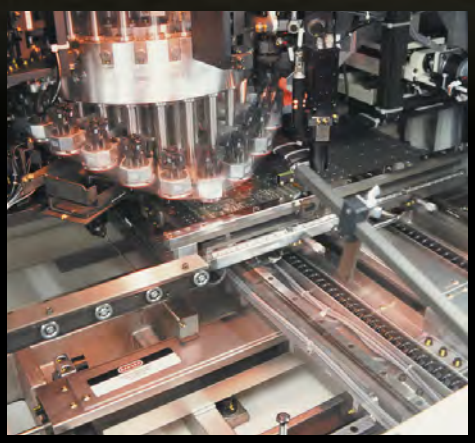
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(Revised 05-28-2019)

WILKERSON®

the total systems approach to air preparation

Compressed Air Treatment
Filters, Regulators, Lubricators and Accessories
Catalog 9EM-TK-190-5







WILKERSON®

First incorporated in August of 1948, Wilkerson manufactures a complete line of compressed air treatment and control products to meet a wide variety of industrial, process, consumer and health care applications. Today, Wilkerson serves over 500 different industries throughout the world.

Over the years, Wilkerson facilities, manufacturing and engineering technology have kept pace with increased sales volume, the growing need to satisfy customers' specific requirements and the demands placed on production.

Wilkerson's growing leadership in the industry is due to our determined commitment to quality; quality of products, services and people. Our dedication to the total quality management process assures our customers that we can consistently provide the highest levels of product quality and customer service required to meet their needs.

From the very beginning, Wilkerson has sold its products through a world-wide, independent distributor network. We currently have 200 distributors throughout North America, plus an expanding network of international distributors in over 40 countries. Our distributors, who have many years of experience in compressed air treatment and control, offer excellent product knowledge, technical assistance and local inventory. As a result of representing other complimentary products, they are able to satisfy their customers' total requirements.

Today's broad line of Wilkerson products is the result of continuing product innovations and technology advancements which frequently become industry standards. Wilkerson is dedicated to designing and manufacturing innovative products with features and operating characteristics that meet customer requirements for quality, performance, reliability, serviceability, safety and value.

⚠ WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

Offer of Sale

The items described in this document are hereby offered for sale by The Company, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document "Offer of Sale".

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WILKERSON®

DISTRIBUTION NETWORK

Wilkerson manufactures and markets a complete line of compressed air treatment components and control products. We have a distribution network of over 100 distributors to serve you.

To find the one nearest you, please visit our DISTRIBUTOR LOCATOR on www.wilkersoncorp.com



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A

Compressed Air Systems

Product Selection Chart

Basic Unit	Series	Port Size										Flange Size		Bowls			Elements (Micron)				Page
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	3	4	6	Poly	Metal	Metal SG	5	20	40	Adsorber	
FILTERS	F01		X											Aluminum Body			Std.	—	—	—	B4
	F03	X	X											X	X	—	Std.	—	—	—	B6
	F08	X	X											X	X	—	Std.	—	—	—	B8
	SF1		X											316 Stainless Steel			Opt.	Std.	—	—	E4
	F18		X	X	X									X	X	—	Opt.	—	Std.	—	B10
	F16		X	X	X									X	X	—	Std.	—	—.	—	B12
	SF2				X									316 Stainless Steel			Opt.	—	Std.	—	E6
	F28			X	X	X								X	X	—	Std.	—	—	—	B14
	F26		X	X	X									X	X	—	Std.	—	—	—	B16
	F90					X	X							—	—	X	Opt.	—	Std.	—	B18
	F30					X	X							X	X	—	Std.	—	—	—	B20
	F34				X	X	X							X	X	—	Std.	—	—	—	B22
	F35							X	X	X				—	Metal w/ DPI		Std.	—	—	—	B24
	F43									X	X			—	Metal w/ DPI		Std.	—	—	—	B26
COALESCING FILTERS	M03	X	X											X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B30
	M08	X	X											X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B32
	SM1		X											316 Stainless Steel			Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		E10
	M18		X	X	X									X	X	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B34
	M16		X	X	X									X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B36
	SM2				X									316 Stainless Steel			Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		E12
	M28			X	X	X								X	X	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B38
	M26		X	X	X									X	X	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B40
	M21			X										X	—	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B42
	M90					X	X							—	—	X	Type "B" 1.0	Type "C" 0.01	—		B44
	M30				X	X	X							X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B46
	M31					X	X							X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B48
	M32						X	X						—	—	X	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B50
	M35								X	X				X	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B52
	M43										X			—	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B54
	M45										X			—	X	—	Type "B" 1.0	Type "C" 0.01	Type "D" 0.003		B56
	M55											X	X	—	X	—	1.0 Micron	0.01 Micron	—		B58

Basic Unit	Series	Port Size				Bowls			Desiccant	Page
		1/4	3/8	1/2	3/4	Poly	Metal	Metal SG		
AFTERFILTERS	A18	X	X	X		X	X	X	Type “B” 5 Micron Element	B61
	A28		X	X	X	X	X	X	Type “B” 5 Micron Element	B63

Basic Unit	Series	Port Size									Spring Range										Page
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	15	25	30	40	60	125	160	180	200	250	
STANDARD REGULATORS	R03	X	X								Opt.	—	Opt.	—	Std.	Std.	—	—	—	—	B80
	RB3		X								—	Std.	—	—	Std.	Std.	—	—	—	—	B82
	RA3		X								—	Std.	—	—	Std.	Std.	—	—	—	—	B82
	RA4	X	X								—	—	Std.	—	Std.	Std.	—	—	—	—	B84
	R24, R25	X	X								—	Std.	—	—	Std.	Std.	—	—	—	—	B86
	R45, R46		X	X							—	Std.	—	—	Std.	Std.	—	—	—	—	B88
	R08	X	X								—	—	Opt.	—	Opt.	Std.	—	—	—	—	B90
	R120		X	X	X	X	X				—	—	—	—	Opt.	Std.	—	—	—	Opt.	B92
	SR1		X								—	Opt.	—	—	Opt.	Std.	—	—	Opt.	—	E16
	R18		X	X	X						—	—	Opt.	—	Opt.	Std.	—	—	—	Opt.	B96
	R16		X	X	X						—	—	—	—	Opt.	Std.	—	—	—	Opt.	B98
	SR2				X						—	—	—	—	Opt.	Std.	—	—	—	Opt.	E18
	R28			X	X	X					—	—	—	—	Opt.	Std.	—	—	—	Opt.	B100
	R26			X	X	X					—	—	—	—	Opt.	Std.	—	—	—	Opt.	B102
	R90					X	X				—	—	—	—	Opt.	Std.	—	—	—	Opt.	B104
	R30					X	X	X			—	—	—	—	—	Std.	—	Opt.	—	—	B106
	R40								X	X	—	—	—	—	—	Std.	—	Opt.	—	—	B108
	R09	X	X								—	—	Opt.	—	Opt.	Std.	—	—	—	—	B114
	R19			X							—	—	Opt.	—	Opt.	Std.	—	—	—	Opt.	B116
DIAL AIR	R11		X								—	—	—	—	Opt.	—	Std.	—	—	—	B120
	R21		X	X	X	X					—	—	—	Opt.	—	—	Std.	—	—	—	B122
	R31					X	X	X			—	—	—	—	—	—	Std.	—	—	—	B124
	R41								X	X	—	—	—	Opt.	—	—	Std.	—	—	—	B126

Basic Unit	Series	Port Size			Spring Range											Page
		1/4	3/8	1/2	2	15	25	30	40	50	60	100	120	125	150	
PRECISION REGULATORS	P16	X	X	X	—	Opt.	—	Opt.	—	Opt.	—	—	—	Std.	—	B130
	P17	X			—	—	—	—	Opt.	—	—	—	Opt.	—	—	B132
	WRA302	X			—	—	—	X	—	—	X	X	—	—	—	B134
	WRA102	X			—	—	—	X	—	—	X	—	—	—	X	B136
	WRA102BP	X			—	—	—	X	—	—	X	—	—	—	X	B138
	WRA171	X			—	—	—	X	—	—	—	—	—	—	—	B140
	WEA632	X			—	—	—	—	—	—	X	—	X	—	—	B142
	WBA208	X			—	—	—	—	—	—	—	—	—	—	—	B144
	WBA45	X			—	—	—	—	—	—	—	—	—	—	—	B146

A

Compressed Air Systems

Product Selection Chart

Basic Unit	Series	Type	Port Size									Bowls			Filling	Page
			1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	Poly	Metal	Metal SG		
LUBRICATORS	L01	Miniature Standard		X	X							Aluminum Body			Cannot be filled under pressure	B150
	L03	Miniature EconOmist™	X	X								X	X	—	Cannot be filled under pressure	B152
	L08	Miniature EconOmist™	X	X								X	X	—	Can be filled under pressure	B154
	L18	Compact EconOmist™		X	X	X						X	X	X	Can be filled under pressure	B156
	L16	Compact EconOmist™		X	X	X						X	X	X	Can be filled under pressure	B158
	L17	Compact AtoMist		X	X	X						X	X	X	Cannot be filled under pressure	B158
	L28	Standard EconOmist™			X	X	X					X	X	X	Can be filled under pressure	B160
	L26	Standard EconOmist™		X	X	X						X	X	X	Can be filled under pressure	B162
	L27	Standard AtoMist		X	X	X						X	X	X	Cannot be filled under pressure	B162
	SL2	Standard AtoMist				X						316 Stainless Steel			Can be filled under pressure	E28
	L90	Large EconOmist™					X	X				—	—	X	Can be filled under pressure	B164
	L30	Large EconOmist™					X	X				X	X	X	Can be filled under pressure	B166
	L31	Large EconOmist™						X				X	X	X	Can be filled under pressure	B168
	L32	Large EconOmist™						X				X	X	X	Can be filled under pressure	B170
	L40	Extra Large EconOmist™							X	X		X	X	X	Can be filled under pressure	B172
	L41	Extra Large EconOmist™							X	X		X	X	X	Can be filled under pressure	B174
	L42	Extra Large EconOmist™							X	X		X	X	X	Can be filled under pressure	B176
	L50	Jumbo EconOmist™									X	X	X	X	Can be filled under pressure	B178

Basic Unit	Series	Port Size						Bowls			Elements (Micron)			Spring Range							Page
		1/8	1/4	3/8	1/2	3/4	1	Poly	Metal	Metal SG	5	20	40	15	25	30	50	60	125	200	250	
FILTER / REGULATORS	B03	X	X					X	X	—	Std.	—	—	Opt.	—	Opt.	—	Opt.	Std.	—	—	B184
	BB3		X					X	—	—	Std.	—	—	—	Opt.	—	—	Opt.	Std.	—	—	B186
	BA3		X					X	—	—	Std.	—	—	—	Opt.	—	—	Opt.	Std.	—	—	B188
	B08	X	X					X	X	—	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	—	B190
	SB1		X					316 Stainless Steel			Std.	—	—	—	Opt.	—	—	Opt.	Std.	—	—	E22
	B18		X	X	X			X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B190
	SB2				X			316 Stainless Steel			Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	E24
	CB6		X	X	X			X	X	X	Std.	—	—	—	—	—.	Opt.	—	Std.	—	—	B192
	PC6		X	X	X			X	X	X	Opt.	—	Std.	Opt.	—	Opt.	Opt.	—	Std.	Opt.	—	B194
	B28			X	X	X		X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B196
	B90					X	X	—	X	X	Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	B198

Basic Unit		Series	Port Size						Bowls			Elements (Micron)			Spring Range								Page
			1/8	1/4	3/8	1/2	3/4	1	Poly	Metal	Metal SG	5	20	40	15	25	30	50	60	125	200	250	
COMBINATIONS	TWO UNIT	D03	X	X					X	X	—	Std.	—	—	Opt.	—	Opt.	—	Opt.	Std.	—	—	B202
		D08	X	X					X	X	—	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	—	B204
		CB7		X	X	X			X	X	X	Std.	—	—	—	—	—.	Opt.	—	Std.	—	—	B206
		D18		X	X	X			X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B208
		D28			X	X	X		X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B210
		D90						X	—	—	X	Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	B212
	THREE UNIT	C03	X	X					X	—	—	Std.	—	—	Opt.	—	Opt.	—	Opt.	Std.	—	—	B216
		C08	X	X					X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	—	B218
		C18		X	X	X			X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B220
		C16		X	X	X			X	X	X	Std.	—	—	—	—	—.	Opt.	—	Std.	—	—	B222
		C28			X	X	X		X	X	X	Std.	—	—	—	—	Opt.	—	Opt.	Std.	—	Opt.	B224
		C26		X	X	X			X	X	—	Std.	—	—	—	—	—	—	Opt.	Std.	—	Opt.	B226
		C31					X	X	X	X	—	Std.	—	—	—	—	—	—	Opt.	Std.	—	—	B228
		C90						X	—	—	X	Std.	—	Opt.	—	—	—	—	Opt.	Std.	—	Opt.	B230

Basic Unit		Series	Port Size				Bowls			Desiccant			Page
			1/4	3/8	1/2	3/4	Poly	Metal	Metal SG				
DESICCANT	DRYERS	DD10	X				Disposable Polycarbonate			—	—	Non-Toxic	F13
		X06	X				X	—	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F16
		X03	X				X	X	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F18
		X04	X		X		X	X	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F18
		X25			X		—	X	—	Silica Gel	4A Molecular Sieve	Non-Toxic	F20
		X08	X				X	—	—	Silica Gel	—	—	F21
		DAS	DISCONTINUED				—	—	—	DRYFIL® MS desiccant and a 1µm particulate filter			F22
		TW					—	—	—				F27
MEMBRANE	DRYERS	MSD	DISCONTINUED	X	X		—	X	—	Modular Membrane			F31

Compressed Air Systems

Air Treatment and Control Components

Compressed air is an essential power source for most industries today. It is a safe operation, relatively inexpensive to operate and very reliable. However, compressed air is susceptible to various types of contamination which not only reduces its value as a power source, but can seriously affect the performance of other pneumatic equipment and, therefore, productivity.

Air valves, air cylinders, logic control systems and air tools can malfunction due to air-borne contamination. Air intended for air-gauging, air conveyors, spray painting, instrumentation, automation and food processing can be rendered unusable. Poor product quality and system shutdown due to compressed air contamination can occur frequently. There are many other problem areas associated with compressed air contamination, as numerous companies in differing industries can attest to.

With today's technology, an efficient, cost-effective compressed air system can be designed to provide years of reliable service if the proper air treatment and control equipment is installed. Operating and maintenance costs can be significantly lowered by removal of most contaminants (dirt, rust, pipe scale, oil aerosols, liquid water and water vapor, microscopic particles and oil vapor). With a well-designed air system and the use of quality air treatment and control products, you can realize extended service life of components, increased flow capacity with minimum pressure loss and improved production efficiencies in your manufacturing processes.

Air Treatment and Control

To take the fullest advantage of the benefits that can be derived from using compressed air, it must be correctly and adequately prepared. Clean, dry, regulated air is the corner-stone of an efficient air system. Where necessary, lubricated air may be required to provide dependable operation and satisfactory service life of certain air tools and components.

Dryers

All atmospheric air contains some water vapor. When the air is compressed, the water content for a given volume of air increases. Because of the effects of compression, most of this water vapor turns into damaging liquid water in your air system. Additionally, as air flows through the compressed air line system, the water vapor condenses in the pipeline. This moisture in the pipeline results in rust, scale, clogged orifices, malfunctioning of pneumatic controls, and increased wear of moving parts as it washes away the lubricant.

Compressed air dryers reduce the water vapor concentration and can prevent further liquid water formation in air lines. Liquid water and water vapor removal increases the efficiency of air operated equipment, prevents corrosion and clogging, extends the service life of pneumatic components, prevents air line freeze-ups and reduces product rejects.

For more detailed information on Dryers, refer to Section F.

Filters

Air-borne contamination from the atmosphere, such as dust, water vapor and hydrocarbons enter the air system through the compressor intake. The contaminants, usually 4 million particles per cubic foot, can easily pass through a typical compressor intake filter since over 80% of these particles are less than 2 microns in size. The compressor

also contributes to the problem with wear particles, oil vapor and fine aerosols that leak past glands and seals from the oil sump into the compression chamber.

Such contamination in the air system can effect the efficient operation of various pneumatic devices and, over time, damage them. Compressed air filters that are installed upstream of the air devices will remove most of these contaminants. In addition, by design these filters will also remove most liquid water from the air line.

The need for higher quality air is more evident today than in the past. To gain improved production efficiencies through automation, more sophisticated, technically advanced pneumatic equipment and instrumentation is being used throughout industry. Due to the critical nature of these applications, the need for extremely clean, virtually oil free air is required. Coalescing (oil removal) and oil vapor removal filters should be used for applications requiring high quality air.

Regulators

All pneumatic devices are designed to provide optimum performance and service life at a specific air pressure. While it is feasible to operate these devices at pressures in excess of the manufacturer's recommended operating conditions, it is not advisable to do so. Operating at higher pressures can cause excessive wear and damage to the device. Further, operating your compressed air system at a higher-than-required pressure wastes energy and is not cost-effective.

To obtain the best operation and service life of your pneumatic equipment use the proper pressure level recommended by the manufacturer. A regulator (pressure control valve) is normally used to reduce and maintain a downstream pressure while the amount of air required to the device may vary with the demand.

Filter / Regulators

The integral Filter / Regulator units combine all the functions and features of a filter and a regulator, as discussed above, into one compact, high performance, space-saving unit.

Lubricators

Getting the proper lubrication to the proper device at the proper time is fundamental to preventative maintenance, longer service life and increased productivity. The efficiency of air motors, control valves, cylinders and other air actuators can be greatly enhanced when the proper amount of lubrication is supplied.

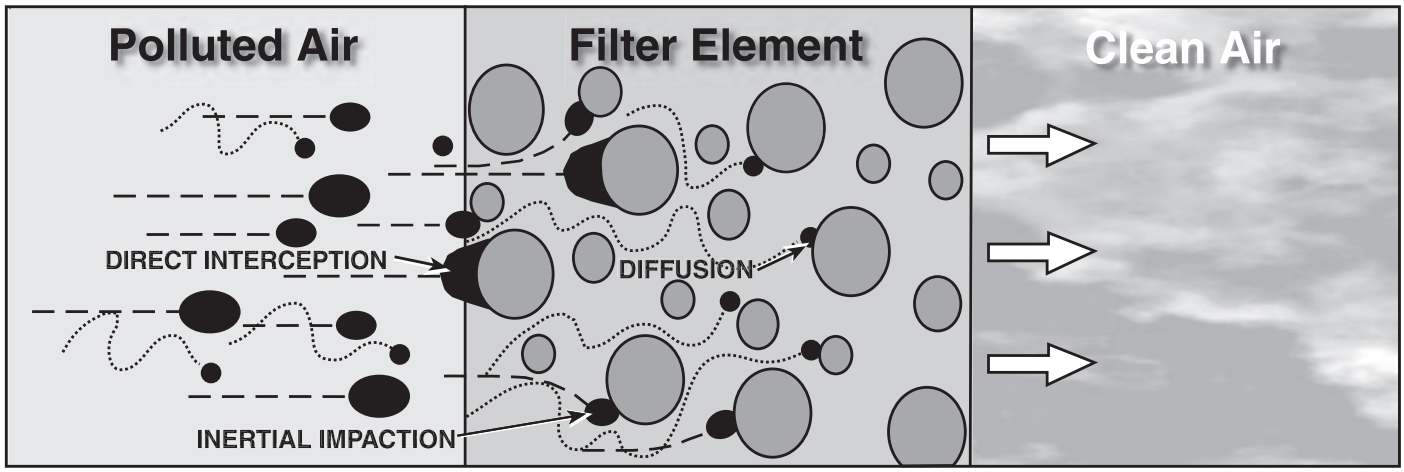
Air line lubricators are specifically designed to generate and introduce an oil aerosol (mist) into the compressed air flow. The air flow then carries the oil to the pneumatic devices where the lubricant mist coats the moving and sliding surfaces thus reducing friction and wear.

To provide satisfactory lubrication to your air devices most lubricators have a proportional delivery system. This feature automatically provides a nearly constant oil-to-air ratio over a wide range of air flows.

A

Compressed Air Systems

Filter Technology – Mechanisms of Filtration



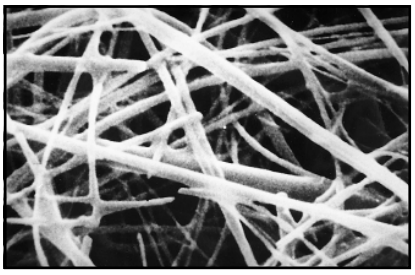
Coalescing Filters

Essentially, coalescing filters (Type B, B1 and C) rely on what is known as mechanical filtration for their effectiveness. The main mechanisms of mechanical filtration are direct interception, inertial impaction and diffusion. Electrostatic attraction can have some bearing although the efficiency of Wilkerson coalescing filters is not dependent on this mechanism.

Direct Interception occurs when a particle collides with and adheres to a fiber of the filter material without deviating out of the streamline flow. This mechanism tends to take place on the surface of the filter material and affects mainly larger particles over 1 micron in size.

Inertial Impaction occurs when a particle is unable to follow the tortuous path around the filter fibers and eventually collides with and adheres to one of the fibers. Typically affecting particles in the 0.3 micron -1 micron size range.

Diffusion or Brownian Movement, as it is sometimes called, occurs with extremely small particles which tend to wander within the gas stream, increasing their chances of colliding with and adhering to a fiber. This usually affects particles below 0.3 micron in size. A degree of overlap takes place with the mechanisms, the extent varying on the conditions.

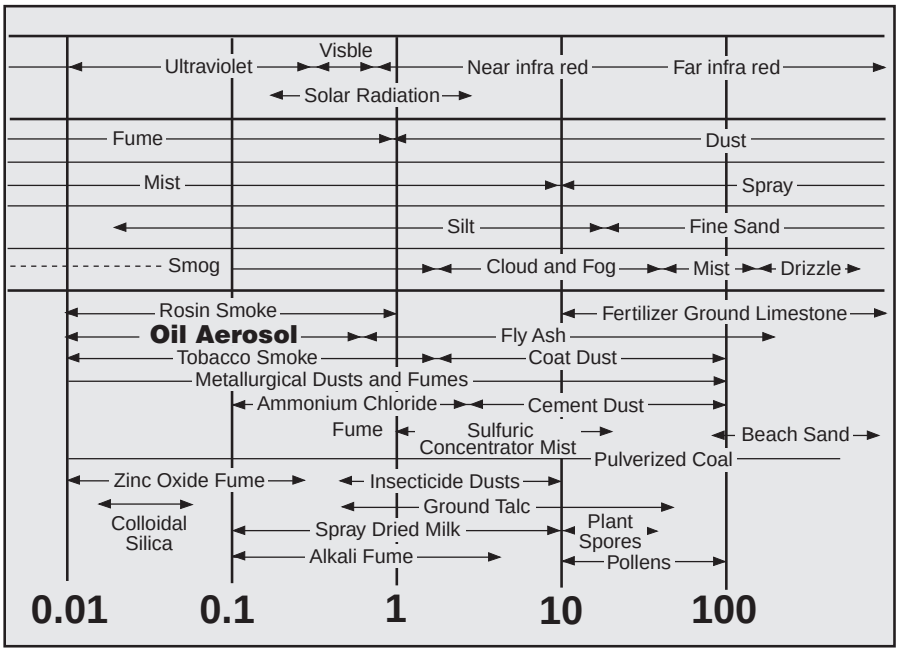


Above: Clean borosilicate microfiber seen at a magnification factor of 3900. *Right:* The same filter material in a contaminated state at the same degree of magnification.



When all mechanisms are combined and utilized by a deep bed of the correct type of filter material, removal of virtually all particles whether liquid or solid, is achieved.

Pollution Size Chart



To assist in understanding the parameters of filtration, refer to this pollution size comparison chart. Look at the size of a major contaminant, **oil aerosol!** It is in the region of 0.01 - 0.8 micron. Tobacco smoke is also a liquid aerosol in a similar size band 0.01 -1.2 micron. Observe the smoke test yourself, appreciate the size of the problem! The smallest particle the human eye can see is in the order of 40 microns.

Particulate Filters

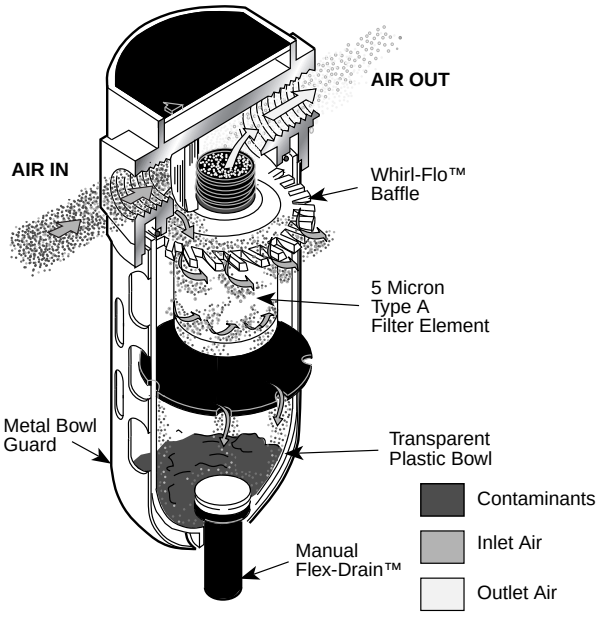
For the removal of solid particle contaminants down to 5 microns and the separation of bulk liquids.

This type of filter is generally used in industrial applications where liquid water and oil, and harmful dirt particles must be removed from the compressed air system. This type of filter should also be used as a prefilter for the Coalescing (oil removal) filter.

Operation

Wet and dirty inlet air is directed downward and outward in a circular pattern by the turbine-shaped upper baffle. This action mechanically separates a large amount of the liquid and gross particles, which then flow down the inside of the bowl, past the lower baffle, into the quiet zone to be drained away. The quiet zone baffle prevents the contaminants from re-entering the air flow stream.

The partially cleansed air then passes through the filter element. By utilizing depth filtration, the 5 micron filter media provides superior filtration, exceptional service life and minimum pressure drop.



Coalescing Filters
(Oil Removal)

Specifically designed for the removal of solid particles, water and oil aerosols down to 0.01 micron. Maximum remaining oil content of air leaving the filter down to 0.01ppm at 70°F (21°C) at a pressure of 100 PSIG (6,9 bar g) using a typical compressor lubricant. Two filter element grades are offered to better meet your air quality requirements.

Grade B and B1 filter elements are used for most air coalescing applications where the removal of liquid aerosols and submicronic particles for *general* air quality is required. Protection of components such as air valves, cylinders, as well as air conveyors, air gaging, air bearings, air control circuits and paint spraying equipment are examples of specific end-use applications. This grade of filter element should be used as a *prefilter* for the *Grade C* coalescing filter.

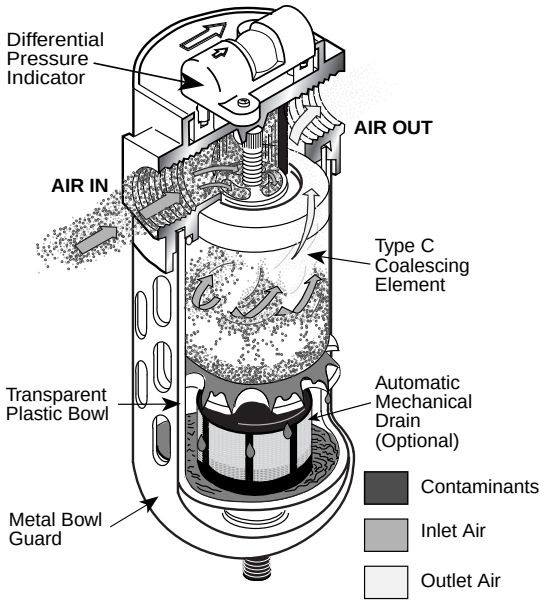
Grade C high-efficiency filter elements are used where the removal of extremely fine particulate and virtually “oil-free” or high quality air is necessary. Specific end-use applications are protection of critical air control circuits, air logic systems, flow and temperature controllers, food processing, electronics, health care and film processing. This grade of filter element should be used as a *prefilter* for the *Grade D* oil vapor removal filter.

Operation

The filter element design utilizes a borosilicate micro fiber that provides superior filtration efficiency, quick draining and minimum pressure drop. Unlike standard particle filters, air flow is inside to out. The compressed air / gas passes through the inner layer of the filter element which acts as an integral pre-filter to remove large contaminants. This gives protection to the layer of high efficiency filter material which substantially removes submicronic aerosols and solids from the air flow stream. Solid particles are permanently trapped within the filter media.

The fine liquid particles, including aerosols, after initially being trapped by the fibers of the filter media, begin to collect or coalesce forming larger droplets. These droplets, along with other large droplets present, are pushed to the outer surface. Here, the anti-reentrainment barrier collects the droplets as they break free from the micro fiber and allow them to gravitate within its cellular structure forming a “wet band” around the bottom of the element.

Clean filtered air / gas passes through the anti-reentrainment barrier above the “wet-band” where the resistance to flow is less, leaving a quiet zone of no air / gas movement in the bottom of the filter housing. The separated liquid drops from the bottom of the filter element and falls through the, without being re-entrained, to the bottom of the filter housing where it collects to be removed by a drain.



Oil Vapor Filters

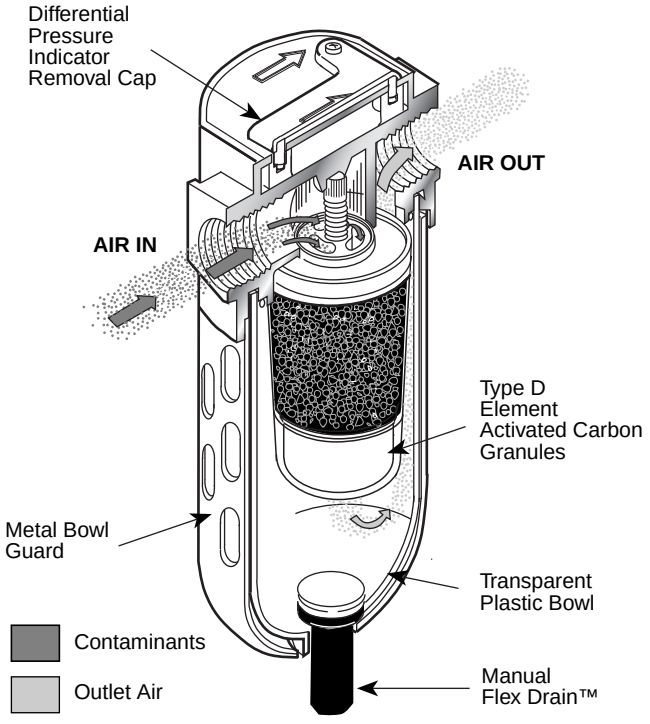
Activated carbon element for the removal of oil vapor and oil associated odors. Maximum remaining oil content of air leaving the filter is 0.003 ppm at 70°F (21°C) at a pressure of 100 PSIG (6,9 bar g). For the *Grade D* filter element, two types of designs are used depending on the size and flow capacity of the filter housing.

An oil vapor filter is used, in conjunction with a *Grade C* filter element, where the application requires very high air quality. Typical applications are food processing and packaging, pharmaceutical, fermentation, electronics and semi-conductor, and critical air control.

Operation

While the *Grade B, B1 and C* filter elements can remove extremely fine liquid and solid particles, they cannot remove gaseous contaminants such as oil vapor or odors. To do this you must employ the physical phenomena of adsorption. Activated carbon, having an affinity for oil vapor molecules and with an extremely high surface area, created by its capillary structure, is used.

Our activated carbon *Grade D* filter elements are designed to maximize the adsorption properties of the carbon. This is achieved by first passing the air through carbon granules located either in an annular space or tubular section. The granules provide a very high ratio of surface area to volume, and when arranged in a deep bed, increases the dwell time of the air flow. This type of design provides the benefit of both high efficiency and longer service life of the activated carbon.



Differential Pressure Indicator (DP2, DP8)

The Wilkerson direct mounting Differential Pressure Indicator is equipped standard on most Coalescing Filter models. It provides a maintenance free means of determining the service life of the filter element. With a new filter the indicator shows all green, and progresses to a full red indication a 7-8 PSID, indicating the element should be changed. The magnified indicator can be easily seen from the top or either side of the filter, and with only one moving part will provide reliability and long life.

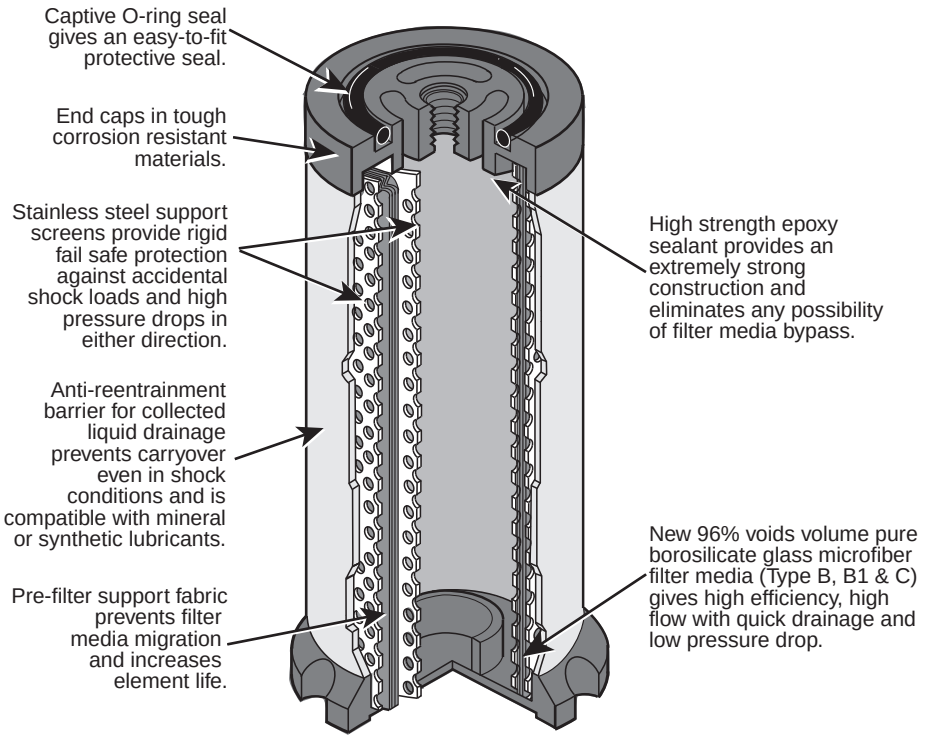
The Differential Pressure Indicator cannot be retrofitted to Wilkerson filters ordered without it. It is available as a replacement accessory kit.

Note: The maximum operating pressure for metal or plastic bowls with this Indicator is 150 PSIG. The maximum operating temperature is 150°F for metal bowls and 125°F for plastic bowls.

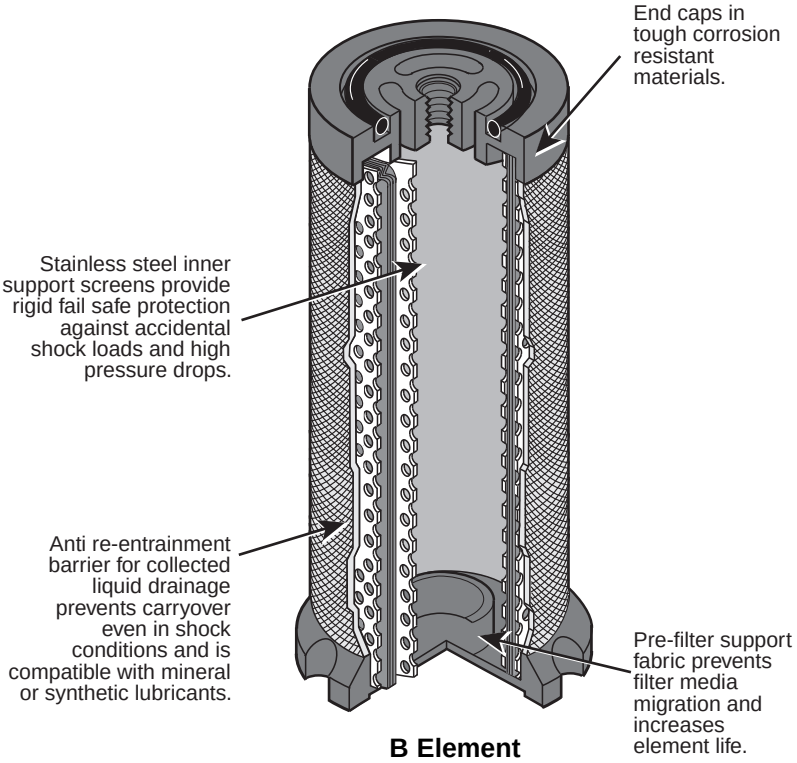
DP3 Differential Pressure Gauge

The Wilkerson direct mounting Differential Pressure Gauge (non-pressurized face) is standard on all mainline filters and it is available as an accessory in kit form. With a scale reading to 20 PSID (1370 m bar dp) the gauge gives a quick indication of the status of the filter element in the filter. The gauge provides a reliable method to help ensure that the filter element is changed at the most economical and convenient time.

Coalescing Elements Features and Benefits
Type B, B1 & C



B1 and C Element



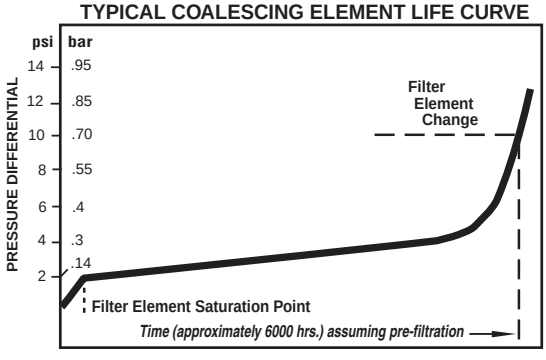
B Element

How The Elements Work

Using the principles of mechanical filtration, the filter media removes the solid particles first in the pre-filter support layers and then in the actual filter media. These particles remain permanently trapped and gradually cause an increase in pressure drop. The liquid particles similarly collected coalesce together forming larger droplets and as the flow is inside to out, are pushed to the outer surface. Here, the anti-reentrainment barrier prevents them from being introduced back into the airstream and instead drains them through its cellular structure to the bottom of the element. The resultant "wet-band" on the bottom of the element, in presenting a high pressure drop area, ensures that the filtered air passes through the upper portion of the element. This creates a "quiet zone" in the bottom of the filter through which the liquid falls to the bottom of the filter bowl and is drained away via the automatic drain.

As mentioned earlier, solid particles cause the pressure drop to slowly increase throughout the working life. Initially, during the period to reach an equilibrium saturation, as determined by the upstream liquid contamination concentration, the pressure drop rises sharply as shown below. This is a typical pressure drop verses time characteristic for a coalescing filter. The end of useful and economic service life is indicated by an accelerating increase in pressure drop. The element should be replaced every 12 months or 6000 working hours under normal working conditions.

TYPICAL COALESCING ELEMENT LIFE CURVE



A

Compressed Air Systems

Adsorption Elements Features and Benefits Type D

How The Elements Work

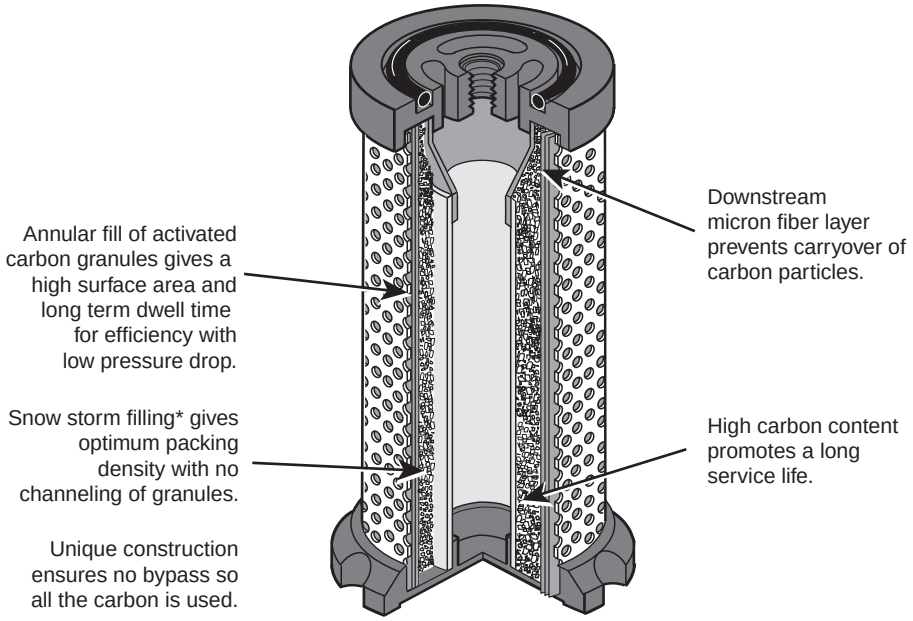
While mechanical filtration employing the Type C element is capable of removing extremely fine liquid or solid particles even as small as 0.01 micron it cannot remove gaseous contaminants such as oil vapor or odors. To do this we must employ the physical phenomena of adsorption. Activated carbon, having an affinity for oil vapor molecules and with an extremely high surface area, created by its capillary structure, is used for this.

Wilkerson activated carbon elements are designed to maximize the adsorption properties of the carbon. This is achieved by first passing the air through carbon granules, snow storm filled* into either an annular space or tubular section. The granules provide an extremely high surface area to volume and when arranged in a deep bed that increases dwell time gives the benefit of both efficiency and service life. After being passed through the carbon, the air goes through a layer of microfiber to prevent migration of fine carbon particles downstream.

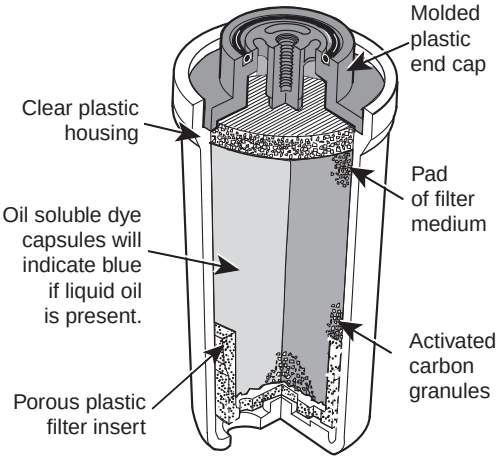
Adsorption elements have a limited life and this is affected by many factors but principally temperature. Obviously, the higher the inlet temperature, the more oil vapor there is present, for example at 104°F (40°C) there is more than ten times the oil vapor than at 70°F (21°C). For this reason, activated carbon filters are best installed at the lowest possible system temperature. The type C filter should always precede a Type D filter.

The typical life of an adsorption element is in the region of 1000-2000 hours at 70°F (21°C). Filtration temperature is based on tests carried out on a Chlorobenzene test rig, however, this is best determined in practice by a routine “odor” check.

Oil vapor has a distinct odor. The least expensive and very effective way to check for oil vapor getting through the filter is to install a small bleed valve downstream. Periodically crack this valve and smell the air. The human nose is extremely sensitive to oil vapor and at the first hint of this odor, change the element.

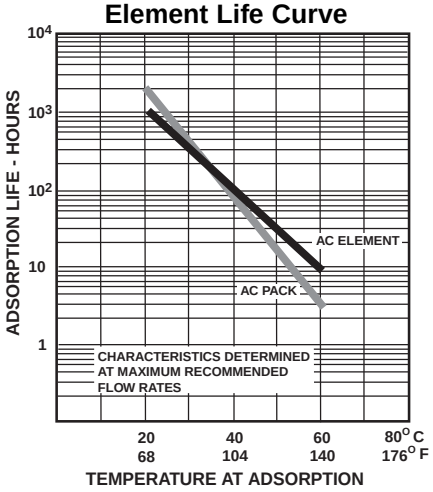


D Element (AC Element)



D Element (AC Pack)

Typical Adsorption Element Life Curve



Type B Filter Element Specifications

Efficiency
99.97% when tested with 0.3 micron aerosol DOP test Federal Standard 209B. Compatible with mineral and synthetic oils.

Residual Oil
0.5 ppm / wt (inlet temperature / pressure 70°F / 100 PSIG) when analyzed using infra red spectrophotometry based on the Pneurop 6611 procedure.

Air Quality Class *
Conforms to ISO 8573 Class 3 or better

Flow
Inside to outside

Filter Media
Resin impregnated borosilicate glass microfiber

Support Structure
Inner 304 Stainless Steel support cylinder with outer polymeric sleeve.

End Caps
Glass filled polyamide material
Initial Differential
Pressure Dry — 1.5 PSID
Initial Differential
Pressure Wet — 2.5 PSID
Flow Range —5 to 4800 SCFM @ 100 PSIG

Application
Installations as a coalescing prefilter for general purpose protection or as a prefilter to a high efficiency coalescer.

Appearance
White polymeric outer sleeve with black end caps.

*** "M" Series Coalescing Filters, with Type "B" 0.5 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm / wt).[5]

Type C Filter Element Specifications

Efficiency
99.99998% when testing with 0.3 micron aerosol on dioctyl phylate (DOP) test according to Federal Standard 209B. Compatible with mineral and synthetic oils.

Residual Oil
0.01 ppm / wt (inlet temperature / pressure 70°F / 100 PSIG) when analyzed using infra red spectrophotometry based on the Pneurop 6611 procedure.

Air Quality Class *
Conforms to ISO 8573, better than Class 1

Flow
Inside to outside

Filter Media
Pure borosilicate glass microfiber with a mean strand diameter of 0.5 micron and a voids volume of 96%. Contains no glues or resins.

Support Structure
Inner and outer 304 Stainless Steel support cylinders.

End Caps
Glass filled polyamide material
Initial Differential
Pressure Dry — 1.25 PSID
Initial Differential
Pressure Wet — 2.25 PSID
Flow Range — 5 to 4800 SCFM

Application
Install where highest quality air is required; typically instrumentation, process air, pneumatic gauging, paint spraying, etc.

*** "M" Series Coalescing Filters, with Type "C" 0.01 micron elements:** All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and **exceed** Class 1 on maximum oil content (ppm / wt).[5]

Type D Filter Element Specifications

Efficiency
Less than 0.003 ppm / wt maximum remaining oil content (inlet temperature / pressure of 70°F / 100 PSIG) when analyzed using infra red spectrophotometry based on the Pneurop 6611 procedure; removal of hydrocarbon vapors and odors.

Air Quality Class *
Conforms to ISO 8573, better than Class 1

Flow
Inside to outside

Filter Media
Snow storm filled activated carbon for optimum packing density and life.

Support Structure
Model M03 - M28: Clear plastic housing with molded plastic end cap. Integral outlet filter.
Model M30 - M45: Inner and outer 304 Stainless Steel support sleeve cylinders

End Caps
Glass filled polyamide material
Initial Differential
Pressure Dry — M30 - M31: 3 PSID
M32 - M45: 1 PSID
Flow Range — 5 to 4800 SCFM

Application
Installation after high efficiency coalescer for process air purification, odor removal, removal of trace vapors and for critical applications.

*** "M" Series Absorption Filters, with Type "D" activated carbon elements:** All Wilkerson Type "M" Absorption Filters with Type "D" activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm / wt).[5]

A

Compressed Air Systems

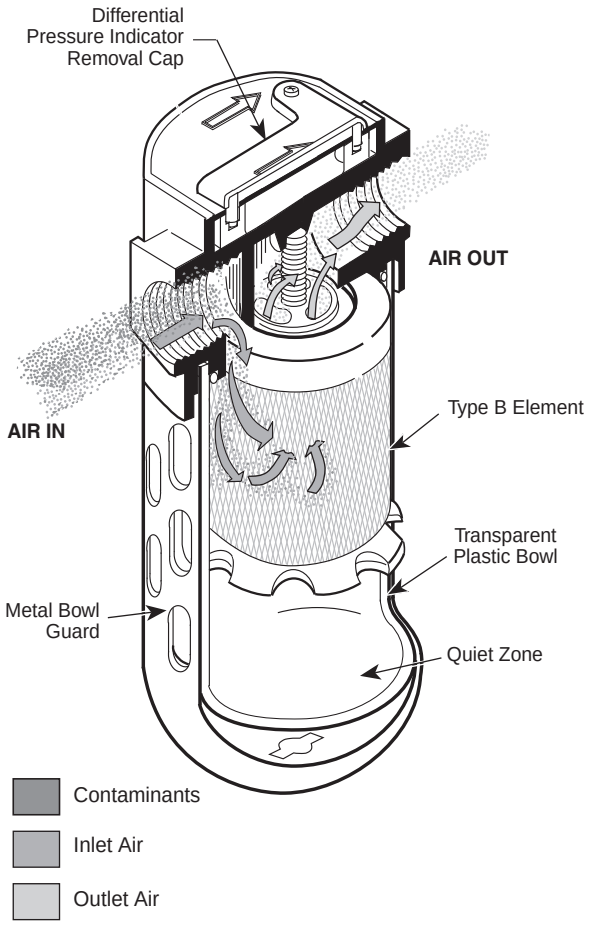
Afterfilters

For the removal of solid particles down to 0.5 micron.

The Afterfilter is designed for use in “dry” systems where it provides efficient removal of desiccant dust and other solid contaminants downstream of various types of desiccant air dryers. These solid contaminants, if not removed, can damage sensitive downstream instruments and critical air controls.

Operation

The inlet air is directed downward and outward in a circular pattern. This action mechanically separates a large amount of gross particles which fall to the bottom of the housing. The air then passes through the filter media bed where a significant number of smaller solid particles and other contaminants are trapped within the filter media.



AF Series Afterfilters, with Type “B” 0.5 micron elements: All Wilkerson Type “AF” Afterfilters with 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil

ISO 8573.1 System Ratings

System	ISO 8573.1 Quality Class Rating	Applications
1.	3.7.4	Air Tools, Air Motors
2.	1.4.1	Automated Equipment, Robotics, Rough Paintings
3.	1.4.1	Injection Molding, CNC, Electronics
4.	1.2.1 or 1.1.1	Semi-Conductors, Instrumentation
5.	1.2.1 or 1.1.1	Food Processing, Hospital Grade, Breathing Air

Applying condensate management systems, dry air storage and flow controllers.

ISO 8573.1 Quality Class

Quality Class	*Solid Contaminants (max. particle size in microns)*	*Max. Pressure Dew Point ºF*	*Max. Oil Content (droplets, aerosols & vapor) ppm*
1	*0.1*	*-94*	*0.01*
2	*1*	*-40*	*0.1*
3	*5*	*-4*	*1*
4	*15*	*37.4*	*5*
5	*40*	*44.6*	*25*
6	*—*	*50*	*—*
7	*—*	*not specified*	*—*

Filter Types

All filters and filter elements are suitable for use in either compressed air or nitrogen applications.

Wilkerson Types B, B1, and C filters are made of materials acceptable in processing of compressed air as defined by regulations of both the United States and Canadian Departments of Agriculture.

Type A General Purpose Filter

Specifications
Particle removal down to 5.0 microns. Separation of liquid water and aerosols > 95% at rated flows. Separation of bulk liquid only.

Purpose
For removal of solid contaminants and bulk liquids. The Type A can be used alone as a general purpose filter or as a pre-filter for Types B, B1 and C elements to extend their service life.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed** ISO Class 3 for maximum particle size and concentration of solid contaminants.[5]

Type AF Prime Efficiency Filter

Specifications

Solid particle removal down to 0.5 micron. Retention on DOP test > 9911.97%.*2 Designed for use in "dry" systems.

Purpose
For removal of desiccant dust and other solid contaminants downstream of Twin Tower or other desiccant air dryers.

"**AF" Series Afterfilters, with Type "B" 0.5 micron elements:** All Wilkerson Type "AF" Afterfilters with 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm / wt).[5]

Type B1 Prime Efficiency Coalescer

Specifications

Particle removal down to 1.0 micron. Maximum downstream remaining oil content 0.5 ppm / wt*[1]. Retention on DOP test> 99.97%.*[2] "B1" Prime Efficiency Coalescing Filters meet ISO Class 2 for maximum particle size and exceeds Class 3 for maximum oil content (ppm / wt).[5]

Purpose
For removal of aerosols and solid particles. Is used in coalescing filter models M32 through M55. Can be used alone as a coalescing filter or as a pre-filter to the Type C elements to extend their service life. Usage proves most economical when preceded by a Type A filter.

Type B Prime Efficiency Coalescer

Specifications
Particle removal down to 0.5 micron. Maximum downstream remaining oil content 0.5 ppm / wt*1. Retention on DOP test> 99.97%.[2]

Purpose
For removal of aerosols and solid particles. Can be used alone as a coalescing filter or as a pre-filter for the Type C elements to extend their service life. Usage proves most economical when preceded by a Type A filter.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements exceed ISO Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm / wt).[5]

Type C Extremely High Efficiency Coalescer

Specifications
Particle removal down to 0.01 micron. Maximum downstream remaining oil content 0.01 ppm / wt*1. Retention on DOP*2 and Sodium Flame Test [3] > 99.9999% (limit of measurability).

Purpose
For removal of extremely fine oil mists, oil aerosols and microscopic particles. The Type C is extremely efficient in the coalescing of remaining oil mists and oil aerosols as well as the retention of solid particles. It is recommended the Type C filter be installed downstream of a Type A and / or Type B or B1. This is very cost effective as it prevents build up of solid contaminants on the Type C element and extends service life.

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements exceed ISO Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm / wt).[5]

Type D Critical Application Adsorption Filter

Specifications
Activated carbon element for removal of oil vapor and associated odors whether petroleum or synthetic base. Maximum downstream remaining oil content 0.003 ppm / wt.[5]

Purpose
For elimination of oil vapor, oil associated odors whether petroleum or synthetic base. Type D elements utilize selected grades of activated carbon and rely on adsorption to remove oil associated vapor and odors. The Type D Filter should be used as the final filter for critical applications. It should always have a Type C Filter element installed upstream to remove oil aerosols and solids particles.

Note: The Type D element will not remove carbon dioxide, carbon monoxide, ethane, methane or other toxic gases.

"M" Series Adsorption Filters, with Type "D" activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" activated carbon elements exceed ISO Class 1 on maximum oil content (ppm / wt).[5]

Applications Notes

1) *Based on a compressed air temperature of 7°F (21°C) at 100 PSIG (6,9 bar g) with a typical compressor lubricant using the Pneurop1 Recommended Test Method No. 6611 / 1984 PART 2. For further information contact Wilkerson. 1 mg/m3 is approximately 0.83 ppm / wt. (parts per million by weight).*
2) *Dioctyl phthalate test generates particles with mean diameter of between 0.1 and 0.3 micron (most difficult size to remove) based on USA Federal Standard 209B.*
3) *Sodium Flame Test using particles with a mean diameter of 0.65 micron based on British Standards Institute BS3928.*
4) *Filtration at a high temperature, although possible, increases the risk of gaseous contaminants condensing downstream. At temperatures above 122°F (50°C), the amount of water and oil vapor increases significantly and is more difficult and costly to remove.*
5) ***All classes above refer to international standards organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.***

When Making Your Selection

1) Generally, install filters downstream of aftercoolers / separators and air receivers at the lowest temperature point and as close to the point of application as possible. This reduces the chance of additional water and oil vapor condensing after the filter.

2) Filters should not be installed downstream of quick opening valves and should be protected from possible reverse flow or other shock conditions.

3) It may be necessary to install a combination of mainline filtration near the compressor installation before entry to the main air distribution system as well as installing terminal filtration at the critical application points.
Remember, especially in existing installations, the contamination already in the pipe system downstream of the filters will take a long time to disappear and probably never will completely.

4) Purge all lines leading from the filters to the final application to be protected.

5) Install filters in a vertical position ensuring that there is sufficient room below the filters to facilitate element change.

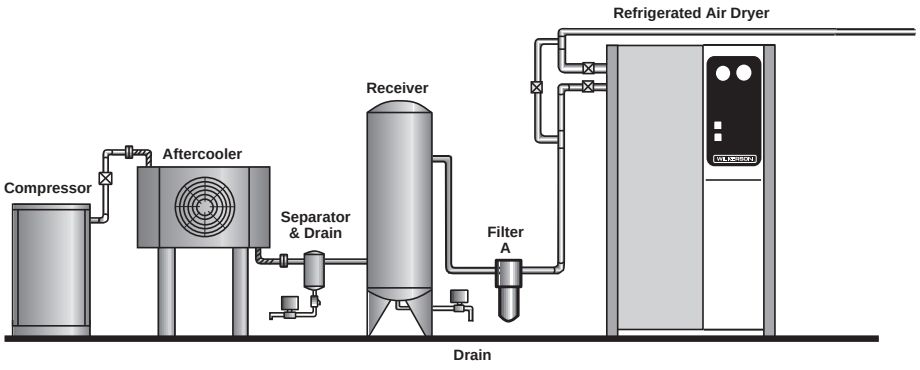
6) Provide a facility to drain away collected liquids from the filter drains via properly sized tubing, taking care there are no restrictions in the drain line.

7) Install Wilkerson differential pressure gauge or pop-up indicator to monitor the pressure drop across the filters. This will provide an easy way of visually monitoring the filter element condition, indicating when to replace the element.
If you have a problem on filter selection or installation, please contact your local Wilkerson stocking distributor. Wilkerson and their representatives will be pleased to help you in selecting the proper installation for your application requirements.

8) For piping convenience and to minimize air system disruptions, we recommend piping the system with by-pass circuits and isolation valves.

General Purpose Protection

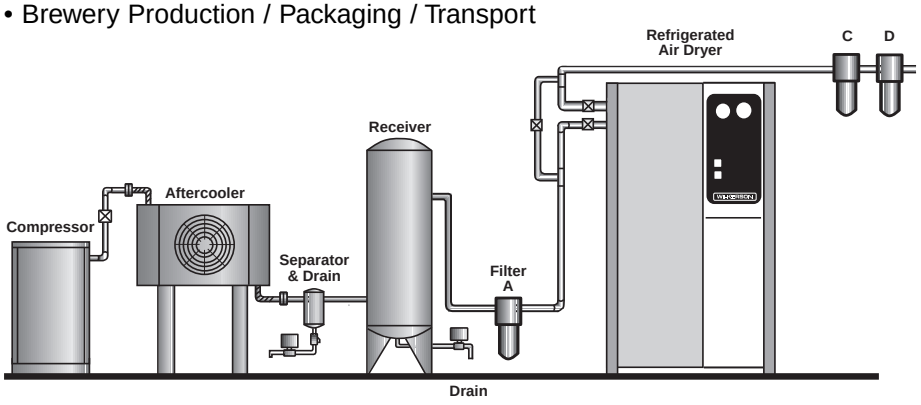
- General Compressed Air System Protection
- Liquid and Solid - Bulk Contamination Removal
- Particle Removal in “Dry” Systems
- Large Pneumatic Tools
- Shot-blasting Air
- Low Cost Automation—cylinders and valves
- Pre-Filtration for Refrigeration Air Dryers
- Pre-Filtration to High Efficiency Dryers
- Pre-Filtration to Adsorption Air Dryers in “Oil-Free” Systems
- Pre-Filtration to Air Sterilization Filters in “Oil-Free” Systems
- High Speed and / or Miniature Pneumatic Tools
- Air Gauging
- Air Conveying
- Air Motors
- Pipeline Purging
- Pre-Filtration to Adsorption Air Dryers in Oil Contaminated Systems
- Pre-Filtration to Air Sterilization Filters in Oil Contaminated Systems



Critical Applications — Clean and "Oil-Free"

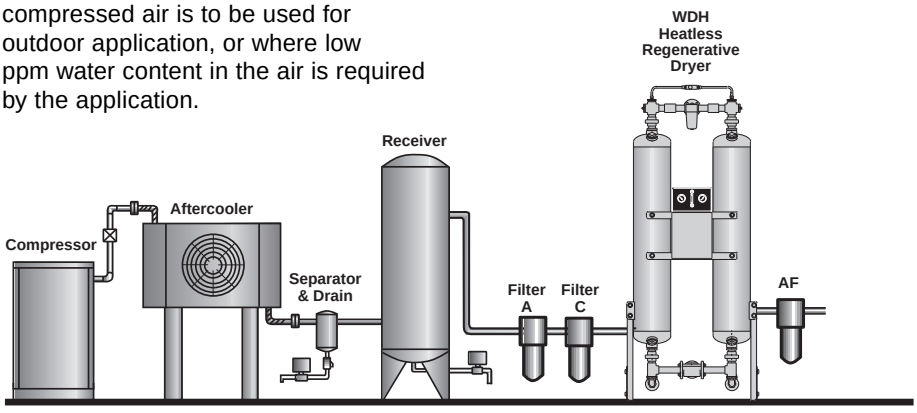
Where dew point is not required to be less than 36-40°F (2.2-4.4°C). Ambient temperature should not be below 45°F (7.2°C). For example, interior of factories.

- Highest Quality - Clean, Oil and Odor Free Air
- Blow Molding of Plastic e.g. P.E.T. Bottles
- Film Processing
- Critical Instrumentation
- Advanced Pneumatics
- Air-Blast Circuit Breakers
- Decompression Chambers
- Cosmetic Production
- Foodstuffs Production / Packaging
- Pharmaceutical Production
- Dairy Production / Packaging / Transport
- Brewery Production / Packaging / Transport
- Robotics
- Air Logic
- Instrumentation
- Air Bearings
- Spray Painting
- Temperature Control Systems



Extremely Low Dew Point System

Where dew point must be below 32°F (0°C). For example, indoor factory installation of dryer, but where compressed air is to be used for outdoor application, or where low ppm water content in the air is required by the application.



When Making Your Selection

Always try to obtain as much information as possible including flow rates, inlet pressure, temperature and pipe size.

Select filtration air quality required to the application to be protected. Remember, it is better to over-specify than not provide enough protection.

Select size of filters by flow rate and inlet pressure at the point of filtration. Also keep in mind pressure drop, if this is critical it may be advisable to oversize the filters. Generally, for operating costs, it is best never to undersize filters. The higher pressure drop caused by undersizing actually increases system operating cost.

Be careful to consider working pressure drops. Although all filters start dry, in time they become wetted with liquid (a normal condition) and this increases pressure drop. Select filters for the highest flow rate and lowest working pressure they will operate under.

Check the pipe size of the installation. If possible, match pipe sizes. This may involve increasing the size of the filter. Never reduce the pipe size of the installation to match the filter. The restriction caused by this is expensive in terms of pressure drop and operating costs and is ongoing. Increasing the size of the filter on the other hand reduces pressure drop and increases the time between element changes. This more than offsets the initial higher costs.

A

Compressed Air Systems

How You Read Flow Charts

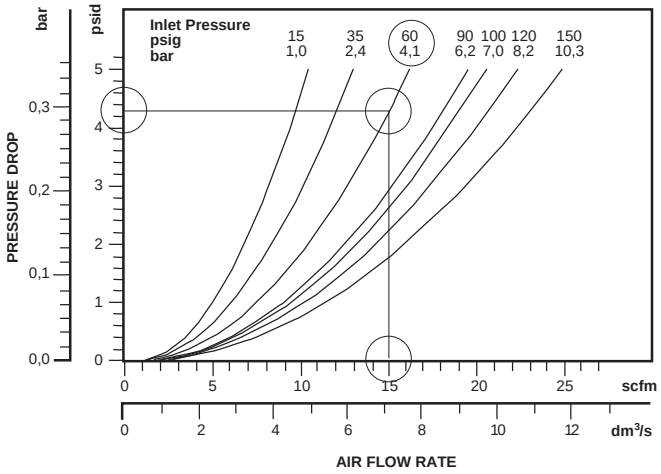
Using Filter Graphs

1) From the graph select one of the inlet pressure curves to be used. 35 PSIG, 60 PSIG, etc.
2) Decide upon the air flow rate requirement for this application. (Refer to the horizontal air flow rate scale located at the bottom of the graph.)
3) To find the initial pressure drop draw a vertical line from the flow rate selected to a point where it crosses the inlet pressure curve. From this intersection draw a horizontal line to where it intersects the vertical pressure drop scale.

EXAMPLE:

At 15 SCFM flow rate and 60 PSIG inlet pressure, pressure drop is about 4.3 PSID.

F08-01-SK00



Using Regulator Graphs

NOTE: Regulator graphs are based upon an inlet pressure of 100 PSIG.

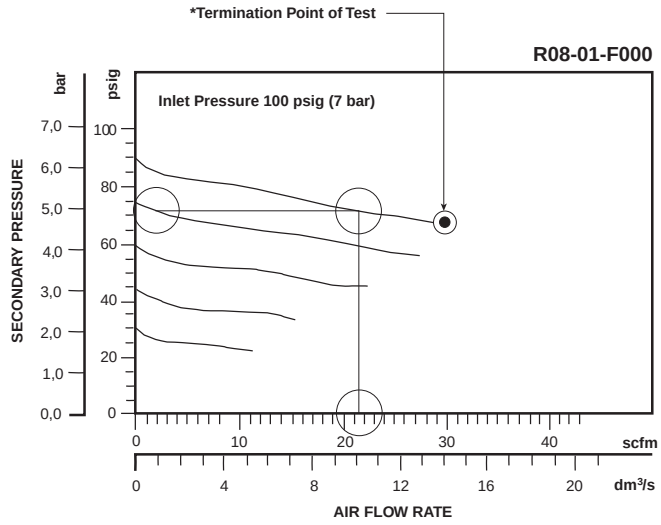
Maximum flow capacity is measured at a point that is 75% of the initial secondary pressure setting. * (NFPA)

EXAMPLE:

Inlet Pressure = 100 PSIG,

Secondary Pressure @ 0 SCFM = 90 PSIG,
Secondary Pressure @ 21.5 SCFM = 75 PSIG,
Pressure Drop @ 21.5 SCFM = 15 PSID.

1) Using a graph selected by product family and pipe size pick the secondary pressure curve that fits
2) Determine the air flow rate required from the air flow rate scale located at the bottom of the graph.
3) To find the pressure drop for this regulator draw a vertical line from the air flow rate selected to a point where it crosses the secondary pressure curve. From this intersection draw a horizontal line to where it intersects the vertical secondary pressure line. This is the secondary pressure at the flow rated selected to determine full pressure drop. Subtract this pressure from the original secondary pressure used.
The Difference = Pressure Drop

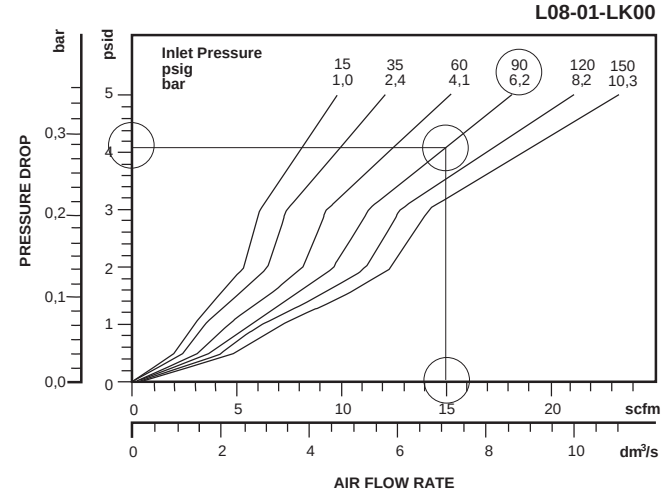


Using Lubricator Graphs

1) From the graph select one of the inlet pressure curves to be used. 35 PSIG, 60 PSIG, etc.
2) Decide the air flow rate requirement for this application. (Refer to horizontal air flow rate scale located at the bottom of the graph.)
3) To determine pressure drop draw a vertical line from the flow rate selected to the point where it crosses the inlet pressure curve used. From this intersection draw a horizontal line to where it intersects the vertical pressure drop scale.

NOTE: Pressure drop value should not be less than 0.8 PSID.

L08-01-LK00



Regulators

General Purpose

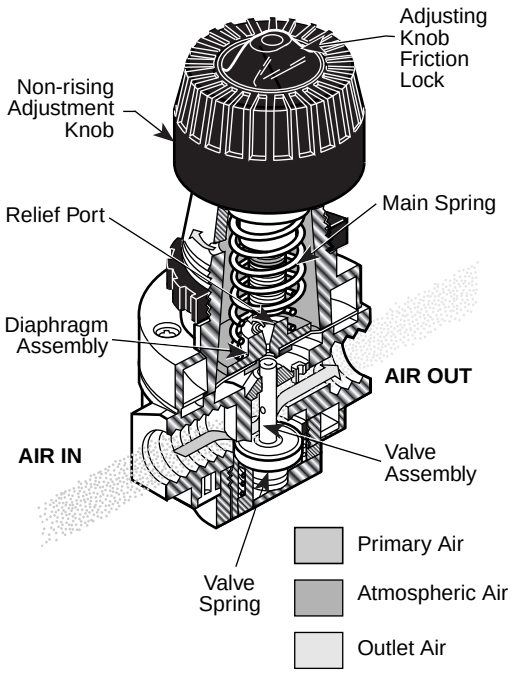
Used to provide a convenient and low cost method to reduce a supplied air pressure to a desired outlet pressure and transform a fluctuating air supply to a relatively constant reduced air pressure within the operating range of the regulator.

This type of regulator is generally used in a wide variety of applications where reduced pressure is highly desirable for energy conservation, safety requirements, air circuit control and air instrumentation.

Operation

Turning the adjusting knob clockwise forces the main spring downward onto the flexible diaphragm which presses down onto the valve stem. The diaphragm and valve stem move downward forcing the balanced valve off its seat, which allows air to flow past the valve to the outlet side of the regulator and downstream to the air system. A precisely positioned aspirator tube communicates secondary pressure to the diaphragm resulting in instant compensation in order to maintain the desired secondary set pressure.

The diaphragm, valve stem and valve move upward, compressing the regulating main spring. Upward movement stops when the spring force acting on the diaphragm balances the pressure force acting below the diaphragm. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



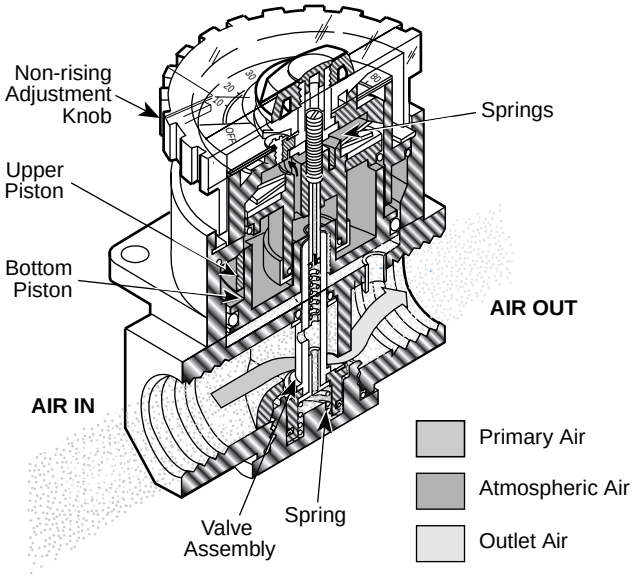
Dial-Air™ Pilot

The Dial-Air™ Pilot is a constant bleed, piston operated regulator. The pilot controlled pressure reducing valve provides exceptionally high air flow with steady pressure control and minimal secondary pressure drop. The non-rising adjustment knob provides quick selection of the desired secondary pressure in less than one full turn. The adjustment knob also can serve as the pressure indicator thereby eliminating the need for a pressure gauge.

This regulator is specifically designed for applications requiring more accurate air circuit control, high air flow capacity with flat performance curves and quick regulator adjustment. The regulator can be used as a conventional regulator for standard air circuits or as a pilot regulator to provide pressure to the control chamber of a pilot operated (slave) regulator.

Operation

To set the regulator, turn the large dial adjustment knob to the desired secondary set pressure. This opens the pilot valve seat allowing air flow into the control chamber which forces the lower piston downward against the relief seat and opens the main valve. At the same time, the air in the control chamber forces the upper piston upward against Belleville springs which closes the pilot valve seat when the set pressure is attained. Secondary pressure in the chamber is now balanced against the control pressure through the lower piston. If demand flow increases, the constant control pressure will force the lower piston and the main valve further downward, and allow more flow downstream. A higher than desired secondary pressure will force the lower piston upward, closing the main valve seat and opening the main relief valve seat thereby allowing air to relieve to the atmosphere. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Regulators

Precision Regulator

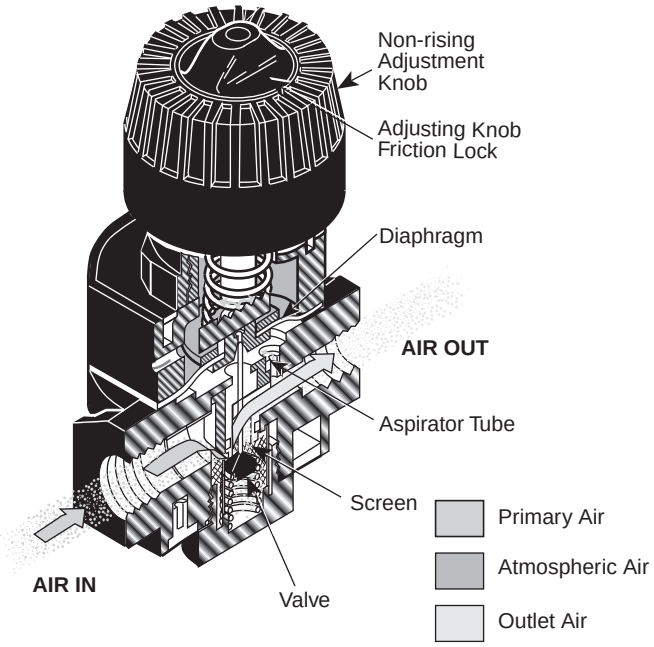
For use in applications that require reliable performance and accurate pressure control.This type of regulator is generally used for material handling systems, flow and temperature controllers, critical air control circuits, medical and scientific test equip-ment, and valve positioners.

Operation

Set the desired secondary pressure by turning the adjustment knob clockwise. This action increases the regulating spring force against the top of the diaphragm disc. When the spring force above exceeds the air pressure beneath the diaphragm, it is transmitted by the valve stem and opens the valve. Airflow through the regulator now occurs.

A precisely designed and positioned aspirator tube constantly transmits the secondary pressure to the under side of the diaphragm so that during flow conditions any pressure loss can be quickly compensated for. When flow is no longer required, the outlet pressure increases slightly, allowing the diaphragm to rise, the valve to close, and set pressure to be maintained.

On self-relieving models, if outlet pressure should increase above the set pressure, the diaphragm will rise therefore opening the relief seal between the diaphragm and the valve. The excess outlet pressure is then vented through the diaphragm orifice into the bonnet and subsequently to the atmosphere through an orifice in the bonnet. For best performance, regulated pressure should always be set by increasing the pressure to the desired setting.



Lubricators

EconOmist™

The EconOmist™ lubricators inject an oil aerosol into the flowing air stream to automatically provide the proper amount of internal lubrication to air operated tools or other pneumatic devices.

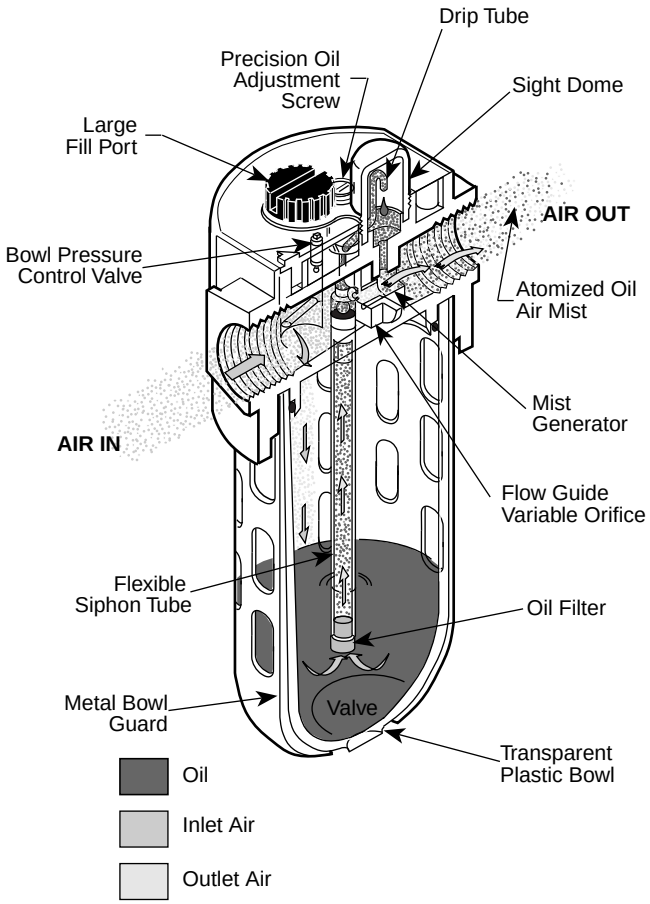
Operation

For proper operation there must be line pressure in the reservoir bowl. As the air flows through the lubricator, some of the incoming air passes through the bowl pressure control valve that then pressurizes the bowl pushing oil upward through the siphon tube. Most of the air flow passes through the self-adjusting Flow-Guide® flow sensor in the lubricator throat creating a slight pressure drop that is proportional to the rate of air flow. The pressure drop is sensed by the sight dome and across the adjustment needle valve allowing oil to flow upward through the siphon tube into the sight dome where it drips into a nozzle passage and then into the lubricator throat.

The precise amount of oil to be delivered to the air stream is determined by the oil adjusting needle valve that sets the exact drip rate.
The oil drops are atomized by the high velocity air flowing through the lubricator. All of the drops visible in the sight dome are delivered downstream to the air devices.

The self-adjusting flow sensor automatically maintains a constant oil-to-air ratio by opening and closing in response to a wide range of changing air flows. A check valve keeps the siphon tube full of oil during periods of no flow and prevents oil carry-over due to the possibility of reverse flow.

The pressurizing valve controls the rate of bowl pressurization and allows depressurization for refilling the unit without shutting off the supply air. When the oil fill plug is loosened, a spring loaded, normally closed 2-way valve closes, allowing the air pressure in the bowl to be gradually reduced. When the fill plug is replaced, the bowl repressurizes through the pressure control valve. Upon initial use, or if unit has been run dry, open oil adjustment wide open until no air bubbles are visible in sight dome. Then, reset oil feed adjustment to desired setting.



A

Compressed Air Systems

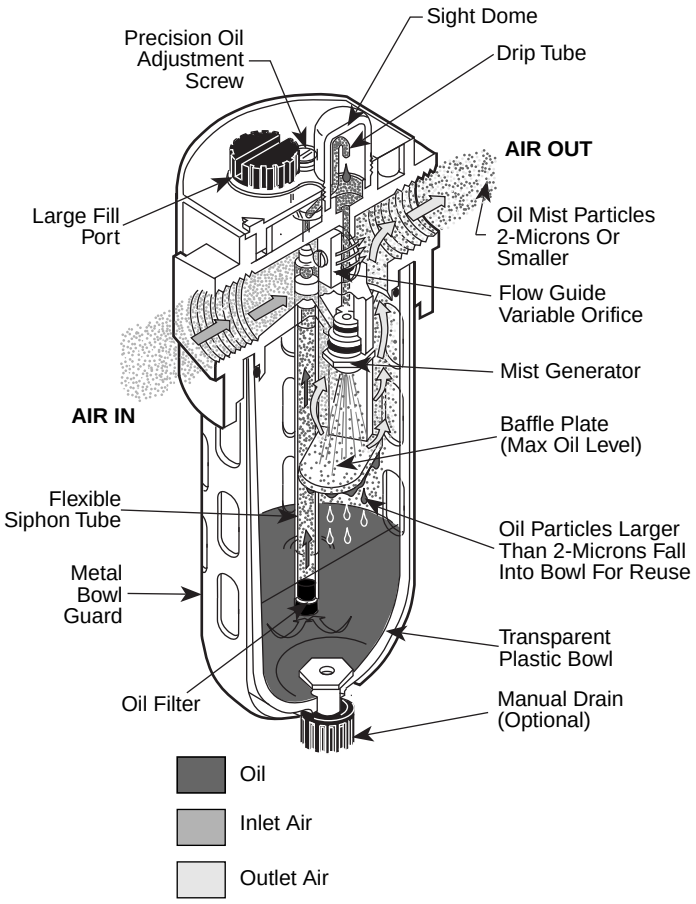
Lubricators
AtoMist™

The AtoMist™ lubricators inject a micro-mist of oil into the flowing air stream to automatically provide the correct amount of internal lubrication for air tools and other pneumatic devices. This type of lubricator can be precisely adjusted to a very low oil flow rate because only a portion of the oil drops seen in the sight dome goes downstream. The lubricator should be used where only a very minute amount of lubricant is desirable or where it is necessary for the oil to remain in suspension in the air stream for long distances.

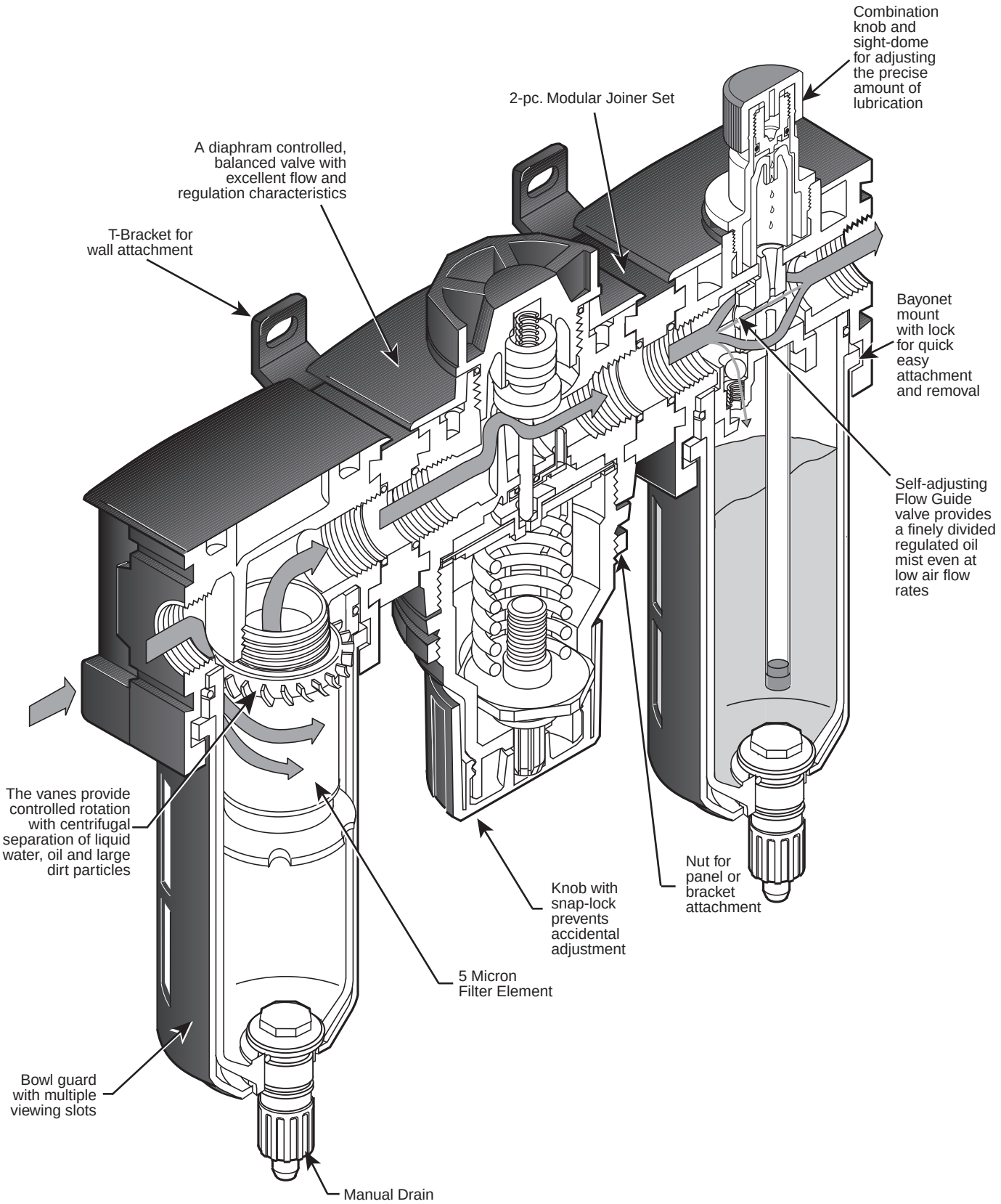
Lubricating oil is injected into the mist generator by allowing a portion of the incoming air to bypass the mist generator and enter the bowl, where it forces the oil up the siphon tube. The oil then passes the adjustment screw, which meters the amount of oil that can flow to the drip tube and down into the mist generator. The oil droplets and air are then sprayed onto the generator baffle where the oil drops are atomized. The larger oil particles are baffled out and fall into the bowl to be reused.

The very fine oil aerosol particles remain airborne and are swept into the lubricator outlet by the airflow, where they are carried downstream. Only a small amount of the oil drops visible in the sight dome are delivered downstream. Generally, micro-mist lubricators convert about 3% of the liquid oil “atomized” particles 2 microns or smaller in size.

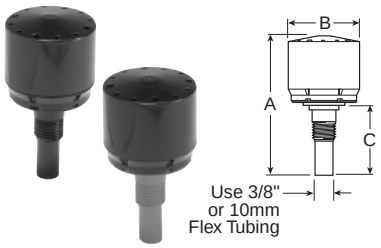
Once the oil-to-air density ratio has been established and the drip rate adjustment set, the proportional control of the patented Flow-Guide® variable orifice permits varying volumes of air to pass through the lubricator while maintaining the oil-to-air ratio balance. AtoMist™lubricators cannot be filled manually without turning off and venting the air pressure from the bowl. The height of the oil level in the bowl is critical and cannot be allowed higher than the baffle plate.



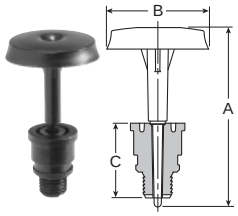
18 / 28 Series FRL Modular Combination



Automatic Mechanical Drains



Automatic Drain
(Nitrile and Fluorocarbon Versions)
Operating Range
15 to 250 PSIG (1 to 17 bar)



Automatic Piston Drain
(08 Series as shown)
Works with cyclical operation of air system.





Wilkerson automatic mechanical drains are designed to remove liquid oil and water contaminants from compressed air systems automatically. They eliminate the necessity of someone having to drain accumulated liquids from filters, separators, receivers, etc. on a daily basis. Instead, only regular, periodic maintenance and cleaning is needed. Typically, once a month the drain should be removed from the housing and cleaned in warm, soapy water (no solvents).

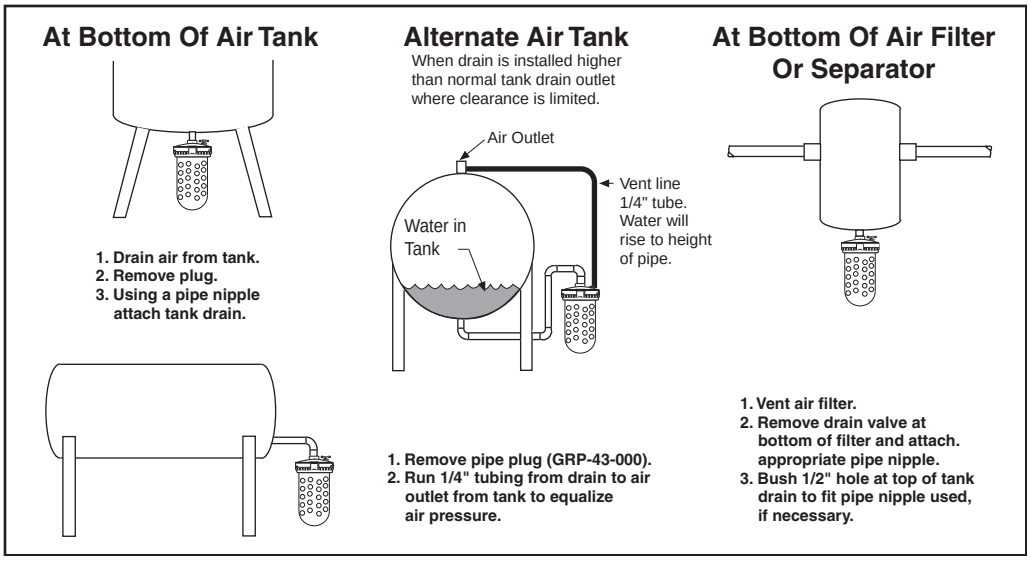
Operation
Automatic Mechanical Drains

Liquid contaminants collected in the bowl cause the float mechanism to rise. When the liquid reaches a specific level, the float triggers a mechanism which pilots system pressure against a large-area piston, driving the piston down. The piston opens the drain orifice, causing the system pressure to evacuate the liquid contaminants. As the liquid level falls, the pilot valve closes, system pressure against the piston exhausts to atmosphere, and the drain valve snaps closed, ready to repeat the cycle. At least once a month, the drain should be removed from service, and cleaned with warm, soapy water to ensure continued reliable operation.

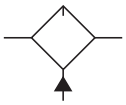
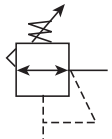
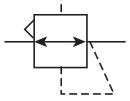
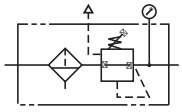
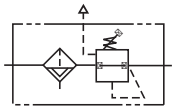
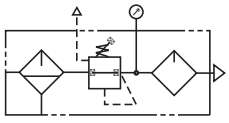
Automatic Piston Drains
(used in F03, F08, M03, M08, B03 and B08 filter units)

Air enters bowl, and pressure equalizes above and below piston. The piston has differential areas above and below, with the top area being larger. This gives a slight downward force, holding the drain orifice closed, as long as air pressure is constant. System fluctuations, such as an increased demand for air downstream, causes the pressure above the piston to drop slightly. Now the trapped air below the piston is a higher pressure, and thus pushes the piston up, opening the orifice, and causing the system pressure to expel to atmosphere any accumulated liquids. The sudden drop of pressure below the piston now causes the system pressure to quickly push the piston down, closing the drain, and resetting the piston for the next cycle. It is important to note that this type of drain requires periodic fluctuations in system pressure in order to operate; in a system where the pressure is constant, the drain piston will never cycle.

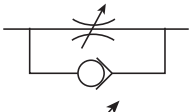
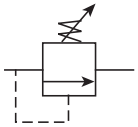
Typical Installations



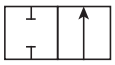
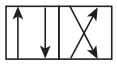
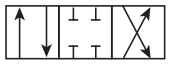
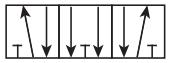
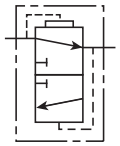
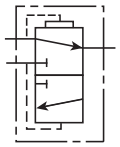
AIR PREPARATION UNITS

Symbol	Description
	FILTER / SEPARATOR with manual drain
	FILTER / SEPARATOR with automatic drain
	OIL REMOVAL FILTER
	AUTOMATIC DRAIN
	LUBRICATOR less drain
	LUBRICATOR with manual drain
	LUBRICATOR with automatic filling
	AIR LINE PRESSURE REGULATOR adjustable, relieving
	AIR LINE PRESSURE REGULATOR pilot controlled, relieving
	FILTER / REGULATOR (piggyback) Manual Drain Relieving (With Gauge)
	FILTER / REGULATOR (piggyback) Auto Drain Relieving
	AIR LINE COMBO F-R-L simplified

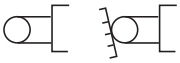
PNEUMATIC VALVES

Symbol	Description
	CHECK
	FLOW CONTROL
	RELIEF VALVE

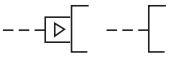
PNEUMATIC VALVES (Cont'd)

Symbol	Description
	2-POSITION 2-WAY
	2-POSITION 3-WAY
	2-POSITION 4-WAY
	2-POSITION, 4-WAY 5-PORTED
	3-POSITION, 4-WAY, APB ports closed, center pos.
	3-POSITION, 4-WAY, CE 5-PORTED cylinder ports open to exhaust in center position
	3-POSITION, 4-WAY, PC 5-PORTED pressure ports open to exhaust in center position
	QUICK EXHAUST
	SHUTTLE

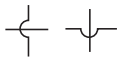
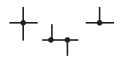
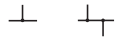
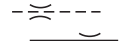
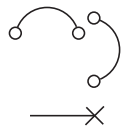
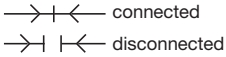
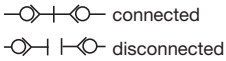
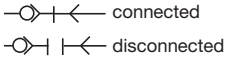
VALVE ACTUATORS

Symbol	Description
	MANUAL general symbol
	PUSH BUTTON
	LEVER
	PEDAL OR TREADLE
	MECHANICAL cam, toggle, etc.
	SPRING
	DETENT line indicates which detent is in use
	PIEZO

VALVE ACTUATORS (Cont'd)

Symbol	Description
	SOLENOID
	INTERNAL PILOT SUPPLY
 complete simplified	REMOTE PILOT SUPPLY
	AND / OR COMPOSITE solenoid and pilot or manual override
	AND / OR COMPOSITE solenoid and pilot or manual override and pilot

LINES AND FUNCTIONS

Symbol	Description
	solid line – MAIN LINE
	dashed line – PILOT LINE
	dotted line – EXHAUST OR DRAIN LINE
	center line – ENCLOSURE OUTLINE
	LINES CROSSING (90° intersection not necessary)
	LINES JOINING (90° intersection not necessary)
	LINES JOINING
	FLOW DIRECTION hydraulic medium
	FLOW DIRECTION gaseous medium
	ENERGY SOURCE
	LINE WITH FIXED RESTRICTION
	LINE WITH ADJUSTABLE RESTRICTION
	FLEXIBLE LINE
	PLUGGED PORT, TEST STATION, POWER TAKE-OFF
 connected disconnected	QUICK DISCONNECT WITHOUT CHECKS
 connected disconnected	QUICK DISCONNECT WITH CHECKS
 connected disconnected	QUICK DISCONNECT WITH ONE CHECK

A

Compressed Air Systems

Saving Money and Space by Sizing Your Valves Properly

You can "plug" *your* requirements into the following simple formula, and determine the Cv needed to do the job. By not oversizing, you'll save space and money, and you'll ensure the valve you select will do the job.

Converting the Job Requirements Into Cv (Capacity Co-efficient).

$$C_V = \frac{\text{Cylinder Area (Sq. In.) (See Table 1)} \times \text{Cylinder Stroke (In.)} \times \text{Compression Factor (Table 2)} \times \text{"A" (Table 2)}}{\text{Stroke Time (sec.)} \times 28.8}$$

Let's work through an example:

We want to extend a 3-1/4" bore cylinder which has a 12" stroke in one second, and we have a supply pressure of 80 PSI to do the work. Here's what we know:

Cylinder Area for a 3-1/4" Bore, from Table 1 .....8.30 sq. in.

Cylinder Stroke.....12 in.

Stroke Time Required in Seconds.....1 sec.

Compression Factor at 80 PSI, from Table 2 .....6.4

"A" Constant for 80 PSI, from Table 2.....048

Substituting in the formula, we have:

$$C_V = \frac{8.30 \times 12 \times 6.4 \times .048}{1 \times 28.8} = 1.06$$

Any valve, therefore, which has a Cv of *at least* 1.06, will extend our cylinder the specified distance in the required time.

Choosing the Valve "Series"

Your next step is to choose a basic valve design to do the job. For a quick guide to valve designs, see Table 3.

Having selected the basic valve design, consult the Capacity Co-efficient (Cv) tables which describe the individual valve capacities.

Selecting the Valve Model, Options and Accessories

Having determined Cv, series, port size, flow-path configuration (pre-determined by circuit design), and actuation method, you're ready to choose the *exact* valve model number.

Table 1

Effective Square-Inch Areas for Standard-Bore-Size Cylinders

Bore Size	Cylinder Area (Sq. In.)	Bore Size	Cylinder Area (Sq. In.)
3/4"	.44	4"	12.57
1"	.79	4-1/2"	15.90
1-1/8"	.99	5"	19.64
1-1/4"	1.23	6"	28.27
1-1/2"	1.77	7"	38.48
1-3/4"	2.41	8"	50.27
2"	3.14	10"	78.54
2-1/2"	4.91	12"	113.10
3-1/4"	8.30	14"	153.94
3-5/8"	10.32	—	—

Table 2

Compression Factors and "A" Constants

Inlet Pressure (PSIG)	Compression Factor	"A" Constants for Various Pressure Drop*		
		2 PSI △P	5 PSI △P	10 PSI △P
10	1.6	.152	.103	—
20	2.3	.126	.084	.065
30	3.0	.111	.073	.055
40	3.7	.100	.065	.048
50	4.4	.091	.059	.044
60	5.1	.085	.055	.040
70	5.7	.079	.051	.037
80	6.4	.075	.048	.035
90	7.1	.071	.046	.033
100	7.8	.068	.044	.032
110	8.5	.065	.042	.030
120	9.2	.063	.040	.029
130	9.9	.061	.039	.028
140	10.6	.058	.037	.027
150	11.2	.057	.036	.026
160	11.9	.055	.035	.025
170	12.6	.053	.034	.024
180	13.3	.052	.033	.024
190	14.0	.051	.032	.023
200	14.7	.050	.032	.023

Note: Use "A" constant at 5 PSI rP for most applications. On very critical applications, use "A" at 2 PSI rP. You will find in many cases, a 10 PSI rP is not detrimental, and can save money and mounting space.

* Tabulated values are the solution of $\frac{1}{22.48}\sqrt{\frac{GT}{(P_1 - P_2)\,P_2}}$ where T is for 68°F and G =1 for Air.

Table 3

Characteristics of the Major Valve Designs

A. Poppet 3-Way and 4-Way	1. High flow capacities 2. Minimum lubrication requirements 3. Fast response 4. Self-cleaning poppet seats 5. Pressures of 15 to 150 PSIG (modifications for vacuum to 250 PSIG)
B. Spool Valves (WCS) 3-Way and 4-Way	1. Low friction 2. Lower operating pressures 3. Fast response 4. Less wear 5. Long Cycle Life - Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore 6. Non-Lube Service - No lubrication required for continuous valve shifting 7. Bi-Directional Spool Seals - Common spool used for any pressure, including vacuum
C. Packed Bore 4-Way	1. Wide range of flow capacities 2. Wide range of flow-path configurations 3. Pilot-operated models available 4. Pressures of vacuum to 150 PSIG
D. Rotary Or Reciprocating Disc 4-Way, manually operated	1. Inexpensive 2. Versatility in manual actuation

Cv – Capacity Co-efficients (sometimes called Flow Factors). Each flow path through the valve has its own Cv value. All Cv ratings for each valve cataloged on this page are listed on the front side of this sheet.

$$C_V = \frac{Q}{22.48}\sqrt{\frac{GT}{(P_1 - P_2)\,P_2}}$$

Q = Flow in Standard Cubic Feet per minute (14.7 PSIA at 60°F)
P_1 = Inlet Absolute Pressure (gauge pressure + 14.7)
P_2 = Outlet Absolute Pressure (gauge pressure + 14.7)
Note: P_2 must be greater than .53 x P_1
G = Specific Gravity of flowing medium (Air, G =1)
T = Absolute Temperature of Air (460 + °F.)

Cv = Q x "A" (Table 2)

B

Filters, Regulators, Lubricators

Filters, Regulators & Lubricators

Particulate Filters B2-B3
F01 .....B4
F03 .....B6
F08 .....B8
F18 .....B10
F16 .....B12
F28 .....B14
F26 .....B16
F90 .....B18
F30 .....B20
F34 .....B22
F35 .....B24
F43 .....B26

Coalescing Filters.....B28-B29
M03 .....B30
M08 .....B32
M18 .....B34
M16 .....B36
M28 .....B38
M26 .....B40
M21 .....B42
M90 .....B44
M30 .....B46
M31 .....B48
M32 .....B50
M35 .....B52
M43 .....B54
M45 .....B56
M55 .....B58

After Filters B59
A18 .....B61
A28 .....B63

Exhaust Mufflers
F23 .....B64
F33 .....B65

Exhaust Silencer
XMC B66

Liquid Separators
WSA / WSO.....B68
WWSA.....B70

External Drains
X01 .....B71
X02 / XB3 .....B72
X51 .....B74

Regulators.....B77-B79
R03.....B80
RB3 / RA3 .....B82
RA4 .....B84
R24, R25 .....B86
R45, R46 .....B88
R08.....B90
R120.....B92
R18.....B96
R16.....B98
R28.....B100
R26.....B102
R90.....B104
R30.....B108
R40.....B110

Common P1 Regulators...B113
R09.....B114
R19.....B116

Dial-Air™ Regulators.....B118-B119
R11.....B120
R21.....B122
R31.....B124
R41.....B126

Precision Regulators.....B129
P16.....B130
P17.....B132
WRA302.....B134
WRA102.....B136
WRA102BP B138
WRA171 .....B140
WEA632 .....B142
WBA208 .....B144
WBA45 .....B146

Lubricators.....B148-B149
L01 .....B150
L03 .....B152
L08 .....B154
L18 .....B156
L16 / L17 .....B158
L28 .....B160
L26 / L27 .....B162
L90 .....B164
L30 .....B166
L31 .....B168
L32 .....B170
L40 .....B172
L41 .....B174
L42 .....B176
L50 .....B178

Filter / Regulators...B181-B183
B03.....B184
BB3 / BA3.....B186
B08.....B188
B18.....B190
CB6 .....B192
PC6 .....B194
B28.....B196
B90.....B198

Combinations – 2-Unit B200-B201
D03.....B202
D08.....B204
CB7 .....B206
D18.....B208
D28.....B210
D90.....B212

Combinations – 3-Unit B214-B215
C03.....B216
C08..... B218
C18..... B220
C16..... B222
C28..... B224
C26..... B226
C31..... B228
C90..... B230

Particulate Filter Numbering System

= "Most Popular"

Unit Function	Family		Thread Type	Pipe Size	Filter Element	Bowls / Drains	Options	Options	Level
F	1	8	- 0	3	- S	K	0	0	B

Unit Function

F Filter

Family

08 Miniature
18 Compact
28 Standard

Thread Type

0 NPT
C BSPP [1]

Pipe Size

Code	Pipe Size	Series 08	Series 18	Series 28
2	1/4"	X	X	
3	3/8"		X	X
4	1/2"		X	X
6	3/4"			X

Filter Element

S 5 Micron

Bowls / Drains

Drains	Bowls: Plastic w/ Guard	Bowls: Metal w/ No Sight Gauge	Bowls: Metal w/ Sight Gauge[2]
1/8 NPT Female 2 (18 & 28 Only)	E	U	F
Automatic Drain [3] (18, 28 Only)	**G**	A	H
Manual Drain	**K**	—	L
Piston Drain (08 Series Only)	**R**	—	S

Options

0 None
L Differential Pressure Indicator (18 & 28 Only)
R Electronic DPI (18 & 28 Only)
V Fluorocarbon Seals (18 & 28 Only)

Options

0 None
R Electronic DPI (18 & 28 Only)
V Fluorocarbon Seals (18 & 28 Only)

Level

Code	Series
B	08
B	18
B	28

1 ISO, R228 (G Series)

2 F08 Filter has an all Metal Bowl (no sight gauge)

3 Operating range 15 to 250 PSIG (1 to 17 bar)

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

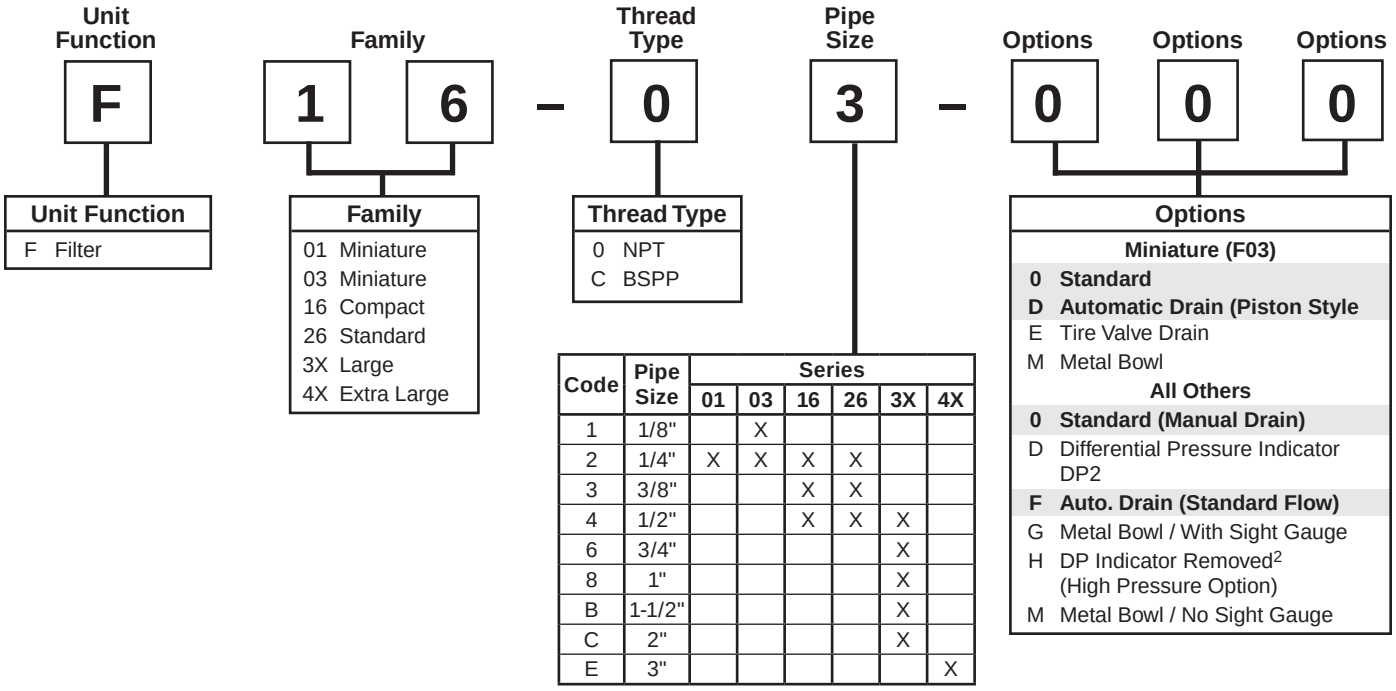
NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

F 1 8 - 0 3 - S K 0 0 B

Particulate Filter Numbering System

= "Most Popular"



Unit Function

F	Filter

Family

01	Miniature
03	Miniature
16	Compact
26	Standard
3X	Large
4X	Extra Large

Thread Type

0	NPT
C	BSPP

Code	Pipe Size	Series					
		01	03	16	26	3X	4X
1	1/8"		X				
2	1/4"	X	X	X	X		
3	3/8"			X	X		
4	1/2"			X	X	X	
6	3/4"					X	
8	1"					X	
B	1-1/2"					X	
C	2"					X	
E	3"						X

Options

	Miniature (F03)
0	**Standard**
D	**Automatic Drain (Piston Style**
E	Tire Valve Drain
M	Metal Bowl
	All Others
0	**Standard (Manual Drain)**
D	Differential Pressure Indicator DP2
F	**Auto. Drain (Standard Flow)**
G	Metal Bowl / With Sight Gauge
H	DP Indicator Removed[2] (High Pressure Option)
M	Metal Bowl / No Sight Gauge

[1] Ports on some units are BSPP-G, others are BSPT-Rc. Consult specific model page for specifications.

[2] Models F35 & F43.

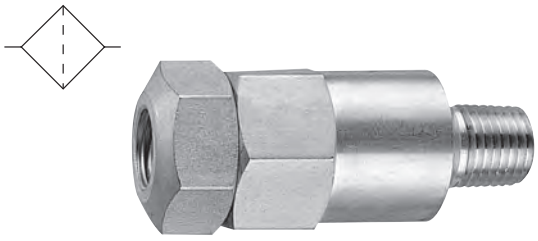
"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.

NOTE: 000 in position 6, 7, and 8 signifies standard product.

Particulate Filter F01



F01-02-000

In-Line Filter

This small, aluminum in-line filter is designed to provide protection for portable pneumatic hand tools. It weighs only 2 ounces with a throw-away filter element rated at 5 microns. Either port may be used as the inlet port. Flow is 17 SCFM (8 dm^3/s) at 90 PSIG (6.2 bar) inlet pressure with 5 PSIG (0.3 bar) pressure drop.

= **"Most Popular"**

Specifications

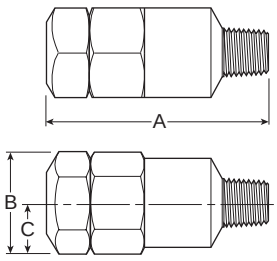
Flow Capacity*		17.0 SCFM (8 dm^3/s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPT-Rc	1/4
Standard Filtration		5 Micron
Weight		.13 lb. (.06 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Baffle	Aluminum
Body	Aluminum
Filter Element	Sintered Polyethylene
Seals	Nitrile



Dimensions

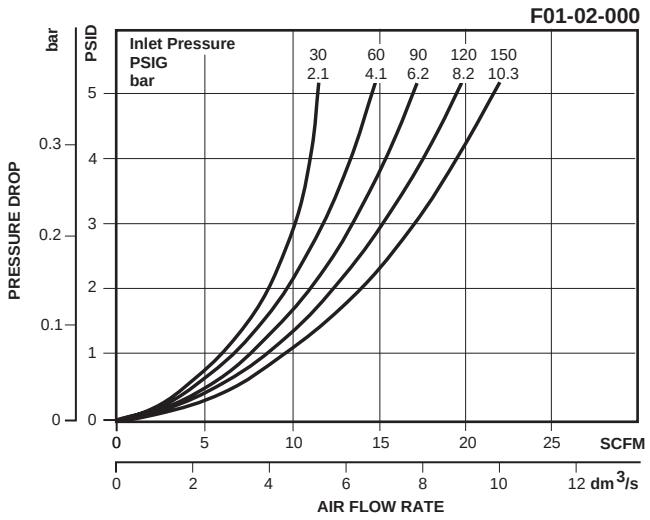
Models	Inches (mm)	A	B	C
Standard Unit F01-02-000		2.50 (63.5)	1.00 (25)	.51 (13)

= "Most Popular"

Replacement Element Kits

Type "A", 5 Micron FRP-95-199

F01-02-000



B

Filters, Regulators, Lubricators

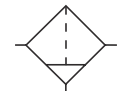
Ordering Information

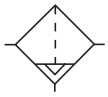
Model Type	Port Size	Standard Unit
In-Line Filter	1/4	F01-02-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F03

= "Most Popular"


Manual Drain


Auto Drain



F03-02-000

Features

- Excellent Water Removal Efficiency
- Unique Deflector Plate that Creates Swirling of the Air Stream Ensuring Maximum Water and Dirt Separation
- Easily Disassembled for Servicing Without the Use of Tools

Specifications

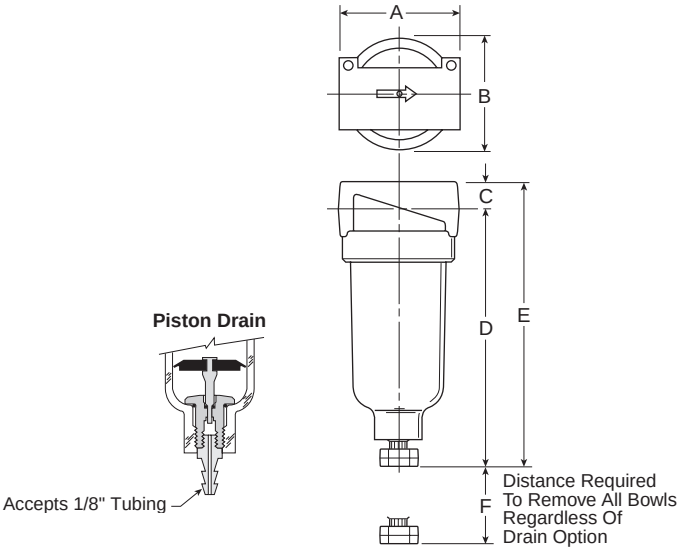
Flow Capacity*	1/8	22.0 SCFM (10 dm^3/s)
	1/4	24.0 SCFM (11 dm^3/s)
Maximum Supply Pressure		
Polycarbonate Bowl		0 to 150 PSIG (0 to 10.3 bar)
Metal Bowl		0 to 250 PSIG (0 to 17.2 bar)
Piston Drain		10 to 250 PSIG (0.7 to 17.2 bar)
Operating Temperature		
Polycarbonate Bowl		32°F to 125°F (0°C to 52°C)
Metal Bowl		32°F to 175°F (0°C to 80°C)
Piston Drain		32°F to 125°F (0°C to 52°C)
Port Size	NPT	1/8, 1/4
Standard Filtration		5 Micron
Weight		.41 lb. (.18 kg)

* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Zinc
Bowls	Transparent	Polycarbonate
	Metal (Without Sight Gauge)	Zinc
Deflector, Element Holder & Baffle		Plastic
Manual Drain	Body & Stem	Plastic
	Seals	Nitrile
Piston Drain	Piston & Seals	Nitrile
	Stem, Seat, Adaptor & Washers	Aluminum
Filter Elements	5 Micron	Plastic
Seals		Nitrile



Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit F03-XX-000		1.69 (43)	1.53 (39)	.39 (10)	3.82 (97)	4.21 (107)	1.60 (41)
Piston Drain F03-XX-D00		1.69 (43)	1.53 (39)	.39 (10)	3.87 (99)	4.26 (108)	1.60 (41)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Manual Drain PS447B
- Piston Drain PS451B

Plastic Bowl –
- Manual Drain PS404
- Piston Drain PS408B

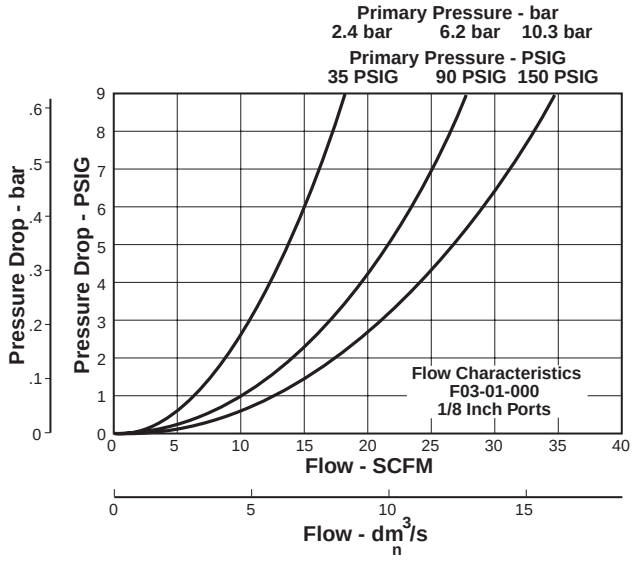
Replacement Element Kits

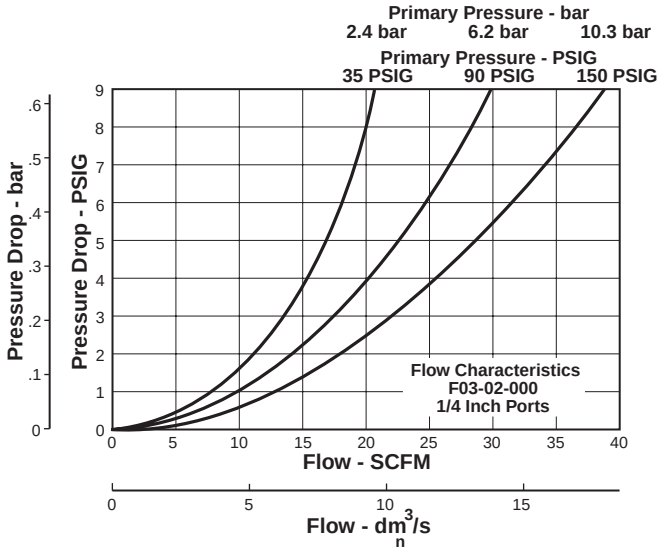
5 Micron PS403

Accessories

Filter Element Kit (Bulk Pack, Qty. 12) FRP-96-303

Mounting Bracket Kit PS417B





B

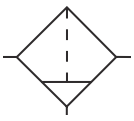
Filters, Regulators, Lubricators

Ordering Information

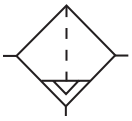
Model Type	Port Size	Polycarbonate Bowl	Metal Bowl
Manual Drain	1/8	F03-01-000	F03-01-M00
	1/4	F03-02-000	F03-02-M00
Piston Drain	1/8	F03-01-D00	F03-01-DM0
	1/4	F03-02-D00	F03-02-DM0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F08



Manual Drain



Auto Drain

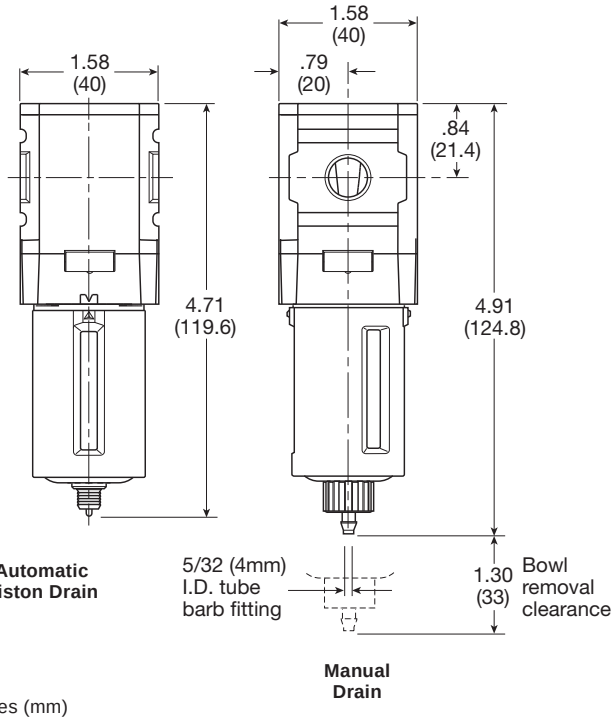


B

Filters, Regulators, Lubricators

Features

- Standard 5 Micron Filtration
- Quick-disconnect Bowl
- Bowl Guard
- High Flow Capacity



Inches (mm)

Specifications

Flow Capacity*	1/4	42 SCFM (20 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl Metal Bowl	14° to 125°F (-10° to 52°C) 14° to 150°F(-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.6 oz
Standard Filtration		5 Micron
Weight		0.24 lb. (0.11 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Baffle		Acetal
Body		Aluminum
Body Cap		ABS
Bowl	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Bowl Guard		Nylon
Element Retainer		Acetal
Filter Element		Sintered Polyethylene
Seals	Plastic Bowl Metal Bowl	Nitrile Nitrile

Air quality:
Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl, Manual Drain.....GRP-96-714

Plastic Bowl / Bowl Guard, Manual Drain.....GRP-96-712

Replacement Element Kit and Bowl Seal

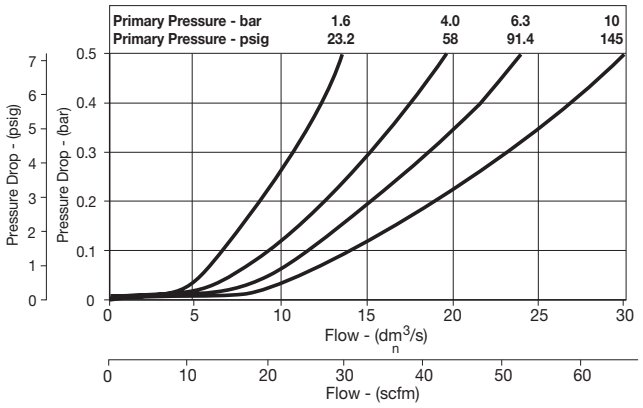
Type "A", 5 Micron FRP-96-729

Accessories

Automatic Piston Drain GRP-96-716

Wall Mounting Bracket –
C-Type GPA-97-010
T-Type GPA-96-737

F08 1/4" Filter



B

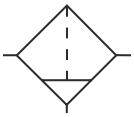
Filters, Regulators, Lubricators

Ordering Information

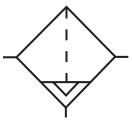
Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl (No Sight Gauge)
Manual Drain	1/4	F08-02-SK00B	F08-02-SL00B
Automatic Piston Drain	1/4	F08-02-SR00B	F08-02-SS00B

Options - To order an option supplied with the unit model, Add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F18



Manual Drain

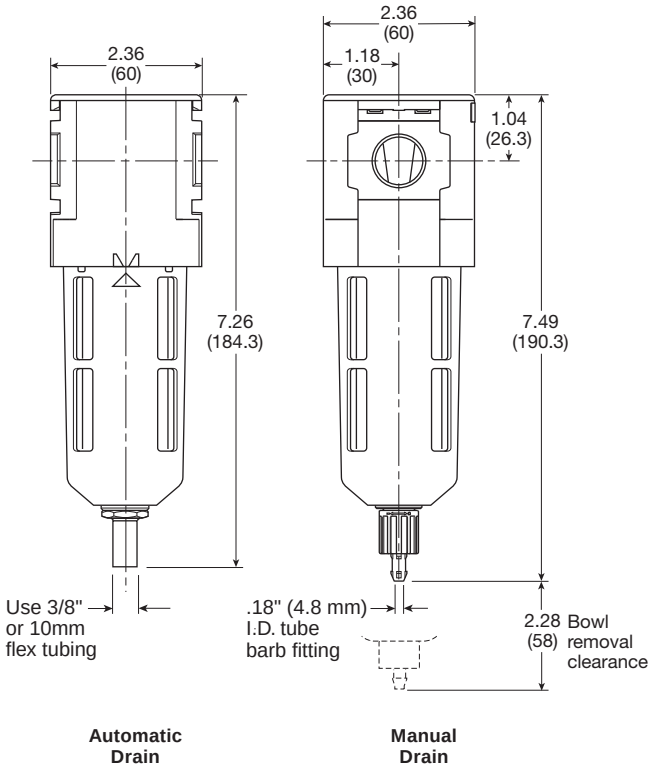


Auto Drain



Features

- Standard 5 Micron Filtration
- High Flow Capacities
- 1/2" NPT / BSPP-G Over-port
- Quick-disconnect Bowl
- Bowl Guard
- Light Weight
- Barbed Manual Drain Connection with Pipe-away



Inches (mm)

Specifications

Flow Capacity*	1/4	50 SCFM (24 dm^3/s, ANR)
	3/8	78 SCFM (37 dm^3/s, ANR)
	1/2	82 SCFM (39 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F(-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		1.72 oz
Standard Filtration		5 Micron
Weight		0.62 lb. (0.28 kg)

* Inlet pressure 91.3 psig (6.3 bar). Pressure drop 4.9 psig (0.34 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard		Nylon
Deflector		Polypropylene
Element Retainer / Baffle		Acetal
Filter Element		Sintered Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)

Air quality:
Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge,
Automatic Float Drain..... GRP-96-637

Metal Bowl with Sight Gauge, Manual Drain..... GRP-96-636

Plastic Bowl –
Bowl Guard, Auto Drain GRP-96-635
Bowl Guard, Manual Drain..... GRP-96-634

Replacement Element Kits and Bowl Seal

Type "A", 5 Micron Element.....FRP-96-639

Type "A", 5 Micron with Retainer, Deflector,
and Bowl O-ring FRP-96-641

Accessories

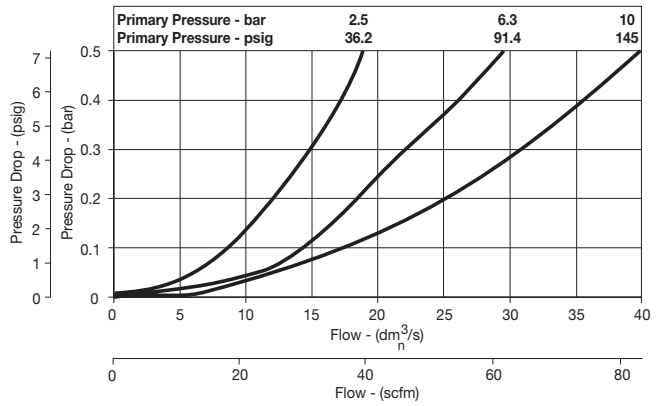
Automatic Drain –
Fluorocarbon GRP-95-981
Nitrile GRP-95-973

Manual Drain..... GRP-96-685

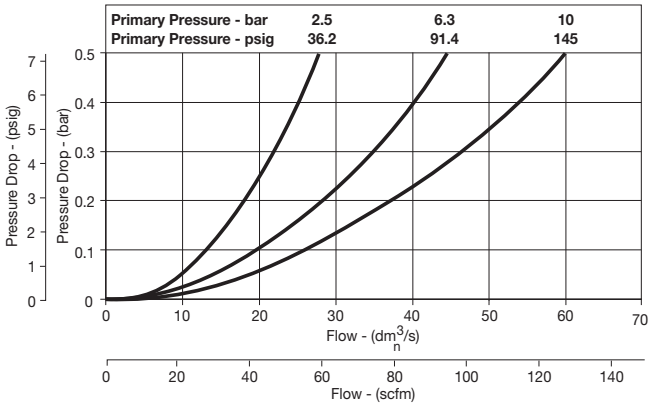
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket –
L-Type GPA-96-604
T-Type..... GPA-96-602

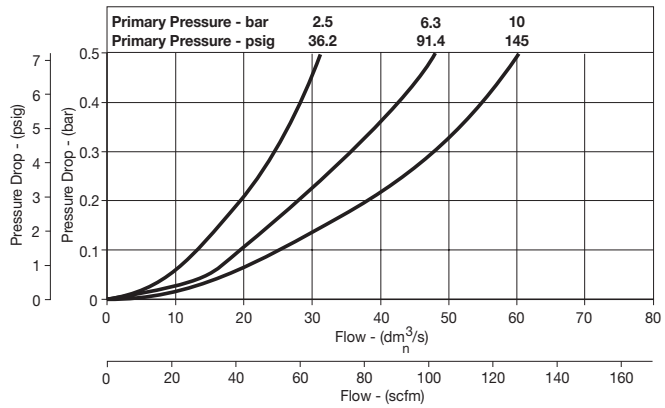
F18 1/4" Filter



F18 3/8" Filter



F18 1/2" Filter

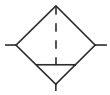


Ordering Information

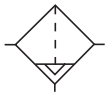
Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
Manual Drain	1/4	F18-02-SK00B	F18-02-SL00B
	3/8	F18-03-SK00B	F18-03-SL00B
	1/2	F18-04-SK00B	F18-04-SL00B
Automatic Drain	1/4	F18-02-SG00B	F18-02-SH00B
	3/8	F18-03-SG00B	F18-03-SH00B
	1/2	F18-04-SG00B	F18-04-SH00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F16



Manual Drain



Auto Drain



F16-02-000

B

Filters, Regulators, Lubricators

= **"Most Popular"**

Specifications

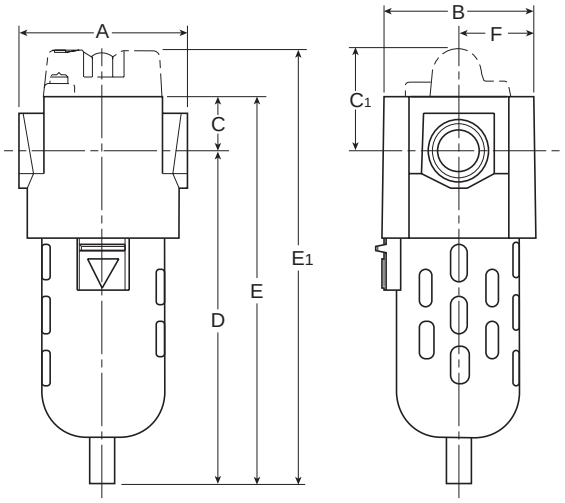
Flow Capacity*	1/4	63.0 SCFM (29.7 dm^3/s)
	3/8	74.1 SCFM (34.9 dm^3/s)
	1/2	80.4 SCFM (37.9 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		2.7 oz
Standard Filtration		5 Micron
Weight		1.8 lb. (0.8 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Features

- Manual Drain
- 5 Micron Rated Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch



Materials of Construction

Baffle		Polypropylene
Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Deflector		Polypropylene
Element Retainer		Acetal
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Polycarbonate

Dimensions

Models (Inches (mm))	A	B	C	C_1	D	E	E_1	F
Standard Unit F16-XX-000	3.00 (76)	2.60 (66)	1.00 (25.4)	—	5.50 (139.7)	6.50 (165)	—	1.30 (33)
Differential Pressure Indicator F16-XX-D00	3.00 (76)	2.60 (66)	1.00 (25.4)	1.83 (46.5)	5.50 (139.7)	6.50 (165)	7.33 (186)	1.30 (33)
Automatic Drain F16-XX-F00	3.00 (76)	2.60 (66)	1.00 (25.4)	—	5.50 (139.7)	6.64 (168.7)	—	1.30 (33)
Metal Bowl / Metal Bowl with Sight Gauge F16-XX-G00	3.00 (76)	2.60 (66)	1.00 (25.4)	—	5.50 (139.7)	7.09 (180)	—	1.30 (33)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Automatic Drain FRP-95-950
- Manual Drain FRP-95-178
- Sight Gauge, Manual Drain GRP-95-133

Plastic Bowl –
- Bowl Guard, Automatic Drain FRP-95-015
- Bowl Guard, Manual Drain FRP-95-014
- Manual Drain FRP-95-017

Replacement Element Kits

Type "A", 5 Micron FRP-95-160

Accessories

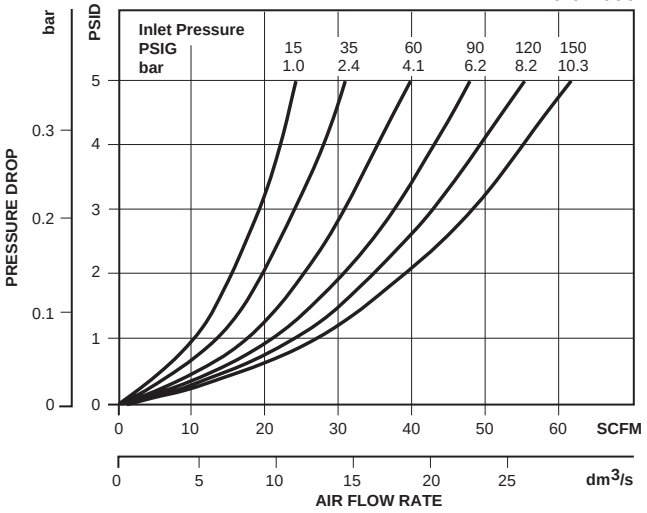
Automatic Drain, Nitrile GRP-95-973

L-Bracket GPA-95-016

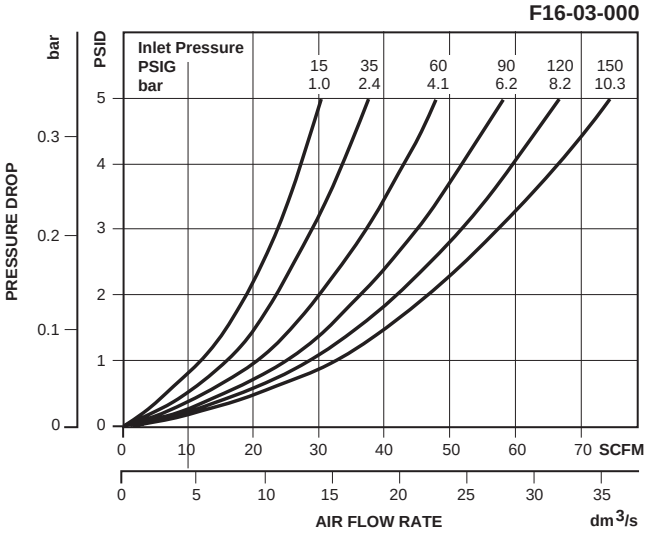
Manual Drain FRP-95-610

Sight Gauge Kit GRP-95-079

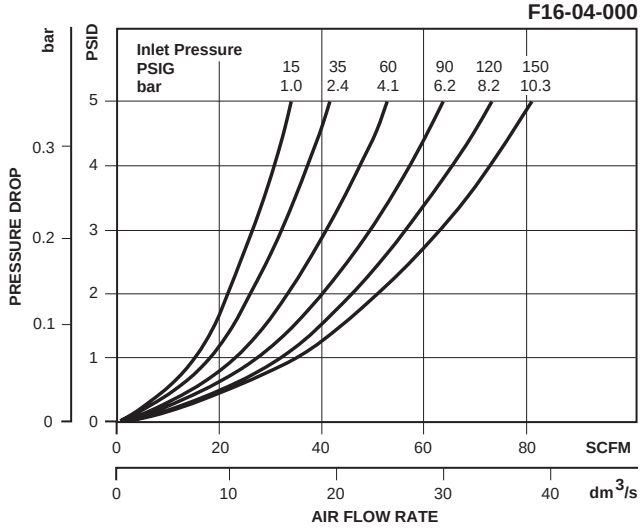
F16-02-000



F16-03-000



F16-04-000

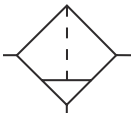


Ordering Information

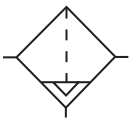
Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl	Metal Bowl / Sight Gauge	Polycarbonate Bowl / Bowl Guard / Differential Pressure Indicator
Manual Drain	1/4	F16-02-000	F16-02-M00	F16-02-G00	F16-02-D00
	3/8	F16-03-000	F16-03-M00	F16-03-G00	F16-03-D00
	1/2	F16-04-000	F16-04-M00	F16-04-G00	F16-04-D00
Automatic Drain	1/4	F16-02-F00	F16-02-FM0	F16-02-FG0	F16-02-DF0
	3/8	F16-03-F00	F16-03-FM0	F16-03-FG0	F16-03-DF0
	1/2	F16-04-F00	F16-04-FM0	F16-04-FG0	F16-04-DF0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F28



Manual Drain

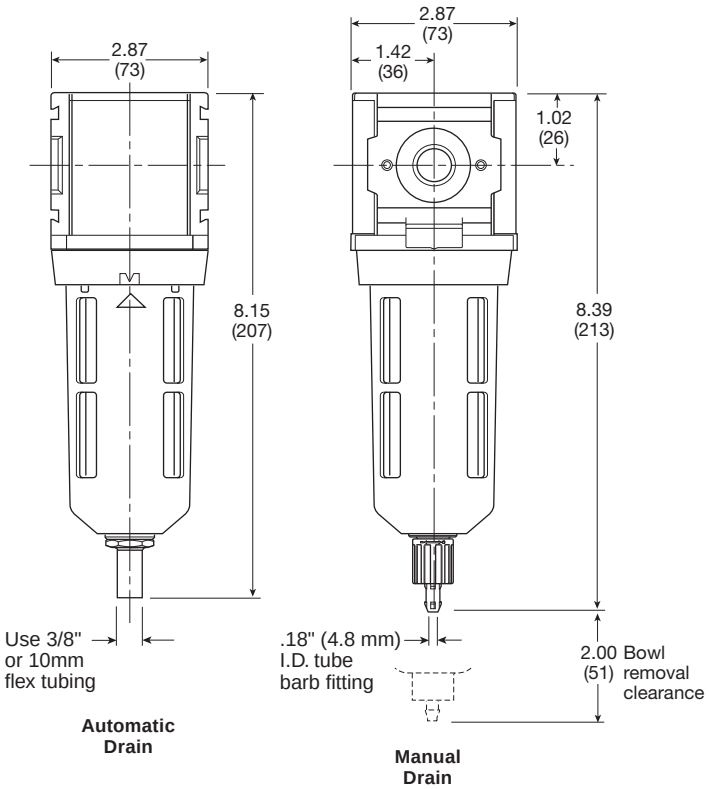


Auto Drain



Features

- Standard 5 Micron Filtration
- High Flow Capacities
- 3/4" NPT / BSPP-G Over-port
- Quick-disconnect Bowl
- Bowl Guard
- Light Weight
- Barbed Manual Drain Connection with Pipe-away



Inches (mm)

Specifications

Flow Capacity*	3/8	115 SCFM (54 dm^3/s, ANR)
	1/2	120 SCFM (57 dm^3/s, ANR)
	3/4	145 SCFM (68 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity		2.87 oz
Standard Filtration		5 Micron
Weight		1.01 lb. (0.46 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (.34 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard		Nylon
Deflector		Polypropylene
Element Retainer / Baffle		Acetal
Filter Element		Sintered Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)

Air quality:
Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge,
Automatic Float Drain..... GRP-96-645

Metal Bowl with Sight Gauge, Manual Drain..... GRP-96-644

Plastic Bowl –
Bowl Guard, Auto Drain GRP-96-643
Bowl Guard, Manual Drain..... GRP-96-642

Replacement Element Kits and Bowl Seal

Type "A", 5 Micron with Element FRP-96-653

Type "A", 5 Micron with Retainer, Deflector,
and Bowl O-ring FRP-96-283

Accessories

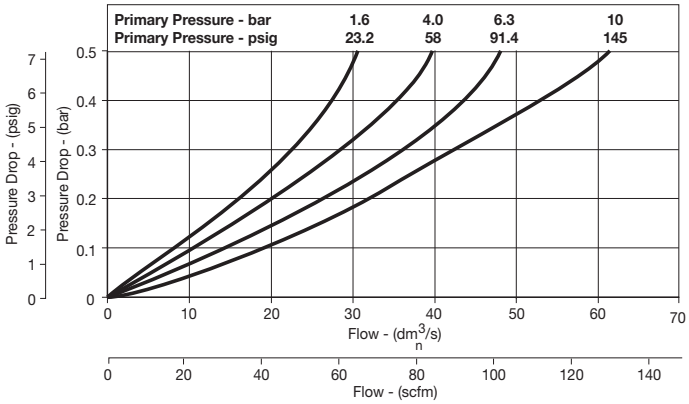
Automatic Drain –
Fluorocarbon GRP-95-981
Nitrile GRP-95-973

Manual Drain..... GRP-96-685

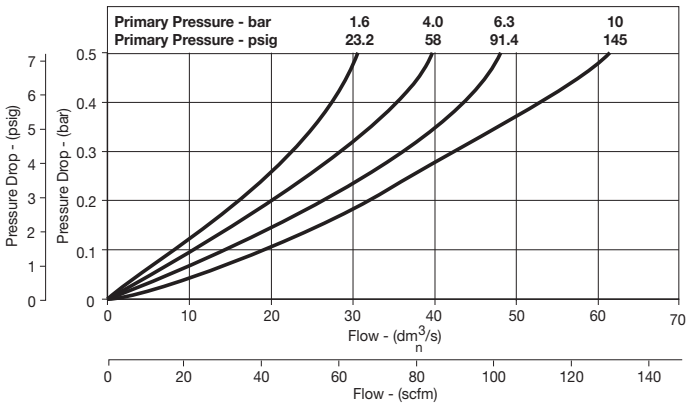
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket –
L-Type GPA-96-605
T-Type GPA-96-602

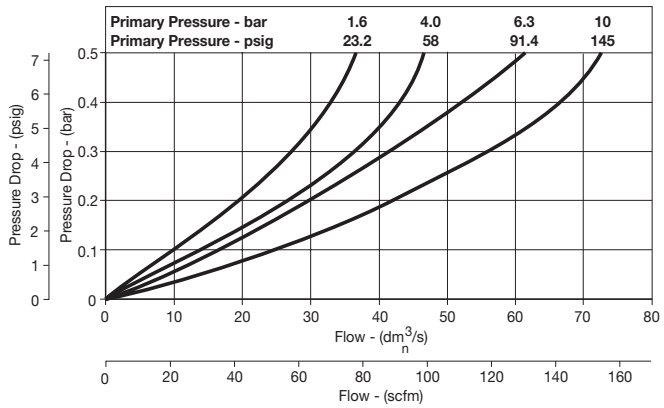
F28 3/8" Filter



F28 1/2" Filter



F28 3/4" Filter

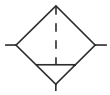


Ordering Information

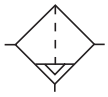
Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
Manual Drain	3/8	F28-03-SK00B	F28-03-SL00B
	1/2	F28-04-SK00B	F28-04-SL00B
	3/4	F28-06-SK00B	F28-06-SL00B
Automatic Drain	3/8	F28-03-SG00B	F28-03-SH00B
	1/2	F28-04-SG00B	F28-04-SH00B
	3/4	F28-06-SG00B	F28-06-SH00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F26



Manual Drain



Auto Drain



F26-02-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/4	81.3 SCFM (28.3 dm^3/s)
	3/8	117.8 SCFM (55.5 dm^3/s)
	1/2	149.8 SCFM (70.6 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10,3 bar)
	Metal Bowl	200 PSIG (13,8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		3.2 oz
Standard Filtration		5 Micron
Weight		2.9 lb. (1.3 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

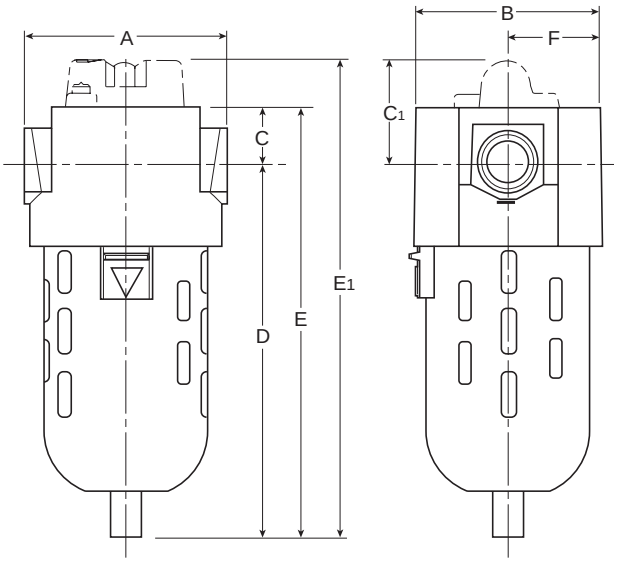
"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Features

- Manual Drain
- 5 Micron Rated Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch

Materials of Construction

Baffle		Acetal
Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Deflector		Polypropylene
Element Retainer		Acetal
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Polycarbonate



Dimensions

Models (Inches (mm))	A	B	C	C_1	D	E	E_1	F
Standard Unit F26-XX-000	3.30 (84)	3.00 (76)	1.00 (25.4)	—	6.40 (162.6)	7.40 (188)	—	1.50 (38)
Differential Pressure Indicator F26-XX-D00	3.30 (84)	3.00 (76)	1.00 (25.4)	1.83 (46.5)	6.40 (162.6)	7.40 (188)	8.23 (209)	1.50 (38)
Automatic Drain F26-XX-F00	3.30 (84)	3.00 (76)	1.00 (25.4)	—	6.40 (162.6)	7.54 (191.5)	—	1.50 (38)
Metal Bowl / Metal Bowl with Sight Gauge F26-XX-G00	3.30 (84)	3.00 (76)	1.00 (25.4)	—	6.40 (162.6)	7.30 (185)	—	1.50 (38)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Automatic Drain GRP-95-960
- Manual Drain GRP-95-930
- Sight Gauge, Manual Drain GRP-95-931

Plastic Bowl –
- Automatic Drain GRP-95-948
- Bowl Guard, Manual Drain GRP-95-935
- Manual Drain GRP-95-929

Replacement Element Kits

Type "A", 5 Micron FRP-95-115

Accessories

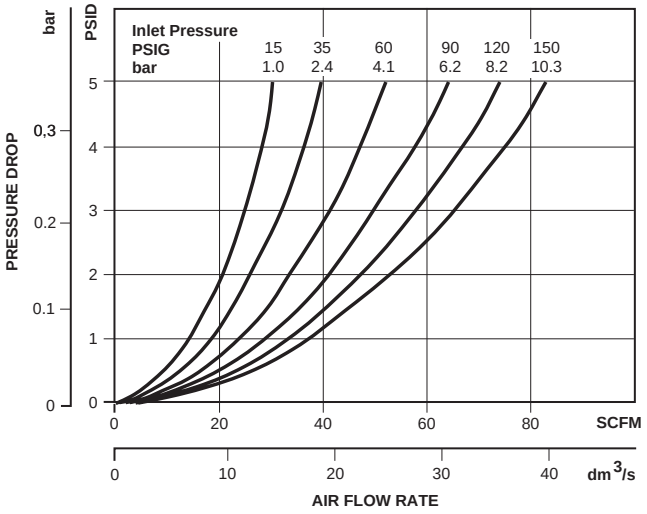
Automatic Drain, Nitrile GRP-95-973

Manual Drain..... FRP-95-610

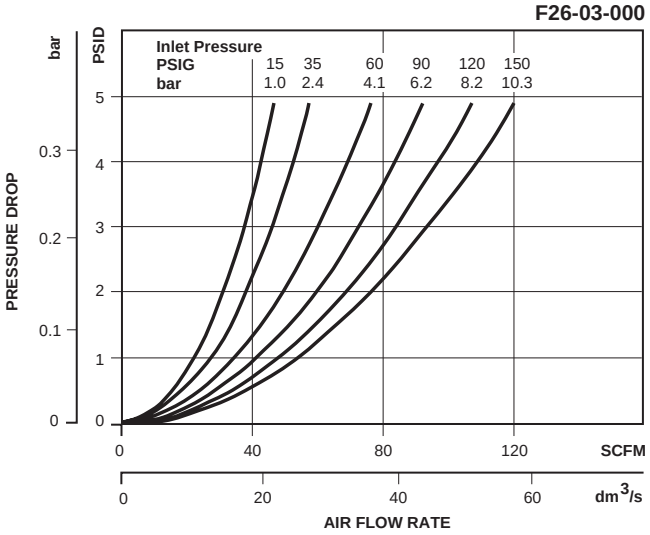
Sight Gauge Kit..... GRP-95-079

L-Bracket GPA-95-946

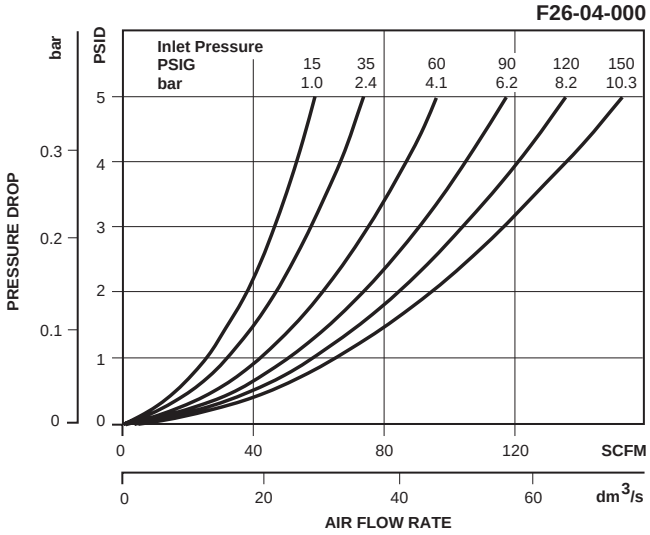
F26-02-000



F26-03-000



F26-04-000



Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl	Metal Bowl / Sight Gauge	Polycarbonate Bowl / Bowl Guard / Differential Pressure Indicator
Manual Drain	1/4	F26-02-000	F26-02-M00	F26-02-G00	F26-02-D00
	3/8	F26-03-000	F26-03-M00	F26-03-G00	F26-03-D00
	1/2	F26-04-000	F26-04-M00	F26-04-G00	F26-04-D00
Automatic Drain	1/4	F26-02-F00	F26-02-FM0	F26-02-FG0	F26-02-DF0
	3/8	F26-03-F00	F26-03-FM0	F26-03-FG0	F26-03-DF0
	1/2	F26-04-F00	F26-04-FM0	F26-04-FG0	F26-04-DF0

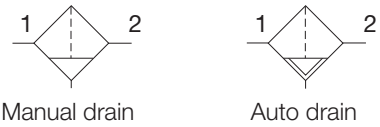
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F90

= "Most Popular"



Symbols



- Integral 3/4" or 1" ports (NPT & BSPP)
- High efficiency particulate element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Low temperature -40° with combined manual / semi-auto drain as standard

F90 - 0 6 - S H 0 0

Series	
Filter	F90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Element	
5 micron	S

Bowl / drain type	
H	Metal bowl / sight gauge & auto drain
L	Metal bowl / sight gauge / manual & semi auto drain

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Flow‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm³ (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number†
3/4"	Combined manual / semi auto drain	170	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	**F90-06-SL00**
3/4"	Auto drain	170	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	**F90-06-SH00**
1"	Combined manual / semi auto drain	170	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	**F90-08-SL00**
1"	Auto drain	170	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	244 (9.6)	90 (3.5)	94 (3.7)	0.9 (1.98)	**F90-08-SH00**

† **Standard part numbers shown in bold. For other models refer to Options chart above.**
‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

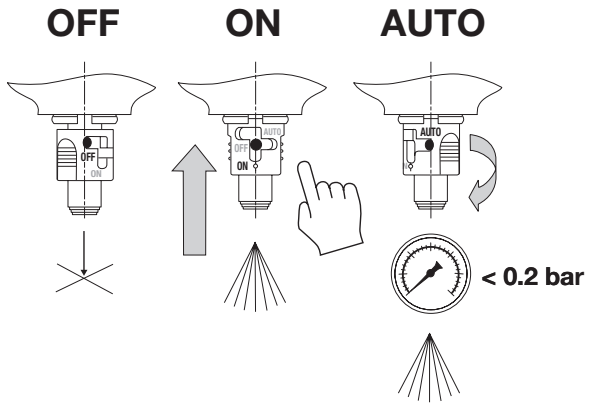
Specifications

Fluid		Compressed air
Maximum inlet pressure*		17.5 bar (254 psig)
Temperature range*:		
	Auto drain	-10°C to 60°C (14°F to 140°F)
	Combined drain	-40°C to 60°C (-40°F to 140°F)
Particle removal		5 micron
Air quality		Within ISO 8573-1: 1991 Class 3 and 5 (particulates) Within ISO 8573-1: 2001 Class 6 and 7 (particulates)
Typical flow 5 micron element 6.3 bar (91.4 psig) inlet pressure and 0.5 bar (7.3 psig) pressure drop		1" port 170 scfm
Manual / semi-auto drain		Closed at 0.8 bar (11.6 psig) G1/8 thread male
Auto drain bowl pressure to close drain		0.8 bar (11.6 psig)
Operating range manual override facility		0.8 bar (11.6 psig) to 17.5 bar (254 psig)
Bowl capacity		130 cm^3 (4.4 US oz)

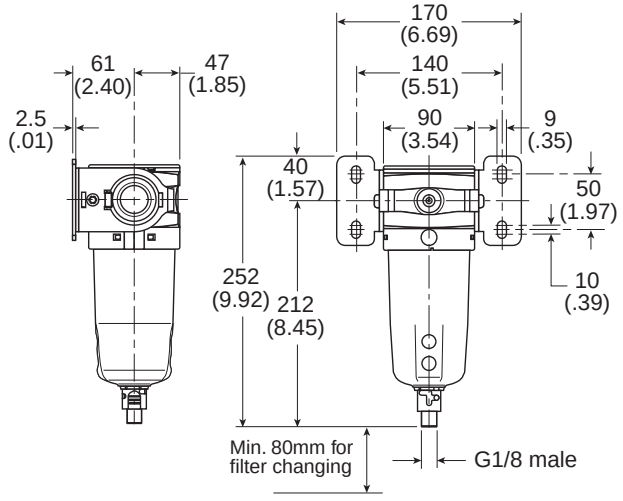
* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

Material specifications

Body		Aluminum
Sight glass		Polypropylene
Body cover		ABS
Element		Sintered P.E.
Seals		Nitrile NBR
Drains	Manual / semi-auto:	Acetal
	Automatic:	PA / Ø 10mm brass connection

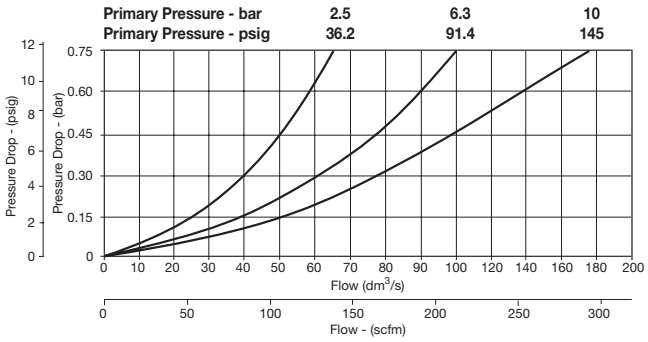


Dimensions mm (inches)

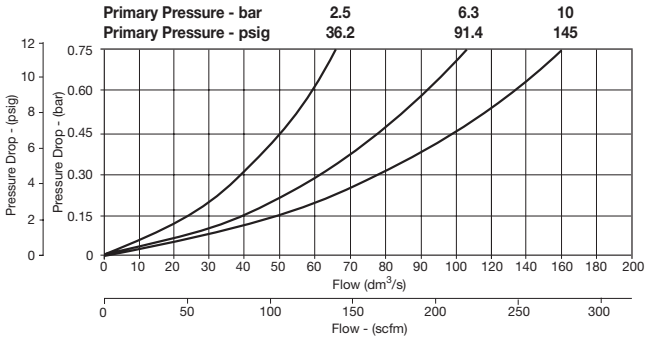


Flow characteristics

(3/4") Filter



(1") Filter



Service kits

5 micron element kit.....P3YKA00ESE

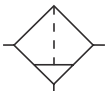
40 micron element kit..... P3YKA00ESG

Bowl kit with combined manual / semi auto drain..... P3YKA00BSC

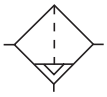
Bowl kit with auto drain.....P3YKA00BSA

Particulate Filter
F30

= "Most Popular"



Manual Drain



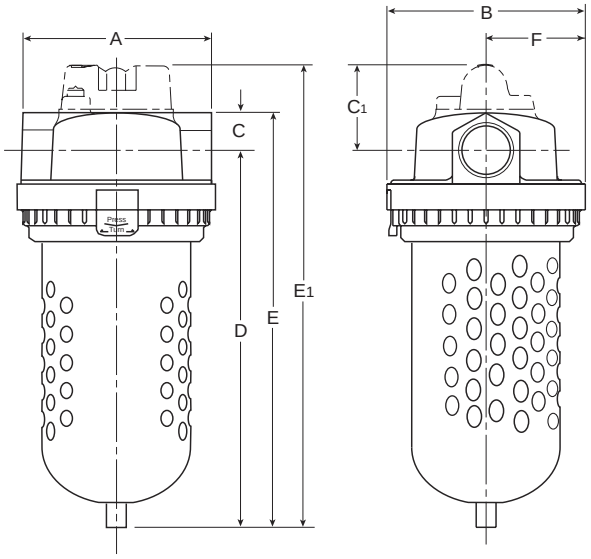
Auto Drain



F30-06-000

Features

- Standard Manual Drain
- Standard 5 Micron Rated Element
- Quick-disconnect Clamp Ring for Easy Bowl Removal
- Bowl Guard



Specifications

Flow Capacity*	3/4	316 SCFM (149.1 dm^3/s)
	1	323 SCFM (152.4 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Bowl Capacity		2.0 oz
Standard Filtration		5 Micron
Weight		5.5 lb. (2.5 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Baffle		Acetal
Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Deflector		Aluminum
Element Retainer		Steel Stud
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Tempered Glass

Dimensions

Models (Inches (mm))	A	B	C	C_1	D	E	E_1	F
Standard Unit F30-XX-000	4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	9.90 (251)	—	2.40 (61)
Differential Pressure Indicator F30-XX-D00	4.63 (118)	4.79 (122)	.94 (24)	1.89 (48)	8.96 (228)	9.90 (251)	10.73 (272.5)	2.40 (61)
Automatic Drain F30-XX-F00	4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	10.04 (255)	—	2.40 (61)
Metal Bowl F30-XX-M00	4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	10.00 (254)	—	2.40 (61)
Metal Bowl with Sight Gauge F30-XX-G00	4.63 (118)	4.79 (122)	.94 (24)	—	8.96 (228)	9.90 (251)	—	2.40 (61)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Automatic Drain GRP-95-970
- Sight Gauge, Manual Drain GRP-95-676
- Manual Drain FRP-95-593

Plastic Bowl –
- Bowl Guard, Automatic Drain FRP-95-775
- Bowl Guard, Manual Drain FRP-95-832
- Manual Drain FRP-96-315

Replacement Element Kits

Type "A", 5 Micron FRP-95-209

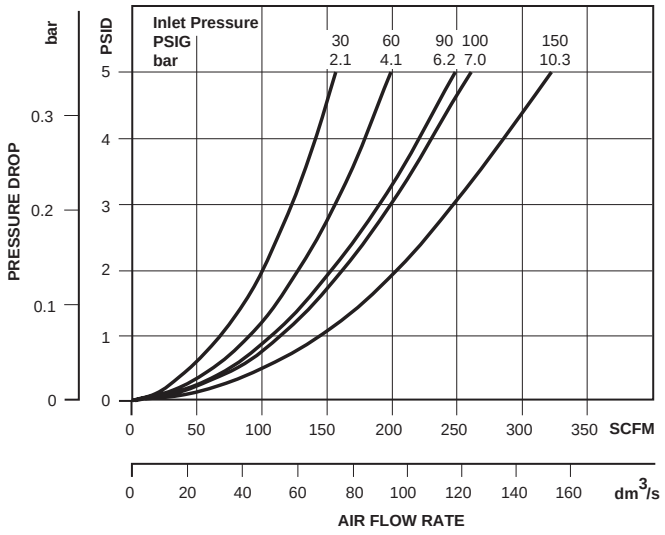
Accessories

Automatic Drain, Nitrile GRP-95-973

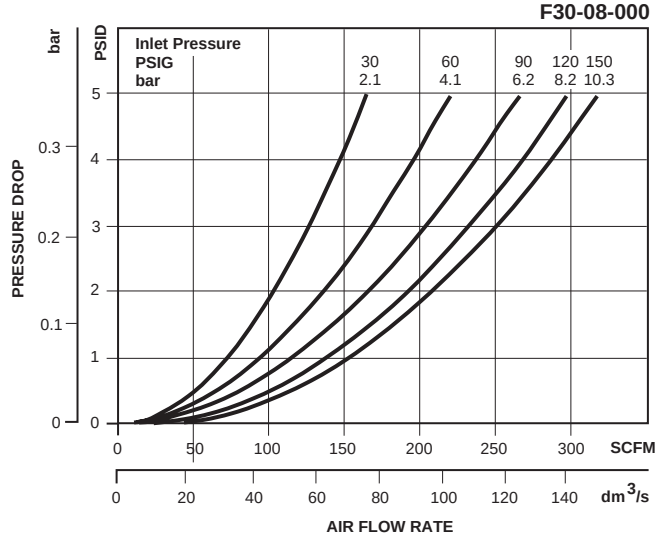
Manual Drain FRP-95-610

Sight Gauge Kit FRP-95-771

F30-06-000



F30-08-000

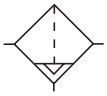


Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl	Metal Bowl / Sight Gauge	Polycarbonate Bowl / Bowl Guard / Differential Pressure Indicator
Manual Drain	3/4	F30-06-000	F30-06-M00	F30-06-G00	F30-06-D00
	1	F30-08-000	F30-08-M00	F30-08-G00	F30-08-D00
Automatic Drain	3/4	F30-06-F00	F30-06-FM0	F30-06-FG0	F30-06-DF0
	1	F30-08-F00	F30-08-FM0	F30-08-FG0	F30-08-DF0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F34



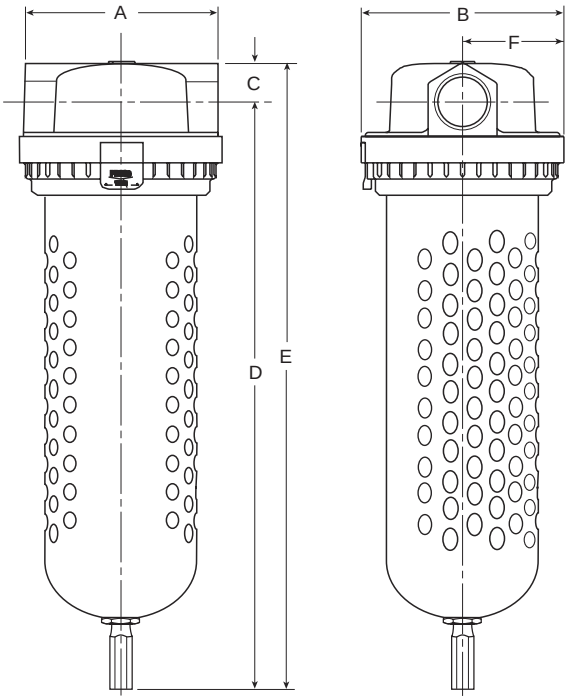
Auto Drain



F34-06-000

Features

- Standard Auto. Drain
- Standard 5 Micron Rated Element
- Quick-disconnect Clamp Ring for Easy Bowl Removal
- Bowl Guard



= **"Most Popular"**

Specifications

Flow Capacity*	1/2	190 SCFM (90.4 dm^3/s)
	3/4	285 SCFM (134.4 dm^3/s)
	1	362 SCFM (171.0 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2, 3/4, 1
Bowl Capacity		16.6 oz
Standard Filtration		5 Micron
Weight		6.4 lb. (2.9 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Baffle		Acetal
Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Deflector		Aluminum
Element Retainer		Steel Stud
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit (Automatic Drain Standard) F34-XX-000	4.61 (117)	4.80 (122)	.94 (24)	14.04 (356)	14.98 (380)	2.40 (61)
Metal Bowl	4.61 (117)	4.80 (122)	.94 (24)	13.52 (343)	14.46 (367)	2.40 (61)

= "Most Popular"

Replacement Bowl Kits

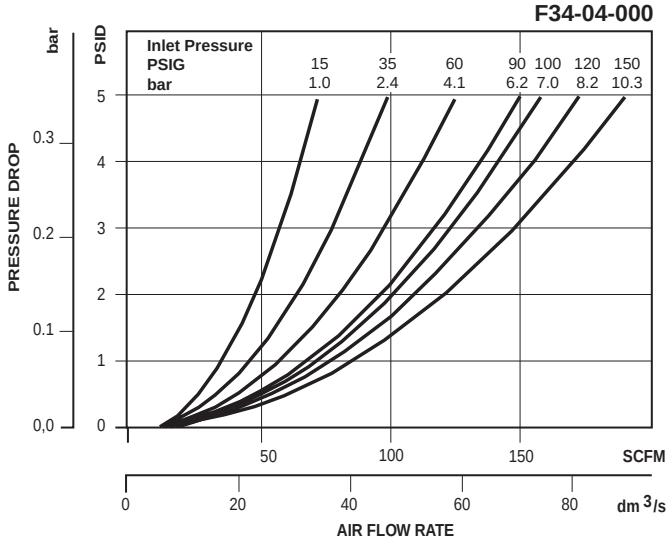
Plastic Bowl –
Bowl Guard, Auto Drain GRP-95-904

Metal Bowl –
Includes Auto Drain Assembly GRP-95-905

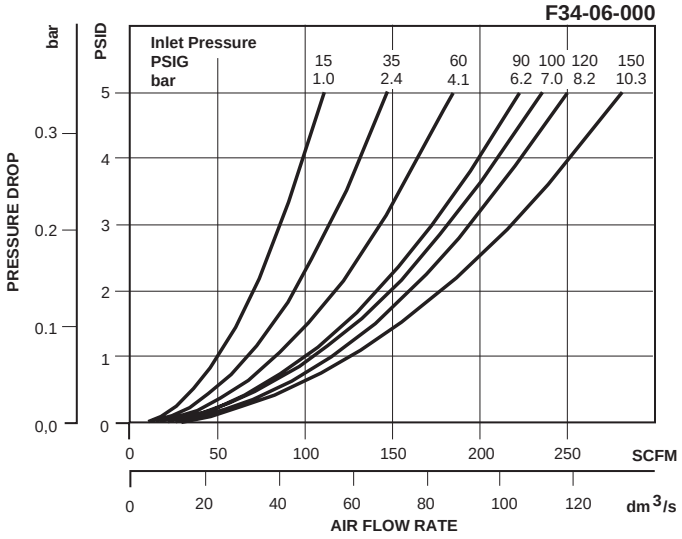
Replacement Element Kits

Type "A", 5 Micron FRP-95-209

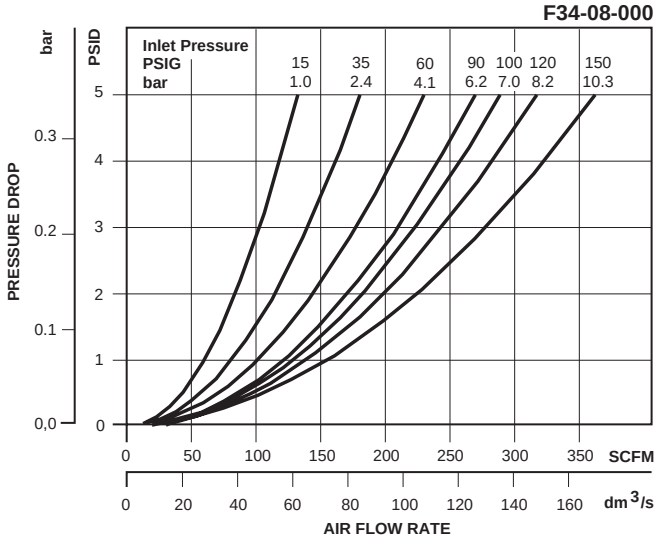
F34-04-000



F34-06-000



F34-08-000

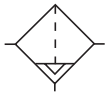


Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl
Automatic Drain	1/2	F34-04-000	F34-04-M00
	3/4	F34-06-000	F34-06-M00
	1	F34-08-000	F34-08-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F35



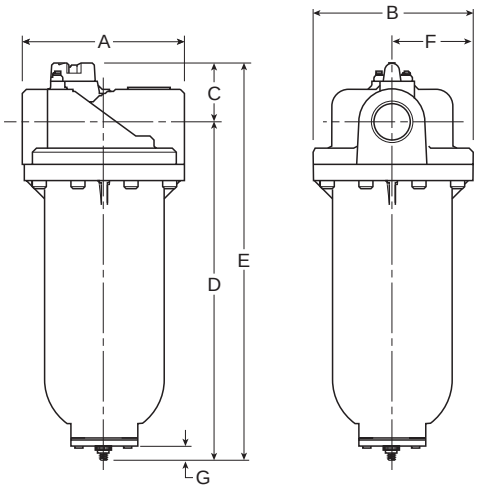
Auto Drain



F35-0B-000

Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG*
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential pressure gauge available, order separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers a Trouble-free Method for Interchanging and Installing External Drains



NOTE: Automatic internal float drain shown is included on F35 filters with F00 suffix only.
Models with 000 suffix include drain plate with tapped 1/2 NPT / BSPP-G drain port.

= **"Most Popular"**

Specifications

Flow Capacity*	1-1/2	1280 SCFM (604 dm^3/s)
	2	1400 SCFM (660 dm^3/s)
Maximum Supply Pressure	without DPI and with Pressure Gauge	250 PSIG (17.2 bar)†
	with DPI	150 PSIG (10.3 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2, 2
Bowl Capacity		12.5 oz
Standard Filtration		5 Micron
Weight		19.3 lb. (8.7 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 5 PSID (0.3 bar).

** Without pressure indicator – Max. supply pressure is 250 PSIG (17.2 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Baffle	Plated Steel
Body	Aluminum
Bowls	Aluminum
Deflector	Plated Steel
Element Retainer	Plated Steel
Filter Element	Polyethylene
Seals	Fluorocarbon
Stud	Plated Steel

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G
Standard Unit F35-XX-000	7.80 (198)	7.75 (197)	2.81 (71)	16.24 (412.5)	19.07 (484)	3.88 (98.6)	.55 (14)
Automatic Drain F35-XX-F00	7.80 (198)	7.75 (197)	2.81 (71)	15.69 (398.5)	18.52 470	3.88 (98.6)	.55 (14)

= "Most Popular"

Replacement Element Kit

Element, F35, 5 Micron, Fluorocarbon O-rings.....FRP-95-505

Accessories

Cap, Differential Pressure Indicator –
For pressures over 150 PSIG.....GRP-95-022

Drain, Automatic, Internal, Fluorocarbon,
1/8 NPT GRP-95-981

Drain Plate Kit –
1/2 NPT tapped drain port GRP-95-393
5/16 Dia. Drain Port,
For use with Internal Auto Drain GRP-95-391

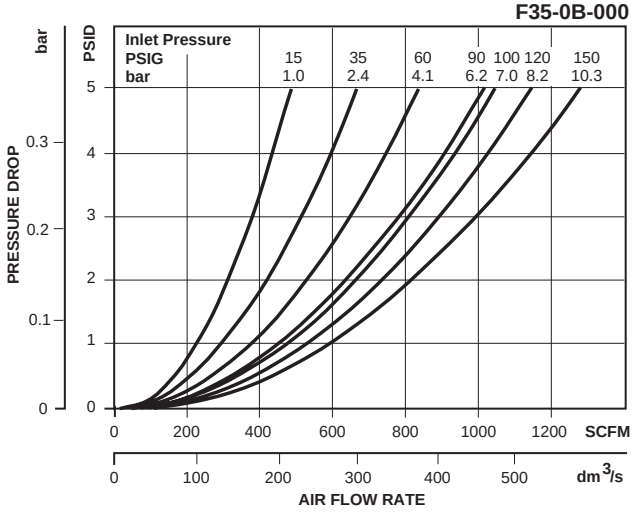
Gauge, Differential Pressure DP3-01-000

Indicator, Differential Pressure.....DP2-02-001

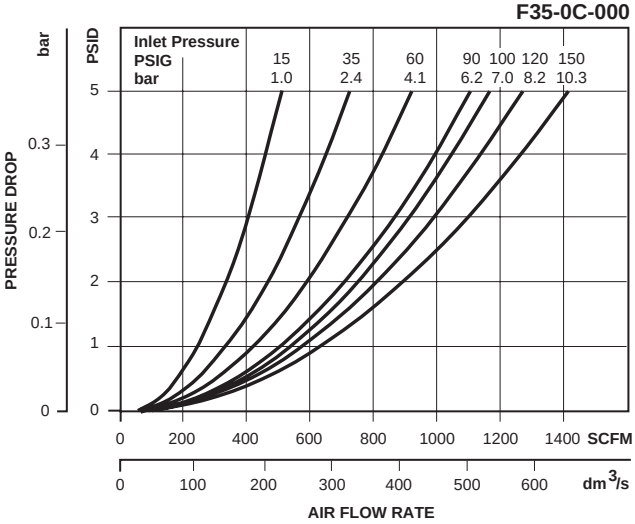
Manual Drain Kit
Includes 1/2" Drain Plate, Manual Drain.....GRP-95-392

Manual Override for Auto Float Drain –
GRP-05-981 Required GRP-96-001

F35-0B-000



F35-0C-000

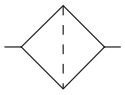


Ordering Information

Model Type	Port Size	Metal Bowl	
Manual Drain	1-1/2	F35-0B-000	(Includes 1/2 NPT / BSPP-G Drain Plate)
	2	F35-0C-000	
Automatic Drain	1-1/2	F35-0B-F00	
	2	F35-0C-F00	

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Particulate Filter
F43





F43-0E-000

= **"Most Popular"**

Specifications

Flow Capacity*	3	2900 SCFM (1368 dm^3/s)
Maximum Supply Pressure	without DPI and with Pressure Gauge	250 PSIG (17.2 bar)†
	with DPI	150 PSIG (10.3 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3
Bowl Capacity		14 oz
Standard Filtration		5 Micron
Weight		32.8 lb. (14.9 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 5 PSID (0.3 bar).

** Without pressure indicator – Max. supply pressure is 250 PSIG (17.3bar).

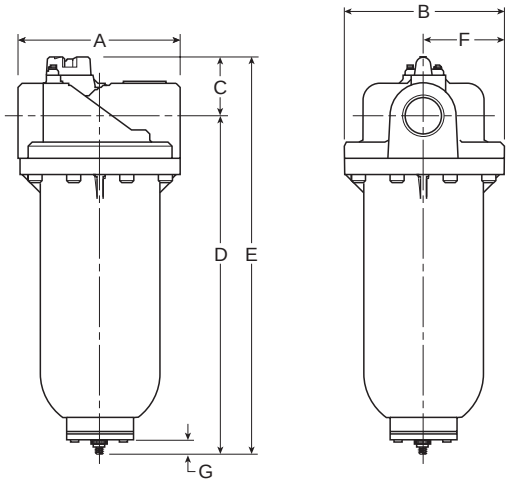
"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Baffle	Plated Steel
Body	Aluminum
Bowls	Aluminum
Deflector	Plated Steel
Filter Element	Polyethylene
Seals	Fluorocarbon
Stud	Plated Steel

Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG*
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential pressure gauge available, order separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers a Trouble-free Method for Interchanging and Installing External Drains
- 5 Micron High Flow Particulate Element



NOTE: Standard filter includes tapped 1/2 NPT / BSPP-G drain plate. To order internal float drain shown, order drain adapter plate GRP-95-391 and automatic drain GRP-95-981.

Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit F43-0E-000		8.94 (227)	8.88 (225.5)	3.48 (88)	25.96 (659.4)	29.44 (748)	4.44 (112.8)	.55 (14)

= "Most Popular"

Replacement Element Kit

Element, F43, 5 Micron, Fluorocarbon O-rings.....FRP-95-508

Accessories

Cap, Differential Pressure Indicator –
For pressures over 150 PSIG.....GRP-95-022

Drain, Automatic, Internal, Fluorocarbon,
1/8 NPT GRP-95-981

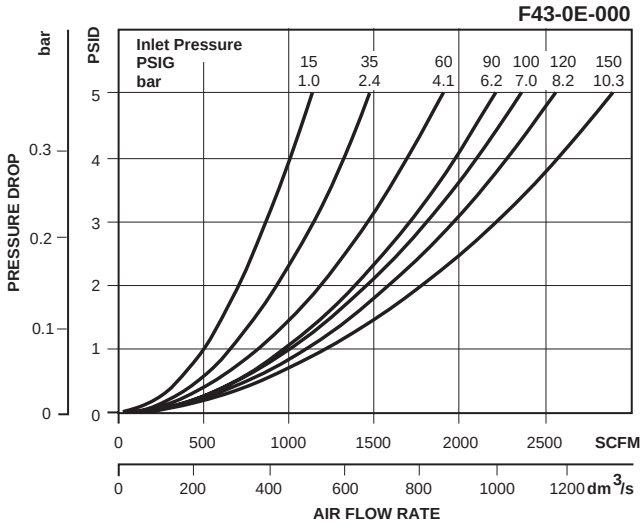
Drain Plate Kit –
1/2 NPT tapped drain port GRP-95-393
5/16 Dia. Drain Port,
For use with Internal Auto Drain GRP-95-391

Gauge, Differential Pressure DP3-01-000

Indicator, Differential Pressure.....DP2-02-001

Manual Drain Kit
Includes 1/2" Drain Plate, Manual Drain.....GRP-95-392

Manual Override for Auto Float Drain –
GRP-05-981 Required GRP-96-000



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl
F43	3	F43-0E-000 (Includes 1/2 NPT / BSPP-G Drain Plate)

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing (Oil Removal) Numbering System

= "Most Popular"

Unit	Family		Thread Type	Pipe	Filter		Bowls / Drains	Options	Options	Level
M	1	8	- 0	3	- C		K	0	0	B

Unit Function

M	Coalescing Filter

Family

08	Miniature
18	Compact
28	Standard

Thread Type

0	NPT
C	BSPP [2]

Code	Pipe Size	Series 08	Series 18	Series 28
2	1/4"	X	X	
3	3/8"		X	X
4	1/2"		X	X
6	3/4"			X

Filter Element

Coalescing – DPI Standard [1]

B	0.5 Micron, Oil Removing
C	**0.01 Micron, Oil Removing**
D	0.003 Micron, Oil Adsorption Activated Carbon [3]

Options

0	**None**
L	Differential Pressure Indicator (08 Series Only)
M	No Differential Pressure Indicator[1] (For Operating Pressure Over 150 PSIG, 10.3 bar (18 & 28 Series Only)
R	Electronic Differential Pressure Indicator (18 & 28 Series Only)
V	Fluorocarbon Seals (18 & 28 Series Only)

Options

0	**None**
M	No Differential Pressure Indicator[1] (For Operating Pressure Over 150 PSIG, 10.3 bar (18 & 28 Series Only)
R	Electronic Differential Pressure Indicator (18 & 28 Series Only)
V	Fluorocarbon Seals (18 & 28 Series Only)

Code	Series
B	08
B	18
B	28

Drains	Bowls: Plastic w/ Guard Nitrile Standard	Bowls: Metal w/ No Sight Gauge [2]	Bowls: Metal w/ Sight Gauge [4]
1/8 NPT Female (18, 28 Only)	E	U	F
Automatic Drain (18, 28 Only)	**G**	A	H
Manual Drain	**K**	M	L
Piston Drain (08 Series Only)	R	—	S

[1] "M" Option not available on 08 Series.

[2] ISO, R228 (G Series)

[3] Only C, D, K, and L bowl / drain configurations available.

[4] M08 filter has an all metal bowl (no sight gauge).

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

M 1 8 - 0 3 - C K 0 0 B

Coalescing Filter Numbering System

= "Most Popular"

Unit Function	Family			Thread Type	Pipe Size		Options	Options	Options
M	1	6	–	0	3	–	0	0	0

Unit Function

M Coalescing Filter

Family

03 Miniature
16 Compact
2X Standard
3X Large
4X Extra Large

Thread Type

0 NPT
C BSPP

Code	Pipe Size	Series				
		03	16	2X	3X	4X
1	1/8"	X				
2	1/4"	X	X	X		
3	3/8"		X	X		
4	1/2"		X	X	X	
6	3/4"				X	
8	1"				X	
B	1-1/2"				X	
C	2"				X	
E	3"					X

Options

	Miniature (M03)
0	**Standard, Type "C" Element, 0.01 Micron**
D	**Piston Drain**
E	Tire Valve Drain
M	Metal Bowl With Manual Drain
S	Type "B" Element, 1.0 Micron
X	Type "D" Element, Activated Carbon, 0.003 Micron [1, 3]
	All Others
0	**Standard, Type "C" Element, 0.01 Micron**
F	**Automatic Float Drain (Standard Flow)**
G	Metal Bowl with Sight Gauge
H	DP Indicator Removed [2] (High Pressure Option)
M	Metal Bowl, No Sight Gauge
S	Type "B" Element, (0.5 Micron M00-M31; 1.0 Micron M32-M45)
X	Type "D" Element Activated Carbon, 0.003 M [1, 3]

[1] Auto Float Drains not available with M16, M26- units with Type "D" Activated Carbon Elements.

[2] Except Models M5X.

[3] Units with Type "D" element do not contain DP indicator.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

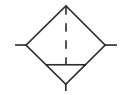
NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.

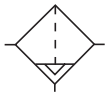
NOTE: 000 in position 6, 7, and 8 signifies standard product.

Coalescing Filter
M03

= "Most Popular"



Manual Drain



Auto Drain



M03-02-000

Specifications

Flow Capacity*	1/8	17.0 SCFM (8 dm^3/s)
	1/4	20.0 SCFM (9 dm^3/s)
Maximum Supply Pressure		
Polycarbonate Bowl		0 to 150 PSIG (0 to 10.3 bar)
Metal Bowl		0 to 250 PSIG (0 to 17.2 bar)
Piston Drain		10 to 250 PSIG (0.7 to 17.2 bar)
Operating Temperature		
Polycarbonate Bowl		32°F to 125°F (0°C to 52°C)
Metal Bowl		32°F to 175°F (0°C to 80°C)
Piston Drain		32°F to 125°F (6°C to 52°C)
Port Size	NPT	1/8, 1/4
Standard Filtration	Micron	(B) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight		.41 lb. (.18 kg)

* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

**Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

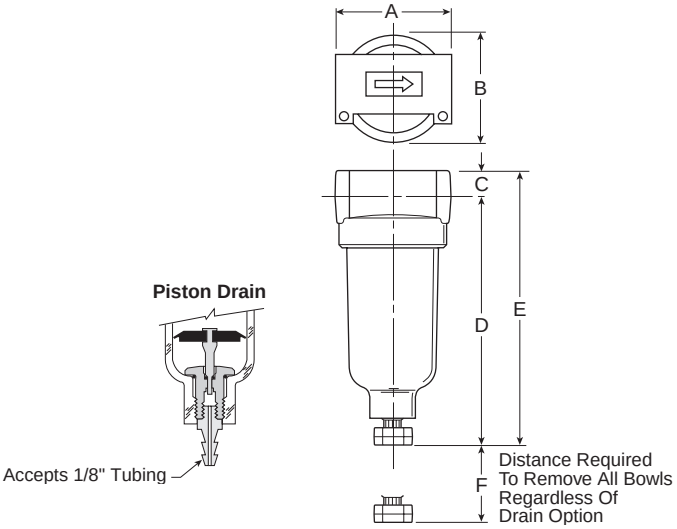
"M" Series Coalescing Filters, with Type "B" 1 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Features

- Removes Liquid Aerosols and Sub-micron Particles
- Liquids Gravitate to the Bottom of the Element and Will Not Re-enter the Airstream
- Oil Free Air for Critical Applications, such as Air Gauging and Pneumatic Instrumentation and Controls



Materials of Construction

Body	Zinc
Bowls – Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Deflector, Element Holder & Baffle	Plastic
Drains	
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Filter Element	Plastic
Seals	Nitrile

Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit M03-XX-000		1.69 (43)	1.53 (39)	.39 (10)	3.82 (97)	4.21 (107)	1.60 (41)
Piston Drain M03-XX-D00		1.69 (43)	1.53 (39)	.39 (10)	3.87 (99)	4.26 (108)	1.60 (41)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Manual Drain PS451B
- Piston Drain PS447B

Plastic Bowl –
- Manual Drain PS404
- Piston Drain PS408B

Replacement Element Kits

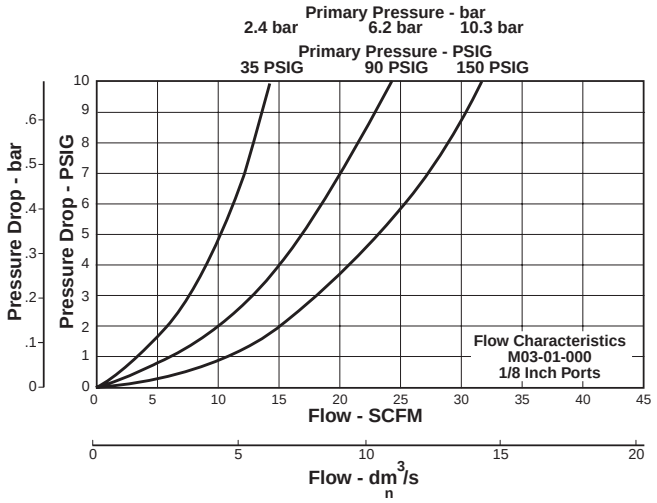
Type "B", 1.0 Micron PS456

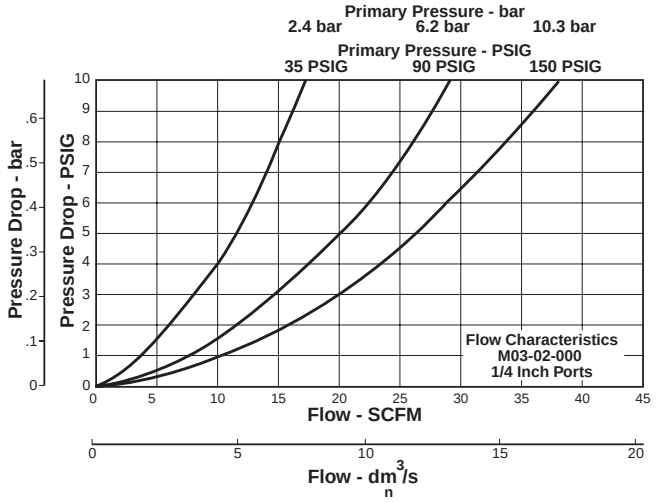
Type "C", 0.01 Micron PS446

Type "D", Oil Vapor Removing PS452

Accessories

Mounting Bracket Kit PS417B





B

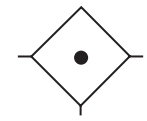
Filters, Regulators, Lubricators

Ordering Information

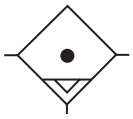
Model Type	Port Size	Polycarbonate Bowl / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / "B" Micron Element	Polycarbonate Bowl / "D" Element
Manual Drain	1/8	M03-01-000	M03-01-M00	M03-01-S00	M03-01-X00
	1/4	M03-02-000	M03-02-M00	M03-02-S00	M03-02-X00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M08



Coalescing Filter



Auto Drain

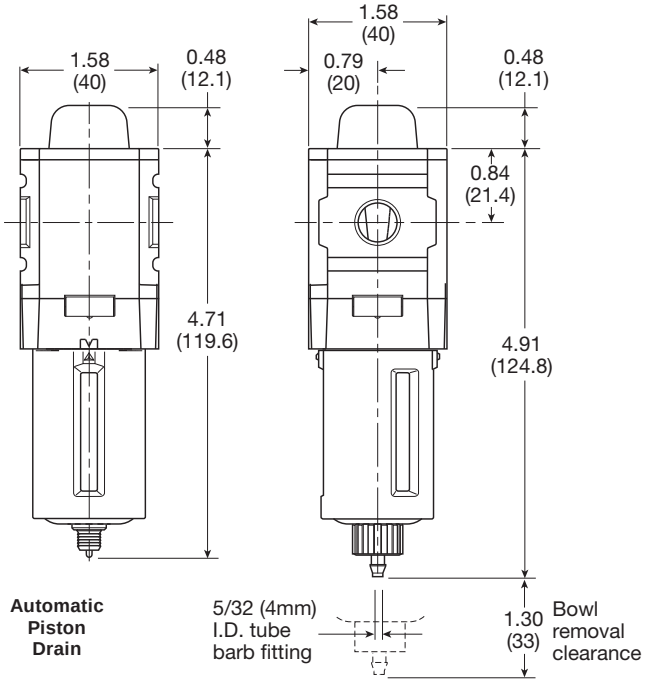


B

Filters, Regulators, Lubricators

Features

- High-efficiency Removal of Water, Oil Aerosols, and Solid Particulate Contaminants Down to 0.01 ppm / wt with Minimum Pressure Drop
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Bowl Guard
- Quick-disconnect Bowl



Inches (mm)

Specifications

Flow Capacity*		
1.0 Micron Coalescing		12.0 SCFM (5.5 dm^3/s, ANR)
0.01 Micron Coalescing		7.5 SCFM (3.6 dm^3/s, ANR)
Activated Carbon Adsorber		12.7 SCFM (6 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10 bar)
	Metal Bowl w/ DPI	150 PSIG (10 bar)
	Metal Bowl w/o DPI	250 PSIG (17 bar)
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.4 oz
Standard Filtration	Micron	(B) .5, (C) 0.01 (D) 0.003 ppm wt**
Weight		0.24 lb. (0.11 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSIG (0.2 bar).

** Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements exceed ISO Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements exceed ISO Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements exceed ISO Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Nitrile

Notes: To optimize the life of the coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a coalescing 0.01 micron filter upstream of the adsorber filter.

= "Most Popular"

Replacement Bowl Kits

Metal Bowl, Manual Drain.....GRP-96-714

Plastic Bowl / Bowl Guard, Manual Drain.....GRP-96-712

Replacement Element Kits

Type "B", 0.5 Micron..... MSP-96-732

Type "C", 0.01 Micron..... MTP-96-649

Type "D", 0.003 Micron, Activated Carbon MXP-96-222

Accessories

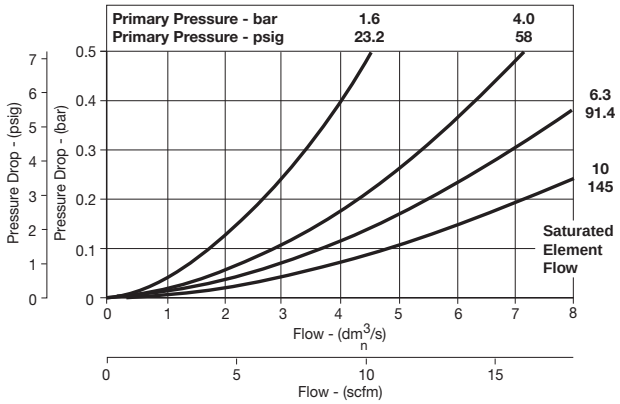
Automatic Piston Drain GRP-96-716

Wall Mounting Bracket –

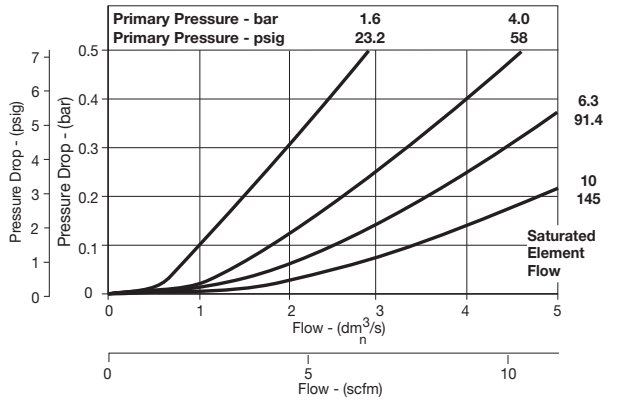
C-Type GPA-97-010

T-Type GPA-96-737

M08 1/4" Filter, 1.0 Micron



M08 1/4" Filter, 0.01 Micron



B

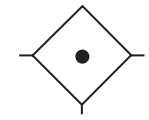
Filters, Regulators, Lubricators

Ordering Information

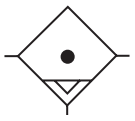
Model Type	Port Size	Plastic Bowl / Bowl Guard / C Element	Plastic Bowl / Bowl Guard / B Element	Plastic Bowl / Bowl Guard / D Element	Metal Bowl / C Element	Metal Bowl / B Element	Metal Bowl / D Element
Manual Drain	1/4	M08-02-CK00B	M08-02-BK00B	M08-02-DK00B	M08-02-CL00B	M08-02-BL00B	M08-02-DL00B
Automatic Piston Drain	1/4	M08-02-CR00B	M08-02-BR00B	M08-02-DR00B	M08-02-CS00B	M08-02-BS00B	M08-02-DS00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M18



Coalescing Filter



Auto Drain

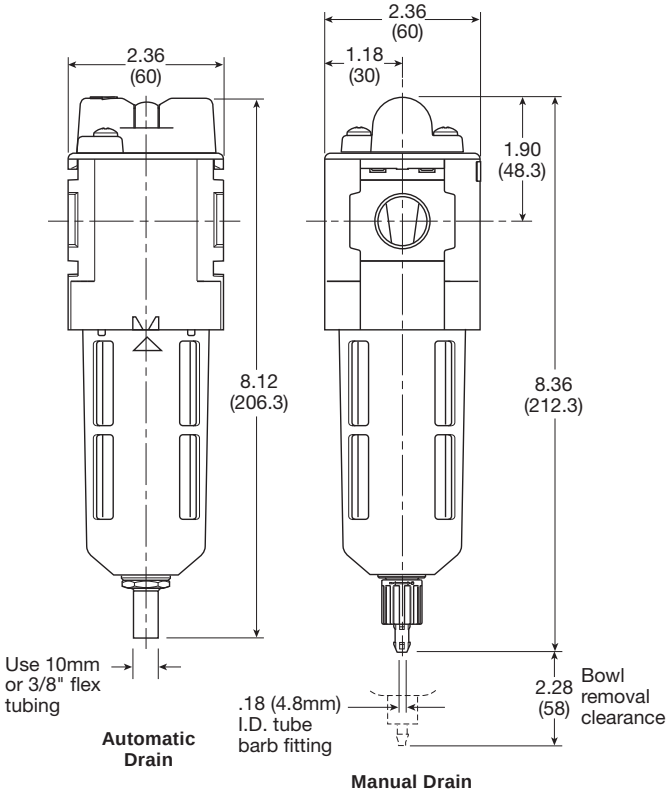


B

Filters, Regulators, Lubricators

Features

- High-efficiency Removal of Water, Oil Aerosols, and Solid Particulate Contaminants Down to 0.01 ppm / wt with Minimum Pressure Drop
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Bowl Guard
- Quick-disconnect Bowl



Inches (mm)

Specifications

Flow Capacity*		
1.0 Micron Coalescing		53 SCFM (25 dm^3/s, ANR)
0.01 Micron Coalescing		36 SCFM (17 dm^3/s, ANR)
Activated Carbon Adsorber		85 SCFM (40 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10 bar)†
	Metal Bowl w/ DPI	150 PSIG (10 bar)†
	Metal Bowl w/o DPI	250 PSIG (17 bar)†
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		1.72 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm wt**
Weight		0.71 lb (0.32 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSIG (0.2 bar).

** Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

† Without pressure indicator — max. supply pressure for metal bowl version is 250 PSIG (17.2 bar).

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)

Notes: To optimize the life of the coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a coalescing 0.01 micron filter upstream of the adsorber filter.

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge,
Automatic Float Drain..... GRP-96-637

Metal Bowl with Sight Gauge, Manual Drain..... GRP-96-636

Plastic Bowl –
Bowl Guard, Auto Drain GRP-96-635
Bowl Guard, Manual Drain..... GRP-96-634

Replacement Element Kits

Type "B", 0.5 Micron..... MSP-96-647

Type "C", 0.01 Micron..... MTP-96-646

Type "D", 0.003 Micron Activated Carbon MXP-96-650

Accessories

Automatic Drain –
Fluorocarbon GRP-95-981
Nitrile GRP-95-973

DPI Replacement Kit..... DP8-01-000

Electronic DPI Conversion Kit..... GRP-96-823
(Converts visual DPI to electronic DPI)

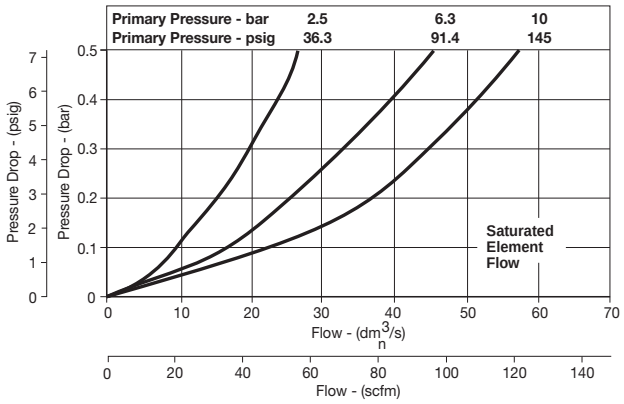
Electronic DPI Replacement Kit GRP-96-824

Manual Drain..... GRP-96-685

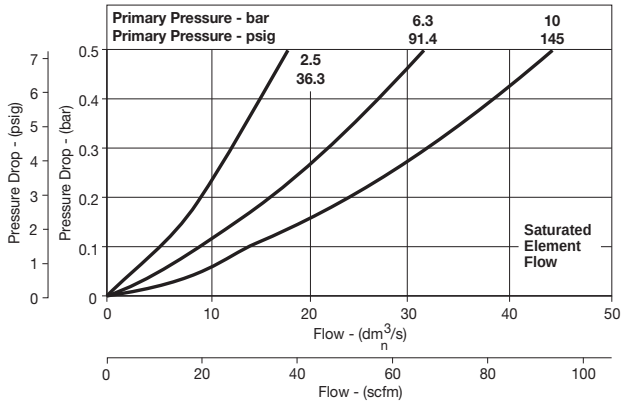
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket –
L-Type GPA-96-604
T-Type GPA-96-602

M18 1/2" Filter, 1.0 Micron



M18 1/2" Filter, 0.01 Micron



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / C Element	Plastic Bowl / Bowl Guard / B Element	Plastic Bowl / Bowl Guard / D Element	Metal Bowl / Sight Gauge / C Element	Metal Bowl / Sight Gauge / B Element	Metal Bowl / Sight Gauge / D Element
Manual Drain	1/4	M18-02-CK00B	M18-02-BK00B	M18-02-DK00B	M18-02-CL00B	M18-02-BL00B	M18-02-DL00B
	3/8	M18-03-CK00B	M18-03-BK00B	M18-03-DK00B	M18-03-CL00B	M18-03-BL00B	M18-03-DL00B
	1/2	M18-04-CK00B	M18-04-BK00B	M18-04-DK00B	M18-04-CL00B	M18-04-BL00B	M18-04-DL00B
Automatic Drain	1/4	M18-02-CG00B	M18-02-BG00B	N/A	M18-02-CH00B	M18-02-BH00B	N/A
	3/8	M18-03-CG00B	M18-03-BG00B	N/A	M18-03-CH00B	M18-03-BH00B	N/A
	1/2	M18-04-CG00B	M18-04-BG00B	N/A	M18-04-CH00B	M18-04-BH00B	N/A

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M16


Coalescing Filter


Auto Drain



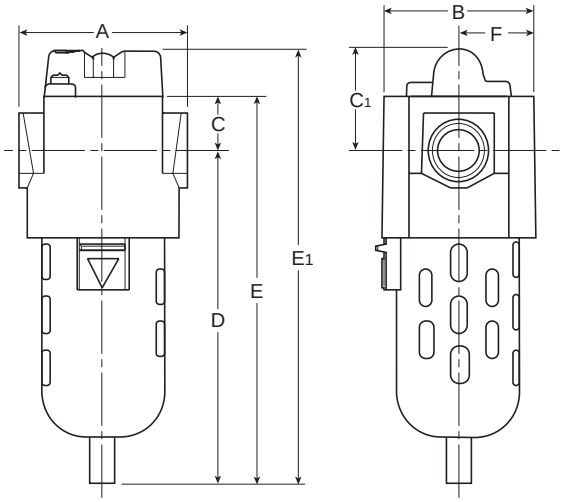
M16-02-000

B

Filters, Regulators, Lubricators

Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator Standard



= "Most Popular"

Specifications

Flow Capacity*	1/4	37.0 SCFM (17.5 dm^3/s)
	3/8	44.7 SCFM (21.0 dm^3/s)
	1/2	46.1 SCFM (21.7 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		2.7 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Weight		1.8 lb.(0.8 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Element Retainer		Brass Stud
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	C_1	D	E	E_1	F
Standard Unit M16-XX-000	3.00 (76)	2.60 (66)	1.00 (25.4)	1.83 (46.5)	5.67 (144)	6.67 (169)	7.50 (190.5)	1.30 (33)
Automatic Drain M16-XX-F00	3.00 (76)	2.60 (66)	1.00 (25.4)	1.83 (46.5)	5.81 (148)	6.81 (173)	7.64 (190.5)	1.30 (33)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Automatic Drain FRP-95-950
- Manual Drain FRP-95-178

Plastic Bowl –
- Bowl Guard, Auto Drain FRP-95-015
- Bowl Guard, Manual Drain FRP-95-014
- Manual Drain FRP-95-017

Replacement Element Kits

Type "B", 0.5 Micron MSP-95-988

Type "C", 0.01 Micron MTP-95-548

Type "D", Oil Vapor Removing MXP-95-987

Accessories

Automatic Mechanical Drain GRP-95-973

Cap, Differential Pressure Indicator –
- For pressures over 150 PSIG GRP-95-020

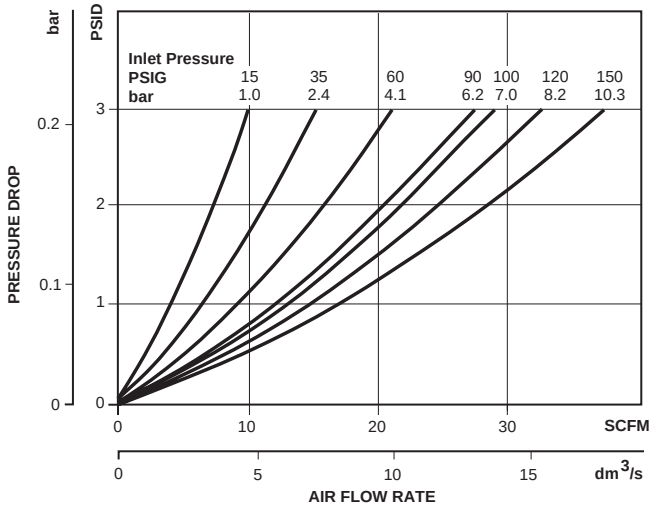
Differential Pressure Indicator DP2-02-000

Manual Drain FRP-95-610

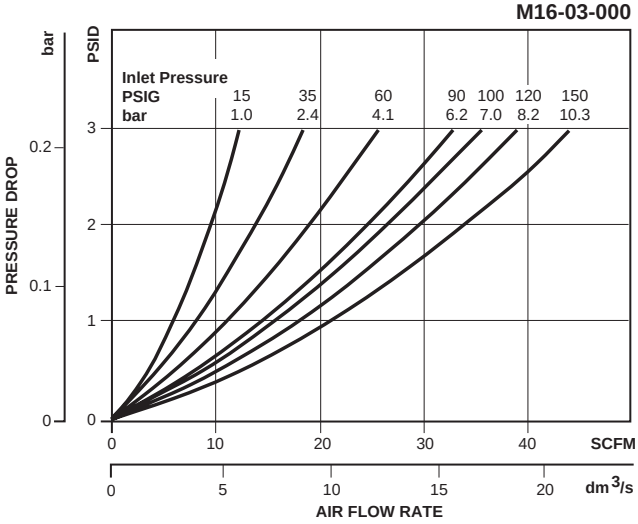
Sight Gauge Kit GRP-95-079

Wall Mounting Bracket, L-Type GPA-95-016

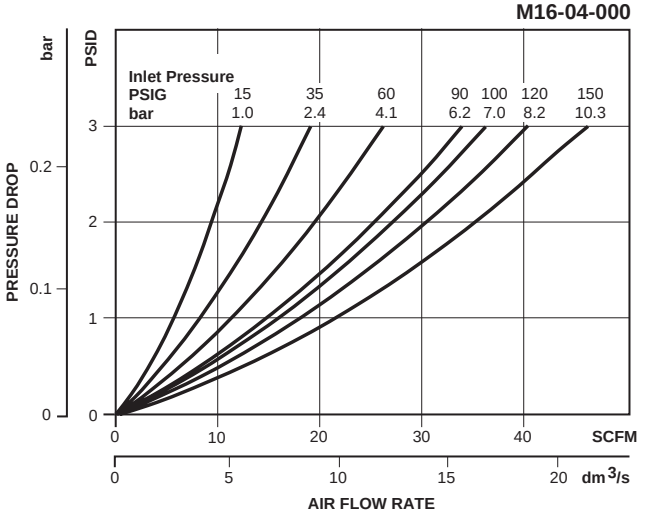
M16-02-000



M16-03-000



M16-04-000

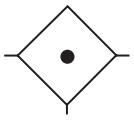


Ordering Information

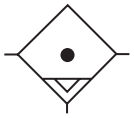
Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	1/4	M16-02-000	M16-02-M00	M16-02-S00	M16-02-X00
	3/8	M16-03-000	M16-03-M00	M16-03-S00	M16-03-X00
	1/2	M16-04-000	M16-04-M00	M16-04-S00	M16-04-X00
Automatic Drain	1/4	M16-02-F00	M16-02-FM0	M16-02-FS0	—
	3/8	M16-03-F00	M16-03-FM0	M16-03-FS0	—
	1/2	M16-04-F00	M16-04-FM0	M16-04-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M28



Coalescing Filter



Auto Drain

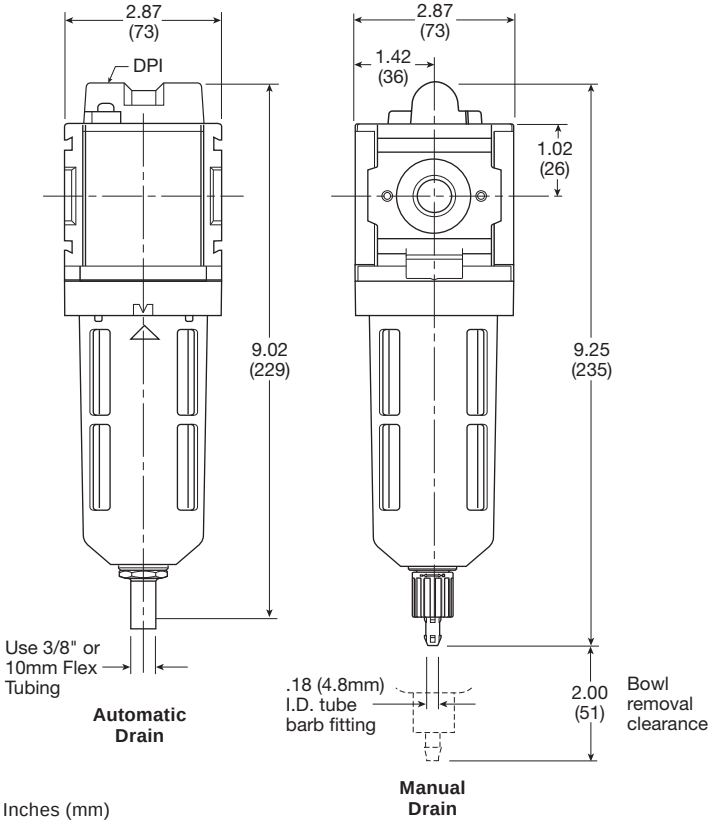


B

Filters, Regulators, Lubricators

Features

- High-efficiency Removal of Water, Oil Aerosols, and Solid Particulate Contaminants Down to 0.01 ppm / wt with Minimum Pressure Drop
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Bowl Guard
- Quick-disconnect Bowl



Inches (mm)

Specifications

Flow Capacity*		
1.0 Micron Coalescing		68 SCFM (32 dm^3/s, ANR)
0.01 Micron Coalescing		42 SCFM (20 dm^3/s, ANR)
Activated Carbon Adsorber		72 SCFM (34 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)†
	Metal Bowl	150 PSIG (10.3 bar)†
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity		2.87 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm wt**
Weight		1.10 lb. (0.5 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSIG (0.2 bar).

** Filtration temperature of 70°F (21°C) @ 100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type C filter.

† Without pressure indicator — max. supply pressure for metal bowl version is 250 PSIG (17.2 bar)

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"**M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements:** All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)

Notes: To optimize the life of the coalescing element, it is advisable to install a pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a coalescing 0.01 micron filter upstream of the adsorber filter.

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge,
Automatic Float Drain..... GRP-96-645

Metal Bowl with Sight Gauge, Manual Drain..... GRP-96-644

Plastic Bowl –
Bowl Guard, Auto Drain GRP-96-643
Bowl Guard, Manual Drain GRP-96-642

Replacement Element Kits

Type "B", 0.5 Micron..... MSP-96-649

Type "C", 0.01 Micron..... MTP-96-648

Type "D", 0.003 Micron Activated Carbon MXP-96-651

Accessories

Automatic Drain –
Fluorocarbon GRP-95-981
Nitrile GRP-95-973

DPI Replacement Kit..... DP8-01-000

Electronic DPI Conversion Kit..... GRP-96-823
(Converts visual DPI to electronic DPI)

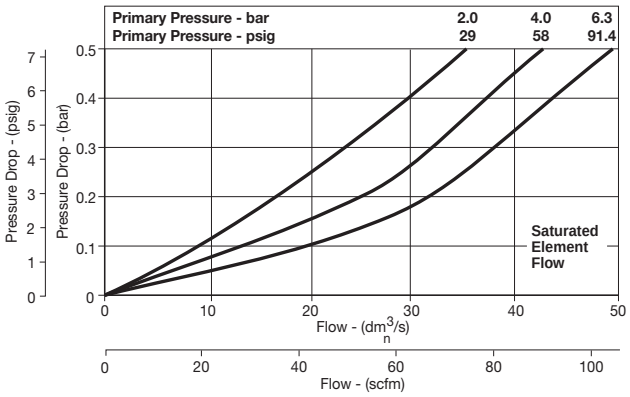
Electronic DPI Replacement Kit GRP-96-824

Manual Drain..... GRP-96-685

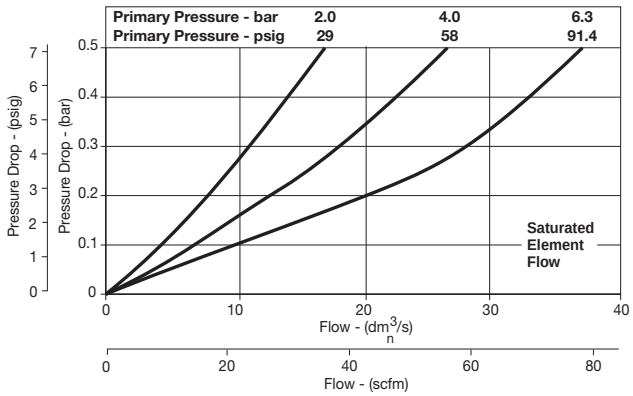
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket–
L-Type GPA-96-605
T-Type GPA-96-602

M28 3/4" Filter, 1.0 Micron



M28 3/4" Filter, 0.01 Micron



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / C Element	Plastic Bowl / Bowl Guard / B Element	Plastic Bowl / Bowl Guard / D Element	Metal Bowl / Sight Gauge / C Element	Metal Bowl / Sight Gauge / B Element	Metal Bowl / Sight Gauge / D Element
Manual Drain	3/8	M28-03-CK00B	M28-03-BK00B	M28-03-DK00B	M28-03-CL00B	M28-03-BL00B	M28-03-DL00B
	1/2	M28-04-CK00B	M28-04-BK00B	M28-04-DK00B	M28-04-CL00B	M28-04-BL00B	M28-04-DL00B
	3/4	M28-06-CK00B	M28-06-BK00B	M28-06-DK00B	M28-06-CL00B	M28-06-BL00B	M28-06-DL00B
Automatic Drain	3/8	M28-03-CG00B	M28-03-BG00B	N/A	M28-03-CH00B	M28-03-BH00B	N/A
	1/2	M28-04-CG00B	M28-04-BG00B	N/A	M28-04-CH00B	M28-04-BH00B	N/A
	3/4	M28-06-CG00B	M28-06-BG00B	N/A	M28-06-CH00B	M28-06-BH00B	N/A

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter M26


Coalescing Filter

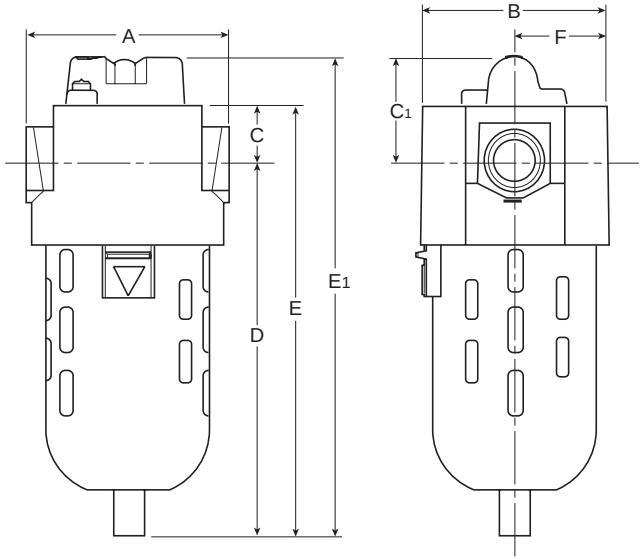

Auto Drain



M26-02-000

Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator



= "Most Popular"

Specifications

Flow Capacity*	1/4	55.0 SCFM (25.9 dm^3/s)
	3/8	65.5 SCFM (30.9 dm^3/s)
	1/2	79.5 SCFM (37.5 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C))
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		1.7 oz
Weight		2.4 lb. (1.1 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Element Retainer		Brass Stud
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	C_1	D	E	E_1	F
Standard Unit M26-XX-000	3.30 (84)	3.00 (76)	1.00 (25.4)	1.83 (46.5)	6.40 (162.6)	7.40 (188)	8.23 (209)	1.50 (38)
Automatic Drain M26-XX-F00	3.30 (84)	3.00 (76)	1.00 (25.4)	1.83 (46.5)	6.54 (166)	7.54 (191.5)	8.37 (212.5)	1.50 (38)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Manual Drain GRP-95-930
- Auto Drain GRP-95-960

Plastic Bowl –
- Manual Drain GRP-95-929
- Bowl Guard, Manual Drain GRP-95-935
- Bowl Guard, Auto Drain GRP-95-948

Replacement Element Kits

Type "B", 0.5 Micron MSP-95-989

Type "C", 0.01 Micron MTP-95-549

Type "D", Oil Vapor Removing MXP-95-540

Accessories

Automatic Mechanical Drain GRP-95-973

Cap, Differential Pressure Indicator –
- For pressures over 150 PSIG GRP-95-020

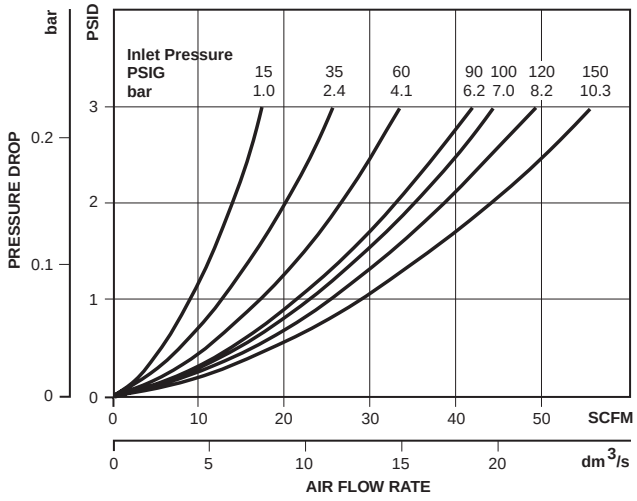
Differential Pressure Indicator DP2-02-000

Manual Flex-Tip FRP-95-610

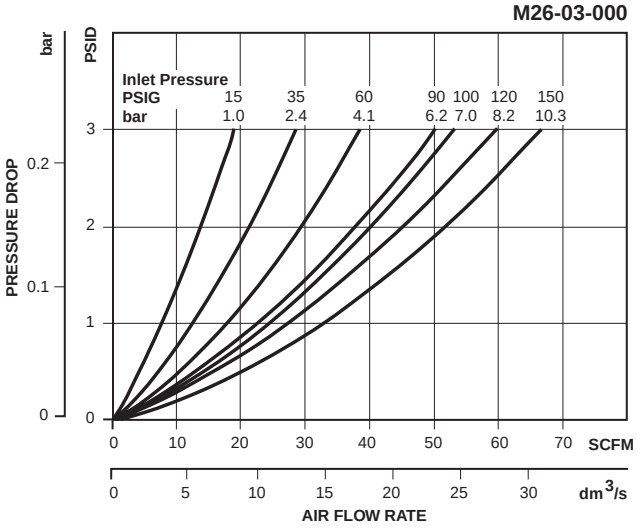
Sight Gauge Kit GRP-95-079

Wall Mounting Bracket, L-Type GPA-95-946

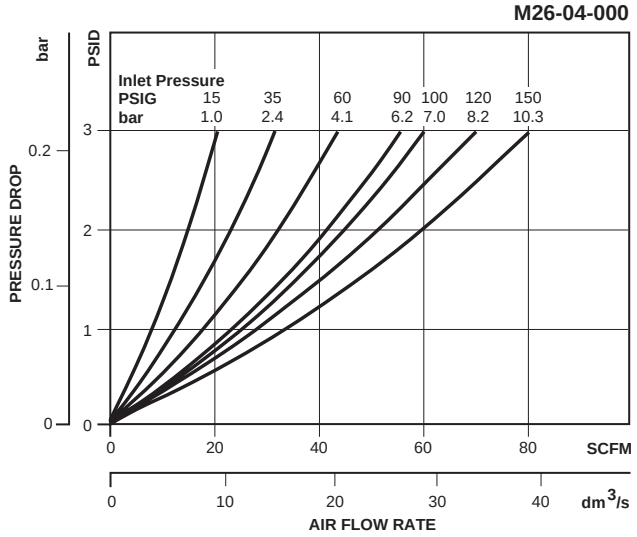
M26-02-000



M26-03-000



M26-04-000

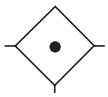


Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	1/4	M26-02-000	M26-02-M00	M26-02-S00	M26-02-X00
	3/8	M26-03-000	M26-03-M00	M26-03-S00	M26-03-X00
	1/2	M26-04-000	M26-04-M00	M26-04-S00	M26-04-X00
Automatic Drain	1/4	M26-02-F00	M26-02-FM0	M26-02-FS0	—
	3/8	M26-03-F00	M26-03-FM0	M26-03-FS0	—
	1/2	M26-04-F00	M26-04-FM0	M26-04-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M21


Coalescing Filter


Auto Drain

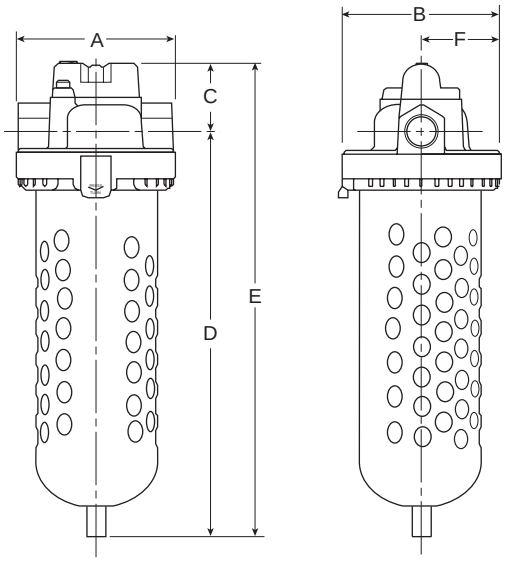


M21-03-000

= **"Most Popular"**

Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator



Specifications

Flow Capacity*	3/8	95.4 SCFM (45.0 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G	3/8
Bowl Capacity		3.9 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Weight		3.7 lb. (1.68 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Zinc
Bowl		Polycarbonate
Element Retainer		Brass Stud
Filter Elements	Type "B", "C" Type "D"	Borosilicate Cloth Activated Carbon
Seals		Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit M21-03-000	3.70 (94)	3.79 (96.5)	1.70 (43.2)	9.20 (233.7)	10.90 276.9)	1.89 (48.1)
Automatic Drain M21-03-F00	3.70 (94)	3.79 (96.5)	1.70 (43.2)	9.34 (237)	11.04 (280)	1.89 (48.1)

= "Most Popular"

Replacement Bowl Kits

Plastic Bowl –
Bowl Guard, Manual Drain FRP-95-722
Bowl Guard, Automatic Drain MRP-95-722

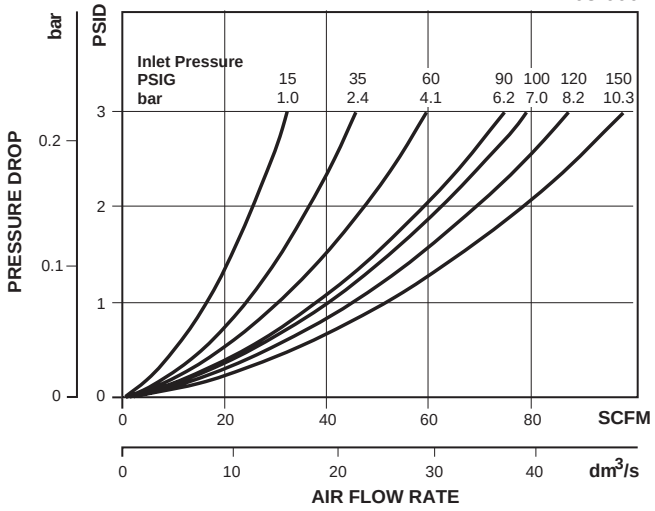
Replacement Element Kits

Type "B", 0.5 Micron MSP-95-990
Type "C", 0.01 Micron MTP-95-550
Type "D", Oil Vapor Removing MXP-95-537

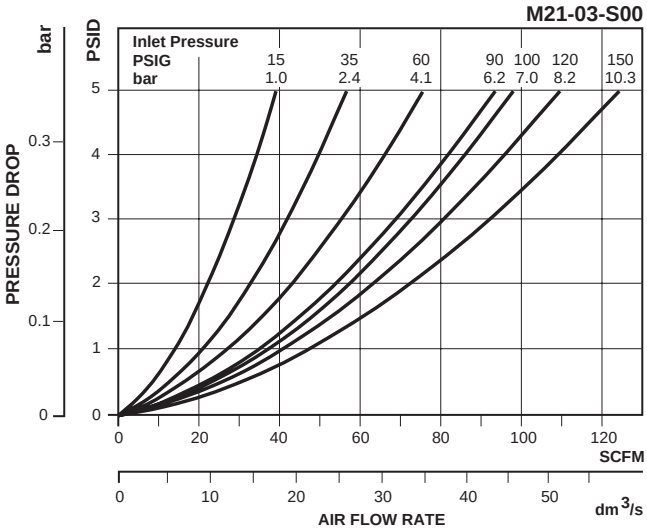
Accessories

Automatic Drain GRP-95-973
Cap, Differential Pressure Indicator –
For pressures over 150 PSIG GRP-95-020
Differential Pressure Indicator DP2-02-000
Manual Flex-Tip FRP-95-610
Wall Mounting Bracket, U-bolt Pipe Clamp .....
GRP-95-734 .....

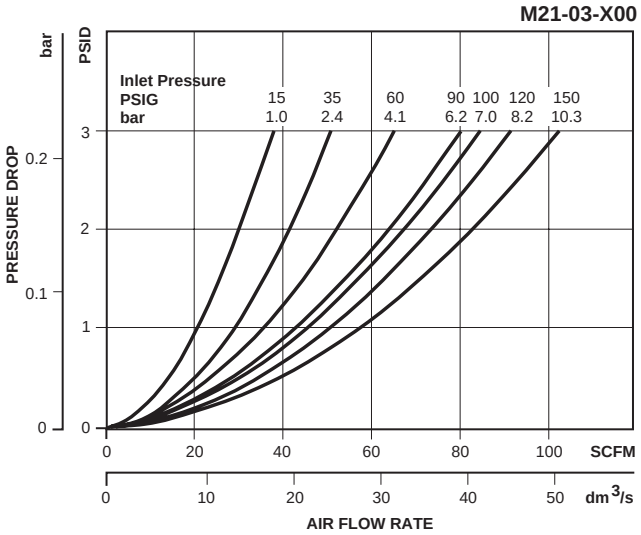
M21-03-000



M21-03-S00



M21-03-X00



Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element
Manual Drain	3/8	M21-03-000
Automatic Drain	3/8	M21-03-F00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M90

= "Most Popular"



- Extended high efficiency filter element provides greater filtration surface area.
- Integral 3/4" or 1" ports (BSPP & NPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Adsorber activated carbon element removes oil vapors and most hydrocarbons
- Robust but lightweight aluminum construction

Notes: To optimize the life of the coalescing element, it is advisable to install a F90 pre-filter with a 5 micron element upstream of the coalescing filter.

To optimize the life of the adsorber element, it is advisable to install a 90 Series coalescing 0.01 micron filter upstream of the adsorber filter.

M90 - 0 6 - C L 0 0

Series	
Coalescing Filter	M90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Element	
C	0.01 micron element (with DPI optional)
D	Adsorber

Bowl / drain type	
H	Metal bowl / sight gauge & auto drain
L	Metal bowl / sight gauge / manual & semi auto drain

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Flow‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm³ (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number†
3/4"	Coalescing filter 0.01 micron, combined manual / semi auto drain	275	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	**M90-06-CL00**
3/4"	Coalescing filter 0.01 micron, auto drain	275	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	**M90-06-CH00**
1"	Coalescing filter 0.01 micron, combined manual / semi auto drain	307	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	**M90-08-CL00**
1"	Coalescing filter 0.01 micron, auto drain	307	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	340 (13.4)	90 (3.5)	94 (3.7)	1.6 (3.5)	**M90-08-CH00**

† **Standard part numbers shown in bold. For other models refer to Options chart above.**
‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

Specifications

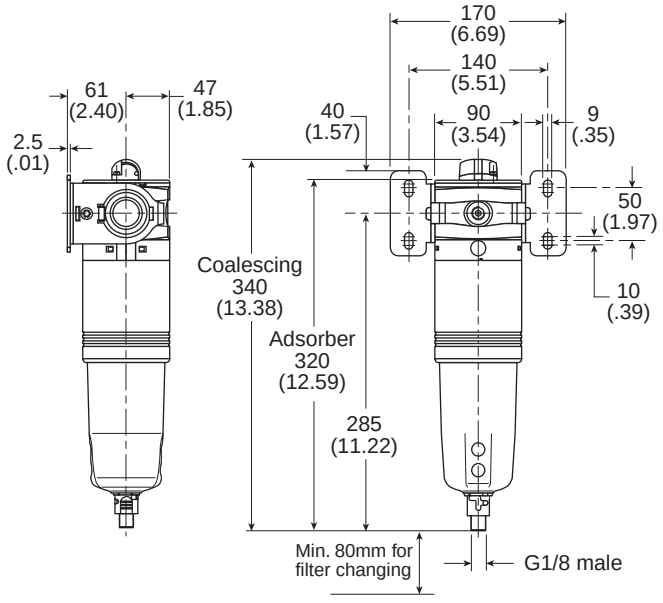
Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*	-10°C to 60°C (14°F to 140°F)
Media specifications (Coalescer): Coalescing efficiency Max. oil carryover	 99.97% (0.3 to 0.6 micron particles) 0.008 mg/m³
Typical flow element @ 6.3 bar (91.4 psig) inlet pressure and 0.5 bar (7.3 psig) pressure drop	0.01 micron element 1" port 307 scfm
Media specifications (Adsorber): Max. oil carryover (PPM w/w)	 0.008 mg/m³
Manual / semi-auto drain	Closed at 0.8 bar (11.6 psig) G1/8 thread male
Auto drain bowl pressure to close drain	0.8 bar (11.6 psig)
Operating range manual override facility	0.8 bar (11.6 psig) to 17.5 bar (254 psig)
Bowl capacity	130 cm³ (4.4 US oz)

* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

Material specifications

Body		Aluminum
Sight glass		Polypropylene
Filter cover		ABS
Coalescing element		Borosilicate & nano fibers
Top & bottom end cap (Coalescing)		Aluminum
Adsorber element		Activated carbon
Top & bottom end cap (Adsorber)		Glass filled nylon
Support cylinders		Grade 430 stainless steel
Support media		Polypropylene
Anti re-entrainment barrier		Polyester
Encapsulate		Epoxy resin / hardener
Seals		Nitrile NBR
Drains	Manual / semi-auto:	Acetal
	Automatic:	PA / Ø 10mm brass connection
Differential pressure indicator		
	Body	Acetal
	Internal parts	Acetal
	Spring	Stainless steel
	Seals	Nitrile NBR
	Support plate	ABS
	Screws	Steel / zinc plated

Dimensions mm (inches)



Service kits

0.01 micron element kit.....P3YKA00ESC

Adsorber element kit.....P3YKA00ESA

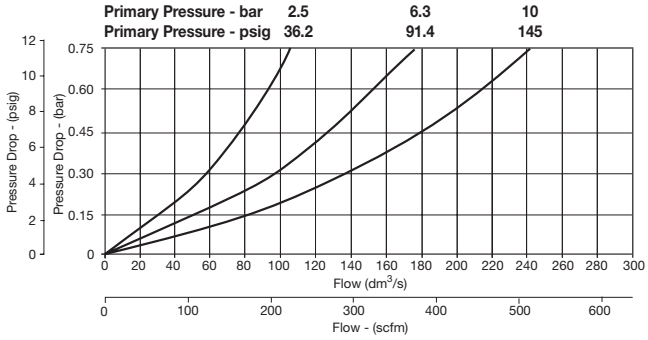
Bowl kit with combined manual / semi auto drain..... P3YKA00BSC

Bowl kit with auto drain.....P3YKA00BSA

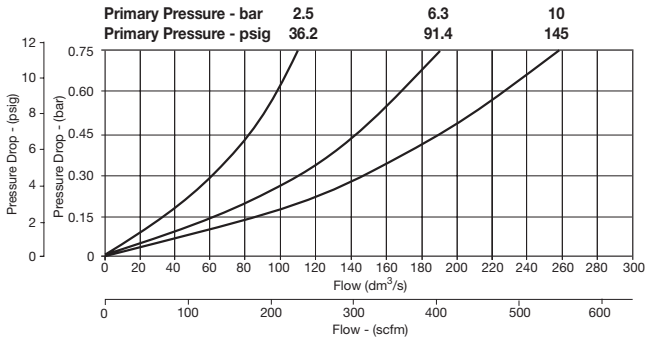
Differential pressure indicator kit..... P3YKA00RQ

Flow characteristics

(3/4") 0.01 Micron Coalescing Filter Saturated



(1") 0.01 Micron Coalescing Filter Saturated



Coalescing Filter
M30



Coalescing Filter

Auto Drain

M30-04-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/2	123 SCFM (58.2 dm^3/s)
	3/4	173 SCFM (81.0 dm^3/s)
	1	203 SCFM (96.0 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2, 3/4, 1
Bowl Capacity		2.0 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Weight		5.4 lb. (2.4 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

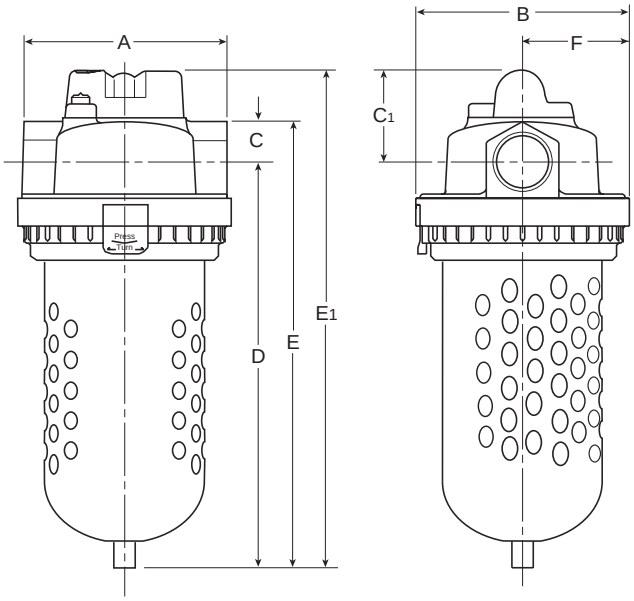
"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator



Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Element Retainer		Brass Stud
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	C_1	D	E	E_1	F
Standard Unit M30-XX-000	4.61 (117)	4.80 (122)	.94 (24)	1.77 (44.9)	9.13 (232)	10.07 (255.8)	10.90 (270)	2.40 (61)
Automatic Drain M30-XX-F00	4.61 (117)	4.80 (122)	.94 (24)	1.77 (44.9)	9.27 (235)	10.21 (259)	11.04 (273.5)	2.40 (61)
Metal Bowl M30-XX-M00	4.61 (117)	4.80 (122)	.94 (24)	1.77 (44.9)	8.73 (221.7)	9.67 (245.6)	10.50 (267)	2.40 (61)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Manual Drain FRP-95-593
- Auto Drain GRP-95-970

Plastic Bowl –
- Manual Drain FRP-96-315
- Bowl Guard, Manual Drain FRP-95-832
- Bowl Guard, Auto Drain FRP-95-775

Replacement Element Kits

Type "B", 0.5 Micron MSP-95-992

Type "C", 0.01 Micron MTP-95-551

Type "D", Oil Vapor Removing MXP-95-532

Accessories

Automatic Mechanical Drain GRP-95-973

Cap, Differential Pressure Indicator –
- For pressures over 150 PSIG GRP-95-020

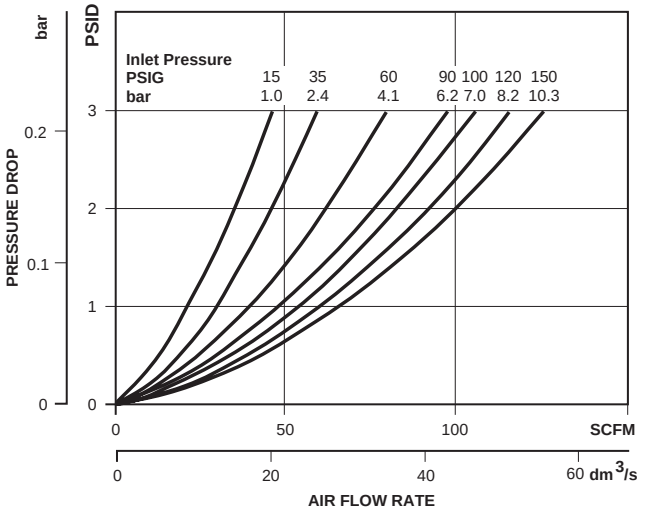
Differential Pressure Indicator DP2-02-000

Manual Flex-Tip FRP-95-610

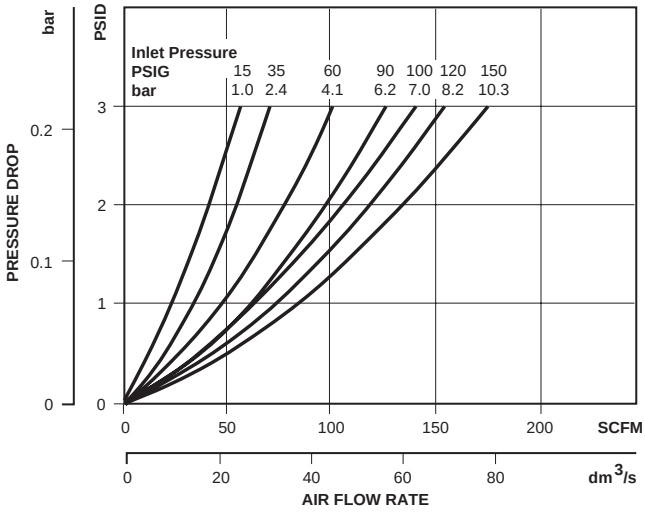
Sight Gauge Kit LRP-95-771

Wall Mounting Bracket, U-Bolt Pipe Clamp GRP-95-734

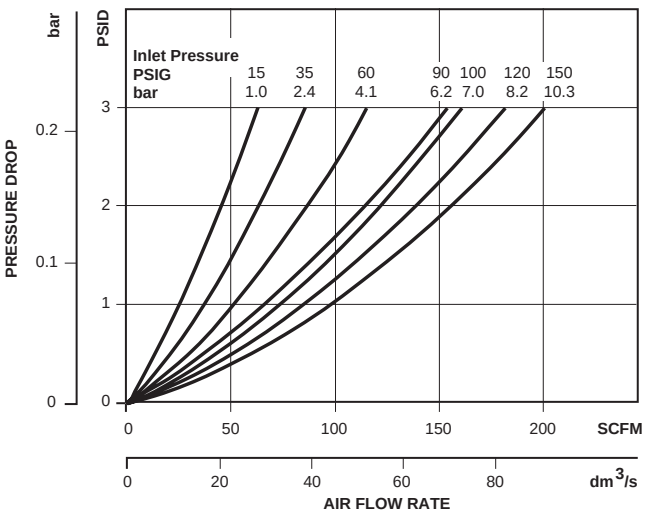
M30-04-000



M30-06-000



M30-08-000

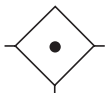


Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	1/2	M30-04-000	M30-04-M00	M30-04-S00	M30-04-X00
	3/4	M30-06-000	M30-06-M00	M30-06-S00	M30-06-X00
	1	M30-08-000	M30-08-M00	M30-08-S00	M30-08-X00
Automatic Drain	1/2	M30-04-F00	M30-04-FM0	M30-04-FS0	—
	3/4	M30-06-F00	M30-06-FM0	M30-06-FS0	—
	1	M30-08-F00	M30-08-FM0	M30-08-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M31


Coalescing Filter

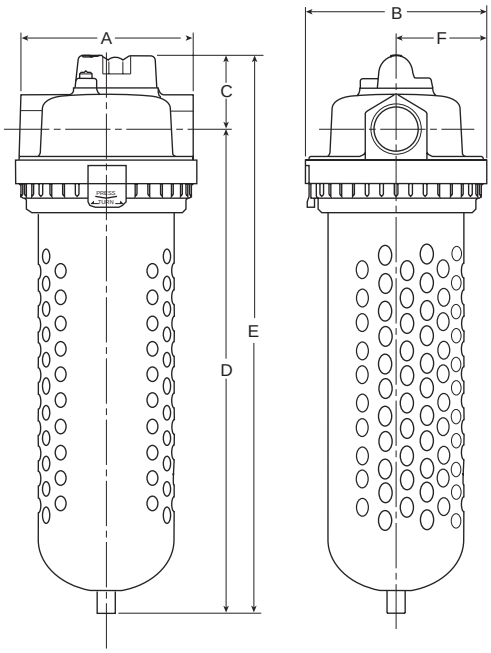

Auto Drain



M31-06-000

Features

- Manual Drain
- 0.01 Micron Rated Filter Element
- Quick-disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Differential Pressure Indicator



= "Most Popular"

Specifications

Flow Capacity*	3/4	215 SCFM (101.4 dm^3/s)
	1	277 SCFM (130.8 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Bowl Capacity		2.3 oz
Standard Filtration	Micron	(B) 0.5, (C) 0.01 (D) 0.003 ppm / wt**
Weight		6.76 lb. (3.1 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

"M" Series Coalescing Filters, with Type "B" 0.5 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Element Holder		Brass Stud
Filter Elements	Type "B", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon

Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit M31-XX-000		4.61 (117)	4.80 (122)	1.90 (48)	13.00 (330)	14.90 (378)	2.40 (61)
Automatic Drain M31-XX-F00		4.61 (117)	4.80 (122)	1.90 (48)	13.14 (333.7)	15.04 (382)	2.40 (61)
Metal Bowl M31-XX-M00		4.61 (117)	4.80 (122)	1.90 (48)	13.10 (332.7)	15.00 (381)	2.40 (61)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
Manual Drain MRP-95-939

Plastic Bowl –
Bowl Guard, Manual Drain MRP-95-938
Bowl Guard, Auto Drain MRP-95-941
Manual Drain MRP-95-940

Replacement Element Kits

Type "B", 0.5 Micron MSP-95-993

Type "C", 0.01 Micron MTP-95-521

Type "D", Oil Vapor Removing MXP-95-522

Accessories

Automatic Mechanical Drain GRP-95-973

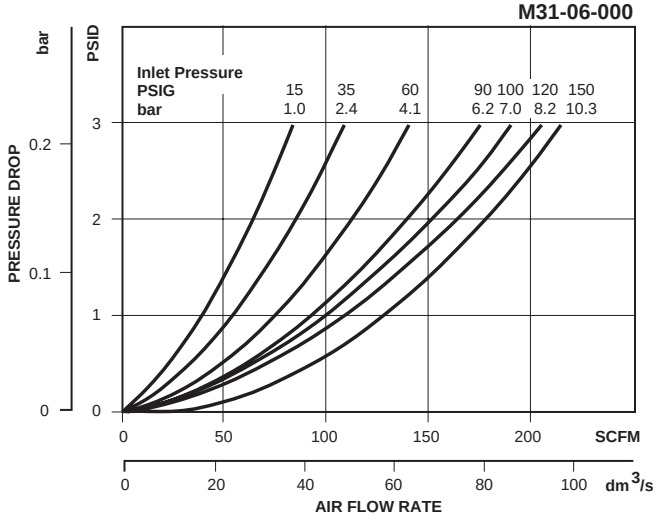
Cap, Differential Pressure Indicator –
For pressures over 150 PSIG GRP-95-020

Differential Pressure Indicator DP2-02-000

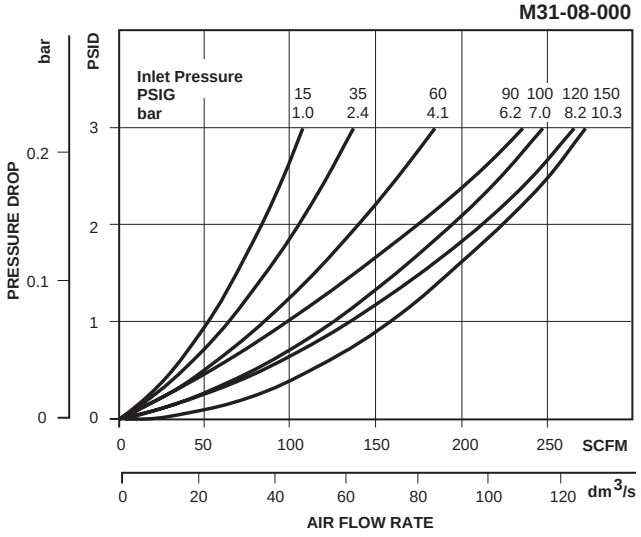
Manual Flex-Tip FRP-95-610

Wall Mounting Bracket, U-bolt Pipe Clamp GRP-95-734

M31-06-000



M31-08-000

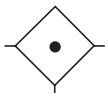


Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "C" Element	Metal Bowl / "C" Element	Polycarbonate Bowl / Bowl Guard / "B" Element	Polycarbonate Bowl / Bowl Guard / "D" Element (No DPI)
Manual Drain	3/4	M31-06-000	M31-06-M00	M31-06-S00	M31-06-X00
	1	M31-08-000	M31-08-M00	M31-08-S00	M31-08-X00
Automatic Drain	3/4	M31-06-F00	M31-06-FM0	M31-06-FS0	—
	1	M31-08-F00	M31-08-FM0	M31-08-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M32


Coalescing Filter


Auto Drain



M32-08-000

= **"Most Popular"**

Specifications

Flow Capacity*	1	419 SCFM (197 dm^3/s)
Maximum Supply Pressure	without DP2	300 PSIG (20.7 bar)†
	with DP2	150 PSIG (10.3 bar)
Operating Temperature		32° to 150°F (° to 65.5°C)
Port Size	NPT / BSPP-G	1, 1-1/4
Bowl Capacity		80.7 oz
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight		13 lb. (5.9 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 300 PSIG (20.7 bar).

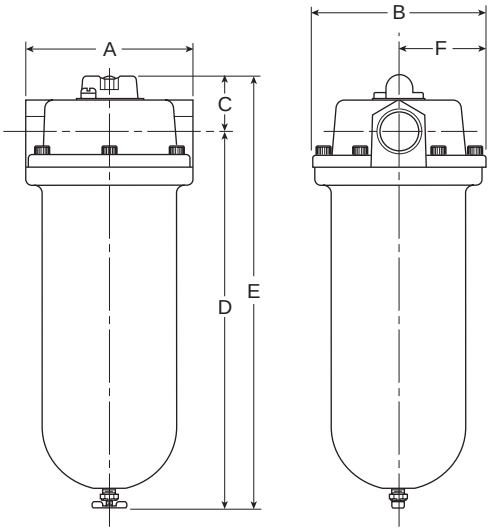
"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 300 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Manual Drain
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



Materials of Construction

Body		Aluminum
Bowls		Aluminum
Element Retainer		Brass Nut / Steel Stud
Filter Elements	Type "B1", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit M32-XX-000	6.25 (159)	6.49 (165)	1.95 (50)	13.90 (353)	16.00 (406)	3.25 (83)
Automatic Drain M32-XX-F00	6.25 (159)	6.49 (165)	1.95 (50)	14.04 (356.6)	16.14 (410)	3.25 (83)

= "Most Popular"

Replacement Bowl Kit

Gasket, Bowl, Fluorocarbon (1 per Kit) GRP-95-288

Replacement Element Kits

Type "B1", 1.0 Micron MSP-95-873

Type "C", 0.01 Micron.....MTP-95-559

Type "D", Oil Vapor Removing MXP-95-558

Accessories

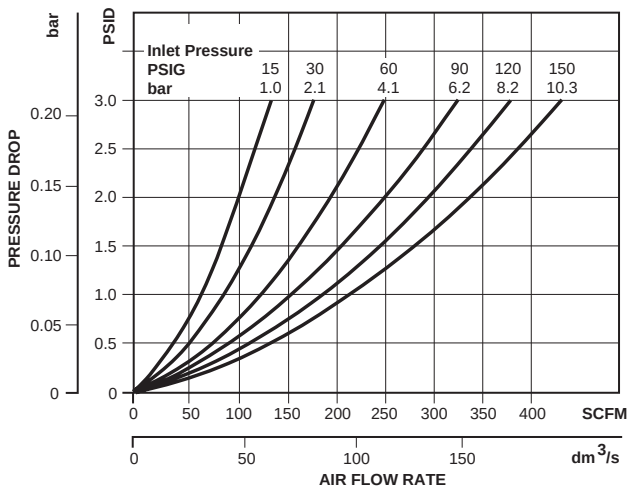
Automatic Mechanical Drain..... GRP-95-981

Cap, Differential Pressure Indicator –
For pressures over 150 PSIG, 10.3 bar GRP-95-020

Gauge, Differential Pressure DP3-01-000

Indicator, Differential Pressure.....DP2-02-000

M32-08-F00



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element (No DPI)
Manual Drain	1	M32-08-000	M32-08-S00	M32-08-X00
Automatic Drain	1	M32-08-F00	M32-08-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number

Coalescing Filter
M35



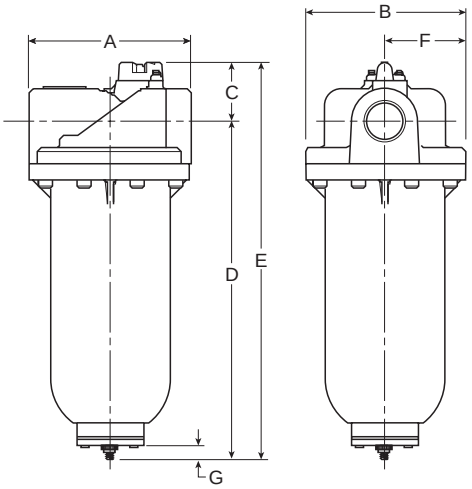
Coalescing Filter

Auto Drain

M35-0B-000

Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential Pressure Gauge Available, Order Separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers Trouble-free Method for Interchanging and Installing External Drains
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



= **"Most Popular"**

Specifications

Flow Capacity*	1-1/2	710 SCFM (335 dm^3/s)
	2	710 SCFM (335 dm^3/s)
Maximum Supply Pressure	without DPI and with Pressure Gauge	250 PSIG (17.2 bar)†
	with DPI	150 PSIG (10.3 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/2, 2
Bowl Capacity		13.9 oz
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight		19.3 lb. (8.7 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 250 PSIG (17.2 bar).

"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Bowls		Aluminum
Filter Elements	Type "B1", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon
Stud		Plated Steel

NOTE: Automatic internal float drain shown is included on M35 filters with F00 suffix only.
Models with 000 suffix include drain plate with tapped 1/2 NPT / BSPP-G drain port.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G
Standard Unit M35-XX-F00	7.80 (198)	7.75 (197)	2.81 (71)	16.24 (412)	19.07 (484)	3.88 (99)	.55 (14)
Without Automatic Drain M35-XX-000	7.80 (198)	7.75 (197)	2.81 (71)	15.69 (398.5)	18.52 (470)	3.88 (99)	.55 (14)

= "Most Popular"

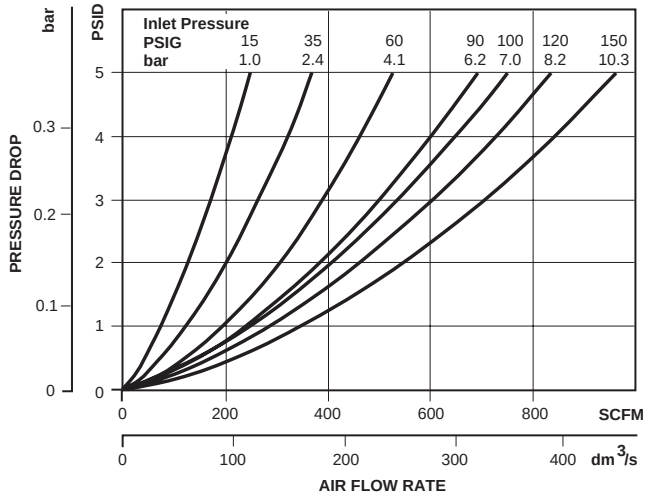
Replacement Element Kits

Type "B1", 1.0 Micron MSP-95-502
Type "C", 0.01 Micron..... MTP-95-502
Type "D", Oil Vapor Removing..... MXP-95-502

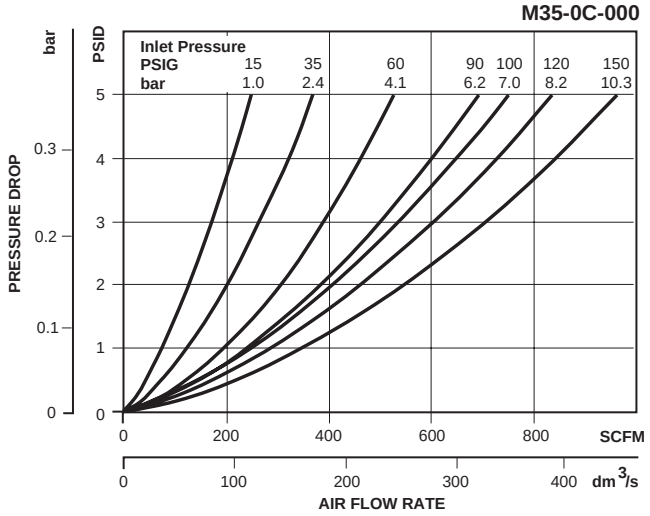
Accessories

Cap, Differential Pressure Indicator –
(For pressures over 150 PSIG) GRP-95-022
Drain, Automatic, Internal, Fluorocarbon..... GRP-95-981
Drain Plate Kit –
1/2 NPT Tapped Drain Port..... GRP-95-393
Gauge, Differential Pressure DP3-01-000
Indicator, Differential Pressure..... DP2-02-001
Manual Drain Kit
with 1/2" Drain Plate..... GRP-95-392

M35-0B-000



M35-0C-000

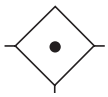


Ordering Information

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element
Manual Drain	1-1/2	M35-0B-000	M35-0B-S00	M35-0B-X00 (Includes 1/2 NPT / BSPP-G M35-0C-X00 Drain Plate)
	2	M35-0C-000	M35-0C-S00	
Automatic Drain	1-1/2	M35-0B-F00	M35-0B-FS0	—
	2	M35-0C-F00	M35-0C-FS0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M43

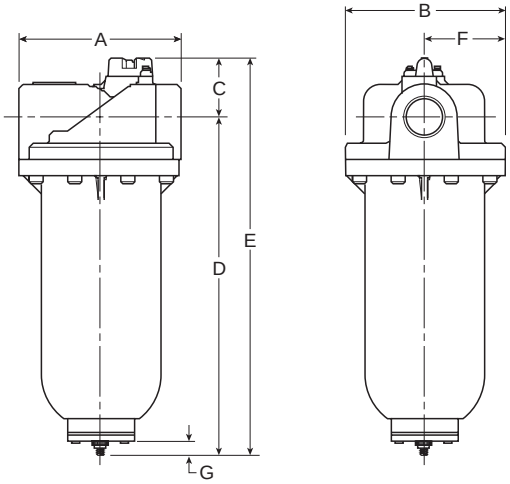




M43-0E-000

Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 250 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Differential Pressure Gauge Available, Order Separately, Kit DP3-01-000
- Unique Drain Mounting Plate Design Offers Trouble-free Method for Interchanging and Installing External Drains
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



= **"Most Popular"**

Specifications

Flow Capacity*	3	1770 SCFM (800 dm^3/s)
Maximum Supply Pressure	without DPI and with Pressure Gauge	250 PSIG (17.2 bar)†
	with DPI	150 PSIG (10.3 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3
Bowl Capacity		17.2 oz
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight		32.8 lb. (14.9 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 250 PSIG (17.2 bar).

"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Bowls		Aluminum
Filter Elements	Type "B1", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon
Stud		Plated Steel

NOTE: Standard filter includes tapped 1/2 NPT / BSPP-G drain plate. To order internal float drain shown, order drain adapter plate GRP-95-391 and automatic drain GRP-95-981.

Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit M43-0E-000		8.94 (227)	9.00 (229)	3.45 (88)	25.96 (660)	29.44 (748)	4.50 (114)	.55 (14)

= "Most Popular"

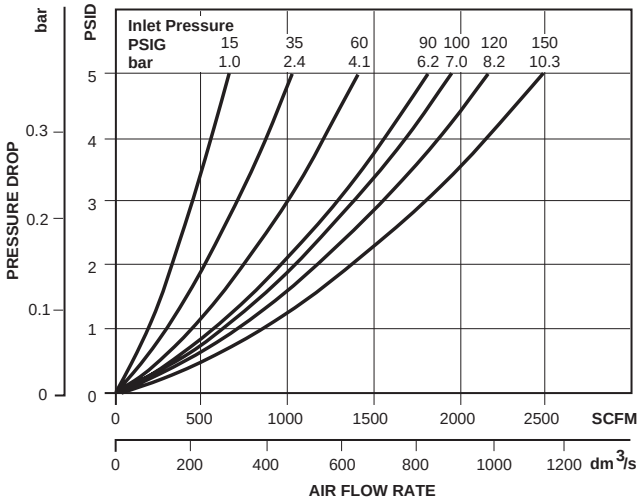
Replacement Element Kits

Type "B1", 1.0 Micron MSP-95-876
Type "C", 0.01 Micron..... MTP-95-562
Type "D", Oil Vapor Removing..... MXP-95-565

Accessories

Cap, Differential Pressure Indicator –
For pressures over 150 PSIG..... GRP-95-022
Drain, Automatic, Internal, Fluorocarbon,
1/8 NPT GRP-95-981
Drain Plate Kit –
1/2 NPT tapped drain port GRP-95-393
5/16 Dia. Drain Port,
For use with Internal Auto Drain GRP-95-391
Gauge, Differential Pressure DP3-01-000
Indicator, Differential Pressure..... DP2-02-001
Manual Drain Kit
Includes 1/2" Drain Plate, Manual Drain..... GRP-95-392
Manual Override for Auto Float Drain –
GRP-05-981 Required GRP-96-001

M43-0E-000



B

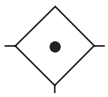
Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element
M43	3	M43-0E-000	M43-0E-S00	M43-0E-X00 (Includes 1/2 NPT / BSPP-G Drain Plate)

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter
M45


Coalescing Filter



M45-0E-000

= **"Most Popular"**

Specifications

Flow Capacity*	3	2200 SCFM (1000 dm^3/s)
Maximum Supply Pressure	without DP2	300 PSIG (20.7 bar)†
	with DP2	150 PSIG (10.3 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3
Bowl Capacity		15 oz
Standard Filtration	Micron	(B1) 1.0, (C) 0.01 (D) 0.003 ppm / wt**
Weight		39.0 lb. (17.7 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop of 3 PSID (0.2 bar).

** Filtration temperature of 70°F (21°C) @100 PSIG (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.

† Without Differential Pressure Indicator – Max. supply pressure is 300 PSIG (20.7 bar).

"M" Series Coalescing Filters, with Type "B1" 1.0 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B1" 1.0 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and exceed Class 3 on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO** Class 1 for maximum particle size and concentration of solid contaminants, and exceed Class 1 on maximum oil content (ppm/wt).

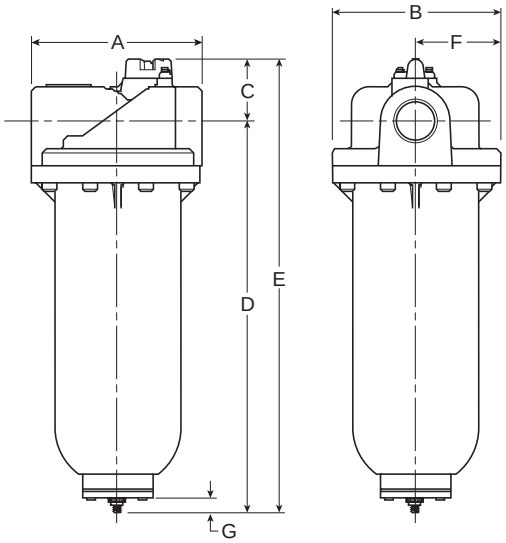
"M" Series Adsorption Filters, with Type "D" 0.003 micron activated carbon elements: All Wilkerson Type "M" adsorption filters with Type "D" 0.003 micron activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Bowls		Aluminum
Filter Elements	Type "B1", "C"	Borosilicate Cloth
	Type "D"	Activated Carbon
Seals		Fluorocarbon
Stud		Plated Steel

Features

- Heavy-duty Cast Aluminum Housings to Withstand Operating Pressures Up to 300 PSIG †
- Differential Pressure Indicator to Eliminate the Guesswork of Element Replacement
- Unique Drain Mounting Plate Design Offers Trouble-free Method for Interchanging and Installing External Drains
- High-flow Filter Elements: Coalescing, 1 Micron and 0.01 Micron



NOTE: Standard filter includes tapped 1/2 NPT / BSPP-G drain plate. To order internal float drain shown, order drain adapter plate GRP-95-391 and automatic drain GRP-95-981.

Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit M45-XX-000		8.94 (227)	8.88 (225.5)	3.48 (88)	32.52 (826)	36.00 (914)	4.44 (112.8)	.55 (14)

= "Most Popular"

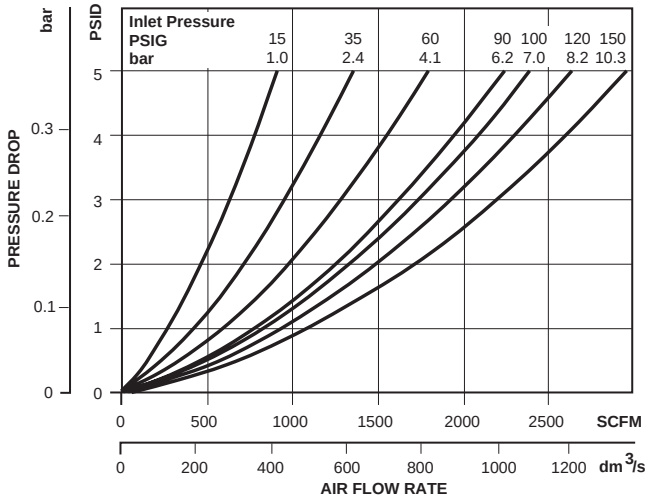
Replacement Element Kits

Type "B1", 1.0 Micron MSP-95-500
Type "C", 0.01 Micron..... MTP-95-500
Type "D", Oil Vapor Removing..... MXP-95-500

Accessories

Cap, Differential Pressure Indicator –
For pressures over 150 PSIG..... GRP-95-022
Drain, Automatic, Internal, Fluorocarbon,
1/8 NPT GRP-95-981
Drain Plate Kit –
1/2 NPT tapped drain port GRP-95-393
5/16 Dia. Drain Port,
For use with Internal Auto Drain GRP-95-391
Gauge, Differential Pressure DP3-01-000
Indicator, Differential Pressure..... DP2-02-001
Manual Drain Kit
Includes 1/2" Drain Plate, Manual Drain..... GRP-95-392
Manual Override for Auto Float Drain –
GRP-05-981 Required GRP-96-000

M45-0E-000



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl / "C" Element	Metal Bowl / "B1" Element	Metal Bowl / "D" Element
M45	3	M45-0E-000	M45-0E-S00	M45-0E-X00 (Includes 1/2 NPT / BSPP-G Drain Plate)

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

M55 Series Flanged Filters

= "Most Popular"



M55 Series

Features

- No Tie Rod Element Design
- Pleated Element Technology
- New High Efficiency Drainage Layer
- Designed in Accordance with ASME and CRN
- Connection Sizes: 4 Inch & 6 Inch Flange
- Acrylic Polyurethane Coating for Corrosion Protection
- Auto float drain is standard, shipped loose
- DP gauge is standard, installed

Specifications

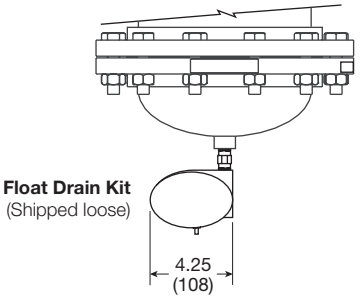
Operating Pressure	232 PSIG (16 bar)
Operating Temperature	35°F to 212°F (1.5°C to 100°C)

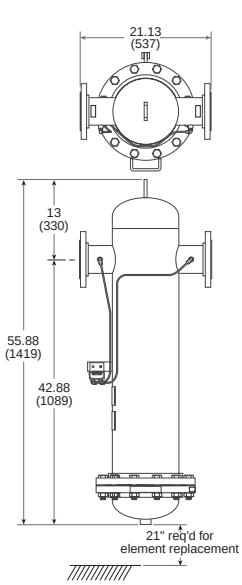
Materials of Construction

Baffle		Plated Steel
Body		Steel
Deflector		Plated Steel
Filter Element	0.01 & 1.0 micron	Borosilicate Cloth
Seals		Fluorocarbon
Stud		Plated Steel

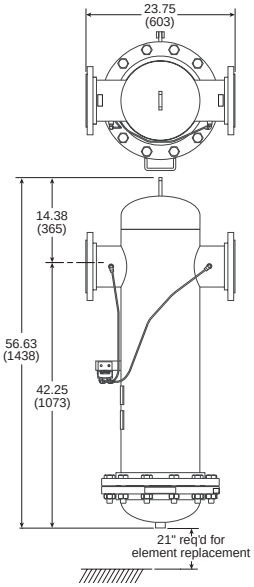
Service Kits

DP Gauge Replacement Kit		Number Required	DPG-Kit
Float Drain Kit - 1/2" NPT			HDF-120-NPT-A
Filter Element Kit	0.01 Micron	4 or 6	060AA
	1.0 Micron	4 or 6	060AO





M55-0F-F00 & M55-0F-FS0



M55-0H-F00 & M55-0H-FS0

Inlet Air Pressure Correction

PSI	15	29	44	58	73	87	100	116	131	145
bar	1	2	3	4	5	6	7	8	9	10
Factor	0.38	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.19

For pressures above 232 PSIG (16 bar), use manual drain.

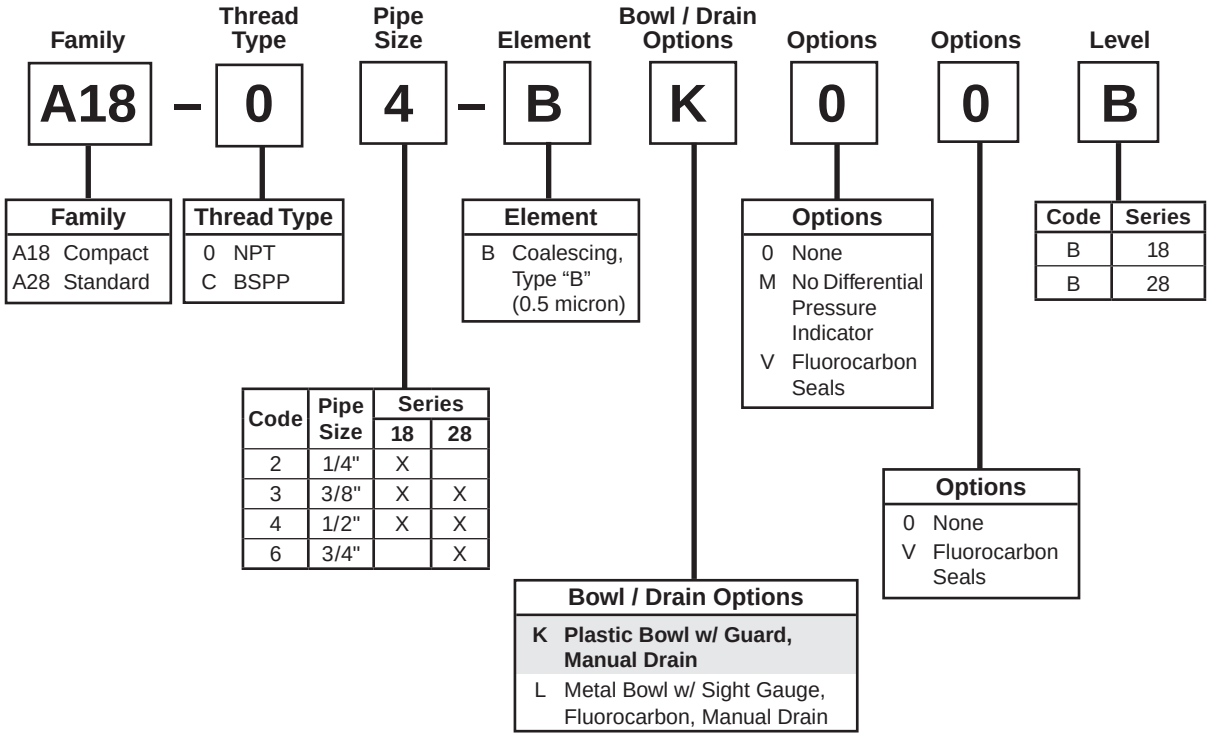
PSI	160	174	189	203	218	232	247	261	275	290
bar	11	12	13	14	15	16	17	18	19	20
Factor	1.25	1.31	1.36	1.41	1.46	1.51	1.56	1.60	1.65	1.70

Ordering Information

Model Type	Port Size	Flow SCFM	Element Type	Number of Elements
M55-0F-F00	4" Flange	2755	0.01 micron	4
M55-0F-FS0	4" Flange	2755	1.0 micron	4
M55-0H-F00	6" Flange	4132	0.01 micron	6
M55-0H-FS0	6" Flange	4132	1.0 micron	6

Afterfilter Numbering System

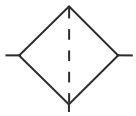
= "Most Popular"



NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.

Afterfilter A18



Afterfilter



= "Most Popular"

Specifications

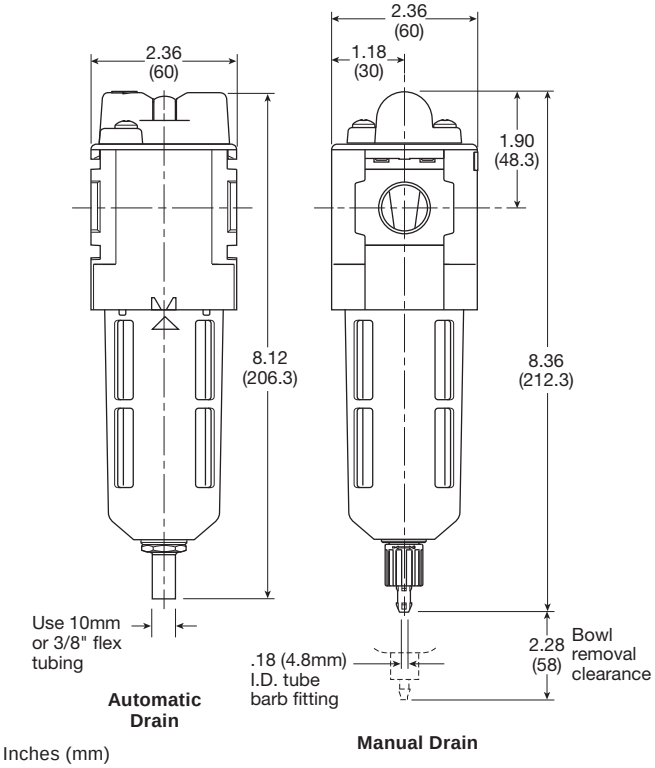
Flow Capacity*	1/4	50 SCFM (23.6 dm^3/s)
	3/8	60 SCFM (28.3 dm^3/s)
	1/2	67 SCFM (31.6 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration		0.5 Micron
Weight		0.71 lb. (0.32 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSID (0.2 bar).

"A18" Series Afterfilters, with Type "B" 0.5 micron elements: All Wilkerson Type "AF" Afterfilters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm/wt).

Features

- Modern Design and Appearance
- 0.5 Micron Element
- Light Weight
- High Flow Capacity with Minimal Pressure Drop



Inches (mm)

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B"	Borosilicate Fiber
Seals		Nitrile
Sight Gauge	Metal Bowl	Nylon

Replacement Bowl Kits

Metal Bowl with Sight Gauge, Manual Drain GRP-96-636

Plastic Bowl / Bowl Guard, Manual Drain GRP-96-634

Plastic Bowl, Plastic Guard, No Drain GRP-96-638

Replacement Element Kit

Type "B", 0.5 Micron MSP-96-647

Accessories

Wall Mounting Bracket –

L-Type GPA-96-604

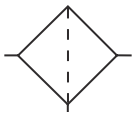
T-Type GPA-96-602

Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "B" Element	Metal Bowl / Sight Gauge / "B" Element
Type "B" Element is Standard (Manual Drain)	1/4	A18-02-BK00B	A18-02-BL00B
	3/8	A18-03-BK00B	A18-03-BL00B
	1/2	A18-04-BK00B	A18-04-BL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Afterfilter A28



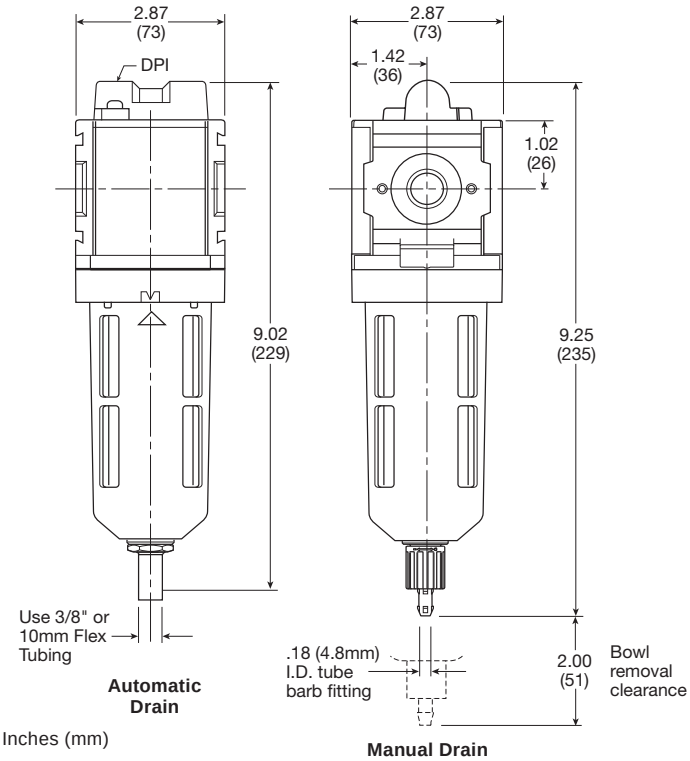
Afterfilter



= "Most Popular"

Features

- Modern Design and Appearance
- 0.5 Micron Element
- Light Weight
- High Flow Capacity with Minimal Pressure Drop
- Bowl Guard
- Quick-Disconnect Bowl



Inches (mm)

Specifications

Flow Capacity*	3/8	82 SCFM (38.7 dm^3/s)
	1/2	90 SCFM (42.5 dm^3/s)
	3/4	98 SCFM (46.3 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Standard Filtration		0.5 Micron
Weight		1.01 lb. (0.46 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 3 PSID (0.2 bar).

"A28" Series Afterfilters, with Type "B" 0.5 micron elements: All Wilkerson Type "AF" Afterfilters with Type "B" 0.5 micron elements **exceed ISO** Class 2 for maximum particle size and concentration of solid contaminants, and **exceed** Class 3 on maximum oil content (ppm/wt).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Filter Element	Type "B"	Borosilicate Fiber
Seals		Nitrile
Sight Gauge	Metal Bowl	Nylon

Replacement Bowl Kits

Metal Bowl with Sight Gauge, Manual Drain GRP-96-644

Plastic Bowl / Bowl Guard, Manual Drain GRP-96-642

Plastic Bowl, Plastic Guard, No Drain GRP-96-652

Replacement Element Kit

Type "B", 0.5 Micron MSP-96-649

Accessories

Wall Mounting Bracket –

L-Type GPA-96-605

T-Type GPA-96-602

Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard / "B" Element	Metal Bowl / Sight Gauge / "B" Element
Type "B" Element is Standard (Manual Drain)	3/8	A28-03-BK00B	A28-03-BL00B
	1/2	A28-04-BK00B	A28-04-BL00B
	3/4	A28-06-BK00B	A28-06-BL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Exhaust Muffler F23



F23-04-000

Exhaust Muffler Units

Part of an OSHA requirement is to keep sustained noise levels within acceptable specifications: 90 decibels (dBA) or less. Wilkerson's mufflers and oil reclassifiers keep these objectionable exhaust noises (air motors, control valves, etc.) within the OSHA specifications.

These units have only one inlet port.

The contaminants in the exhaust flow are mechanically separated and twice filtered to 5 micron levels. The clean, muffled exhaust flows out of the unit under the metal hood on top.

Features:

- 5 Micron Rated Reusable Elements
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Low-Pressure Drop (Back Pressure)
- Removes Oily Aerosols from Exhaust Flows
- Transparent Bowls with Metal Bowl Guards Standard

Replacement Bowl Kits

Metal Bowl Guard, (for Plastic Bowl)..... GRP-95-804
Metal Bowl, Brass Petcock FRP-95-612
Metal Bowl / Sight Gauge, Brass Petcock GRP-95-613
Plastic Bowl, Plastic Petcock Drain LRP-96-157
Plastic Bowl / Bowl Guard, Plastic Petcock Drain....GRP-95-724

Replacement Element Kit

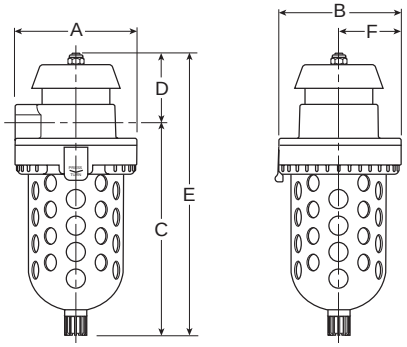
Type A", 5 Micron (Upper & Lower Elements)..... FRP-95-169

Replacement Kits

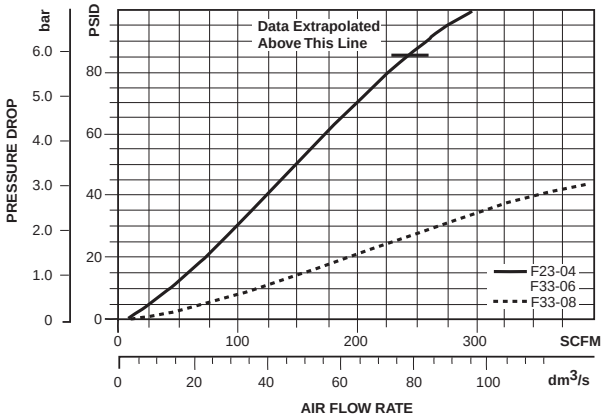
Clamp Ring Assembly.....GRP-95-154
Manual Drain, Brass Petcock GRP-95-182
O-ring, Bowl, Fluorocarbon (10 per kit) GRP-95-109
O-ring, Bowl, Nitrile (10 per kit) GRP-95-257

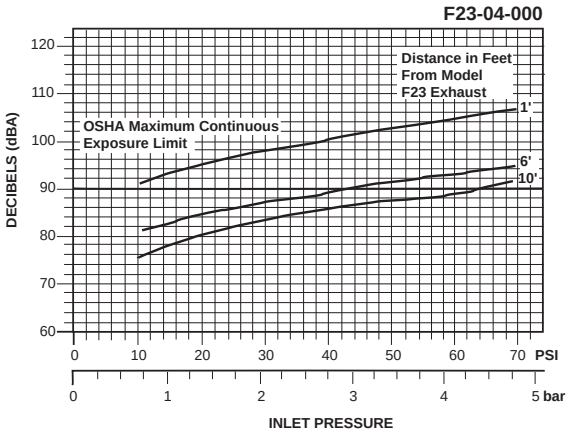
Accessories

Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734



= "Most Popular"





Specifications

Maximum Supply Pressure		150 PSIG (10.3 bar)
Operating Temperature		32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G	1/2
Standard Filtration		5 Micron
Weight		3.12 lb. (1.4 kg)

Materials of Construction

Baffle		Acetal
Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Element Retainer		Steel Stud
Filter Element		Sintered Polyethylene
Shield		Steel
Stem		Steel

Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit F23-04-000		3.83 (97.5)	3.83 (97.5)	6.23 (158.2)	2.06 (52.3)	8.29 (210.6)	1.92 (48.8)

Exhaust Muffler F33

= "Most Popular"



F33-06-000

Exhaust Muffler Units

Part of an OSHA requirement is to keep sustained noise levels within acceptable specifications: 90 decibels (dBA) or less. Wilkerson's mufflers and oil reclassifiers keep these objectionable exhaust noises (air motors, control valves, etc.) within the OSHA specifications.

These units have only one inlet port. The contaminants in the exhaust flow are mechanically separated and twice filtered to 5 micron levels. The clean, muffled exhaust flows out of the unit under the metal hood on top.

Features:

- 5 Micron Rated Reusable Elements
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Low-Pressure Drop (Back Pressure)
- Removes Oily Aerosols from Exhaust Flows
- Transparent Bowls with Metal Bowl Guards Standard

Replacement Bowl Kits

Metal Bowl Guard, (for Plastic Bowl)..... GRP-95-808
Metal Bowl, Brass Petcock FRP-95-593
Metal Bowl / Sight Gauge, Brass Petcock..... GRP-95-676
Plastic Bowl, Plastic Petcock Drain LRP-96-160
Plastic Bowl / Bowl Guard, Plastic Petcock Drain.... LRP-95-830

Replacement Element Kit

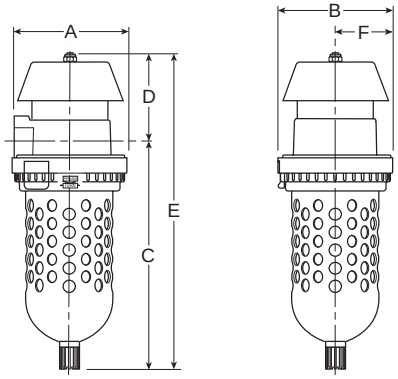
Type "A", 5 Micron FRP-95-170

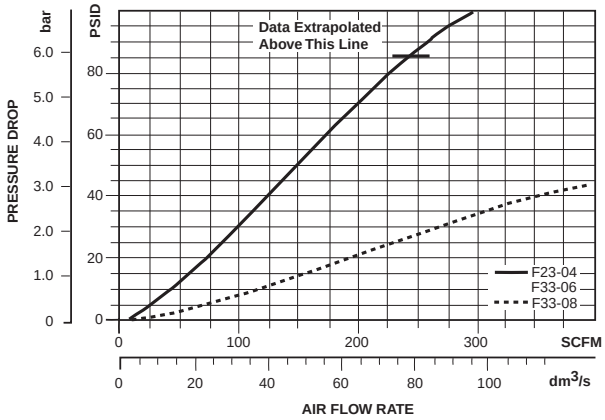
Replacement Kits

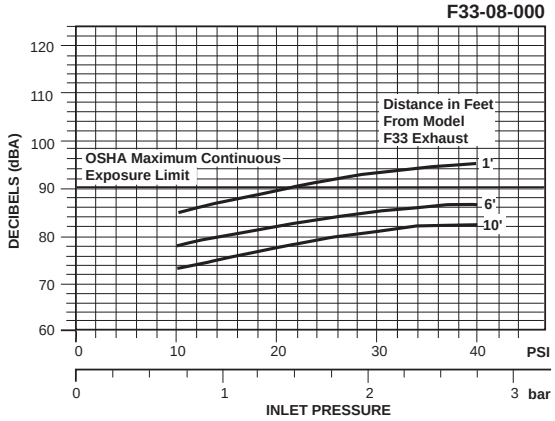
Clamp Ring Assembly..... GRP-96-404
Manual Drain, Brass Petcock GRP-95-182
O-ring, Bowl, Fluorocarbon (10 per kit) GRP-95-942
O-ring, Bowl, Nitrile (10 per kit) GRP-95-256

Accessories

Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734







Specifications

Maximum Supply Pressure		150 PSIG (10.3 bar)
Operating Temperature		32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G	3/4, 1
Standard Filtration		5 Micron
Weight		6 lb. (2.7 kg)

Materials of Construction

Baffle		Acetal
Body		Zinc
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Element Retainer		Steel Stud
Filter Element		Sintered Polyethylene
Shield		Steel
Stem		Steel

Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit F33-06-000 & F33-08-000		4.63 (117.6)	4.63 (117.6)	8.91 (226.3)	3.99 (98.6)	12.79 (324.9)	2.31 (58.7)

Exhaust Silencer Mist Eliminator XMC



XMC-08-000

Features

- Port Sizes 1/2", 1" and 1-1/2" NPT
- Liquid Sump with Manual Drain
- Corrosion Resistant Construction
- Compact and Easy to Install
- Low Cost
- Low Back Pressure
- High Density Durable Plastic End Caps

= "Most Popular"

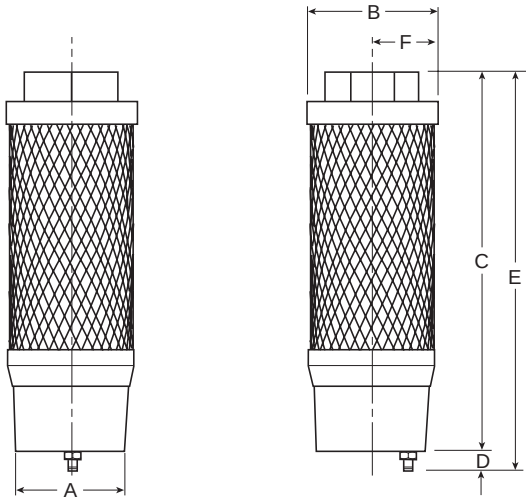
Specifications

	XMC-04-000	XMC-08-000	XMC-0B-000
Air Flow @12 PSIG (0,8 bar) Back Pressure	65 SCFM (30.7 dm^3/s)	110 SCFM (51.9 dm^3/s)	200 SCFM (94.4 dm^3/s)
Bowl Capacity	2.2 fl. oz.	5 fl. oz.	5 fl. oz.
Cv	5.5	9.3	16.9
Drain	Manual		
Oil Removal	99.9%		
Operating Temperature	36° to 122°F (2° to 50°C)		
Port Size*	1/2 NPT	1 NPT	1-1/2 NPT
Media		Air	
Noise Reduction	25 dBA		
Weight	0.4 (0,18)		

* Place "C" in position 4 to specify BSPP-G.

Materials of Construction

Corrosion Resistant Threaded End Cap	Nylon
Cover Cap	Plastic
Filter Elements –	
Primary	Borosilicate Cloth
Secondary	PVC Fiber
Oil Drain Cup	Plastic
Outer Support Sleeve	Plastic Mesh Screen



Dimensions

Models (Inches (mm))	Port Size	A	B	C	D	E	F
Standard Unit XMC-04-000	1/2	2.00 (51)	2.36 (60)	3.94 (100)	0.39 (10)	5.94 (150.9)	1.18 (30)
Standard Unit XMC-08-000	1	2.00 (51)	2.36 (60)	5.83 (148)	0.39 (10)	7.83 (198.9)	1.18 (30)
Standard Unit XMC-0B-000	1-1/2	3.00 (76)	3.42 (87)	8.19 (208)	0.42 (11)	11.19 (284)	— —

Exhaust Silencer / Mist Eliminator XMC

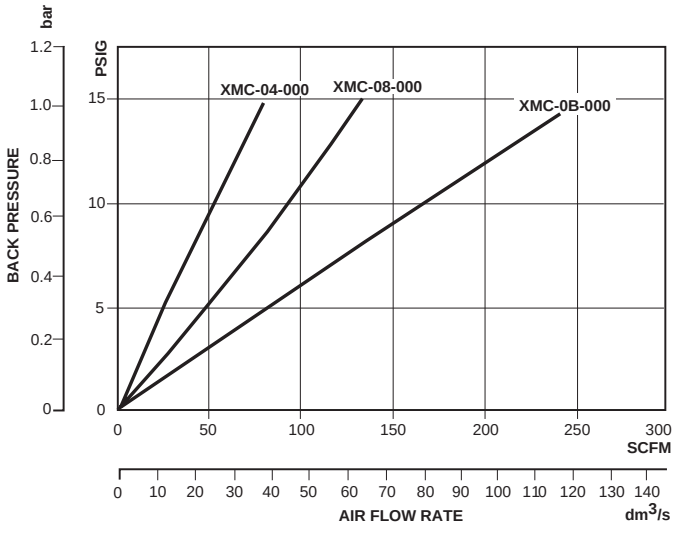
The XMC Series High Performance Exhaust Silencer / Mist Eliminator is an efficient solution to exhaust air oil mist contamination and excessive noise levels generated by exhaust air at levels generally above acceptable safety standards. The Wilkerson XMC Series Exhaust Silencer / Mist Eliminator solves the following two problems:

Oil and Mist Contamination

Exhaust air from various in-plant pneumatic components, such as valves and cylinders generally contain a significant amount of oil mists, as well as solid particles and other lubricant additives which will pollute the working environment, affect worker's health and the quality of the final product.

Operation

During unit operation, the XMC unit coalesces oil mists, which then collect into an integral drainage cup at the bottom of the element. Depending upon the volume of contamination exhausting into the unit, this may either be drained off periodically by removing the rubber drain plug cap and drain into a container, or continuously by connecting a suitable length of plastic tubing to the drain plug on the unit. The XMC is a disposable unit and should be changed when the back pressure becomes excessive for your particular installation.

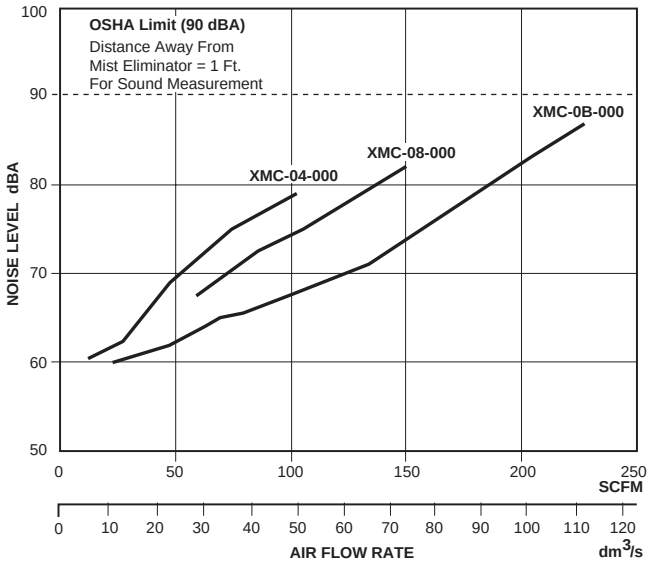


Back Pressure Chart

Unacceptable Noise Levels

The expanding exhaust air also produces both sudden and excessive noise, generally at levels well above the OSHA requirements of 90 decibels (dBA), which makes the working environment both unpleasant and potentially unsafe.

By using a Wilkerson XMC Series unit, oil mist and other contaminants inherent in lubricated air lines are removed thus preventing them from entering the atmosphere. At the same time, the noise level is reduced to meet and exceed the requirements of OSHA standards applicable to environmental conditions. The high performance XMC models remove up to 99.9% of the oil mist from the exhaust air, providing a clean, healthy work environment.



Noise Characteristics Chart

Installation

Wilkerson's XMC Exhaust Silencer / Mist Eliminators can be easily and quickly installed in the exhaust ports of pneumatic valves, air motors and other air operated devices to reduce work area noise and eliminate oil mist from exhaust air. Use of collective piping or manifold where multiple air devices are used makes for easy maintenance and control of oil mist collection and disposal. For manual draining, attach plastic tubing with an inside diameter of 0.25" (6.35 mm) and run tubing from the drain to the collecting container. When installed without plastic tubing, periodically remove rubber drain plug cap and manually drain unit into a proper disposable container.

Liquid Separators
WSA / WS0

= "Most Popular"



Specifications

Maximum Operating Pressure	(WSA)	200 PSIG (13.8 bar)
	(WS0)	232 PSIG (16.0 bar)
Operating Temperature	(WSA)	32° to 150°F (0° to 65.5°C)
	(WS0)	35° to 176°F (1.6° to 80°C)
Pressure Differential at Rated Flow		1.0 PSID (0.07 bar)

Materials of Construction

	WSA	WS0
Housing	Zinc	Aluminum
Seals	Nitrile	Fluorocarbon

Features

- High Flow Rates
- Less than 1 PSIG Differential Pressure
- Lightweight Cast Aluminum Housing with 1" to 3" NPT Connections (WS0)
- Cast Zinc Housings with 1/4" to 1" NPT Connections (WSA)
- External Surfaces Epoxy Painted for Maximum Corrosion Protection
- Standard Equipped with Quick Disconnect Bowls for Ease of Service (WSA)
- Three (3) Optional Automatic Drains Available

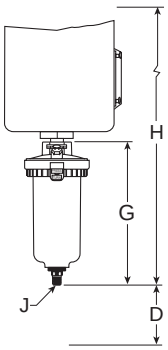
Liquid Separators

Our unique design combines the techniques of centrifugal action and other mechanical separation principles (Impingement, Separation, Laminar Flow and Stokes Law) to remove large quantities of liquid and solid contamination.

Typical applications include water separation downstream of aftercoolers, protection of refrigerant and heatless regenerative desiccant dryers, downstream of air receivers, and other liquid / gas separation duties where the volume of water and solids poses a real problem.

Model Number	In / Out NPT Pipe Conn.	Rated Flow (SCFM) @ 100 PSIG*	Approx. Weight lbs.	Recommended Automatic Drain
WSA-02-M00**	1/4"	25	2.2	Optional
WSA-02-FM0	1/4"	25	2.2	Internal
WSA-03-M00**	3/8"	50	2.6	Optional
WSA-03-FM0	3/8"	50	2.6	Internal
WSA-04-M00**	1/2"	50	2.6	Optional
WSA-04-FM0	1/2"	50	2.6	Internal
WSA-06-M00**	3/4"	100	6.0	Optional
WSA-06-FM0	3/4"	100	6.0	Internal
WSA-08-M00**	1"	120	6.0	Optional
WSA-08-FM0	1"	120	6.0	Internal
WS0-08-000B	**1"**	**233**	**4.8**	**X02-04-FM0 WDV3-G**
WS0-0B-000B	1-1/2"	742	11.2	X02-04-FM0 WDV3-G
WS0-0C-000B	**2"**	**742**	**11.2**	**X02-04-FM0 WDV3-G**
WS0-0E-000B	3"	1700	22.0	X02-04-FM0 WDV3-G

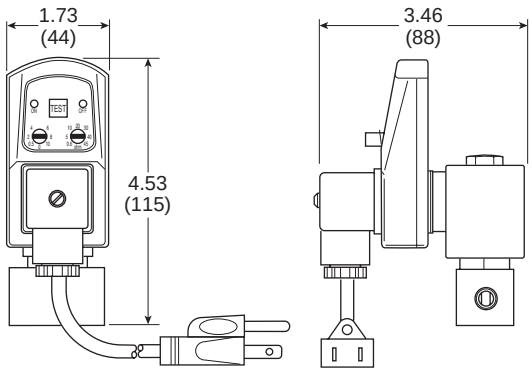
*1 PSID maximum differential. **Models have petcock.



X02

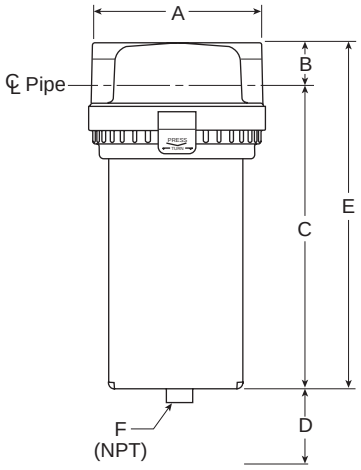
D = Bowl Removal Clearance Dimension

J = External Drain Discharge Port (NPT)

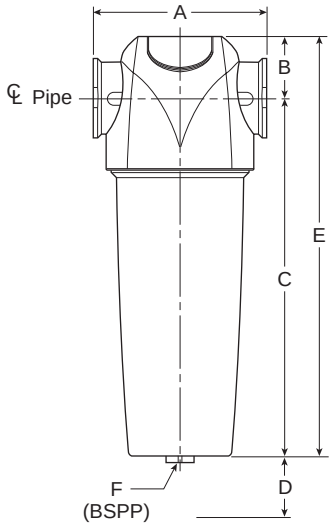


Front View **Side View**

WDV3-G



WSA



WS0

NOTE: MAXIMUM separator efficiency of 98%+ is achieved in the range of 15 to 100% of rated flow in SCFM. At flow rates of <15% or >100%, separator efficiency is reduced considerably. Consult your Wilkerson distributor or contact Wilkerson for assistance in selecting the correct separator model for your application.

Model Number	A	B	C	D	E	NPT F	G	H	NPT J
WSA-02-M00*	3.00	.90	5.51	3.50	6.41	1/8	—	—	—
WSA-02-FM0	3.00	.90	5.51	3.50	6.41	1/8	—	—	—
WSA-03-M00*	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-03-FM0	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-04-M00*	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-04-FM0	3.35	.98	6.36	3.50	7.34	1/8	—	—	—
WSA-06-M00*	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-06-FM0	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-08-M00*	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WSA-08-FM0	4.62	1.00	9.00	3.50	10.00	1/8	—	—	—
WS0-08-000B	5.10	1.60	9.20	3.00	10.80	1/2	5.90	18.00	1/4
WDV3-G	—	—	—	—	—	—	1.62	13.72	—
WS0-0B-000B	6.70	2.00	15.00	4.00	17.00	1/2	5.90	18.00	1/4
WDV3-G	—	—	—	—	—	—	1.62	13.72	—
WS0-0C-000B	6.70	2.00	15.00	4.00	17.00	1/2	5.90	24.50	1/4
WDV3-G	—	—	—	—	—	—	1.62	20.22	—
WS0-0E-000B	8.10	2.40	17.50	4.72	19.90	1/2	5.90	28.90	1/4
WDV3-G	—	—	—	—	—	—	1.62	24.62	—

*Models have petcock.

Bulk Liquid Separators
WWSA



WWSA Series

= "Most Popular"

Specifications

Operating Pressure	232 PSIG (16 bar)
Operating Temperature	35°F to 150°F (1.5°C to 66°C)

Materials of Construction

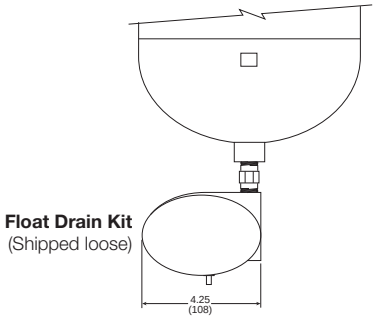
Baffle	Plated Steel
Body	Steel
Deflector	Plated Steel
Seals	Fluorocarbon
Stud	Plated Steel

Service Kits

Auto Float Drain Kit - 1/2" NPT	HDF-120-NPT-A

Features

- Designed in Accordance with ASME and CRN
- Connection Sizes: 4 Inch & 6 Inch
- High Liquid Removal Efficiencies at All Flow Conditions
- Suitable for Variable Flow Compressors
- Works With All Types of Compressor and Compressor Condensate
- External Surface Epoxy Painted for Maximum Corrosion Resistance
- Auto float drain is standard, shipped loose

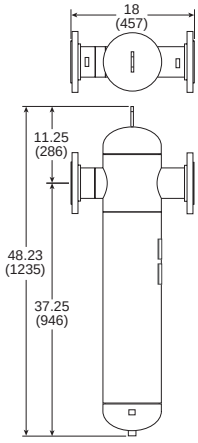


Inlet Air Pressure Correction

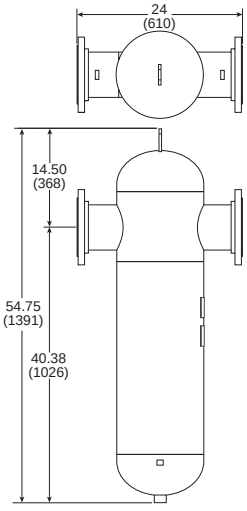
PSI	15	29	44	58	73	87	100	116	131	145
bar	1	2	3	4	5	6	7	8	9	10
Factor	2.65	1.87	1.53	1.32	1.18	1.08	1.00	.94	0.88	0.84

For pressures above 232 PSIG (16 bar), use manual drain.

PSI	160	174	189	203	218	232	247	261	275	290
bar	11	12	13	14	15	16	17	18	19	20
Factor	0.80	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.61	0.59



WWSA1000F



WWSA1800F

Ordering Information

Model Type	Port Size	Flow SCFM
WWSA1000F	4" Flange	2119
WWSA1800F	6" Flange	3814

External Drain X01

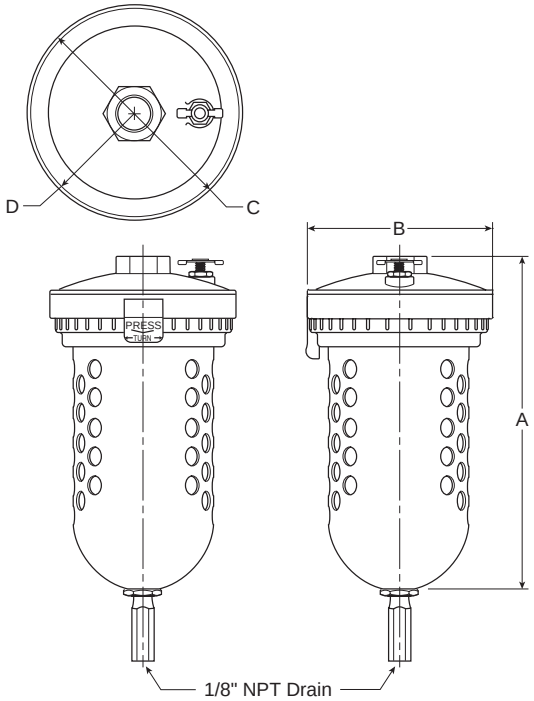


X01-04-000

= "Most Popular"

Features

- Fully Automatic Float Operated
- No Electrical Connections
- Easily Installed
- Internal Pilot Operated
- Quick-Disconnected Clamp Ring for Easy Bowl Removal when Servicing
- Transparent Bowl with Metal Bowl Guard Standard



Specifications

Drain Rate		150 GPH @ 100 PSIG (570 l/h @ 6.9 bar)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2
Weight		4.6 lb. (2.1 kg)

Materials of Construction

Body	Zinc
Float Assembly	Plastic with Stainless Steel Internals

Replacement Kits

Bowl Guard, Metal (for Plastic Bowl)..... GRP-95-808

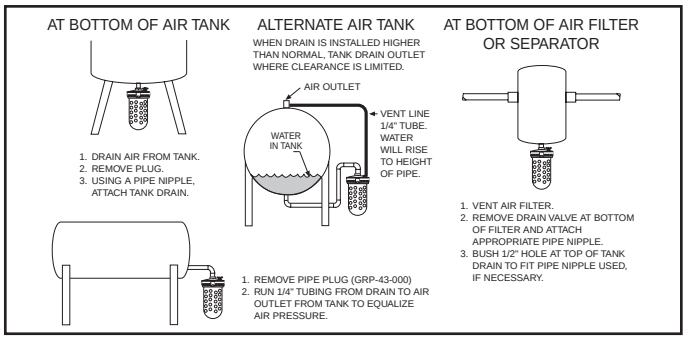
Clamp Ring Assembly..... GRP-96-404

Plastic Bowl, Auto Drain and Bowl Guard Assembly..... XRP-95-747

Metal Bowl and Auto Drain Assembly –..... FRP-95-631

O-ring, Bowl –
Fluorocarbon (10 per kit)..... GRP-95-942
Bowl, Nitrile (10 per kit)..... GRP-95-256

Typical Installations



External Drain

As liquid contaminants collect in the bowl, they raise a closed-cell molded float. When the liquid level reaches a given point, the float triggers a mechanism, which pilots line pressure against a large-area diaphragm, which snaps open the drain valve. The contaminants are discharged from the drain orifice at line pressure. As the liquid level falls, the pilot valve closes, line pressure against the diaphragm returns to atmosphere and the drain valve snaps closed.

Dimensions

Models	Inches (mm)	A	B	C	D
Standard Unit X01-04-000		9.66 (245)	4.76 (121)	4.76 (121)	2.36 (60)

External Drain
X02 / XB3

= "Most Popular"



X02-04-000



XB3-04-M00

Specifications

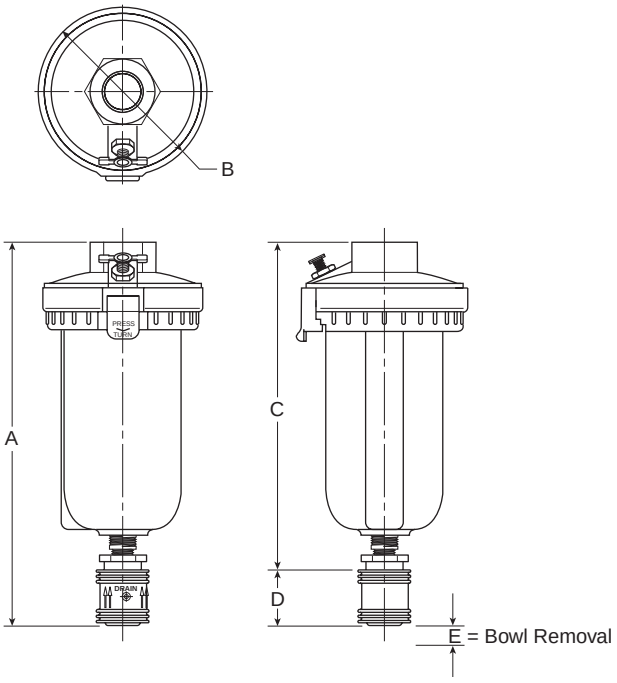
Drain Rate		80 GPH @ 100 PSIG (300 l/h @ 6.9 bar)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/2
Weight	XB3	1.42 lb. (0.6 kg)
	X02	1.26 lb. (0.6 kg)

Materials of Construction

Body	Zinc
Float Assembly	Plastic with Stainless Steel Internals
Manual Override	Brass

Features

- Available in NPT and BSPP-G Ports
- The Manual Override Allows Drainage at Any Time Without Waiting
- Use of the Manual Override Does Not Interfere with the Normal Operation of the Drain
- To Assist in Compliance with EPA Regulations, a 1/8" Pipe Thread Allows the Liquid Discharge to be Piped Away. The X02 Has No Manual Override for the Automatic Drain.



Dimensions

Models (Inches (mm))	A	B	C	D	E
Standard Unit XB3-04-000	7.00 (179)	3.06 (78)	6.00 (152)	1.00 (25)	1.66 (42)
Standard Unit X02-04-F00	5.87 (149)	3.06 (78)	— —	— —	2.88 (73)
Metal Bowl XB3-04-M00	7.50 (190.5)	3.06 (78)	6.50 (165)	1.00 (25)	1.66 (42)
Metal Bowl X02-04-FM0	5.87 (149)	3.06 (78)	— —	— —	2.88 (73)

WILKERSON®
Pneumatic Division
Richland, Michigan
www.wilkersoncorp.com

= "Most Popular"

External Drain

Wilkerson drains are designed to remove liquid oil and water contaminants from compressed air systems automatically.

Liquid contaminants collected in the bowl cause the float mechanism to rise. When the liquid reaches a specific level the float triggers a mechanism which pilots line pressure against a large-area piston. This action causes the drain orifice to open and evacuate the liquid and particulate contaminants. As the liquid level falls the pilot valve closes, line pressure against the piston returns to atmosphere and the drain valve snaps closed.

Wilkerson's XB3 model automatic drain includes the manual override. The manual override option allows for drainage at times when waiting for the system to drain automatically is not desirable.

Replacement Bowl Kits

Bowl Guard, Metal (for Plastic Bowls) GRP-95-846

Metal Bowl –
- Automatic Float Drain GRP-96-007
- Brass Petcock GRP-95-539
- Sight Gauge, Brass Petcock LRP-95-673

Plastic Bowl –
- Flex Tip Drain FRP-95-017
- Plastic Petcock Drain LRP-96-543

Plastic Bowl, Metal Bowl Guard –
- Automatic Float Drain GRP-95-845
- Flex Tip Drain FRP-95-847

Accessories

Auto Float Drain –
- Fluorocarbon GRP-95-981





Drain, Manual Override For Auto Float Drains –
- with 1/8 NPT Port GRP-96-001
  (Use with GRP-95-981 shown above. Order saperately)

Manual Drain, Flex-Tip FRP-95-610

External Piston Drain X51

= "Most Popular"



X51-02-0000

Features

- Automatically Drains Liquid Water from Compressed Air Receiver
- Drains Every Time System Pressure Decays (20 PSIG)

Specifications

Maximum Supply Pressure		200 PSIG (13.8 bar)
Minimum Supply Pressure		30 PSIG (2.1 bar)
Minimum Differential Pressure Required		20 PSIG (1.4 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Weight	lb. (kg)	.8 (.36)

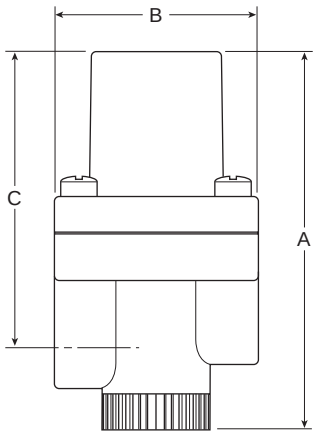
Materials of Construction

Body	Aluminum
Bottom Cap	Plastic
Check Valve Ball	Chrome Alloy Steel
Piston	Brass
Seals	Fluorocarbon
Springs	Steel

Replacement Kits

Maintenance Kit XRP-95-511

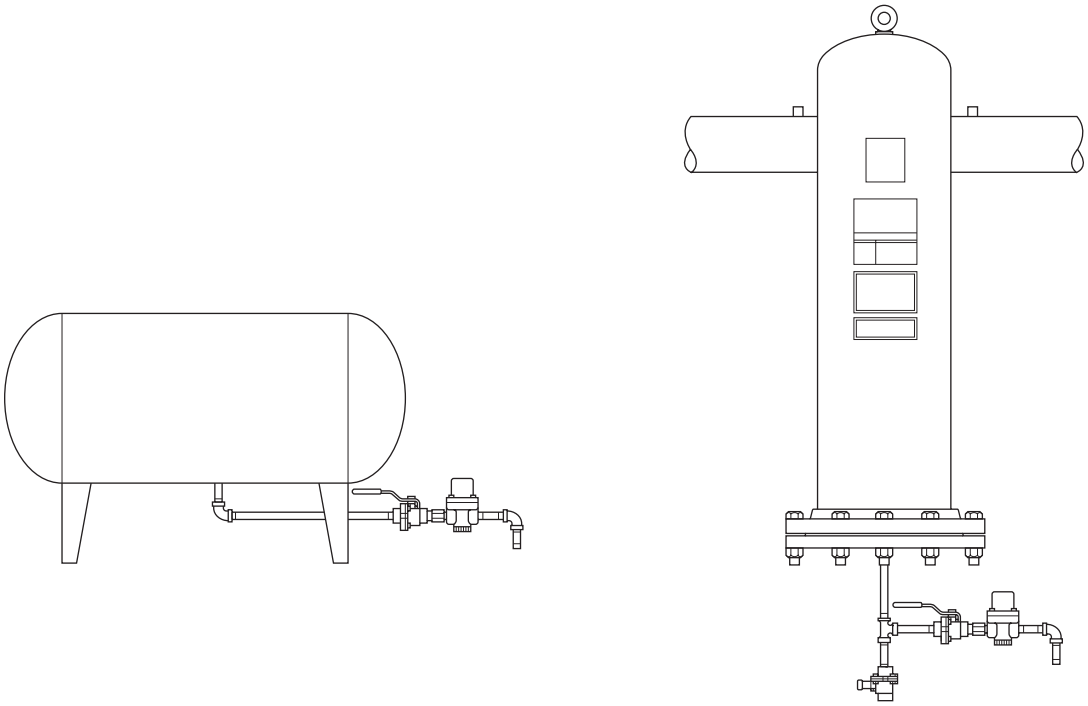
Piston XRP-95-512



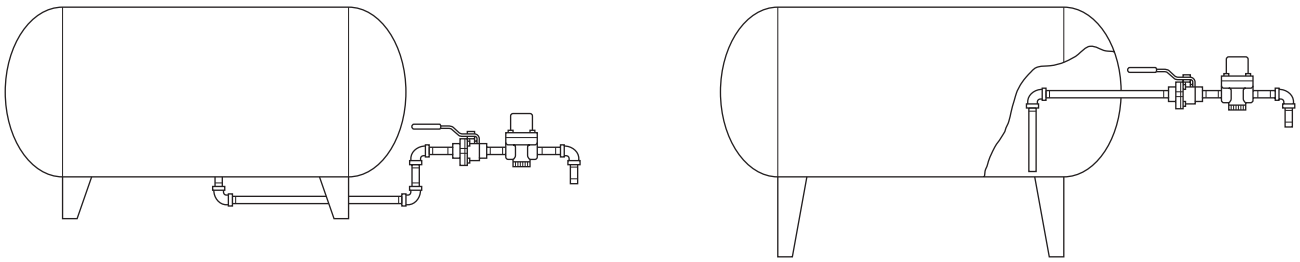
Dimensions

Models	Inches (mm)	A	B	C
Standard Unit X51-02-0000		3.81 (96.8)	2.11 (53.6)	2.93 (74.4)

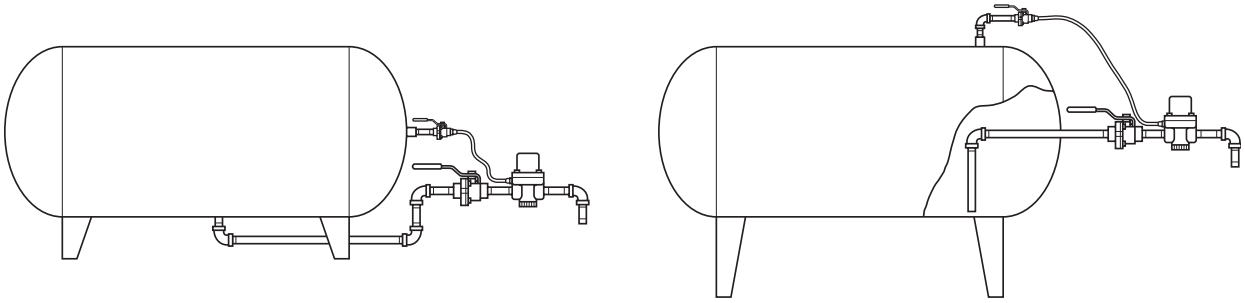
Standard Acceptable Installation (X51 Mounted at Lowest Point in System)



Unacceptable Installation (X51 Installed in Piping Above Lowest Point)



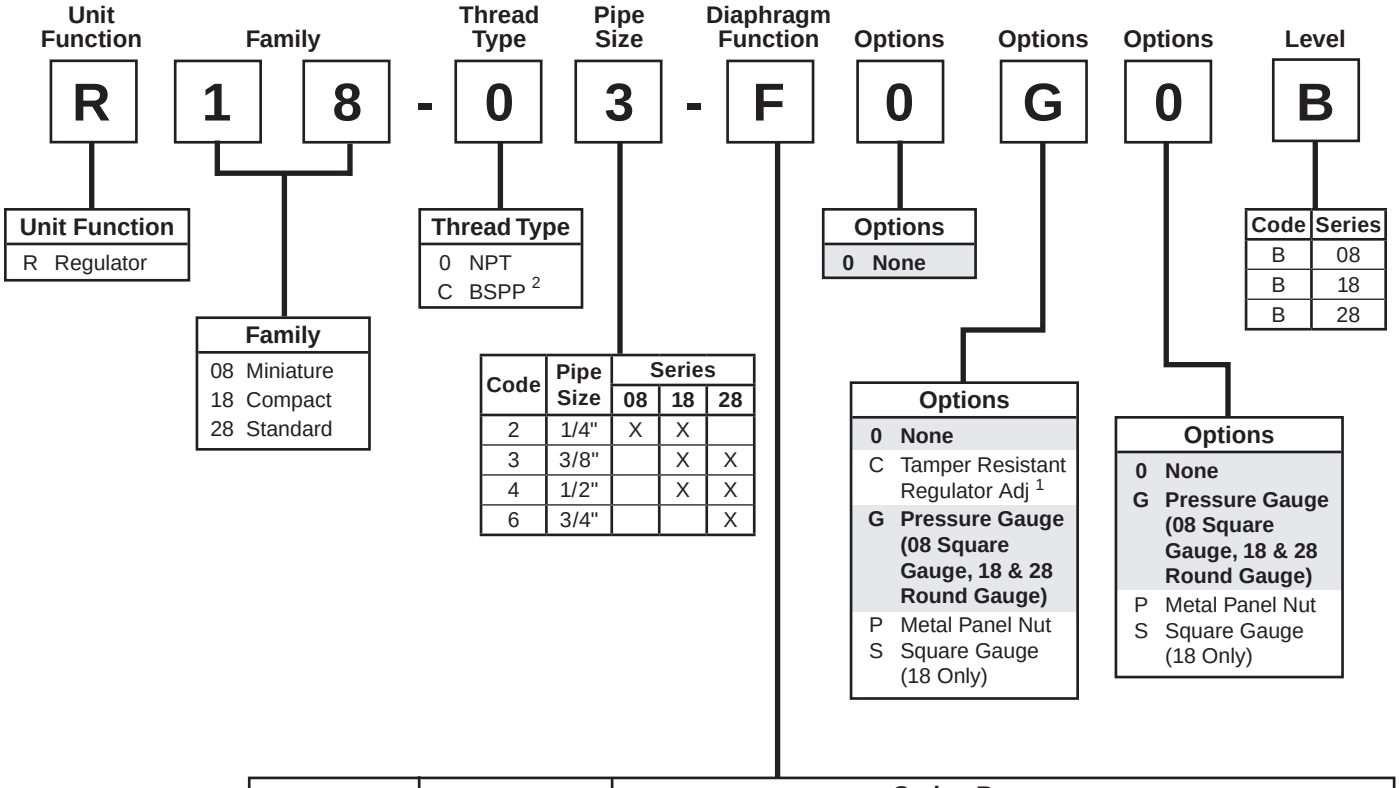
Proper Installation of Remote Pilot (X51 Installed Above Lowest Point)



Notes

Regulator Numbering System

= "Most Popular"



Diaphragm Function	Fluorocarbon	Spring Range			
		0 to 30 PSIG (0 to 2 bar)	0 to 60 PSIG (0 to 4 bar)	0 to 125 PSIG (0 to 8 bar)	0 to 250 PSIG [3] (0 to 17 bar)
Relieving	No	C	D	**F**	G
	Yes	J	K	L	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

[1] Tamper kit not installed. Kit is shipped loose in carton, for 08, 18 & 28 NPT units.

[2] ISO, R228 (G Series).

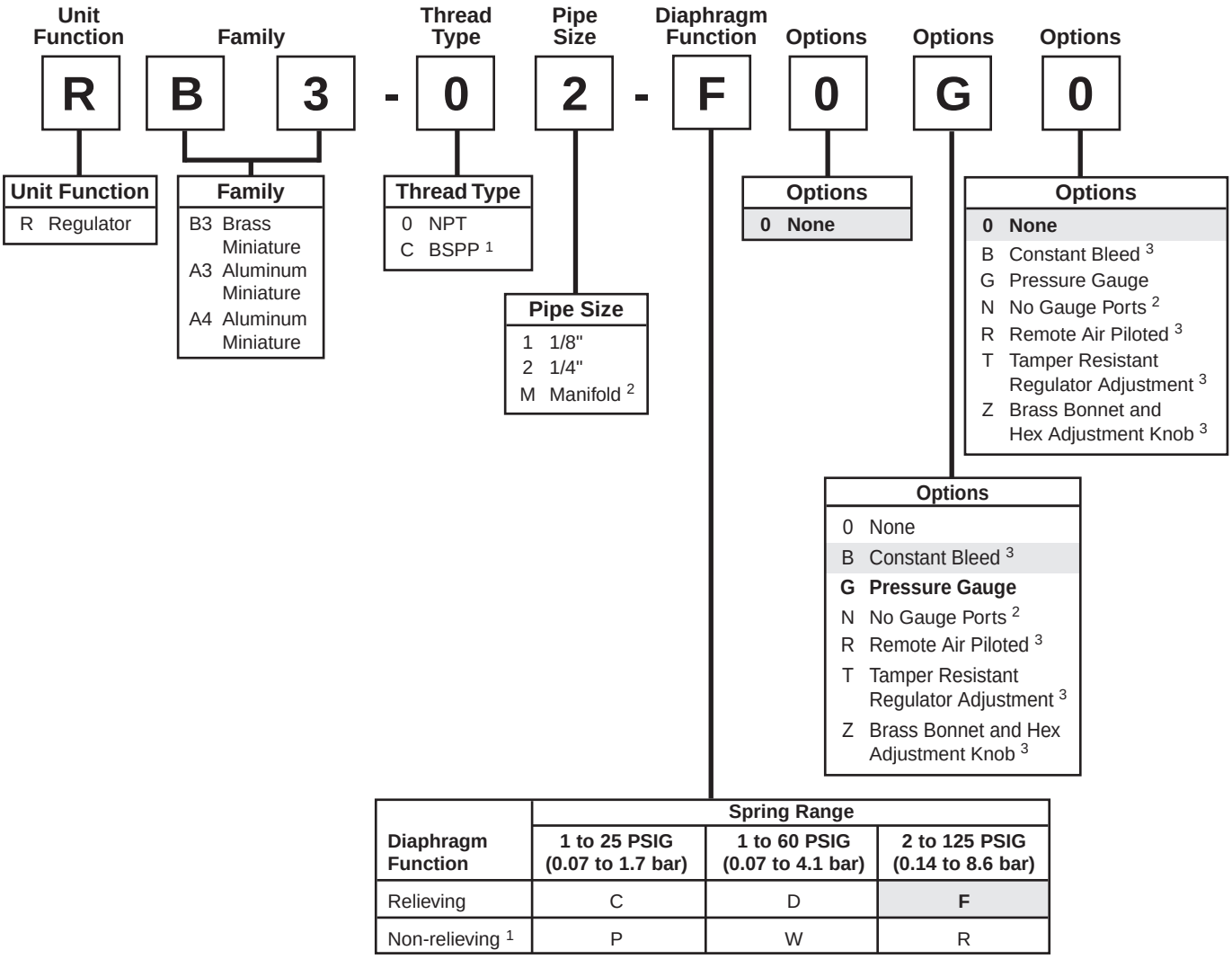
[3] R08 series operating range 0 to 232 PSIG (1 to 16 bar).

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

R 1 8 - 0 3 - F 0 G 0 B

RB3 / RA3 Series Regulator Numbering System

= "Most Popular"



Diaphragm Function	Spring Range		
	1 to 25 PSIG (0.07 to 1.7 bar)	1 to 60 PSIG (0.07 to 4.1 bar)	2 to 125 PSIG (0.14 to 8.6 bar)
Relieving	C	D	**F**
Non-relieving [1]	P	W	R

[1] ISO, R228 (G Series)

[2] RA4 Only

[3] Not available on RA4

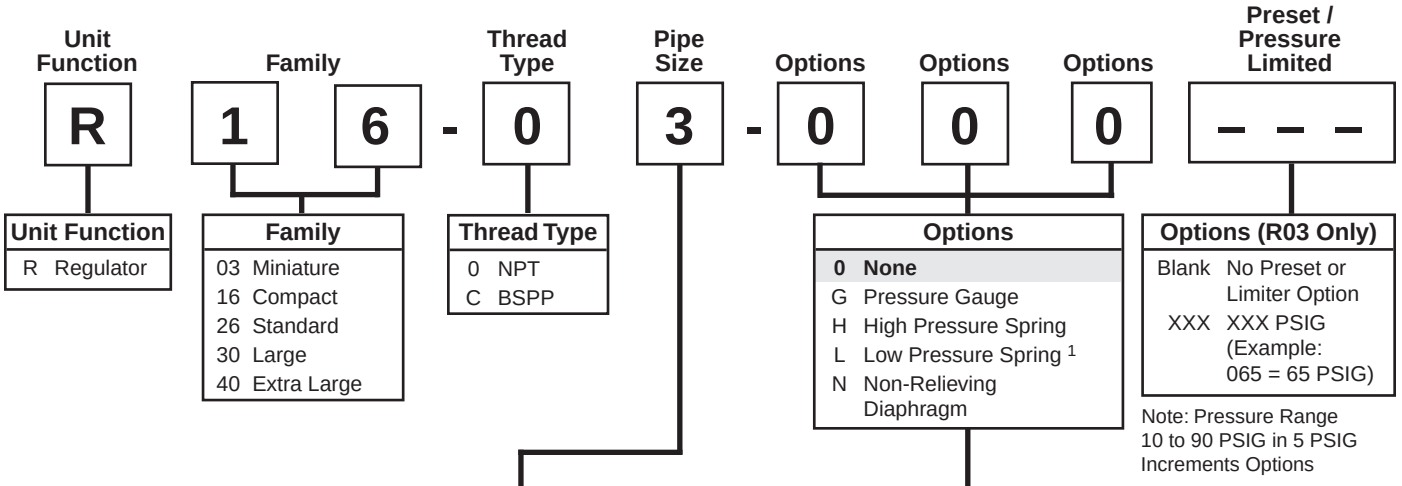
NOTE: Standard pressure adjustment is plastic "snap lock" knob and plastic bonnet with plastic panel mount nut.

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 8, and 9. For example:

RB3 - 0 2 - F 0 G T

Regulator Numbering System

= "Most Popular"



Unit Function	
R	Regulator

Family	
03	Miniature
16	Compact
26	Standard
30	Large
40	Extra Large

Thread Type	
0	NPT
C	BSPP

Code	Pipe Size	Series				
		03	16	26	30	40
1	1/8"	X				
2	1/4"	X	X	X		
3	3/8"		X	X		
4	1/2"		X	X		
6	3/4"				X	
8	1"				X	
B	1-1/2"					X
C	2"					X

Options	
0	**None**
G	Pressure Gauge
H	High Pressure Spring
L	Low Pressure Spring [1]
N	Non-Relieving Diaphragm

Options (R03 Only)	
0	**Standard, 2 to 125 PSI, Relieving**
G**	Pressure Gauge
J*†	Preset, Adjustable
K*†	Preset, Non-Adj. / Epoxy
L	1 to 60 PSI, Relieving
M	Panel Nut Included
N	2 to 125 PSI, Non-Relieving
P	1 to 30 PSI, Relieving
Q	1 to 15 PSI, Relieving
R*†	Pressure Limiter
S	1 to 60 PSI, Non-Relieving
T	1 to 30 PSI, Non-Relieving
U	1 to 15 PSI, Non-Relieving

Options (R03 Only)	
Blank	No Preset or Limiter Option
XXX	XXX PSIG (Example: 065 = 65 PSIG)

Note: Pressure Range 10 to 90 PSIG in 5 PSIG Increments Options

* Inlet pressure is 100 PSIG. For other pressures, consult factory.

** Not available with BSPP thread type.

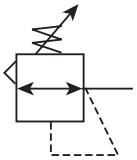
† Must specify preset or limited pressure.

Spring Type by Preset / Limited Pressure:
For Preset / Limited Pressure 10 to 25 use 30 PSI Spring
For Preset / Limited Pressure 26 to 50 use 60 PSI Spring
For Preset / Limited Pressure 51 to 90 use 125 PSI Spring

If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.

[1] Not available on R30.

Miniature Regulator
R03





R03-02-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/8	13 SCFM (6.14 dm^3/s)
	1/4	15 SCFM (7.08 dm^3/s)
Gauge Ports (2)		1/8
Port Threads		1/8, 1/4 Inch
Supply Pressure		0 to 300 PSIG (0 to 20.7 bar)
Operating Temperature		32°F to 125°F (0°C to 52°C)
Secondary Pressure Ranges –		
Standard Pressure		2 to 125 PSIG (0 to 8.6 bar)
Medium Pressure		1 to 60 PSIG (0 to 4.1 bar)
Medium Pressure		1 to 30 PSIG (0 to 2.1 bar)
Low Pressure		1 to 15 PSIG (0 to 1.0 bar)
Weight		.3 lb. (.14 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar) and 10 PSIG pressure drop.

Materials of Construction

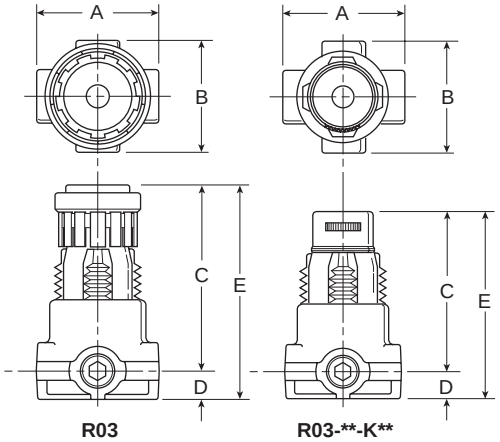
Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Seat, Piston & Valve Poppet	Plastic
Seals	Nitrile

Features

- Unbalanced Poppet Standard
- Solid Control Piston with Lip Seal for Extended Life
- Non-rising Adjusting Knob
- Compact, 3.08 inch (78mm) High by 1.65 inch (42mm) Wide
- Easily Serviced

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



R03 **R03-**-K****

Note: 1.218" dia. (31) mm hole required for panel mounting.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Model (Inches (mm))	A	B	C	D	E
Standard Unit R03-XX-XXX	1.65 (42)	1.56 (39.6)	2.50 (63.5)	.38 (9.6)	2.88 (73)
Preset, Non-Adjustable Unit R03-XX-KXX	1.65 (42)	1.56 (39.6)	2.28 (57.9)	.38 (9.6)	2.66 (67.6)

= "Most Popular"

Replacement Kits

Poppet / Piston Kits –
- Unbalanced, Non-Relieving PS428P
- Unbalanced, Relieving PS426P

Springs –
- 1-30 PSIG Range P01175
- 1-60 PSIG Range P01174
- 2-125 PSIG Range..... P01173
- 1-15 PSIG Range..... P01176

Tamperproof Metal Disc..... P01265

Accessories

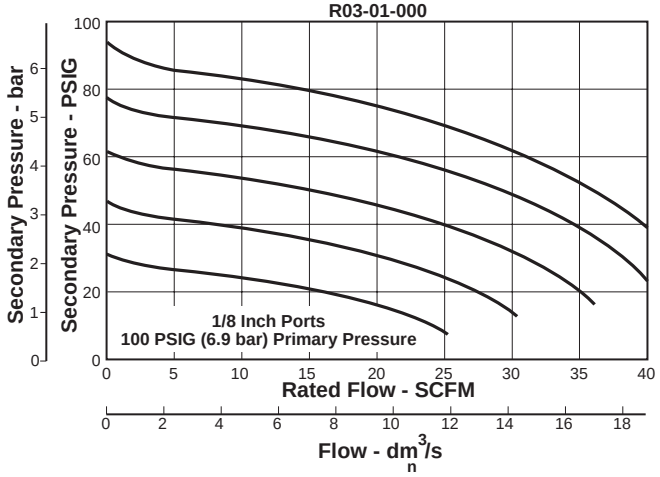
Gauge, Pressure –
- 30 PSIG, 1/8" NPT (0 to 2.1 bar) K4515N18030
- 60 PSIG, 1/8" NPT (0 to 4.1 bar) K4515N18060
- 160 PSIG, 1/8" NPT (0 to 11.0 bar).....K4515N18160

Mounting Bracket Kit* (Includes Panel Mount Nut).....PS417B

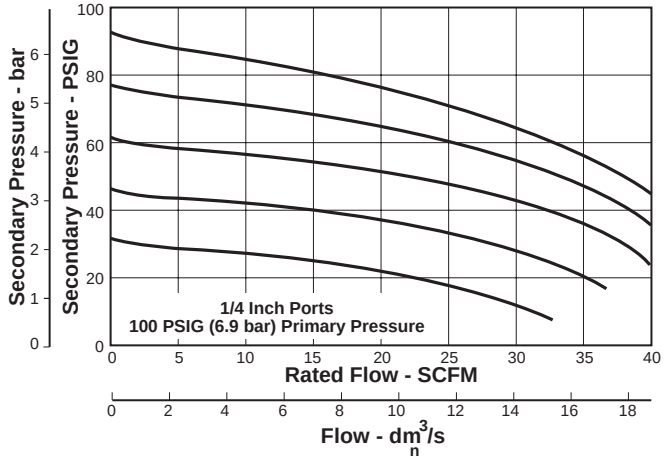
Panel Mount Nuts* –
- Plastic P78652
- Metal P01531

*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

Flow Characteristics
R03-01-000



Flow Characteristics
R03-02-000

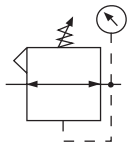


Ordering Information

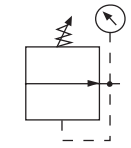
Model Type	Port Size	Without Gauge 2 to 125 PSIG (0.2 to 8.6 bar)	Without Gauge 1 to 60 PSIG (0.2 to 4.1 bar)	Without Gauge 1 to 30 PSIG (0.2 to 2.1 bar)	Without Gauge 1 to 15 PSIG (0.2 to 1.0 bar)
Relieving	1/8	R03-01-000	R03-01-L00	R03-01-P00	R03-01-Q00
	1/4	R03-02-000	R03-02-L00	R03-02-P00	R03-02-Q00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Miniature Regulator
RB3 – Brass
RA3 – Aluminum



Relieving



Non-Relieving



RB3-02-F000

= **"Most Popular"**

Specifications

Flow Capacity*	1/4	14 SCFM (6.6 dm3/s)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		40° to 125°F (4.4° to 52°C)
Port Size	NPT / BSPP-G	1/8, 1/4
Weight	lb. (kg)	0.5 (0.23)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar). *(flow at 25% pressure drop)*

Materials of Construction

Body	RB3	Brass
	RA3	Aluminum
Bonnet		Acetal
Diaphragm & Seals		Nitrile
Valve Assembly & Bottom Plug		Brass

Note: Panel Nut included, but not shown on dimensional drawing.

Note: 1.19" dia. (30.2) mm hole required for panel mounting.

Features

- Brass Body Construction Handles Water and Compressed Air Service
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Spring Loaded Diaphragm
- High Flow: 1/4" -14 SCFM
- Panel Mount Nut Standard
- Two 1/8" Gauge Ports

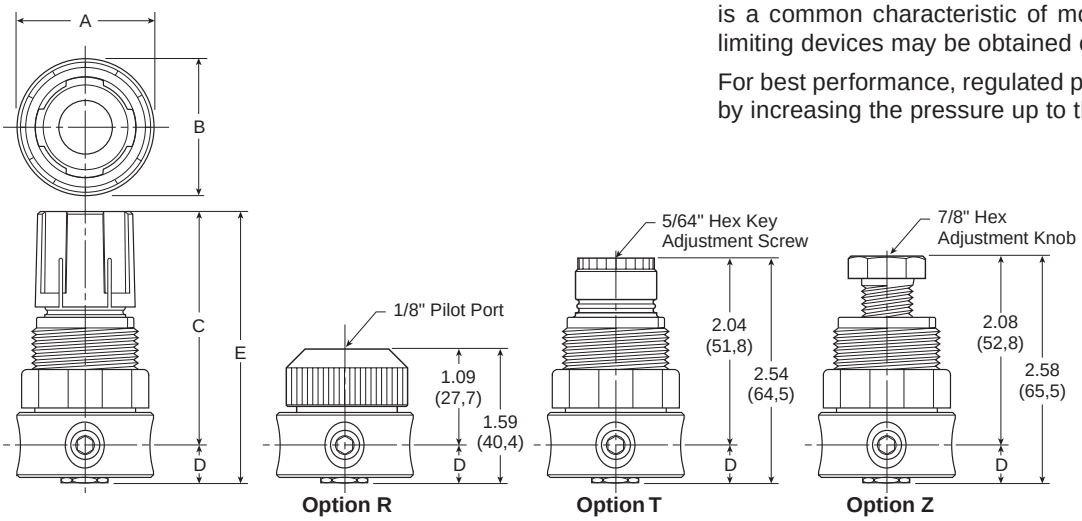
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



Dimensions

Model (Inches (mm))	A	B	C	D	E
Brass Regulator - Miniature RB3-XX-XXXX	1.56 (39.8)	1.56 (39.8)	2.56 (65)	.50 (12.7)	3.06 (77.7)
Aluminum Regulator - Miniature RA3-XX-XXXX	1.56 (39.8)	1.56 (39.8)	2.56 (65)	.50 (12.7)	3.06 (77.7)

= "Most Popular"

Repair Kits

Bonnet, Knob, Adjusting Screw Kit..... RRP-96-821

Bonnet, Tamper Resistant Adjustment Kit..... RRP-96-822

Repair Kit –
- Relieving..... RRP-96-824
- Non-relieving RRP-96-825

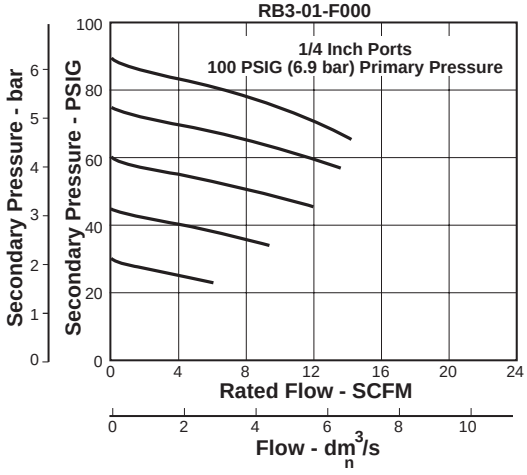
Accessories

Gauge, Pressure –
- 0-160 PSI (0-11,0 bar), 1-1/2" Dial Face, 1/8" NPT, CBM K4515N18160
- 0-60 PSI (0-4,1 bar), 1-1/2" Dial Face, 1/8" NPT K4515N18060

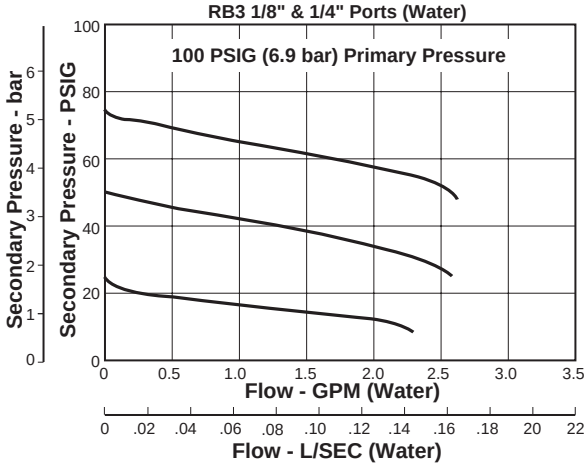
Panel Mount Nut –
- Aluminum..... RPA-96-733
- Plastic RPA-96-734

Wall Mounting Bracket –
- L-Type GRP-95-147
- L-Type with Plastic Panel Mount Nut..... GRP-95-747

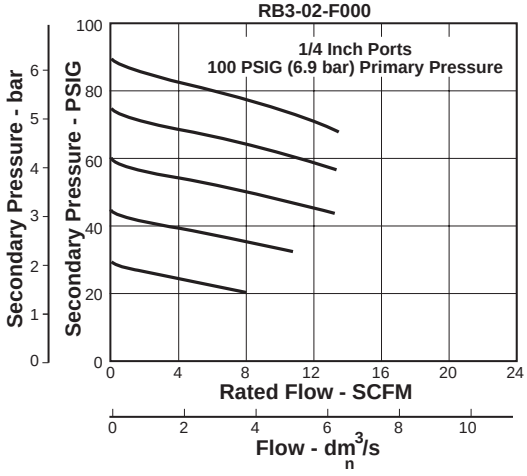
Flow Characteristics
RB3-01-F000



Flow Characteristics
RB3 1/8" & 1/4" Ports (Water)



Flow Characteristics
RB3-02-F000



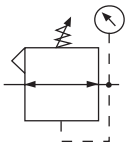
Ordering Information

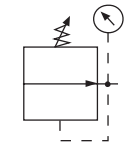
Model Type	Port Size	Without Gauge 2 to 125 PSI (0.14 to 8.6 bar)	Without Gauge 1 to 60 PSI (0.07 to 4.1 bar)	Without Gauge 1-25 PSI (0.07 to 1.7 bar)
Relieving	1/8"	RB3-01-F000	RB3-01-D000	RB3-01-C000
	1/4"	RB3-02-F000	RB3-02-D000	RB3-02-C000
Non-relieving	1/8"	RB3-01-R000	RB3-01-W000	RB3-01-P000
	1/4"	RB3-02-R000	RB3-02-W000	RB3-02-P000
Relieving	1/8"	RA3-01-F000	RA3-01-D000	RA3-01-C000
	1/4"	RA3-02-F000	RA3-02-D000	RA3-02-C000
Non-relieving	1/8"	RA3-01-R000	RA3-01-W000	RA3-01-P000
	1/4"	RA3-02-R000	RA3-02-W000	RA3-02-P000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Miniature Regulator
RA4

= "Most Popular"







RA4-02-F000



RA4-0M-F000

Specifications

Operating Temperature	-40° F to 150°F (-40° C to 65.5°C)
Supply Pressure	300 PSIG Maximum (20.4 bar)
Port Threads	1/8, 1/4 Inch
Gauge Ports	(2) Std 1/8 Inch (No Gauge Port Version Available)
Weight	.25 lbs. (0.11 kg)

Materials of Construction

Body	Aluminum
Bonnet	Acetal
Diaphragm & Seals	Nitrile
Valve Assembly	Brass
Springs	Steel
Panel Nut	Acetal

Features

- Diaphragm Operated for Fast Operation.
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity.
- Balanced Valve Design for Precise Regulation.
- Available in 2 or 4† Port Design.
- Available With a Manifold Mount to Minimize Plumbing.
- Suitable for Low Temperature Applications.
- Non-Rising Adjusting Knob.
- 1/8" - 17 SCFM*
- 1/4" - 19 SCFM*

* SCFM = Standard cubic feet per minute at 100 PSIG inlet, 90 PSIG no flow secondary setting and 10 PSIG pressure drop.

† Not Available with Manifold Mount.

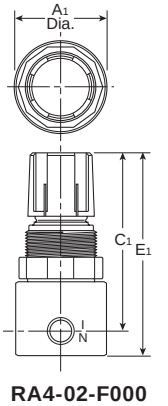
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

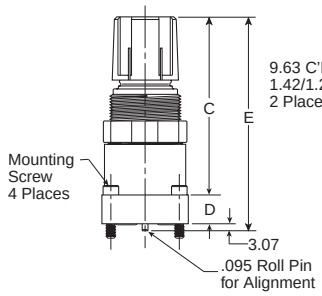
CAUTION:

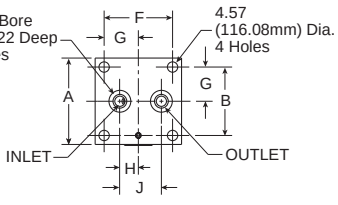
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



RA4-02-F000





RA4-0M-F000

Dimensions

Models / Inches (mm)	A	A1	B	B1	C	C1	D	E	E1	F	G	H	J
Brass Regulator - Miniature RA4-XX-XXXX	1.5 (38.1)	1.56 (39.7)	1.188 (30.18)	1.56 (39.7)	2.75 (69.92)	2.7 (68.7)	.5 (12.7)	3.25 (82.62)	3.25 (82.62)	1.188 (30.18)	.6 (15.09)	.32 (8.26)	.73 (18.42)

= "Most Popular"

Replacement Kits

Diaphragm Assembly -

Non-relieving GRP-96-726
Relieving GRP-96-725

Spring, Regulating -

0 to 30 PSIG (0 to 2.1 bar) GRP-95-111
0 to 60 PSIG (0 to 4.1 bar) GRP-96-718
0 to 125 PSIG (0 to 8.6 bar) GRP-96-717
Valve Assembly RRP-96-727
Valve Spring RRP-96-728

Accessories

Adjusting Knob RRP-16-005-000

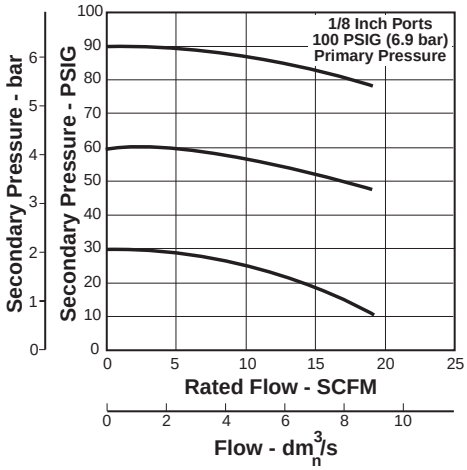
Panel Mount Nut -

Aluminum RPA-96-733
Plastic RPA-96-734

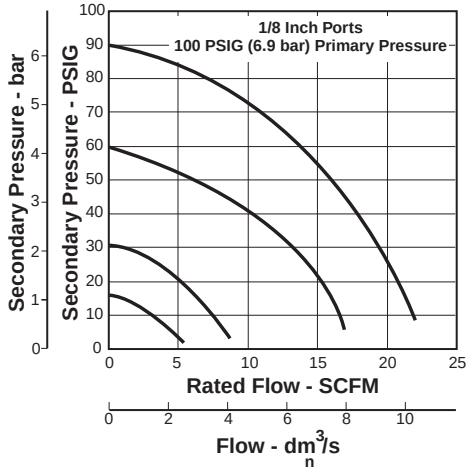
Gauges

0 to 60 PSIG (0 to 4.1 bar), 1-1/2" Dial Face,
1/8 NPT, CBM K4515N18060
0 to 160 PSIG (0 to 11.0 bar), 1-1/2" Dial Face,
1/8 NPT, CBM K4515N18160
Tamper Resistant Kit RPA-96-735

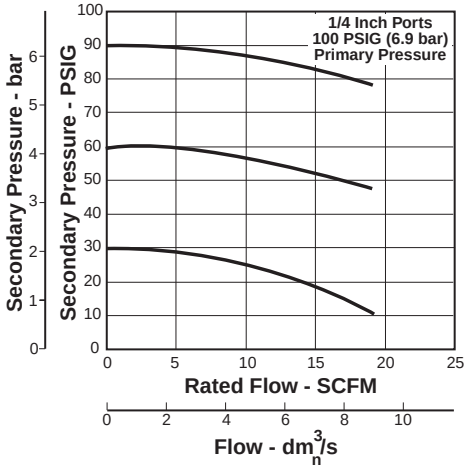
Flow Characteristics
RA4-01-F000



Flow Characteristics
RA4-0M-F000



Flow Characteristics
RA4-02-F000

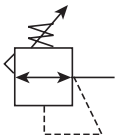


Ordering Information

Model Type	Port Size	Without Gauge 0 to 30 PSIG (0.0 to 2.1 bar)	Without Gauge 0 to 60 PSIG (0.0 to 4.1 bar)	Without Gauge 0 to 125 PSIG (0.0 to 8.6 bar)	With Gauge 0 to 30 PSIG (0.0 to 2.1 bar)	With Gauge 0 to 60 PSIG (0.0 to 4.1 bar)	With Gauge 0 to 125 PSIG (0.0 to 8.6 bar
Relieving	1/8"	RA4-01-C000	RA4-01-D000	RA4-01-F000	RA4-01-C0G0	RA4-01-D0G0	RA4-01-F0G0
	1/4"	RA4-02-C000	RA4-02-D000	RA4-02-F000	RA4-02-C0G0	RA4-02-D0G0	RA4-02-F0G0
	Manifold Mount	RA4-0M-C000	RA4-0M-D000	RA4-0M-F000			
Non-relieving	1/8"	RA4-01-P000	RA4-01-W000	RA4-01-R000	RA4-01-P0G0	RA4-01-W0G0	RA4-01-R0G0
	1/4"	RA4-02-P000	RA4-02-W000	RA4-02-R000	RA4-02-P0G0	RA4-02-W0G0	RA4-02-R0G0
	Manifold Mount	RA4-0M-P000	RA4-0M-W000	RA4-0M-R000			

Miniature Regulator
R24, R25

= "Most Popular"

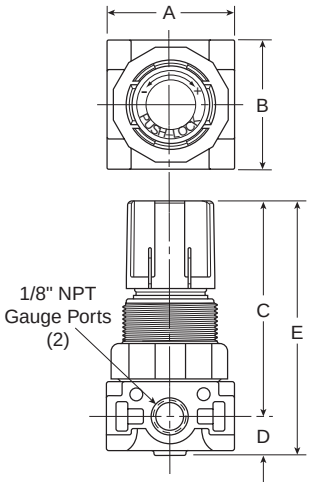




R25-02C

Features

- Lightweight Plastic Body
- Constructed with a Combination of N.S.F. and F.D.A. Approved Materials
- Unbalanced Poppet Standard
- Non-rising, Push-to-lock Adjusting Knob
- Compact, 3.10 inch (79mm) high by 1.60 inch (41mm) wide
- Lightweight
- Diaphragm Operated



Specifications

Maximum Supply Pressure		150 PSIG (10 bar)
Operating Temperature		40° to 125°F (4.4° to 52°C)
Gauge Ports (2)	(Can be used for full flow)	1/8 Inch
Port Size	NPT	1/8, 1/4
Weight	lb. (kg)	0.25 (0.11)

Materials of Construction

Adjusting Screw	Steel
Body	Acetal
Bonnet and Seat	Acetal
Diaphragm (R25)	Buna N
Diaphragm (R24)	EPDM
Seals (R25)	Buna N
Seals (R24)	EPDM
Springs	Stainless Steel
Valve Poppet (R25)	Buna N
Valve Poppet (R24)	EPDM

Note: 1.25" dia. (31.8) mm hole required for panel mounting.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Model (Inches (mm))	A	B	C	D	E
Regulator - Miniature, Air Service R25-XXX	1.60 (41)	1.60 (41)	2.61 (66)	0.49 (13)	3.10 (79)
Regulator - Miniature, Water Service R24-XXX	1.60 (41)	1.60 (41)	2.61 (66)	0.49 (13)	3.10 (79)

= "Most Popular"

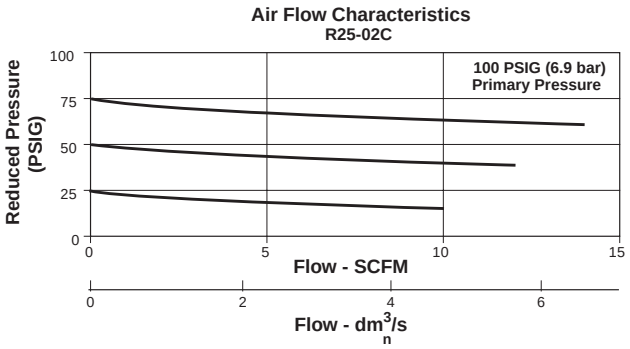
Kits and Accessories

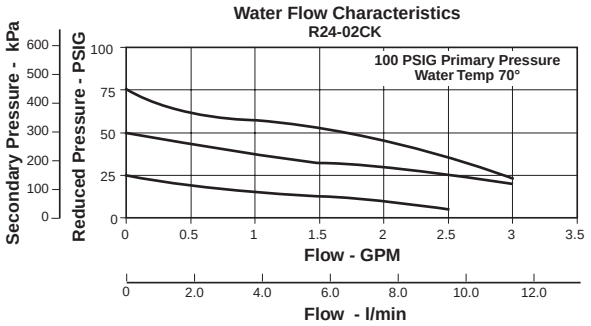
Panel Mount Nut –
- Plastic R05X51-P
- Aluminum R05X51-A

Mounting Bracket and Nut SA161X57

Service Kits –
- Relieving (Buna) RKR25Y
- Non-Relieving (Buna) RKR25KY
- Relieving (EPDM) RKR24Y
- Non-Relieving (EPDM) RKR24KY

Springs –
- 0-25 psig Spring SPR-375-1
- 0-60 psig Spring SPR-376
- 0-125 psig Spring SPR-377





B

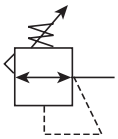
Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Without Gauge 0 to 125 PSI (0 to 8.6 bar)
Air Service Relieving	1/8"	R25-01C
	1/4"	R25-02C
Water Service Non-relieving	1/8"	R24-01CK
	1/4"	R24-02CK

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Miniature Regulator
R45, R46



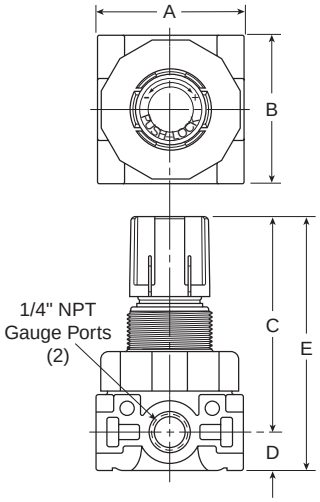


R45-03C

= **"Most Popular"**

Features

- Lightweight Plastic Body
- Constructed with a Combination of N.S.F. and F.D.A. Approved Materials
- Unbalanced Poppet Standard
- Non-rising, Push-to-lock Adjusting Knob
- Compact, 3.43 inch (87mm) high by 2.06 inch (52.3mm) wide
- Lightweight
- Diaphragm Operated



Specifications

Maximum Supply Pressure		150 PSIG (10 bar)
Operating Temperature		40° to 125°F (4.4° to 52°C)
Gauge Ports (2)	(Can be used for full flow)	1/4 Inch
Port Size	NPT	1/4, 3/8
Weight	lb. (kg)	0.38 (0.17)

Materials of Construction

Adjusting Screw	Steel
Body	Acetal
Bonnet and Seat	Acetal
Diaphragm (R45)	Buna N
Diaphragm (R46)	EPDM
Seals (R45)	Buna N
Seals (R46)	EPDM
Springs	Stainless Steel
Valve Poppet (R45)	Buna N
Valve Poppet (R46)	EPDM

Note: 1.25" dia. (31.8) mm hole required for panel mounting.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Model (Inches (mm))	A	B	C	D	E
Regulator - Miniature, Air Service R45-XXX	2.06 (52)	2.06 (52)	2.90 (74)	0.53 (143)	3.43 (87)
Regulator - Miniature, Water Service R46-XXX	2.06 (52)	2.06 (52)	2.90 (74)	0.53 (143)	3.43 (87)

= "Most Popular"

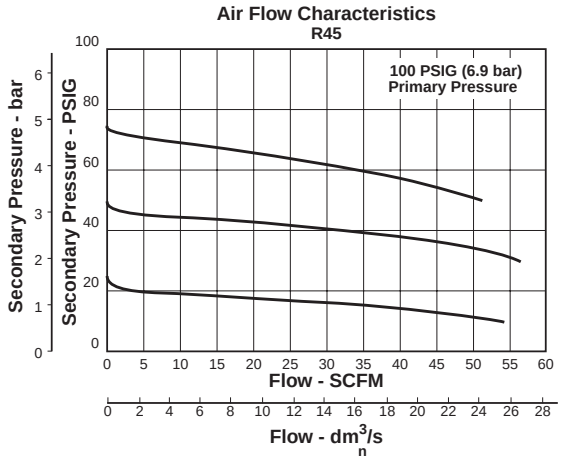
Kits and Accessories

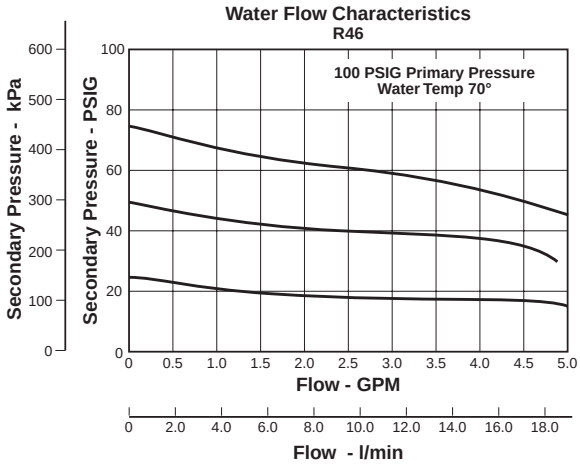
Panel Mount Nut –
- Plastic R05X51-P
- Aluminum R05X51-A

Mounting Bracket and Nut SA161X57

Service Kits –
- Relieving (Buna) RKR45Y
- Non-Relieving (Buna) RKR45KY

Springs –
- 0-25 psig Spring SPR-46
- 0-60 psig Spring SPR-47
- 0-125 psig Spring SPR-48





B

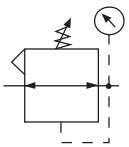
Filters, Regulators, Lubricators

Ordering Information

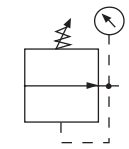
Model Type	Port Size	Without Gauge 0 to 125 PSI (0 to 8.6 bar)
Air Service Relieving	1/4"	R45-02C
	3/8"	R45-03C
Water Service Non-relieving	1/4"	R46-02CK
	3/8"	R46-03CK

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator
R08



Relieving



Non-Relieving



Features

- Balanced Valve Design
- 2 Gauge Ports
- Serviceability and Ease of Maintenance
- Unique Flush-mounted Pressure Gauge
- Light Weight
- Modern Design and Appearance

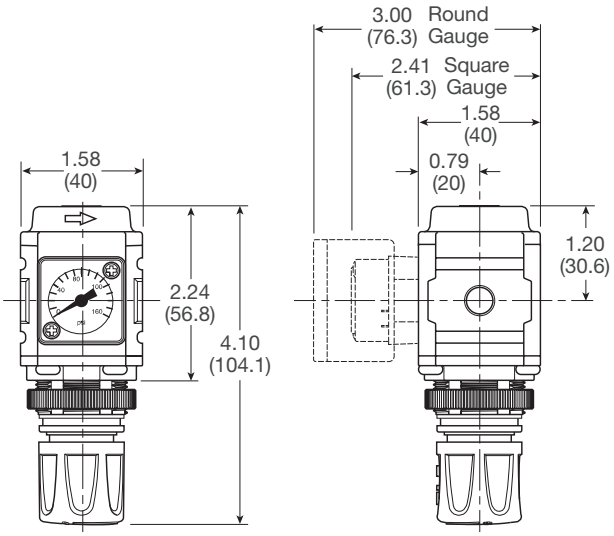
Specifications

Flow Capacity*	1/4	68 SCFM (32 dm^3/s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar) 0 to 60 PSIG (0 to 4 bar) 0 to 125 PSIG (0 to 8 bar) 0 to 232 PSIG (0 to 16 bar)
Gauge Port (2 ea.)**	NPT / BSPP-G	1/8
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature†		-4° to 150°F (-20° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Weight		0.37 lb. (0.17 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.
** Non-gauge option only.
† Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Body Cap	ABS
Bonnet	PBT
Diaphragm Assembly	Brass / Nitrile
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile



Inches (mm)

NOTE: 1.20 in. (30mm) hole required for panel nut mounting.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Kits

Diaphragm Assembly –
- Non-relieving GRP-96-726B
- Relieving GRP-96-725B

Spring, Regulating –
- 0 to 125 PSIG (0 to 8.6 bar) GRP-96-717B

Accessories

Adjusting Knob RRP-16-005-000

Panel Mount Nut –
- Aluminum RPA-96-733
- Plastic RPA-96-734

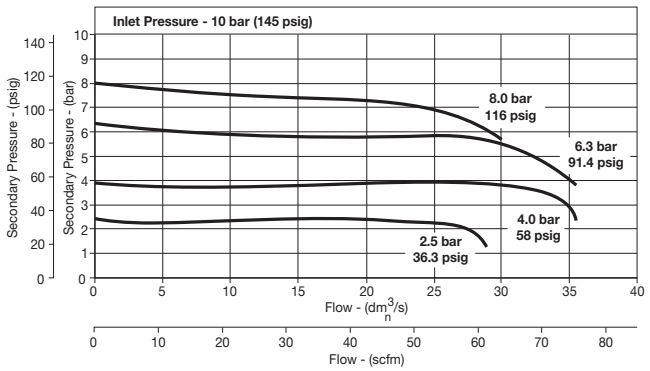
Pressure Gauge –
- Flush Mounted –
  - 0 to 150 PSIG K4511SCR160
  - 0 to 60 PSIG K4511SCR060
  - 0 to 4 bar K4511SCR04B
  - 0 to 11 bar K4511SCR11B
- Square with adapter kit
  - 0-4 bar P6G-PR10040
  - 0-11 bar P6G-PR10110
  - 0-60 PSIG P6G-PR90060
  - 0-160 PSIG P6G-PR90160
- 0 to 60 PSIG (0 to 4.1 bar), 1-1/2" Dial Face, 1/8 NPT, CBM K4515N18060
- 0 to 160 PSIG (0 to 11.0 bar), 1-1/2" Dial Face, 1/8 NPT, CBM K4515N18160

Tamper Resistant Kit RPA-96-735

Tamperproof Lock and Cover Kit (lock not included) RPA-96-736

Wall Mounting Bracket –
- C-Type GPA-97-010
- L-Type GRP-96-739
- T-Type GPA-96-737

R08 1/4" Regulator



B

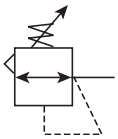
Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	With Gauge 0 to 125 PSIG (0 to 8.6 bar)	With Gauge 0 to 30 PSIG (0 to 2.1 bar)	With Gauge 0 to 60 PSIG (0 to 4.1 bar)	Without Gauge 0 to 125 PSIG (0 to 8.6 bar)
Relieving	1/4	R08-02-F0G0B	R08-02-C0G0B	R08-02-D0G0B	R08-02-F000B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator R120

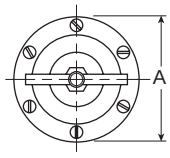


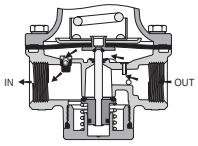


R120-02-000

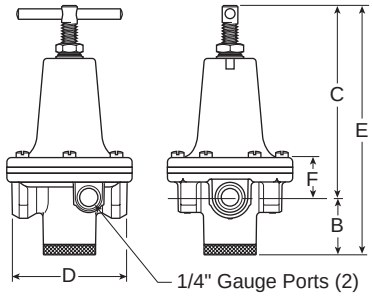
Features

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available





Reverse Flow Option



Specifications

Flow Capacity§	1/4	100 SCFM (47.2 dm^3/s)
	3/8	110 SCFM (51.9 dm^3/s)
	1/2	150 SCFM (70.8 dm^3/s)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Reduced Pressure Range		2 to 125 PSIG (0.15 to 8.5 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		40° to 125°F (4.4° to 52°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight		
R120-02, R120-03		1.8 lb. (0.82 kg) / Unit 26 lb. (11.79) / 12-Unit Master Pack
R120-04		3.2 lb. (1.45 kg) / Unit 27 lb. (12.25) / 8-Unit Master Pack

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

Materials of Construction

Adjustment Screw, Spring	Steel
Body, spring Cage	Zinc
Bottom Plug	Brass
Innervalve	Brass
Seals	Buna N

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Model (Inches (mm))	A	B	C	D	E	F
Standard Unit, 1/4 & 3/8 Port R120-XX-000	3.00 (76)	1.38 (35)	4.60 (117)	2.74 (70.5)	5.98 (152)	0.96 (24)
Standard Unit, 1/2 Port R120-X4-000	3.56 (90)	1.56 (40)	5.20 (132)	3.25 (83)	6.76 (172)	1.27 (32)

R120 Kits and Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa)..... K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Mounting Bracket Kit –
1/4", 3/8"..... WSA15Y57
1/2" W18A57

Panel Mount Conversion Kit –
1/4", 3/8" W4202
1/2" W4204

Repair Kits –

Non-Relieving Diaphragm,
Valve Assembly (1/4", 3/8"; All PSIG) WRK118Y

Relieving Diaphragm,
Valve Assembly (1/4", 3/8"; All PSIG) WRK119Y

Non-Relieving Diaphragm,
Valve Assembly (1/2"; 25, 60, 125 PSIG)..... WRK118A

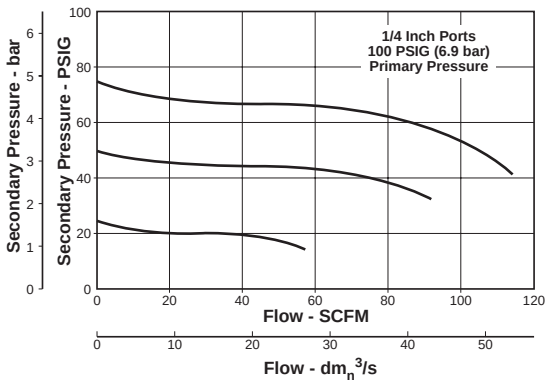
Non-Relieving Diaphragm,
Valve Assembly (1/2"; 250 PSIG) WRK118A250

Relieving Diaphragm,
Valve Assembly (1/2"; 25, 60, 125 PSIG)..... WRK119A

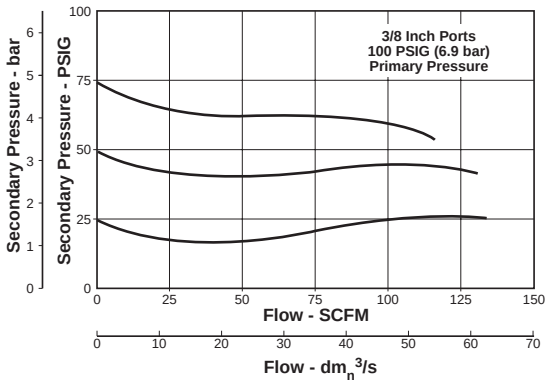
Relieving Diaphragm,
Valve Assembly (1/2"; 250 PSIG) WRK119A250

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

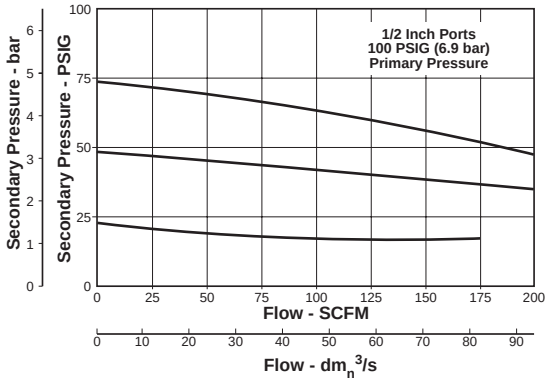
Flow Characteristics
R120-02C



Flow Characteristics
R120-03C



Flow Characteristics
R120-04C



Ordering Information

R120 - 0 2 - 0 0 0

Series	
Regular	R120

Thread type	
NPT	0
BSPP	C

Port size	
2	1/4
3	3/8
4	1/2

Options †	
G	Pressure Gauge
H	High Pressure Spring (250 PSI)
L	Low Pressure Spring (60 PSI)
N*	Non-Relieving
V	All Fluorocarbon
X	Reverse Flow

Standard pressure spring is 0 to 125 PSIG

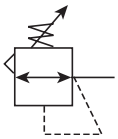
* **Note:** Non-relieving option not available with 250 PSI spring

† For additional options, add to end of model number.
Must be in alphabetical order and up to a total of 5 options.

B

Filters, Regulators, Lubricators

Regulator R120





R120-06-000

Features

- High flow performance featuring rugged design for the most demanding applications
- Ideal for those installations calling for constant pressure with wide variation in flow
- Diaphragm operated design with balanced poppet design for quick and accurate regulation
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Heavy duty tee handle adjustment
- Reverse flow version available

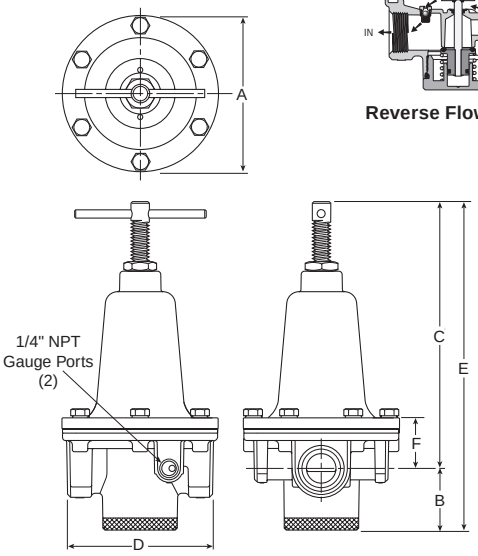
Specifications

Flow Capacity§	3/4	300 SCFM (141.6 dm^3/s)
	1	400 SCFM (188.8 dm^3/s)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Reduced Pressure Range		2 to 125 PSIG (0.15 to 8.5 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		40° to 125°F (4.4° to 52°C)
Port Size	NPT / BSPP-G	3/4, 1
Weight		
R120-06, R120-08		6.2 lb. (2.81 kg) / Unit
		25 lb. (11.34) / 4-Unit Master Pack

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

Materials of Construction

Adjustment Screw, Spring	Steel
Body, Spring Cage	Zinc
Bottom Plug	Brass
Innervalve	Brass
Seals	Buna N



Reverse Flow Option

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit, 3/4" & 1" Port R120-XX-000		4.69 (119)	1.87 (47)	8.15 (207)	4.38 (111)	10.02 (255)	1.61 (41)

R120 Kits and Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa)..... K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Mounting Bracket Kit W18B57

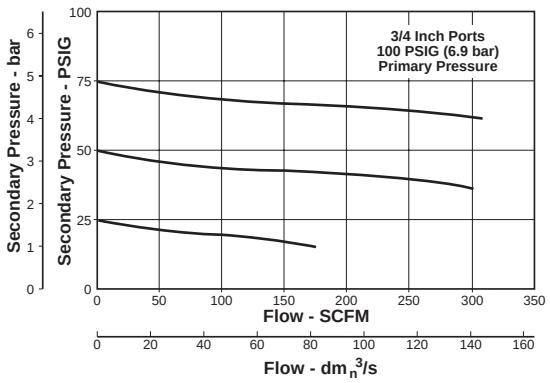
Repair Kits –

Non-Relieving Diaphragm,
Valve Assembly (3/4", 1") WRK118B

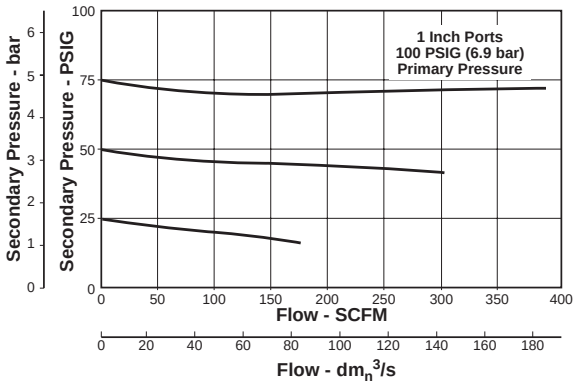
Relieving Diaphragm,
Valve Assembly (1/4", 3/8"; All PSIG) WRK119B

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

Flow Characteristics
R120-06C-000



Flow Characteristics
R120-08C-000



B

Filters, Regulators, Lubricators

Ordering Information

R120 - 0 6 - 0 0 0

Series	
Regular	R120

Thread type	
NPT	0
BSPP	C

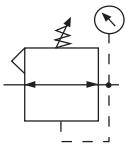
Port size	
6	3/4
8	1

Options †	
G	Pressure Gauge
H	High Pressure Spring (250 PSI)
N	Non-Relieving
V	All Fluorocarbon
X	Reverse Flow

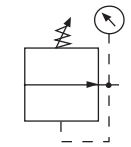
Standard pressure spring is 0 to 125 PSIG.

† For additional options, add to end of model number. Must be in alphabetical order and up to a total of 5 options.

Regulator
R18



Relieving

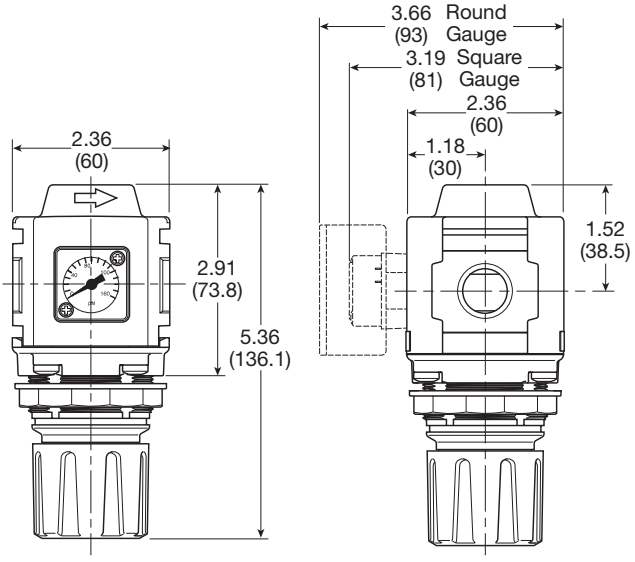


Non-Relieving



Features

- Balanced Valve Design
- Spring-loaded Diaphragm
- 4 Adjusting Pressure Ranges Available
- 1/2" NPT / BSPP-G Over-port
- 2 Gauge Ports
- Regulator will Reverse-flow as Standard



Inches (mm)

NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Specifications

Flow Capacity*	1/4	148 SCFM (70 dm^3/s, ANR)
	3/8	165 SCFM (78 dm^3/s, ANR)
	1/2	165 SCFM (78 dm^3/s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar) 0 to 60 PSIG (0 to 4 bar) 0 to 125 PSIG (0 to 8 bar) 0 to 250 PSIG (0 to 17 bar)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight		0.90 lb (0.41 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Materials of Construction

Adjustment Knob		Acetal
Body		Aluminum
Body Cap		ABS
Bonnet		33% glass-filled nylon
Diaphragm Assembly		Nitrile / Steel
Valve Assembly		Brass / Nitrile
Panel Nut		Acetal
Seals		Nitrile
Springs	Main Regulating Valve	Steel Stainless Steel

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Kits

Adjusting Knob RRP-96-655

Diaphragm Assembly –
- Non-relieving RRP-96-657B
- Relieving RRP-96-656B

Spring, Regulating –
- 0 to 30 PSIG (0 to 2.1 bar) RRP-96-659B
- 0 to 60 PSIG (0 to 4.1 bar) RRP-96-660B
- 0 to 125 PSIG (0 to 8.6 bar) RRP-96-661B
- 0 to 250 PSIG (0 to 17.2 bar) RRP-96-662B

Accessories

Panel Mount Nut –
- Aluminum RRP-96-673
- Plastic RRP-96-675B

Gauge, Pressure –

Square flush mount gauge
- 0-4 bar K4511SCR04B
- 0-11 bar K4511SCR11B
- 0-60 PSIG K4511SCR060
- 0-160 PSIG K4511SCR160

Square with adapter kit
- 0-4 bar P6G-PR10040
- 0-11 bar P6G-PR10110
- 0-60 PSIG P6G-PR90060
- 0-160 PSIG P6G-PR90160

50mm (2") round 1/4" center back mount
- 0-30 PSIG / 0-2 bar K4520N14030
- 0-60 PSIG / 0-4 bar K4520N14060
- 0-160 PSIG / 0-11 bar K4520N14160
- 0-300 PSIG / 0-20 bar K4520N14300

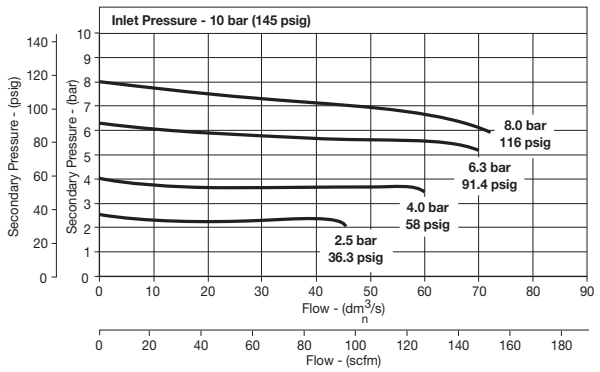
1-3/4" Digital Round 1/4" NPT
- 0 to 160 PSIG K4517N14160D

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

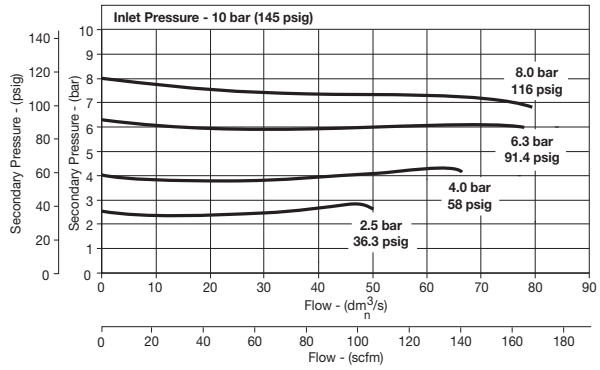
Tamper Resistant Kit RRP-96-671
Tamperproof Lock and Cover Kit RPA-96-737
Tamperproof Knob Kit RPA-96-738

Wall Mounting Bracket –
- L-Type GPA-96-606
- T-Type GPA-96-602

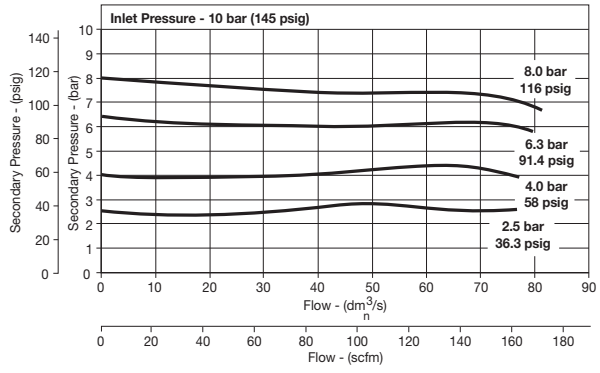
R18 1/4" Regulator



R18 3/8" Regulator



R18 1/2" Regulator

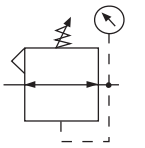


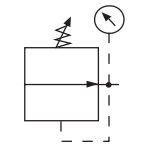
Ordering Information

Model Type	Port Size	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Relieving	1/4	R18-02-F0G0B	R18-02-G0G0B	R18-02-D0G0B	R18-02-F000B
	3/8	R18-03-F0G0B	R18-03-G0G0B	R18-03-D0G0B	R18-03-F000B
	1/2	R18-04-F0G0B	R18-04-G0G0B	R18-04-D0G0B	R18-04-F000B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator R16







R16-02-000

= "Most Popular"

Specifications

Flow Capacity*	1/4	71.5 SCFM (33.7 dm^3/s)
	3/8	80.5 SCFM (38.0 dm^3/s)
	1/2	88.0 SCFM (41.5 dm^3/s)
Adjusting Range Pressure		0 to 60 PSIG (0 to 4.1 bar) 0 to 125 PSIG (0 to 8.6 bar) 0 to 250 PSIG (0 to 17.2 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	1.7 (0.77)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

Materials of Construction

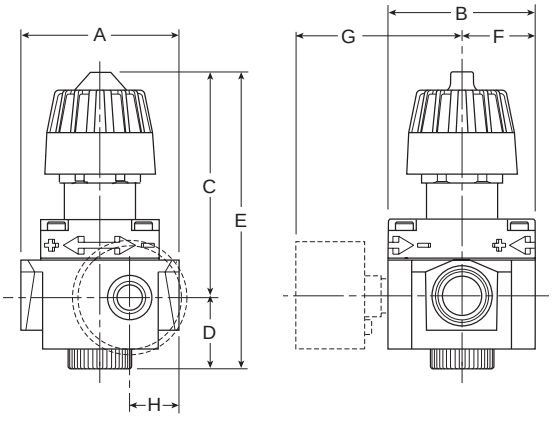
Body	Zinc
Bonnet	PBT
Diaphragm	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

Features

- Non-Rising Adjustment Knob with Friction Lock Knob
- Standard with Two Full Flow 1/4" NPT / BSPT-Rc Gauge Ports
- Panel Mount Nut
- High Flow Capacity
- Balanced Valve Design for Excellent Regulation Characteristics

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



NOTE: 1.31" Dia. (33.3 mm) hole required for panel nut mounting.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H
Standard Unit R16-XX-000	2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	— —	1.02 (25.9)
With Gauge R16-XX-G00	2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	2.80 (71)	1.02 (25.9)

= "Most Popular"

Replacement Kits

Adjusting Knob RRP-95-023

Diaphragm Assembly –
- Non-relieving RRP-96-216
- Self-relieving RRP-96-213

Spring, Regulating –
- 0 to 50 PSIG (0 to 3.4 bar) RRP-95-222
- 0 to 125 PSIG (0 to 8.6 bar) RRP-95-224
- 0 to 250 PSIG (0 to 17.2 bar) RRP-95-218

Valve Assembly –
- Valve, Valve Spring, Bottom Plug O-ring RRP-96-215

Accessories

Gauge, Pressure –
- 0 to 60 PSIG (0 to 4 bar), 2" Dial Face, 1/4 NPT, CBM K4520N14060W
- 0 to 160 PSIG (0 to 11 bar), 2" Dial Face, 1/4 NPT, CBM K4520N14160W
- 0 to 300 PSIG (0 to 20 bar), 2" Dial Face, 1/4 NPT, CBM K4520N14300W
- 0 to 160 PSIG, 1-3/4" Digital Round K4517N14160D

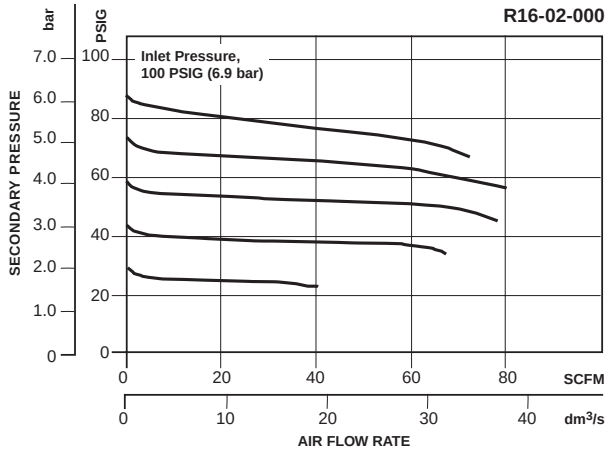
Panel Mount Nut, Plastic GPA-95-032

Tamper Resistant Kit, Ring Style RPA-95-006

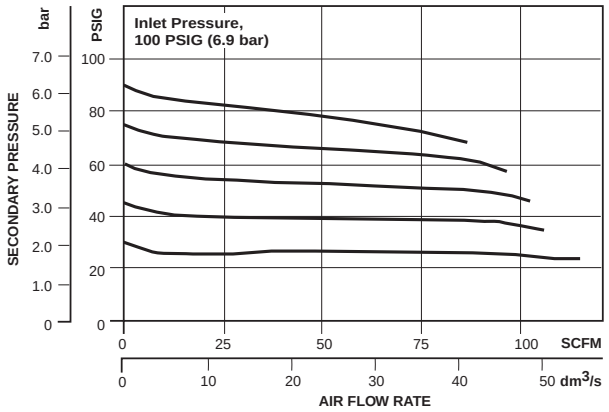
Wall Mounting Bracket, Gauge Port Adapter, 1/4 NPT RRP-95-590

Wall Mounting Bracket –
- L-Type, Heavy Duty RPA-95-090
- L-Type, Standard GPA-95-012
- L-Type with Plastic Panel Mount Nut GPA-95-011

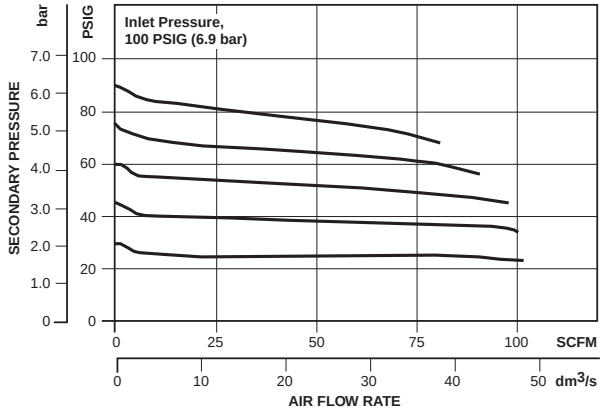
R16-02-000



R16-03-000



R16-04-000

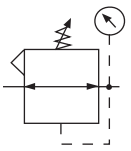


Ordering Information

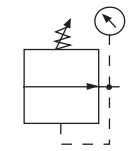
Model Type	Port Size	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Without Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	Without Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)
Relieving	1/4	R16-02-000	R16-02-H00	R16-02-L00	R16-02-G00	R16-02-GH0	R16-02-GL0
	3/8	R16-03-000	R16-03-H00	R16-03-L00	R16-03-G00	R16-03-GH0	R16-03-GL0
	1/2	R16-04-000	R16-04-H00	R16-04-L00	R16-04-G00	R16-04-GH0	R16-04-GL0
Non-relieving	1/4	R16-02-N00	R16-02-HN0	R16-02-LN0	R16-02-GN0	R16-02-GHN	R16-02-GLN
	3/8	R16-03-N00	R16-03-HN0	R16-03-LN0	R16-03-GN0	R16-03-GHN	R16-03-GLN
	1/2	R16-04-N00	R16-04-HN0	R16-04-LN0	R16-04-GN0	R16-04-GHN	R16-04-GLN

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator
R28



Relieving

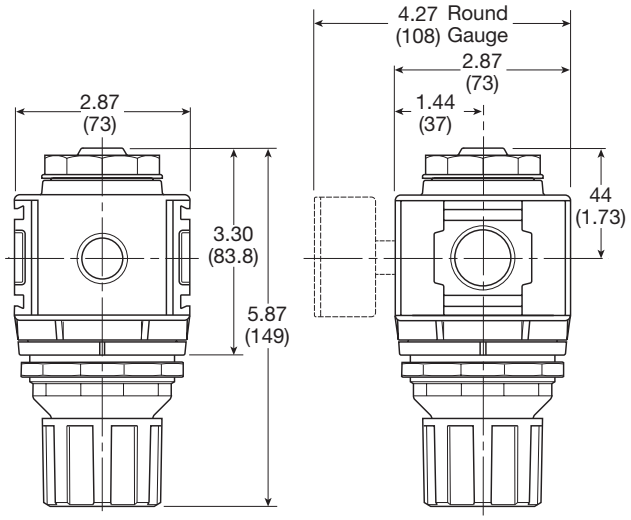


Non-Relieving



Features

- Balanced Valve Design
- Spring-loaded Diaphragm
- 4 Adjusting Pressure Ranges Available
- 3/4" NPT / BSPP-G Over-port
- Reverse-flow Available
- 2 Gauge Ports



Inches (mm)

NOTE: 2.40 in. (61mm) hole required for panel nut mounting.

Specifications

Flow Capacity*	3/8	228 SCFM (108 dm^3/s, ANR)
	1/2	233 SCFM (110 dm^3/s, ANR)
	3/4	233 SCFM (110 dm^3/s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar) 0 to 60 PSIG (0 to 4 bar) 0 to 125 PSIG (0 to 8 bar) 0 to 250 PSIG (0 to 17 bar)
Gauge Port (2 ea.)	NPT / BSPP-G	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Weight		1.37 lb. (0.62 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

Materials of Construction

Adjustment Knob		Acetal
Body		Aluminum
Body Cap		ABS
Bonnet		33% Glass-filled Nylon
Diaphragm Assembly		Nitrile / Zinc
Panel Nut		Acetal
Seals		Nitrile
Springs	Main Regulating	Steel
	Valve	Stainless Steel
Valve Assembly		Brass / Nitrile / Acetal

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Kits

Diaphragm Assembly –
- Non-relieving RRP-96-987
- Relieving RRP-96-986

Valve Assembly RRP-96-049

Adjusting Knob RRP-16-341-000

Spring, Regulating
- 0 to 30 PSIG (0 to 2.1 bar) RRP-96-163
- 0 to 60 PSIG (0 to 4.1 bar) RRP-96-164
- 0 to 125 PSIG (0 to 8.6 bar) RRP-96-165
- 0 to 250 PSIG (0 to 17.2 bar) RRP-96-166

Accessories

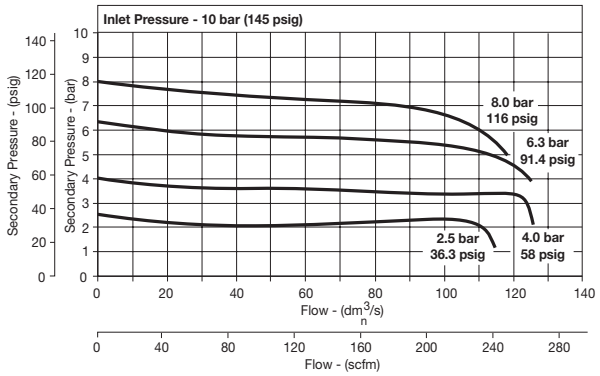
Panel Mount Nut –
- Aluminum RRP-96-674
- Plastic RRP-96-676

Gauge, Pressure –
50mm (2") round 1/4" center back mount
- 0-30 PSIG / 0-2 bar K4520N14030
- 0-60 PSIG / 0-4 bar K4520N14060
- 0-160 PSIG / 0-11 bar K4520N14160
- 0-300 PSIG / 0-20 bar K4520N14300
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT K4517N14160D

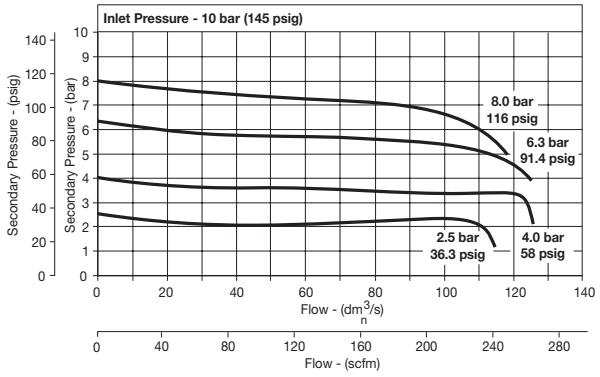
Tamper Resistant Kit RRP-96-672

Wall Mounting Bracket
- L-Type GPA-96-607
- T-Type GPA-96-602

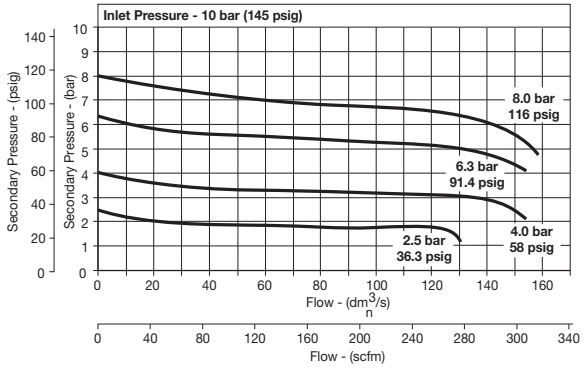
R28 3/8" Regulator



R28 1/2" Regulator



R28 3/4" Regulator

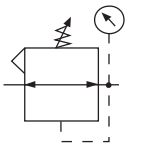


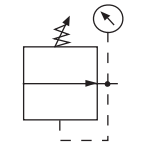
Ordering Information

Model Type	Port Size	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Relieving	3/8	R28-03-F0G0B	R28-03-G0G0B	R28-03-D0G0B	R28-03-F000B
	1/2	R28-04-F0G0B	R28-04-G0G0B	R28-04-D0G0B	R28-04-F000B
	3/4	R28-06-F0G0B	R28-06-G0G0B	R28-06-D0G0B	R28-06-F000B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator R26







R26-02-000

Features

- Non-Rising Adjustment Knob with Friction Lock Knob
- Standard with Two Full Flow 1/4" NPT / BSPT-Rc Gauge Ports
- Panel Mount Nut
- High Flow Capacity
- Balanced Valve Design for Excellent Regulation Characteristics

= **"Most Popular"**

Specifications

Flow Capacity*	1/4	112 SCFM (53 dm^3/s)
	3/8	148 SCFM (70 dm^3/s)
	1/2	185 SCFM (87 dm^3/s)
Adjusting Range Pressure		0 to 60 PSIG (0 to 4.1 bar) 0 to 125 PSIG (0 to 8.6 bar) 0 to 250 PSIG (0 to 17.2 bar)
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Operating Temperature		32° to 150°F (0° to 65.5°C)
Maximum Supply Pressure		300 PSIG (21 bar)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight	lb. (kg)	2.5 (1.34)

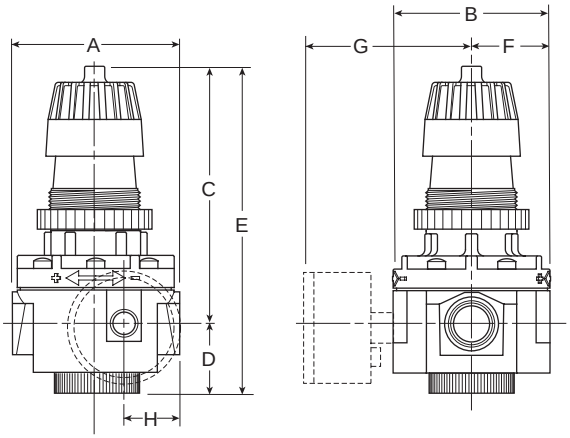
* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

Materials of Construction

Body	Zinc
Bonnet	PBT
Diaphragm	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



NOTE: 1.88" Dia. (47.8 mm) hole required for panel nut mounting.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H
Standard Unit R26-XX-000	3.35 (85)	3.10 (79)	5.13 (130.3)	1.35 (34)	6.48 (165)	1.55 (39.4)	— —	1.13 (28.7)
With Gauge R26-XX-G00	3.35 (85)	3.10 (79)	5.13 (130.3)	1.35 (34)	6.48 (165)	1.55 (39.4)	3.13 (79.5	1.13 (28.7)

= "Most Popular"

Replacement Kits

Diaphragm Assembly –
- Non-relieving RRP-96-332
- Self-relieving RRP-96-238

Knob, Adjusting –
- Used on Units with Plastic Bonnets RRP-95-023

Spring, Regulating –
- 0 to 60 PSIG (0 to 4,1 bar) RRP-95-962
- 0 to 125 PSIG (0 to 8,6 bar) GRP-95-225
- 0 to 250 PSIG (0 to 17,2 bar) RRP-95-219

Valve Assembly –
- Valve, Valve Spring, Bottom Plug O-ring RRP-96-294

Accessories

Gauge, Pressure –
- 0 to 60 PSIG (0 to 4 bar), 2" Dial Face, 1/4" NPT, CBM K4520N14060W
- 0 to 160 PSIG (0 to 11 bar), 2" Dial Face, 1/4" NPT, CBM K4520N14160W
- 0 to 300 PSIG (0 to 20 bar), 2" Dial Face, 1/4" NPT, CBM K4520N14300W
- 0 to 160 PSIG, 1-3/4" Digital Round 1/4" NPT K4517N14160D

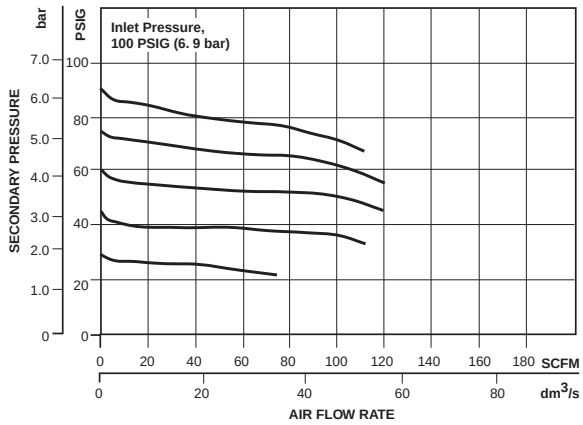
Nut, Panel Mount, Plastic RRP-95-954

Tamper Resistant Kit –
- Ring Style used on Plastic Bonnets RPA-95-006

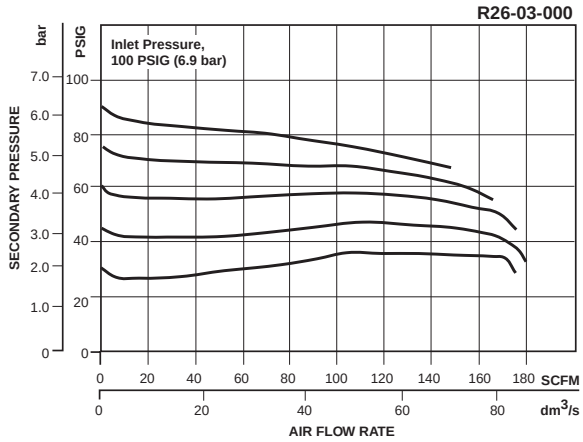
Wall Mounting Bracket –
- C-type GPA-95-051
- C-type RPA-95-947
- L-Type – Heavy Duty GPA-95-956

Wall Mounting Bracket, Gauge Port Adapter, 1/4" NPT RRP-95-590

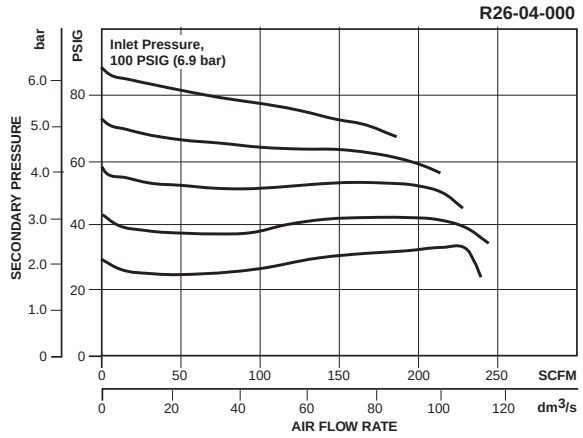
R26-02-000



R26-03-000



R26-04-000



Ordering Information

Model Type	Port Size	Without Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Without Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	Without Gauge 3 to 60 PSIG (0.2 to 4.1 bar)	With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	With Gauge 10 to 250 PSIG (0.7 to 17.2 bar)	With Gauge 3 to 60 PSIG (0.2 to 4.1 bar)
Relieving	1/4	R26-02-000	R26-02-H00	R26-02-L00	R26-02-G00	R26-02-GH0	R26-02-GL0
	3/8	R26-03-000	R26-03-H00	R26-03-L00	R26-03-G00	R26-03-GH0	R26-03-GL0
	1/2	R26-04-000	R26-04-H00	R26-04-L00	R26-04-G00	R26-04-GH0	R26-04-GL0
Non-relieving	1/4	R26-02-N00	R26-02-HN0	R26-02-LN0	R26-02-GN0	R26-02-GHN	R26-02-GLN
	3/8	R26-03-N00	R26-03-HN0	R26-03-LN0	R26-03-GN0	R26-03-GHN	R26-03-GLN
	1/2	R26-04-N00	R26-04-HN0	R26-04-LN0	R26-04-GN0	R26-04-GHN	R26-04-GLN

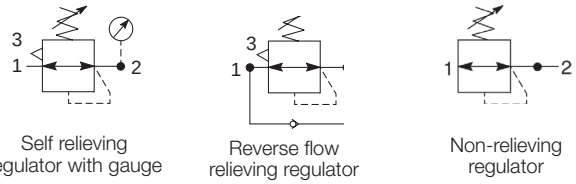
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator R90



= "Most Popular"

Symbols



Self relieving regulator with gauge

Reverse flow relieving regulator

Non-relieving regulator

Features

- Integral 3/4" or 1" ports (BSPP & NPT)
- Robust but lightweight aluminum construction
- Secondary pressure ranges 12 and 16 bar
- Rolling diaphragm for extended life
- Secondary aspiration plus rolling diaphragm provides quick response and accurate pressure regulation
- Optional tamperproof regulator padlock
- Reverse flow / relieving option
- Low temperature -40°

R90 - 0 6 - A 0 0 0

Series	
Regulator	R90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Function / pressure range	
A	Relieving / 0 to 174 PSI
H	Relieving / 0 to 232 PSI

Option	
0	None
G	Pressure Gauge
A†	Lockable type
R	Reverse Flow

Notes:
* For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
† Not field convertible.
Bold items are most common.

Ordering information

Port size	Description	Flow ‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	12 bar relieving	380	17.5 (254)	-40 (-40)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.08 (2.4)	**R90-06-A000**
3/4"	12 bar relieving + pressure gauge	380	17.5 (254)	-10 (14)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.13 (2.5)	**R90-06-AG00**
1"	12 bar relieving	550	17.5 (254)	-40 (-40)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.08 (2.4)	**R90-08-A000**
1"	12 bar relieving + pressure gauge	550	17.5 (254)	-10 (14)	60 (140)	182 (7.2)	90 (3.5)	94 (3.7)	1.19 (2.6)	**R90-08-AG00**

† **Standard part numbers shown in bold. For other models refer to Options chart above.**
‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

Specifications

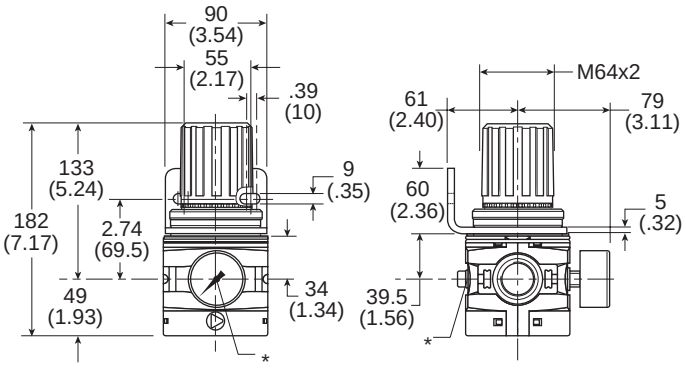
Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*	-40°C to 60°C (-40°F to 140°F)
Typical flow with 10 bar (145 psig) inlet pressure and 6.3 bar (91 psig) set pressure and 0.5 bar (7.3 psig) pressure drop	1" size 550 scfm
Gauge port (x 2)	1/4"

* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

Material specifications

Body	Aluminum
Bonnet	Glass filled polyamide
Regulator cover	ABS
Control knob	Glass filled polyamide
Valve	Brass / NBR
Seals	Nitrile NBR
Screws	Steel / zinc plated

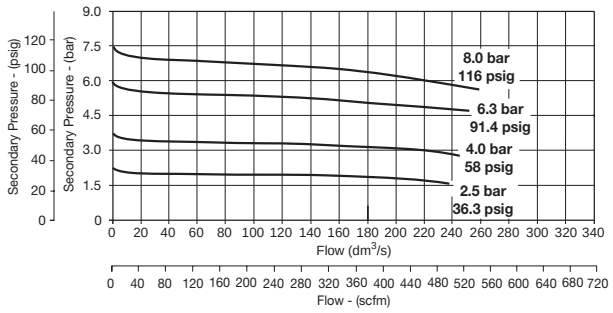
Dimensions mm (inches)



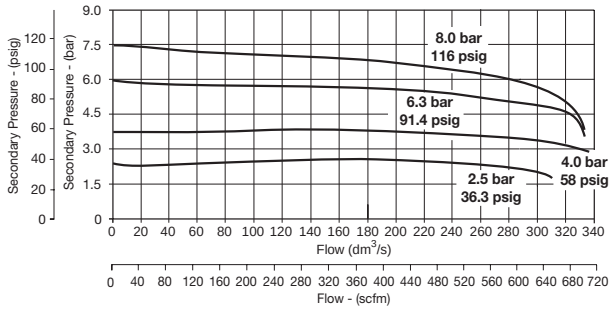
* 1/4" gauge port

Flow characteristics

(3/4") Regulator



(1") Regulator



Service kits

Angle bracket + metal lock ring P3YKA00MS
Panel mounting nut P3YKA00MM
Diaphragm kit (relieving type) P3YKA00RR
Diaphragm kit (non-relieving type) P3YKA00RN
Gauge - 1/4" port
0 to 10 bar (0 to 160 psig) K4520N14160
0 to 20 bar (0 to 300 psig) K4520N14300

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

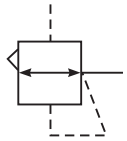
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Pilot Operated Regulator R90

= "Most Popular"



Symbol



Features

- Integral 3/4" or 1" ports (BSPP & NPT)
- Pilot controlled regulators can be mounted "out of reach" with pilot regulator installed in a convenient location
- Constant pilot bleed control for accurate pressure control
- Balanced poppet provides quick response
- High flow

R90 - 0 6 - R 0 0 0

Series	
Regulator	R90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Function	
R	Pilot Operated

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Flow‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number†
3/4"	Pilot operated regulator	550	17.5 (254)	-10 (14)	60 (140)	105.5 (4.15)	90 (3.54)	90 (3.54)	1.2 (2.6)	**R90-06-R000**
1"	Pilot operated regulator	550	17.5 (254)	-10 (14)	60 (140)	105.5 (4.15)	90 (3.54)	90 (3.54)	1.2 (2.6)	**R90-08-R000**

† **Standard part numbers shown in bold. For other models refer to Options chart above.**
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

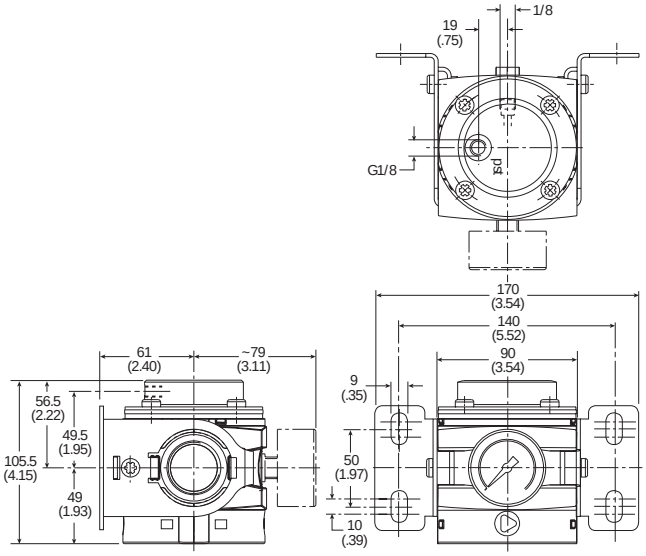
Specifications

Fluid	Compressed air
Max. pressure air pilot operated	17.5 bar (254 psig)
Operating temperature	-10°C to 60°C (14°F to 140°F)
Weight	3/4" 1.2 kg (2.6 lb)
	1" 1.2 kg (2.6 lb)

Material specifications

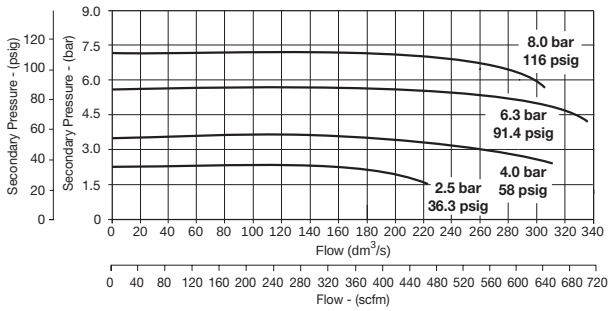
Body	Aluminum
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR
Screws	Zinc plated steel

Dimensions mm (inches)



Flow characteristics

3/4" and 1" Pilot Regulator



⚠ WARNING

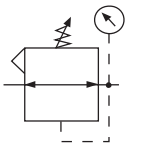
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

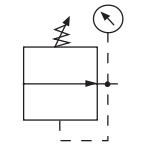
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Regulator R30







R30-06-000

Features

- Balanced Valve Design
- Standard Self-Relieving
- Two 1/4 NPT / BSPT-Rc Gauge Ports Standard – Can Be Used for Additional Outlet Ports
- Piston Operated
- High Flow Capacity

= **"Most Popular"**

Specifications

Flow Capacity*	3/4	481 SCFM (227 dm^3/s)
	1	500 SCFM (236 dm^3/s)
Adjusting Range Pressure		0 to 125 PSIG (0 to 8.6 bar) 0 to 180 PSIG (0 to 12.4 bar)
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Weight	lb. (kg)	6 (2.7)

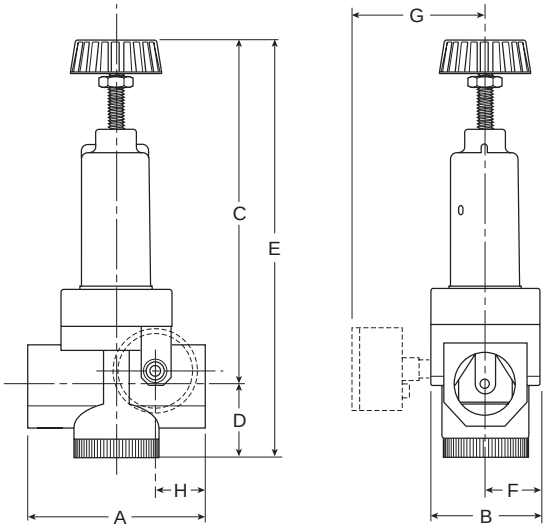
* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 80 PSIG (5.5 bar).

Materials of Construction

Body	Zinc
Bonnet	Zinc
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Steel

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H
Standard Unit R30-XX-000	4.33 (110)	2.65 (67)	8.62 (218.9)	1.75 (44)	10.37 (263)	1.33 (34)	— —	1.23 (31.2)
With Gauge R30-XX-G00	4.33 (110)	2.65 (67)	8.62 (218.9)	1.75 (44)	10.37 (263)	1.33 (34)	2.99 (76)	1.23 (31.2)

= "Most Popular"

Replacement Kits

Piston Assembly –
- Non-relieving RRP-95-451
- Relieving RRP-95-964

Spring, Regulating –
- 0 to 125 PSIG (0 to 8.6 bar) RRP-95-226
- 0 to 180 PSIG (0 to 12.4 bar) RRP-95-220

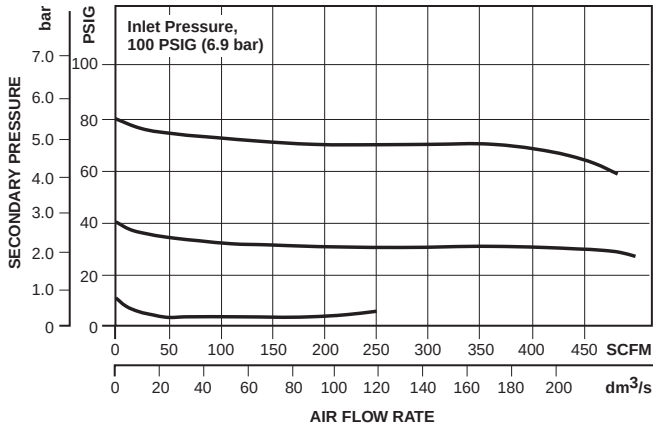
Valve Assembly –
- Valve, Valve Spring, Bottom Plug O-ring RRP-95-159

Accessories

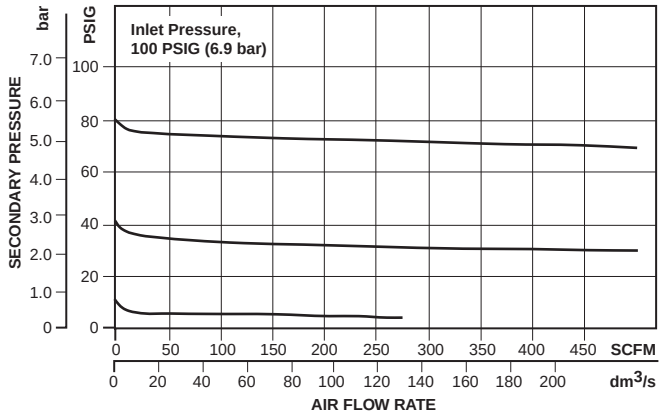
Gauge, Pressure –
- 0 to 160 PSIG (0 to 11 bar), 2" Dial Face, 1/4" NPT, CBM K4520N14160
- 0 to 300 PSIG (0 to 20 bar), 2" Dial Face, 1/4" NPT, CBM K4520N14300
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT K4517N14160D

Wall Mounting Bracket –
- Gauge Port Adapter, 1/4" NPT RRP-95-590
- U-bolt Pipe Clamp GRP-95-734

R30-06-000



R30-08-000



B

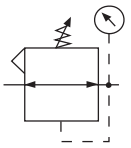
Filters, Regulators, Lubricators

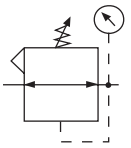
Ordering Information

Model Type	Port Size	Standard Pressure 10 to 125 PSIG (0.7 to 8.6 bar)	High Pressure 10 to 180 PSIG (0.7 to 12.4 bar)
Relieving	3/4	R30-06-000	R30-06-H00
	1	R30-08-000	R30-08-H00
Non-relieving	3/4	R30-06-N00	R30-06-HN0
	1	R30-08-N00	R30-08-HN0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator
R40







R40-0B-000

= **"Most Popular"**

Specifications

Flow Capacity*	1-1/2, 2	1200 SCFM (566 dm^3/s)
Adjusting Range Pressure		0 to 125 PSIG (0 to 8.6 bar) 0 to 180 PSIG (0 to 12.4 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/2, 2
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	10.8 (4.9)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 85 PSIG (5.9 bar).

Materials of Construction

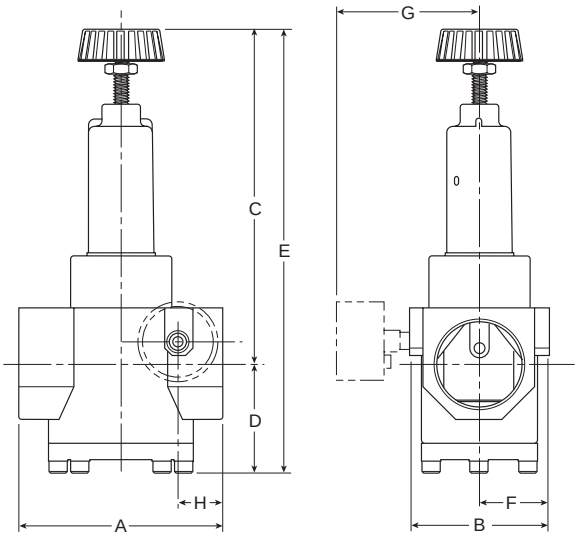
Body	Zinc
Bonnet	Zinc
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

Features

- Balanced Valve Design
- Standard Self-Relieving
- Two 1/4 NPT / BSPT-Rc Gauge Ports Standard – Can Be Used for Additional Outlet Ports
- Piston Operated
- High Flow Capacity

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H
Standard Unit R40-XX-000	5.30 (135)	3.63 (92)	9.05 (230)	2.83 (72)	11.88 (302)	1.82 (43)	— —	1.15 (29.2)
With Gauge (order separately) R40-XX-XXX	5.30 (135)	3.63 (92)	9.05 (230)	2.83 (72)	11.88 (302)	1.82 (43)	4.02 (102)	1.15 (29.2)

= "Most Popular"

Replacement Kits

Piston Assembly –
Non-relieving RRP-95-451
Relieving RRP-95-964

Spring, Regulating –
0 to 125 PSIG (0 to 8.6 bar) RRP-95-226
0 to 180 PSIG (0 to 12.4 bar) RRP-95-220

Spring, Valve RRP-95-024

Valve Assembly (Non-relieving) –
Valve, Valve Spring RRP-95-162

Valve Assembly (Self-relieving) –
Valve, Valve Spring, Ret. Ring, O-rings RRP-95-161

Accessories

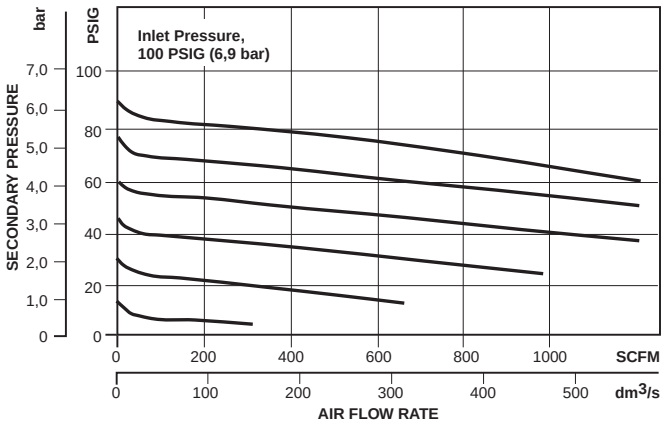
Gauge, Pressure –
0 to 160 PSIG (0 to 11 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14160

0 to 300 PSIG (0 to 20 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14300

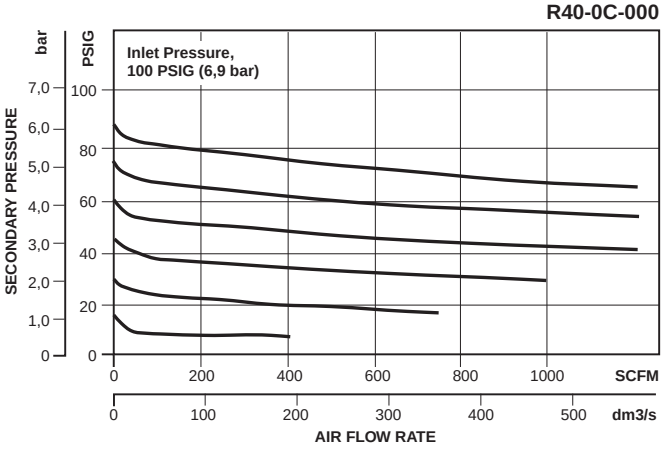
0 to 160 PSIG, 1-3/4" Digital Round,
1/4" NPT K4517N14160D

Wall Mounting Bracket, Gauge Port Adapter,
1/4" NPT RRP-95-590

R40-0B-000



R40-0C-000



Ordering Information

Model Type	Port Size	Without Gauge 10 to 125 PSIG (0.7 to 8.6 bar)	High Pressure 10 to 180 PSIG (0.7 to 12.4 bar)
Relieving	1-1/2	R40-0B-000	R40-0B-H00
	2	R40-0C-000	R40-0C-H00
Non-relieving	1-1/2	R40-0B-N00	R40-0B-HN0
	2	R40-0C-N00	R40-0C-HN0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Common-P1 Regulator Numbering System

= "Most Popular"

Unit Function	Family			Thread Type	Pipe Size		Diaphragm Function	Regulated Port Size	Options	Options	Level
R	1	9	-	0	3	-	F	A	0	0	B

Unit Function
R Regulator

Family
09 Miniature
19 Compact

Thread Type
0 NPT
C BSPP [2]

Code	Pipe Size	Series 09	Series 19
2	1/4"	X	X
3	3/8"		X
4	1/2"		X

Regulated Port Size
B 1/8" Regulated Port [3]
A 1/4" Regulated Port [4]

Options
0 None
G Pressure Gauge (09 Square, 19 Round)
P Metal Panel Nut
S Square Pressure Gauge (19 Series only)

Options
0 None
C Tamper Resistant [1] Regulator Adjustment
G Pressure Gauge (09 Square, 19 Round)
P Metal Panel Nut
S Square Pressure Gauge (19 Series only)

Code	Series
B	09
B	19

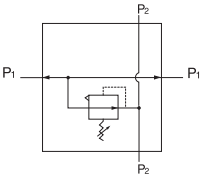
Diaphragm Function	Fluorocarbon	Spring Range 0 to 30 PSIG (0 to 2.1 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 125 PSIG (0 to 8.6 bar)	0 to 250 PSIG [5] (0 to 17.2 bar)
Relieving	No	C	D	**F**	G
	Yes	J	K	L	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

1 Tamper kit not installed. Kit is shipped loose in carton.
2 ISO, R228 (G Series).
3 Not available on R19.
4 Not available on R09.
5 R09 series operating range 0 to 232 PSIG (1 to 16 bar).

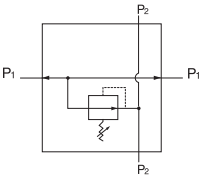
Note: When selecting from the options columns, please enter letters in alphabetical order, for example:

R 1 9 - 0 3 - F A 0 0 B

Common-P1 Regulator R09



Relieving

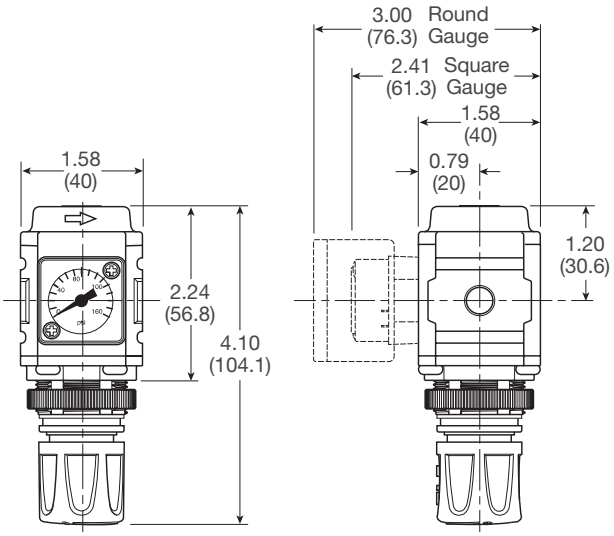


Non-Relieving



Features

- Balanced Valve Design
- 2 Regulated Ports
- Ease of Maintenance of Serviceability
- Light Weight
- Modern Design and Appearance



Inches (mm)

NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Specifications

Flow Capacity*	1/4	42 SCFM (20 dm^3/s)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2.1 bar) 0 to 60 PSIG (0 to 4.1 bar) 0 to 125 PSIG (0 to 8.6 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-4° to 150°F (-20° to 65.5°C)
P1 Port Size (Inlet / Outlet)	NPT / BSPP-G	1/4
P2 Regulated Ports (2 ea.)	NPT / BSPP-G	1/8
Weight		0.37 lb (0.17 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

Materials of Construction

Adjustment Knob	Acetal
Body	Aluminum
Body Cap	ABS
Bonnet	33% Glass-filled PBT
Bottom Plug	33% Glass-filled Nylon
Diaphragm Assembly	Brass / Nitrile
Valve Assembly	Brass / Nitrile

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Kits

Diaphragm Assembly –
- Non-relieving GRP-96-726B
- Relieving GRP-96-725B

Spring, Regulating –
- 0 to 30 PSIG (0 to 2.1 bar) GRP-95-111B
- 0 to 60 PSIG (0 to 4.1 bar) GRP-96-718B
- 0 to 125 PSIG (0 to 8.6 bar) GRP-96-717B

Accessories

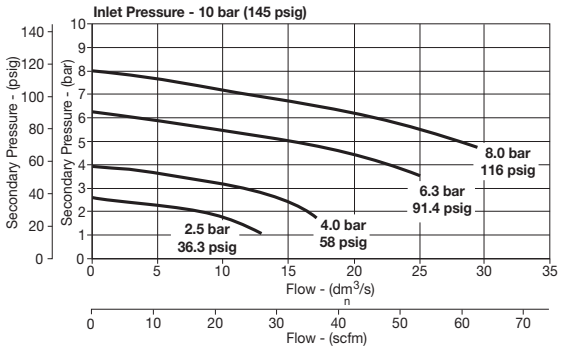
Gauge, Pressure –
- 0 to 60 PSIG (0 to 4.1 bar), 1.00" Dial Face, 1/8" NPT, CBM K4510N18060
- 0 to 160 PSIG (0 to 11.0 bar), 1.00" Dial Face, 1/8" NPT, CBM K4510N18160

Panel Mount Nut –
- Aluminum RPA-96-733
- Plastic RPA-96-734

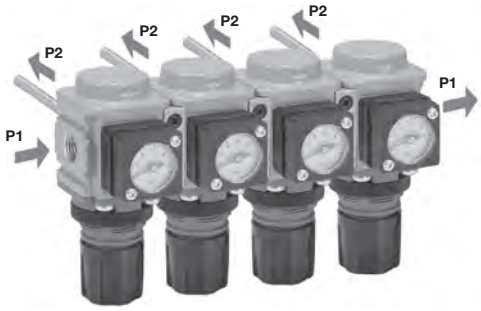
Tamper Resistant Kit RPA-96-735

Wall Mounting Bracket –
- C-Type GPA-97-010
- L-Type GRP-96-739
- T-Type GPA-96-737

R09 1/4" Common Regulator



NOTE: Square gauge not included, order separately by accessory number.



Typical Application

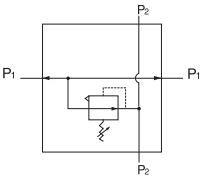
Ordering Information

All P2 Regulated Ports are 1/8" Ports

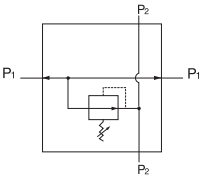
Model Type	P1 Port Size	Without Gauge 0 to 125 PSIG (0 to 8.6 bar)	Without Gauge 0 to 30 PSIG (0 to 2.1 bar)	Without Gauge 0 to 60 PSIG (0 to 4.1 bar)
Relieving	1/4	R09-02-FB00B	R09-02-CB00B	R09-02-DB00B
Non-relieving	1/4	R09-02-RB00B	R09-02-PB00B	R09-02-WB00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Common-P1 Regulator R19



Relieving

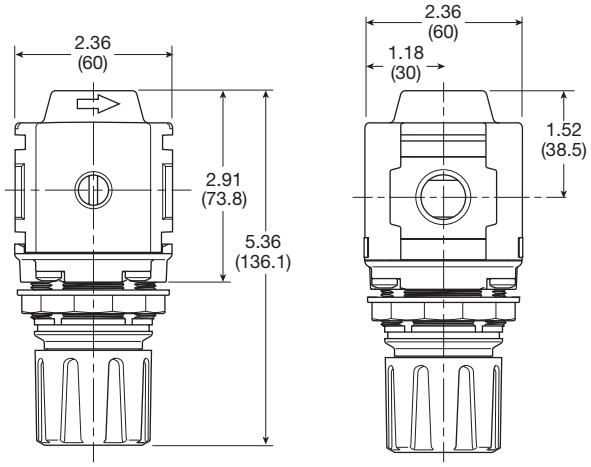


Non-Relieving



Features

- Balanced Valve Design
- Spring-loaded Diaphragm
- 4 Adjusting Pressure Ranges Available
- 1/2" NPT / BSPP-G Over-port
- 2 Regulated Ports



Inches (mm)

NOTE: 1.90 in. (48mm) hole required for panel nut mounting.

Inches (mm)

Specifications

Flow Capacity*	1/4, 3/8, 1/2	64.0 SCFM (30 dm^3/s)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2.1 bar) 0 to 60 PSIG (0 to 4.1 bar) 0 to 125 PSIG (0 to 8.6 bar) 0 to 250 PSIG (0 to 17.2 bar)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-13° to 150°F (-25° to 65.5°C)
P1 Port Size (Inlet / Outlet)	NPT / BSPP-G	1/4, 3/8, 1/2
P2 Regulated Ports (2 ea.)	NPT / BSPP-G	1/4
Weight		0.50 lb (0.22 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

Materials of Construction

Adjustment Knob		Acetal
Body		Aluminum
Body Cap		ABS
Bonnet		33% Glass-filled Nylon
Bottom Plug		33% Glass-filled Nylon
Diaphragm Assembly		Nitrile / Steel
Panel Nut		Acetal
Seals		Nitrile
Springs	Main Regulating Valve	Steel Stainless Steel
Valve Assembly		Brass / Nitrile

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Kits

Diaphragm Assembly –
- Non-relieving RRP-96-761B
- Relieving RRP-96-760B

Spring, Regulating–
- 0 to 30 PSIG (0 to 2.1 bar) RRP-96-659B
- 0 to 60 PSIG (0 to 4.1 bar) RRP-96-660B
- 0 to 125 PSIG (0 to 8.6 bar) RRP-96-661B
- 0 to 250 PSIG (0 to 17.2 bar) RRP-96-662B

Accessories

Gauge, Pressure –
- 50mm (2") round 1/4" center back mount
  - 0-30 PSIG / 0-2 bar K4520N14030
  - 0-60 PSIG / 0-4 bar K4520N14060
  - 0-160 PSIG / 0-11 bar K4520N14160
  - 0-300 PSIG / 0-20 bar K4520N14300
  - 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT K4517N14160D

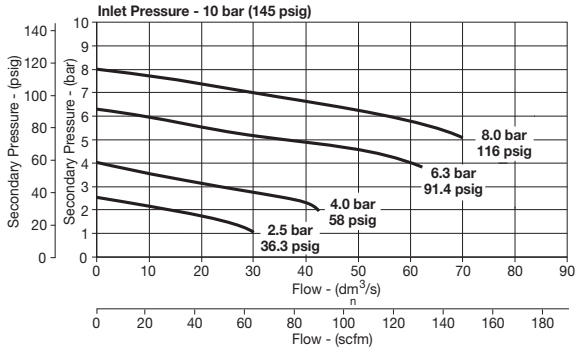
Panel Mount Nut –
- Aluminum RRP-96-673
- Plastic RRP-96-675

Tamper Resistant Kit RRP-96-671

Wall Mounting Bracket –
- L-Type GPA-96-606
- T-Type GPA-96-603

NOTE: Gauge not included, order separately by accessory number.

R19 3/8 Common Regulator





Typical Application

Ordering Information

All units shown with 1/4" regulated ports.

Model Type	P1 Port Size	5-125 PSIG (0.4 to 8.6 bar)	10-250 PSIG (0.7 to 7.2 bar)	3-60 PSIG (0.2 to 4.1 bar)
Relieving	1/4	R19-02-FA00B	R19-02-G700B	R19-02-DA00B
	3/8	R19-03-FA00B	R19-03-G700B	R19-03-DA00B
	1/2	R19-04-FA00B	R19-04-G700B	R19-04-DA00B
Non-relieving	1/4	R19-02-RA00B	R19-02-S700B	R19-02-WA00B
	3/8	R19-03-RA00B	R19-03-S700B	R19-03-WA00B
	1/2	R19-04-RA00B	R19-04-S700B	R19-04-WA00B

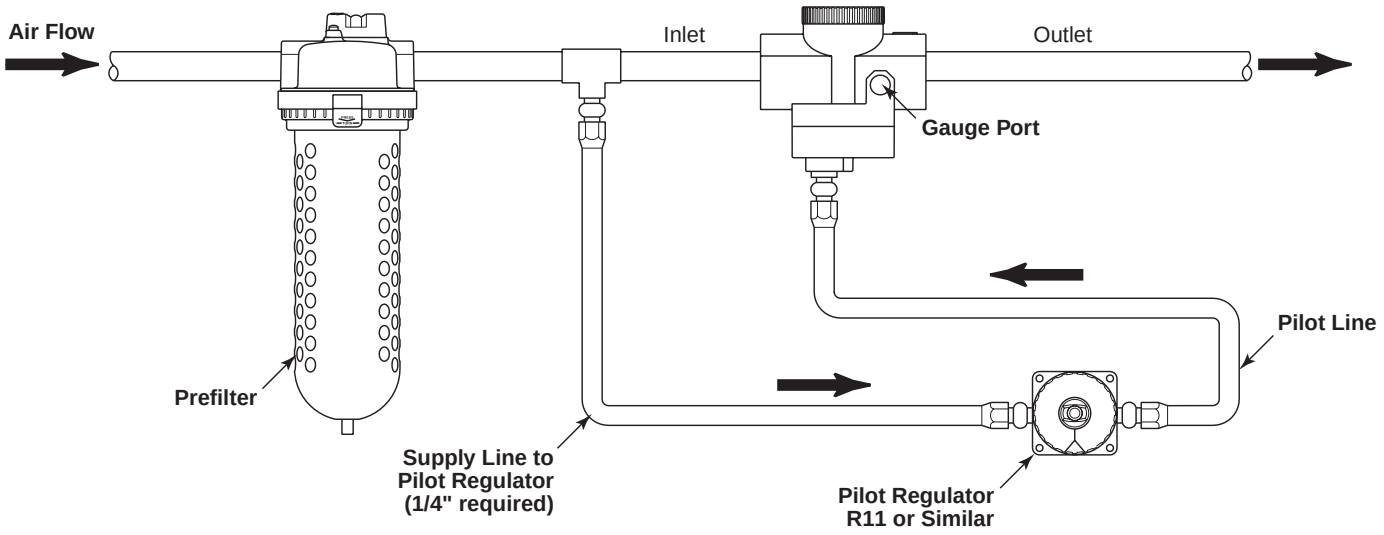
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Principal Regulator (Remote Operated) – R21 / 31 / 41-XX-RXX

Remote-control Dial-Air™ Regulator

Incorporates all the features of the standard Dial-Air™ Regulator plus the additional advantage of remote installation using the R11 model Pilot Regulator. Maximum inlet operating pressure and temperature ratings are 300 PSIG (20.7 bar) and 150°F (65.5°C).

The Remote-control Dial-Air™ Regulators are available in five pipe sizes, with 1/4" NPT connections on the pilot regulator and pilot port of remote-controlled regulators. Typical installation is shown below. For other remote models, see R21, R31 & R41.

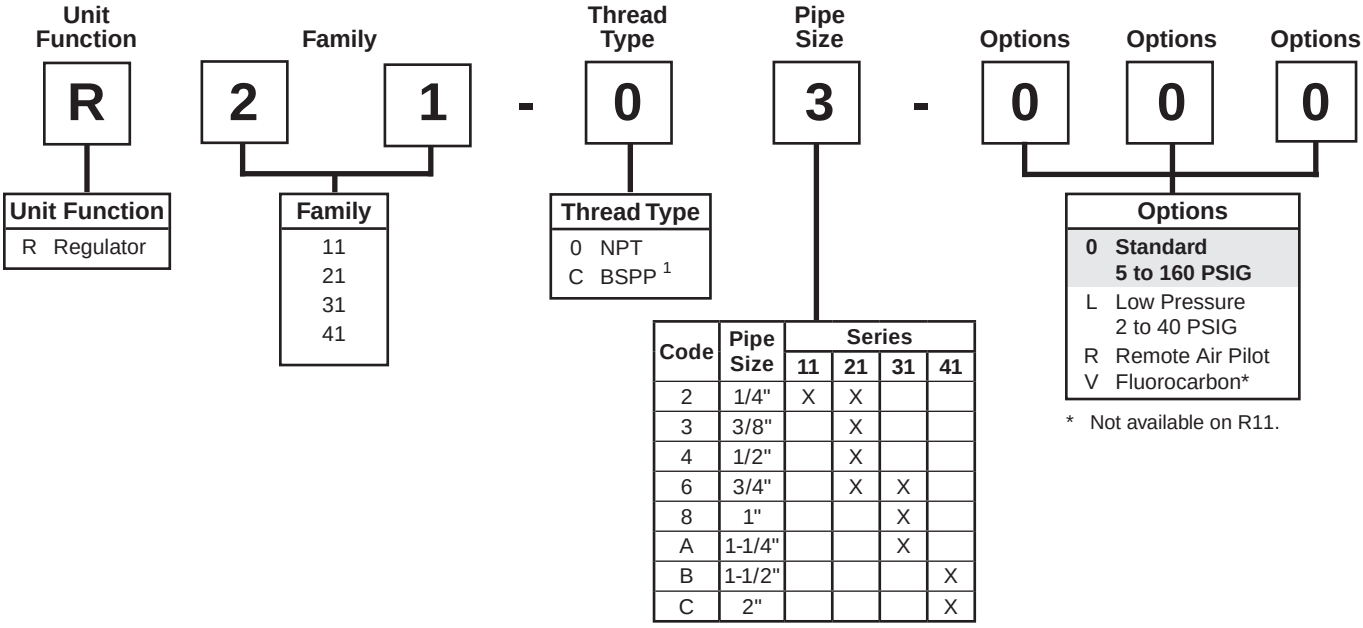


Dial-Air™

Dial-Air™ regulators feature a transparent, pressure-calibrated, non-rising adjustment dial for quick adjustment of secondary pressure. If a gauge (R21, R31, R41) is required for monitoring reasons, two 1/4" gauge ports are provided; however, these are usually used for additional outlet ports. The full reduced pressure range can be dialed in less than 270° of dial rotation. This feature is particularly advantageous if secondary pressure must be changed frequently. The transparent dial can be color or graphics coded for easy reference to required pressure changes. Dial-Air™ regulators can be mounted in any position so dial face is always visible. All Dial-Air™ units have a slight constant air bleed: 0.05 SCFM (0.024 dm^3/s), @100 PSIG (6.9 bar) inlet and 90 PSIG (6.2 bar) outlet.

Dial-Air™ Regulator Numbering System

= "Most Popular"



Unit Function
R Regulator

Family
11
21
31
41

Thread Type
0 NPT
C BSPP [1]

Code	Pipe Size	Series 11	21	31	41
2	1/4"	X	X		
3	3/8"		X		
4	1/2"		X		
6	3/4"		X	X	
8	1"			X	
A	1-1/4"			X	
B	1-1/2"				X
C	2"				X

Options
0 Standard 5 to 160 PSIG
L Low Pressure 2 to 40 PSIG
R Remote Air Pilot
V Fluorocarbon*

* Not available on R11.

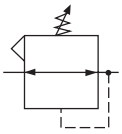
[1] ISO, R228 (G Series)

NOTE: Standard pressure adjustment is plastic "snap lock" knob and plastic bonnet with plastic panel mount nut.

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8. For example:

R21 - 0 3 - 0 0 0

Dial-Air™ Regulator R11





R11-02-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/4	0.8 SCFM (0.377 dm^3/s)
Adjusting Range Pressure		0 to 40 PSIG (0 to 2.8 bar) 0 to 160 PSIG (0 to 11 bar)
Bleed Rate		0.05 SCFM (0.024 dm^3/s)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Weight	lb. (kg)	1.3 (0.5)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

Features

- Pressure Reference Indicating Dial Face
- Non-rising Pressure Adjustment Knob
- Self-Relieving
- Full Pressure Adjustment in Less Than One Full Turn
- Recommended for Pilot-Air Applications (Low Flow)

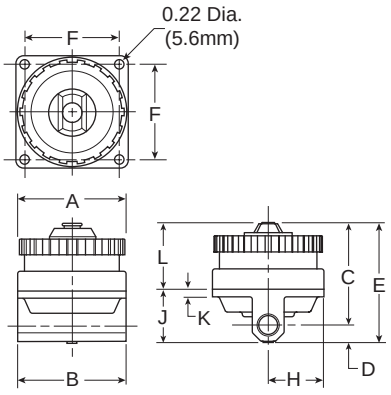
⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.



NOTE: Panel mounting requires (2) 11/16" (69mm) diameter holes and (4) 7/32" (5.5mm) screw holes. Unit can be mounted on material up to 1-1/4" (32mm) thick.

Dimensions

Model	Inches (mm)	A	B	C	D	E	F	H	J	K	L
Standard Unit R11-02-000		2.60 (66)	2.60 (66)	2.40 (60.9)	.40 (10)	2.80 (71)	2.20 (55.9)	1.30 (33)	1.25 (31.8)	.18 (4.6)	1.56 (39.6)

= "Most Popular"

Replacement Kits

Conversion Kit (Series A to Series B) RRP-95-765

O-ring, Repair Kit..... GRP-95-260

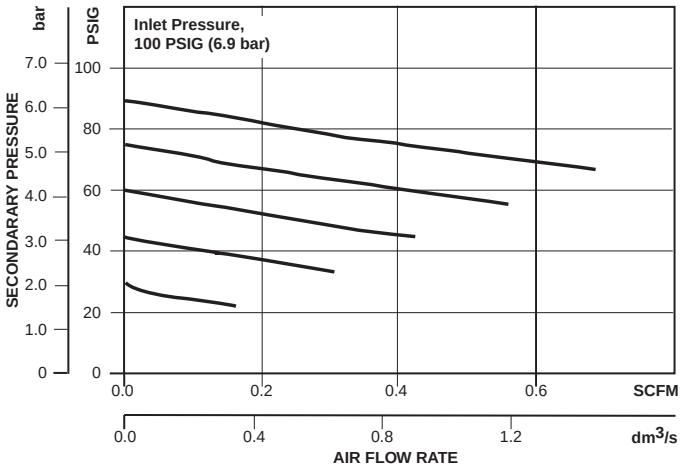
Spring, Regulating, Belleville Washer –
2 to 40 PSIG (0.1 to 3 bar)..... RRP-95-906
5 to 160 PSIG (0.4 to 11 bar) RRP-95-905

Valve, Pilot with O-ring and Valve Spring..... RRP-96-934

Accessories

Tamper Resistant Kit..... RRP-95-585

R11-02-000



B

Filters, Regulators, Lubricators

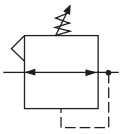
Ordering Information

Model Type	Port Size	Standard Pressure 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)
Pilot	1/4	R11-02-000	R11-02-L00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Dial-Air™ Regulator R21

= "Most Popular"

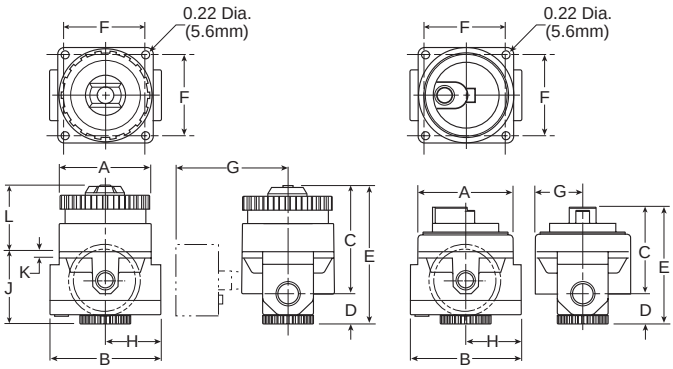

Relieving



R21-02-000

Features

- Balanced Valve Design
- Non-Rising Pressure Adjusting Dial
- High-Relief Flow (3/16" Relief Orifice)
- Two 1/4" NPT Gauge Ports, Usually Used for Additional Outlets
- Piston Operated



Remote Operated

NOTE: Panel mounting requires (2) 11/16" (69mm) diameter holes and (4) 7/32" (5.5mm) screw holes. Unit can be mounted on material up to 1-1/4" (32mm) thick.

Specifications

Flow Capacity*	1/4	117 SCFM (55 dm^3/s)
	3/8	180 SCFM (85 dm^3/s)
	1/2	195 SCFM (92 dm^3/s)
	3/4	220 SCFM (103 dm^3/s)
Adjusting Range Pressure		0 to 40 PSIG (0 to 2.8 bar) 0 to 160 PSIG (0 to 11 bar)
Bleed Rate		0.05 SCFM (0.024 dm^3/s)
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2, 3/4
Remote Pilot Port Size		1/4
Weight	lb. (kg)	2.3 (1.04)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure (1/4, 1/2 & 3/4) 90 PSIG (6.2 bar); (3/8) 80 PSIG (5.5 bar).

Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H	J	K	L
Standard Unit R21-XX-000	2.60 (66)	3.19 (81)	3.14 (79.8)	.95 (24)	4.09 (104)	2.20 (55.9)	— —	1.61 (41)	2.08 (52.8)	.18 (4.6)	2.07 (52.6)
With Gauge (order separately) R21-XX-XXX	2.60 (66)	3.19 (81)	3.14 (79.8)	.95 (24)	4.09 (104)	2.20 (55.9)	2.70 (68.5)	1.61 (41)	2.08 (52.8)	.18 (4.6)	2.07 (52.6)
Remote Operated R21-XX-R00	2.60 (66)	3.19 (81)	2.24 (56.9)	.95 (24)	3.19 (81)	2.20 (55.9)	1.33 (33.8)	1.61 (41)	2.08 (52.8)	.18 (4.6)	1.11 (28.2)

= "Most Popular"

Replacement Kits

Adjustment Dial Knob RRP-16-024-000

Conversion Kit (Series A to Series B) RRP-95-766

Cover Kit (Remote) –
Bonnet and Nitrile, O-ring (Series B).....RRP-95-910
Bonnet and Fluorocarbon, O-ring (Series B).....RRP-95-911

O-ring, Repair Kit GRP-95-260

Piston, Bottom and O-ring Seal.....RRP-95-192

Spring, Regulating, Belleville Washer –
2 to 40 PSIG (0.1 to 3 bar) RRP-95-906
5 to 160 PSIG (0.4 to 11 bar) RRP-95-905

Valve, Main with U-cup Seal..... RRP-95-151

Valve, Main with U-cup Seal and Bottom Plug –
Nitrile Elastomers RRP-95-914
Fluorocarbon Elastomers.....RRP-95-915

Valve, Main (Remote) with U-cup Seal RRP-96-952

Valve, Main (Remote) with U-cup Seal and Bottom Plug –
Nitrile Elastomers).....RRP-95-912
Fluorocarbon Elastomers.....RRP-95-913

Valve, Pilot with O-ring and Valve Spring..... RRP-96-934

Accessories

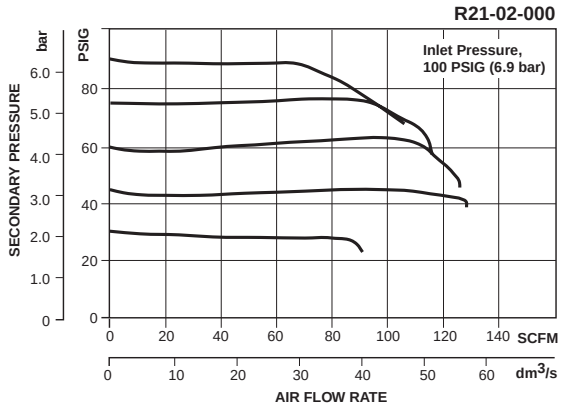
Wall Mounting Bracket, Gauge Port Adapter,
1/4" NPT RRP-95-590

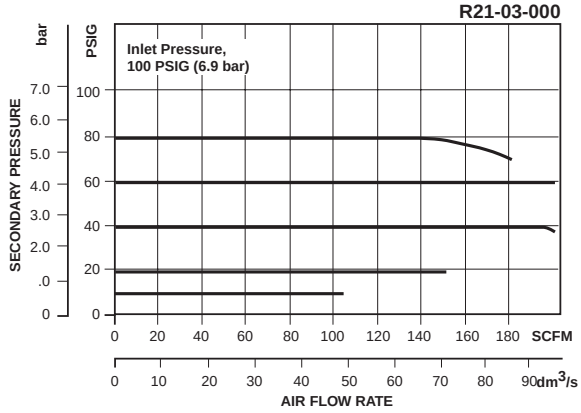
Gauge, Pressure –
0 to 60 PSIG (0 to 4 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14060

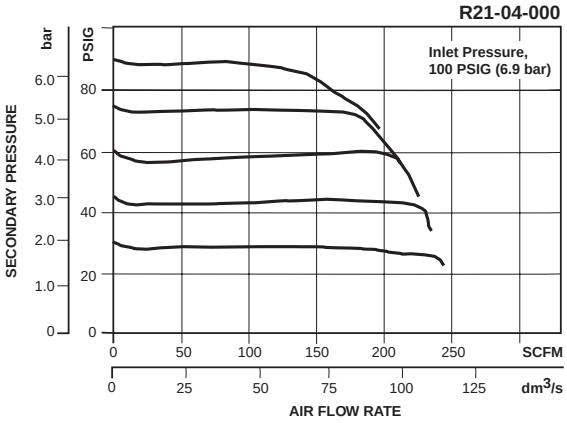
0 to 160 PSIG (0 to 11 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14160

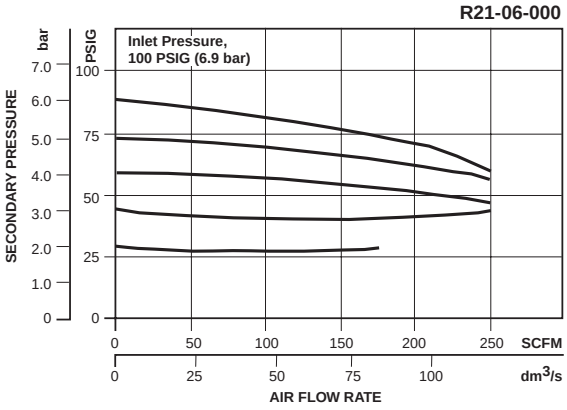
0 to 160 PSIG, 1-3/4" Digital Round,
1/4" NPT K4517N14160D

Tamper Resistant Kit..... RRP-95-585







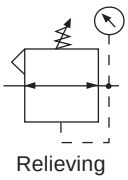


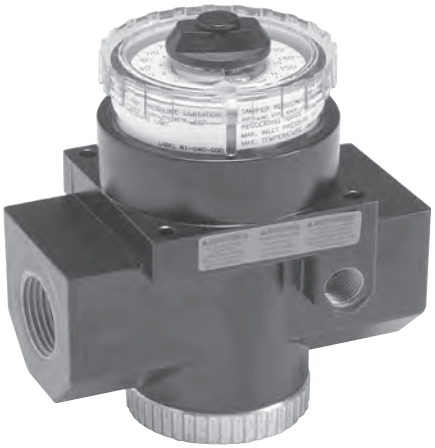
Ordering Information

Model Type	Port Size	High Flow 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)	Remote 5 to 160 PSIG (0.4 to 11 bar)
Relieving	1/4	R21-02-000	R21-02-L00	R21-02-R00
	3/8	R21-03-000	R21-03-L00	R21-03-R00
	1/2	R21-04-000	R21-04-L00	R21-04-R00
	3/4	R21-06-000	R21-06-L00	R21-06-R00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Dial-Air™ Regulator
R31

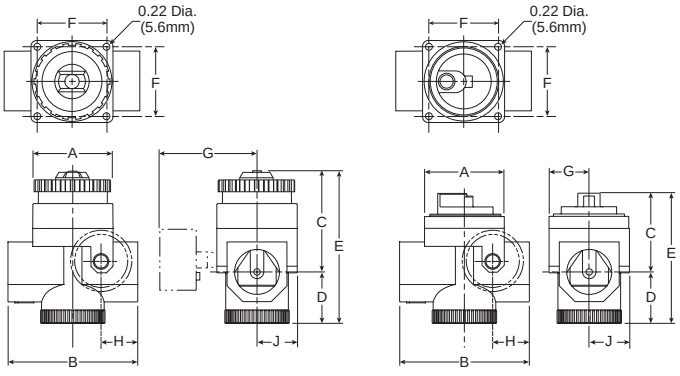




R31-06-000

Features

- Balanced Valve Design
- Non-Rising Pressure Adjusting Dial
- High-Relief Flow (3/16" Relief Orifice)
- Two 1/4" NPT / BSPT-Rc Gauge Ports, Usually Used for Additional Outlets
- Piston Operated



NOTE: Panel mounting requires (2) 11/16" (69mm) diameter holes and (4) 7/32" (5.5mm) screw holes. Unit can be mounted on material up to 1-1/4" (32mm) thick.

= **"Most Popular"**

Specifications

Flow Capacity*	3/4	400 SCFM (189 dm^3/s)
	1	650 SCFM (307 dm^3/s)
	1-1/4	700 SCFM (330 dm^3/s)
Adjusting Range Pressure		0 to 40 PSIG (0 to 2.7 bar) 0 to 160 PSIG (0 to 11 bar)
Bleed Rate		0.05 SCFM (0.024 dm^3/s)
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1, 1-1/4
Remote Pilot Port Size		1/4
Weight	lb. (kg)	4.0 (1.8)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 80 PSIG (5.5 bar).

Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H	J
Standard Unit R31-XX-000	2.59 (66)	4.29 (109)	3.50 (88.9)	1.69 (43)	5.19 (132)	2.20 (55.9)	— —	1.23 (31.2)	1.31 (33.3)
With Gauge (order separately) R31-XX-XXX	2.59 (66)	4.29 (109)	3.50 (88.9)	1.69 (43)	5.19 (132)	2.20 (55.9)	3.00 (76)	1.23 (31.2)	1.31 (33.3)
Remote Operated R31-XX-R00	2.59 (66)	4.29 (109)	2.63 (66.8)	1.69 (43)	4.32 (109.7)	2.20 (55.9)	1.33 (33.7	1.23 (31.2)	1.31 (33.3)

= "Most Popular"

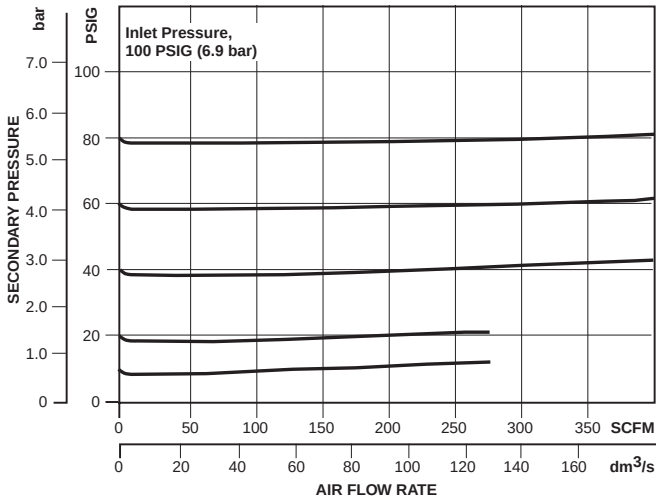
Replacement Kits

Adjustment Dial Knob RRP-16-024-000
Conversion Kit (Series A to Series B) RRP-95-766
O-ring, Repair Kit GRP-95-261
Piston, Bottom and O-ring seal RRP-95-192
Spring, Regulating, Belleville Washer –
2 to 40 PSIG (0.1 to 3 bar) RRP-95-906
5 to 160 PSIG (0.4 to 11 bar) RRP-95-905
Valve, Main with O-ring Seal RRP-95-152
Valve, Main (Remote) with O-ring Seal RRP-96-950
Valve, Pilot with O-ring and Valve Spring..... RRP-96-935

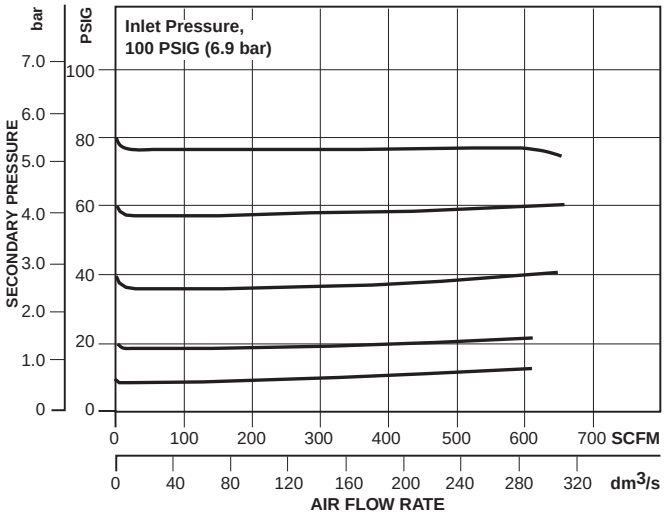
Accessories

Gauge, Pressure –
0 to 60 PSIG (0 to 4 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14060
0 to 160 PSIG (0 to 11 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14160
0 to 160 PSIG, 1-3/4" Digital Round,
1/4" NPT K4517N14160D
Tamper Resistant Kit..... RRP-95-585
Wall Mounting Bracket, Gauge Port Adapter,
1/4" NPT RRP-95-590

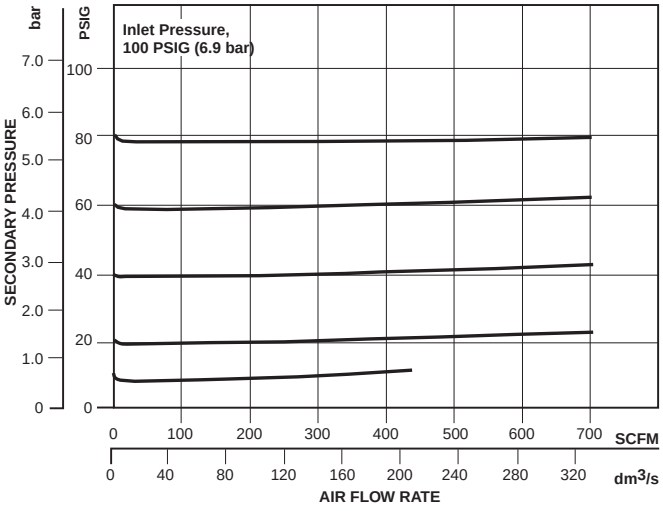
R31-06-000



R31-08-000



R31-0A-000

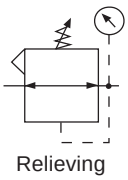


Ordering Information

Model Type	Port Size	High Flow 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)	Remote 5 to 160 PSIG (0.4 to 11 bar)
Relieving	3/4	R31-06-000	R31-06-L00	R31-06-R00
	1	R31-08-000	R31-08-L00	R31-08-R00
	1-1/4	R31-0A-000	R31-0A-L00	R31-0A-R00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Dial-Air™ Regulator
R41





R41-0B-000

Features

- Balanced Valve Design
- Non-Rising Pressure Adjusting Dial
- High-Relief Flow (3/16" Relief Orifice)
- Two 1/4" NPT / BSPT-Rc Gauge Ports, Usually Used for Additional Outlets
- Piston Operated

= **"Most Popular"**

Specifications

Flow Capacity*	1-1/2, 2	1600 SCFM (755 dm^3/s)
Adjusting Range Pressure		0 to 160 PSIG (0 to 11 bar)
Bleed Rate		0.05 SCFM (0,024 dm^3/s)
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/2, 2
Remote Pilot Port Size		1/4
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	9 (4.1)

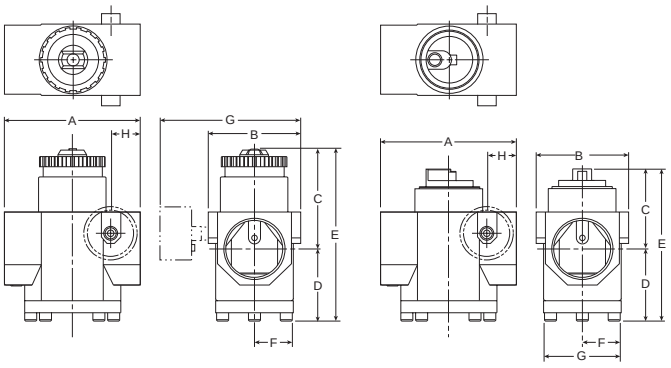
* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 80 PSIG (5.5 bar).

Materials of Construction

Body	Zinc
Bonnet	Zinc / Brass
Piston	Zinc
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile / Acetal

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



Remote Operated

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H
Standard Unit R41-XX-000	5.31 (135)	3.58 (91)	4.02 (102)	2.79 (71)	6.81 (173)	1.79 (45.7)	— —	1.15 (29.2)
With Gauge (order separately) R41-XX-XXX	5.31 (135)	3.58 (91)	4.02 (102)	2.79 (71)	6.81 (173)	1.79 (45.7)	5.29 (134.6)	1.15 (29.2)
Remote Operated R41-XX-R00	5.31 (135)	3.58 (91)	3.11 (78.9)	2.79 (71)	5.90 (149.8)	1.50 (38)	3.00 (76)	1.15 (29.2)

= "Most Popular"

Replacement Kits

Adjustment Dial Knob RRP-16-024-000

Conversion Kit (Series A to Series B) RRP-95-766

O-ring, Repair Kit GRP-95-262

Piston, Bottom and O-ring Seal.....RRP-95-192

Spring, Regulating, Belleville Washer –
2 to 40 PSIG (0.1 to 3 bar) RRP-95-906
5 to 160 PSIG (0.4 to 11 bar) RRP-95-905

Spring, Valve RRP-95-024

Valve –
Main with O-ring Seal.....RRP-95-153
Main (Remote) with O-ring Seal RRP-96-951
Pilot with O-ring and Valve Spring RRP-96-935

Accessories

Gauge, Pressure –
0 to 60 PSIG (0 to 4 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14060

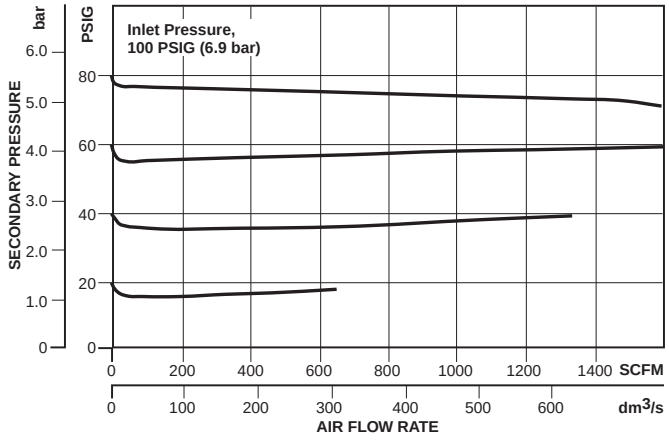
0 to 160 PSIG (0 to 11 bar), 2" Dial Face,
1/4" NPT, CBM K4520N14160

0 to 160 PSIG, 1-3/4" Digital Round,
1/4" NPT K4517N14160D

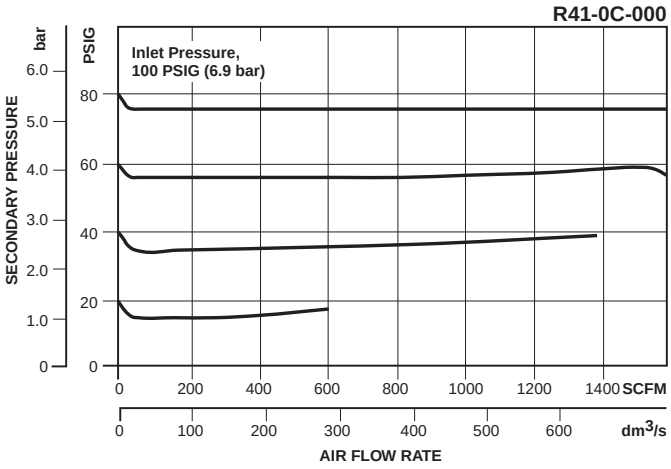
Tamper Resistant Kit..... RRP-95-585

Wall Mounting Bracket, Gauge Port Adapter,
1/4" NPT RRP-95-590

R41-0B-000



R41-0C-000



Ordering Information

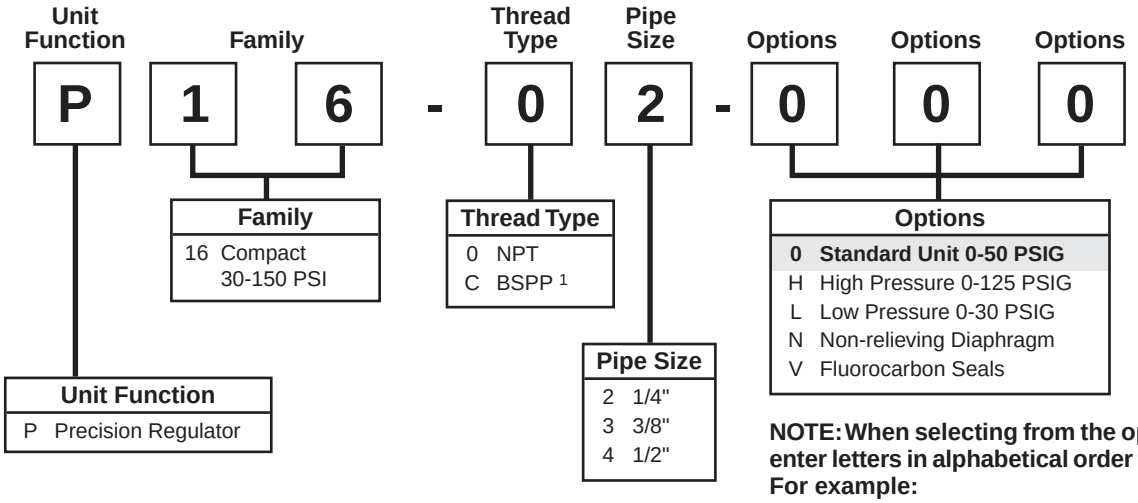
Model Type	Port Size	High Flow 5 to 160 PSIG (0.4 to 11 bar)	Low Pressure 2 to 40 PSIG (0.1 to 3 bar)	Remote 5 to 160 PSIG (0.4 to 11 bar)
Relieving	1-1/2	R41-0B-000	R41-0B-L00	R41-0B-R00
	2	R41-0C-000	R41-0C-L00	R41-0C-R00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Precision Regulator Numbering System (16 Series)

= "Most Popular"



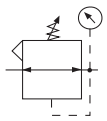
NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8. For example:

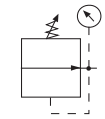
P 1 6 - 0 2 - H 0 0

B

Filters, Regulators, Lubricators

Precision Regulator
P16 (Modular)


Relieving


Non-Relieving

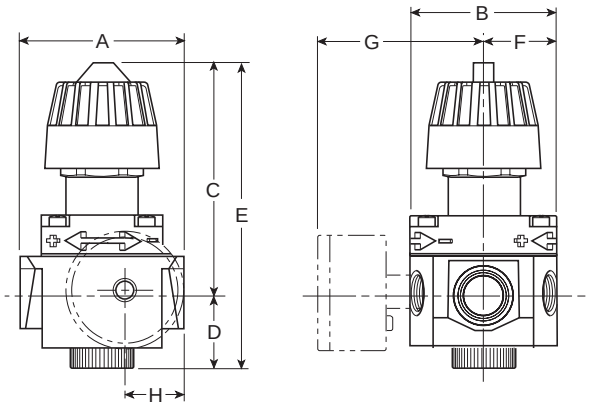


P16-02-000

The P16 models are general purpose regulators specifically designed for applications that require reliable performance and accurate pressure control.

Features

- *Stable Output* – Aspirator Design Minimizes "Droop" at Higher Flow Levels
- *Accuracy* – High Diaphragm-to-Valve-Area Ratio Combined with Unbalanced Valve Provides High Precision with Minimal Initial Pressure Droop
- *Sensitive* – Responds Quickly to the Slightest Change in Downstream Pressure
- *Easy Maintenance* – May be Disassembled and Serviced without Removal from Air Line
- *Modular Design* – Available in a Modular Configuration to Work with Other Wilkerson Modular Units, Accessories and Options



NOTE: 1.31" Dia. (33,3 mm) hole required for panel nut mounting.

= **"Most Popular"**

Specifications

Flow Capacity*	P16	22.0 SCFM (10.4 dm^3/s)
Bleed Rate		0.03 SCFM (0.014 dm^3/s) max.
Gauge Port (2 ea.)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Weight	lb. (kg)	1.66 (0.75)

* Inlet pressure 100 PSIG (6,9 bar). Secondary pressure 45 PSIG (3,1 bar).

Materials of Construction

Body	Zinc
Bonnet	PBT
Diaphragm	Nitrile / Zinc
Panel Nut	Acetal
Seals	Nitrile
Springs	Steel
Valve Assembly	Brass / Nitrile

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H
Standard Unit P16-XX-000	2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	— —	1.02 (25.9)
With Gauge (order gauge separately) P16-XX-XXX	2.99 (76)	2.59 (66)	3.99 (101.3)	1.20 (30.5)	5.19 (132)	1.29 (33)	2.99 (76)	1.02 (25.9)

= "Most Popular"

Replacement Kits

Diaphragm Assembly
- Self-relieving, Fluorocarbon PRP-95-073
- Self-relieving, Nitrile PRP-95-960

Knob, Adjusting (Series A)
- Used on Units with Plastic Bonnets RRP-95-023

Knob, Adjusting (Prior to Series A)
- Used on Units with Zinc Bonnets RRP-95-007

Repair Kit, Non-relieving Diaphragm,
- Valve / Valve Spring, O-rings PRP-95-053

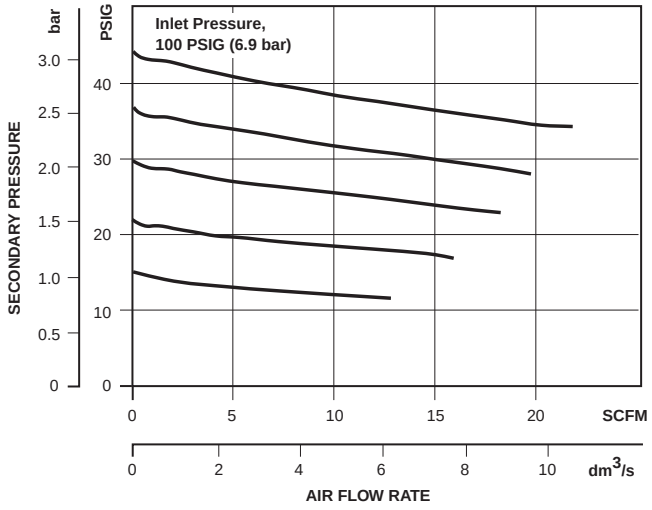
Repair Kit, Self-relieving Diaphragm,
- Valve / Valve Spring, O-rings PRP-95-004

Spring, Regulating –
- 0 to 15 PSIG (0 to 1 bar) RRP-95-233
- 0 to 30 PSIG (0 to 2.1 bar) RRP-95-916
- 0 to 50 PSIG (0 to 3.4 bar) RRP-95-222
- 0 to 125 PSIG (0 to 8.6 bar) RRP-95-224

Valve, Fluorocarbon (Valve Only) PPA-95-067

Valve Assembly – Valve and Valve Spring PRP-95-959

P16-02-000



Accessories

Gauge, Pressure, 2" Dial Face, 1/4 NPT, CBM
- 0 to 30 PSIG (0 to 2.1 bar) K4520N14030W
- 0 to 60 PSIG (0 to 4 bar) K4520N14060W
- 0 to 160 PSIG (0 to 11 bar) K4520N14160W
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT K4517N14160D

Nut, Panel Nut, Plastic GPA-95-032

Tamper Resistant Kit, Ring Style RPA-95-006

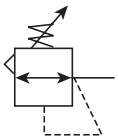
Wall Mounting Bracket
- Gauge Port Adapter, 1/4 NPT RRP-95-590
- L-Type – Heavy Duty RPA-95-090
- L-Type – Standard GPA-95-012
- L-Type with Plastic Panel Mount Nut GPA-95-011

Ordering Information

Model Type	Port Size	Standard Unit 0 to 50 PSIG (0 to 3.4 bar)	High Pressure 0 to 125 PSIG (0 to 8.6 bar)	Low Pressure 0 to 30 PSIG (0 to 2.1 bar)	Fluorocarbon Seals
P16 Relieving	1/4	P16-02-000	P16-02-H00	P16-02-L00	P16-02-V00
	3/8	P16-03-000	P16-03-H00	P16-03-L00	P16-03-V00
	1/2	P16-04-000	P16-04-H00	P16-04-L00	P16-04-V00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

High Precision Regulator P17

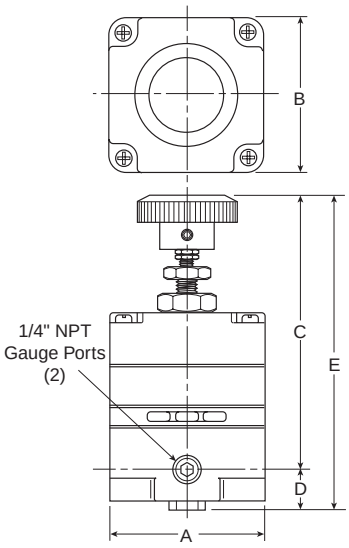




P17-02-F00

Features

- Accurate Pressure Regulation Controls Output Pressure to Within 0.1% Accuracy
- Multi-stage Regulation for Maximum Control and Stability
- Two Full Flow Gauge Ports
- Super Sensitive Relief. Downstream Pressure Buildup, Down to 0.005 PSIG Above the Set Pressure, is Automatically Vented through Internal Relief Valve
- P17 has High Exhaust Relief Capacity



= **"Most Popular"**

Specifications

Flow Capacity at 100 PSIG (6.89 bar) Supply, 20 PSIG (1.38 bar) Outlet			14 SCFM (25m³/hr)
Constant Bleed Rate (Equals Bleed Rate plus other consumption)			Less than 0.08 SCFM (0.15m³/hr)
Effect of Supply Pressure Variation of 25 PSIG (1.7 bar) on outlet:			Less than 0.005 PSIG (0.0003 bar)
Exhaust (Relief) Capacity at 5 PSIG (0.34 bar) above 20 PSIG (1.38 bar) Setpoint	Standard Model		3 SCFM (3.4m³/hr)
	High-Relief Model		11 SCFM (17m³/hr)
Gauge Ports (Can be used as additional full flow 1/4" outlet ports)			1/4" NPTF
Operating Pressure Range –		PSIG	bar
Primary – Maximum		150	10.34
Secondary – Spring Pressure			
40 PSIG	Minimum	2	0.14
	Maximum	40	2.76
120 PSIG	Minimum	2	0.14
	Maximum	120	8.27
Operating Temperature Range 0°F* to 150°F (-18°C * to 65°C) Temperatures below (0°C) 32°F require moisture free air.			
Port Threads			1/4"
Repeatability / Sensitivity			0.005 PSIG (0.0003 bar) Inches of Water Column = 1/8"
Total Air Consumption			6 SCFH (0.21m³/hr.)
Weight			1.4 lb (0.64 kg)

Materials of Construction

Adjusting Stem & Capsule	Stainless Steel
Body	Zinc
Control Knob	Plastic
Diaphragm(s)	Buna-N
Seals	Buna-N
Springs	Stainless Steel
Valve Poppet	Stainless Steel

The P17 is a high precision, multi-stage pressure regulator. This pressure controller provides the highest level of regulation accuracy and repeatability available and is ideal for applications that call for the utmost in control and maximum stability under variable operating conditions. A stainless steel measuring capsule is used as a sensing element to activate the high gain servo balanced control mechanism in which the main valve is controlled by a pilot valve. This allows for greater accuracy and eliminates many of the problems associated with conventional regulators using range springs and diaphragms.

Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit P17-02-F00		2.10 (53)	2.10 (53)	3.82 (97)	0.43 (11)	4.35 (110)

= "Most Popular"

Regulator Kits

Service Kits

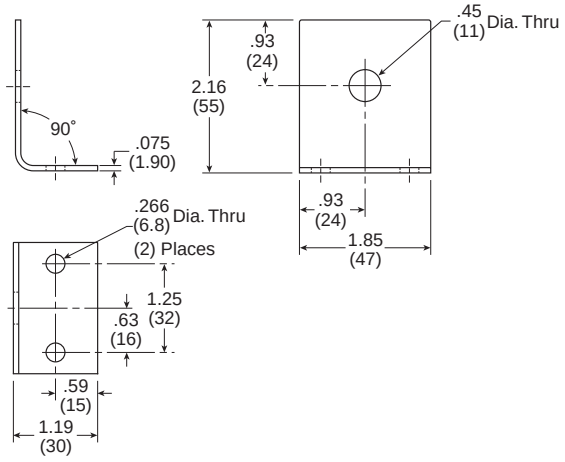
2-40 PSIG.....RKR210A*
2-120 PSIG RKR210C*
2-120 PSIG (High Relieving) RKR220C*

* Parts in Kit

Accessories

Mounting Bracket Kits

Pipe Mounting.....SA200YW57
Right Angle Mounting..... 446-707-045



Mounting Bracket: 446-707-045

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

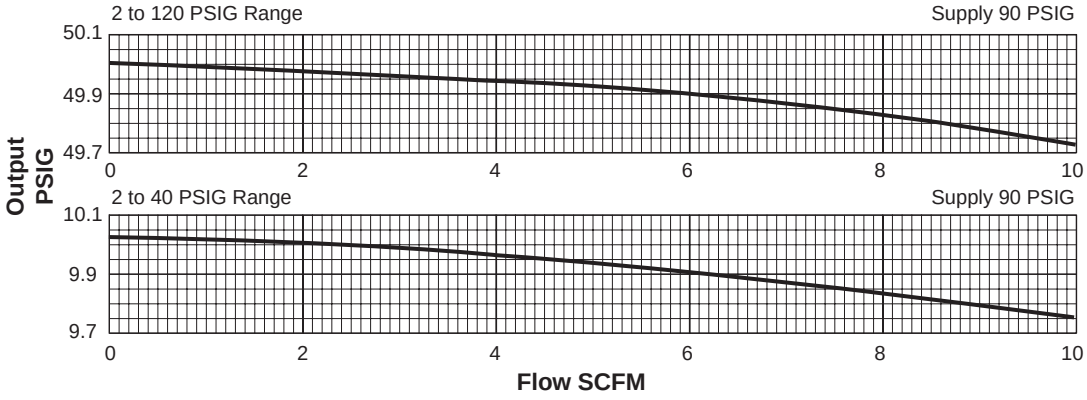
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Applications

The P17 regulators are well suited for any process that requires very precise regulation of air pressure in pipes and vessels. These regulators are often used, but not limited to the following applications:

- Air Gauging
- Gas Mixing
- Calibration Standards
- Air Hoists
- Web Tensioning
- Gate Actuators
- Roll Loading
- Valve Operators
- Cylinder Loading

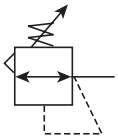


Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		2 to 40	2 to 120	2 to 120 High Relief
In / Out Ports	1/4"	P17-02-B00	P17-02-F00	P17-02-FH0

Compact High Precision Regulator WRA302

= "Most Popular"

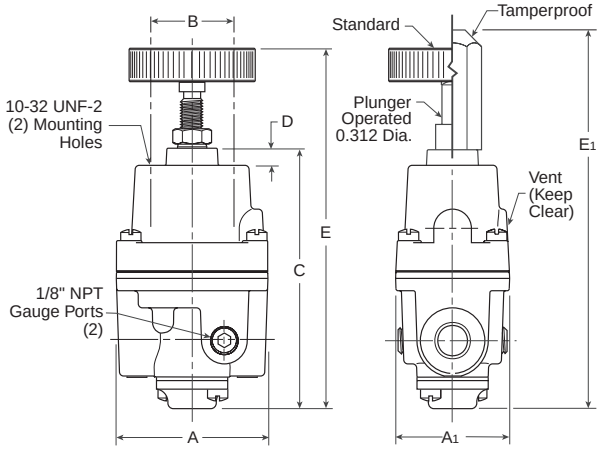




WRA302

Features

- Control Sensitivity of .250" (.63 cm) Water Column Variation Allows Use in Precision Applications
- A Compensating Diaphragm Lets the Regulator Remain Unaffected by Supply Pressure Changes
- Flow of Up to 40 SCFM with 100 PSIG Supply Allows Use in Applications with High Flow Requirements
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flow Conditions
- A Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Unit Construction Lets You Service the Regulator Without Removing it From the Line



Specifications

Supply Pressure 250 PSIG, (17.0 bar), (1700 kPa) Maximum

Flow Capacity –
40 SCFM (68 m^3/HR) @ 100 PSIG, (7.0 bar), (700 kPa) Supply and 20 PSIG, (1.5 bar), (150 kPa) Setpoint

Exhaust Capacity –
2.0 SCFM (3.4 m^3/HR) where downstream pressure is 5 PSIG, (.35 bar), (35 kPa) above 20 PSIG, (1.5 bar), (150 kPa) Setpoint

Supply Pressure Effect –
Less than 0.2 PSIG, (.014 bar), (.14 kPa) for 100 PSIG, (7.0 bar), (700 kPa) change in Supply Pressure

Sensitivity .250" (.010 PSIG) (.64 cm) Water Column

Ambient Temperature -40°F to +200°F, (-40°C to 93°C)

Hazardous Locations –
Acceptable for use in Zones 1 and 2 for Gas Atmosphere: Groups IIA and IIB and Zones 21 and 22 for Dust Atmospheres

Materials of Construction

Body and Housing	Aluminum
Diaphragms	Nitrile on Dacron
Trim	Brass

The WRA302 Regulator is designed for applications that require high capacity and accurate process control in a small package. A poppet valve which is balanced by utilizing a convoluted diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.

Dimensions

Models	Inches (mm)	A	A_1	B	C	D	E	E_1
Standard Unit WRA302		2.25 (57.3)	1.70 (43.1)	1.25 (31.8)	3.81 (96.7)	0.25 (6.4)	5.22 (132.6)	5.56 (141.1)

= "Most Popular"

WRA302 Kits and Accessories

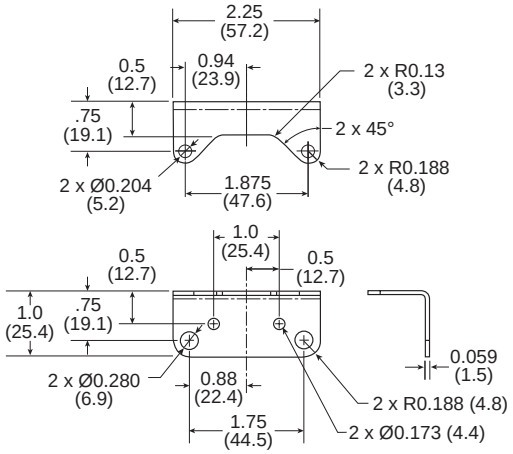
Service Kits

1/2 to 30, 1 to 60, & 2 to 100 PSIG, Nitrile, Standard PS16116-13

1/2 to 30, 1 to 60, & 2 to 100 PSIG, Nitrile, Non-relieving PS16116-14

Tamper Resistant Kit PS12163

Mounting Bracket Kit PS21667-1



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

WRA302	4	2	

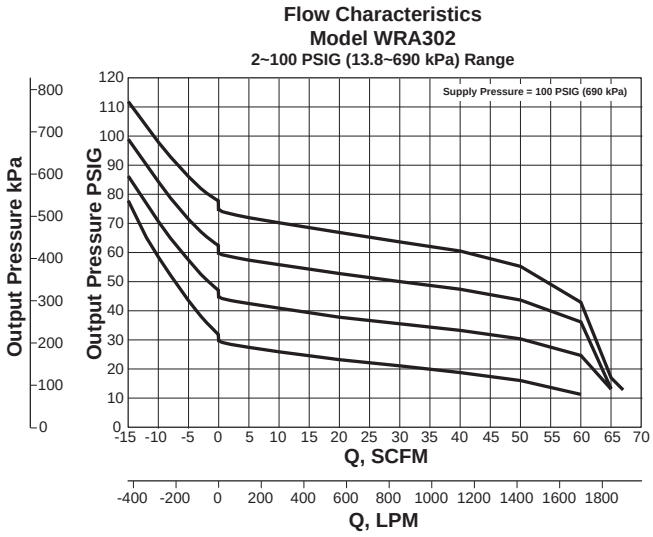
Springs	
3	0.5 to 30 PSIG
4	1 to 60 PSIG
5	2 to 100 PSIG

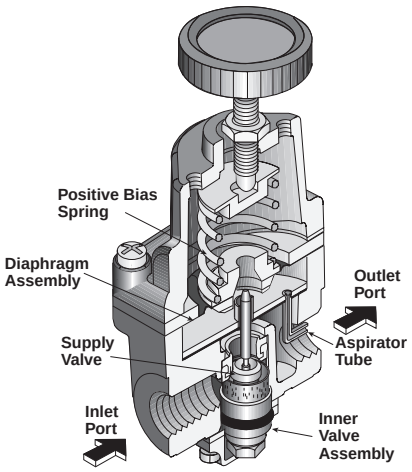
Pipe Size	
2	1/4" NPT

Options	
Blank	No Options
H	BSPP
N	Non-Relieving

Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Technical Information





Operating Principles

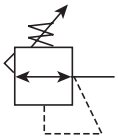
The WRA302 Regulator uses the force balance principal to control the movement of the valve assembly which in turn controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Positive Bias Spring causes the Diaphragm Assembly to move downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Positive Bias spring is balanced by the upward force of the downstream pressure acting on the bottom of the Diaphragm Assembly. The resultant force moves the supply Valve upward to reduce the flow of air to the Outlet Port.

Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		0 to 30	0 to 60	0 to 100
In / Out Ports	1/4 Inch	WRA30232	WRA30242	WRA30252

Standard High Precision Regulator WRA102

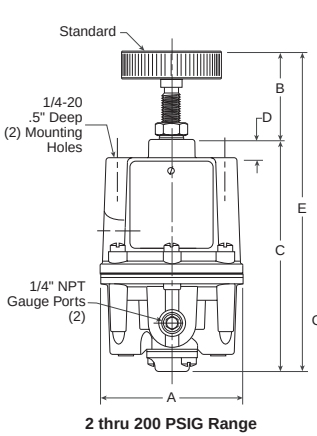




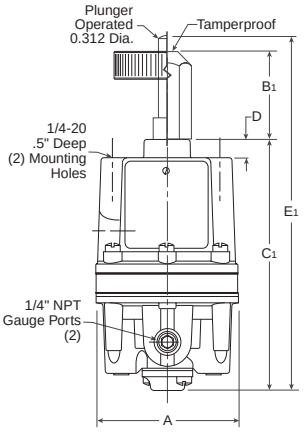
WRA102

Features

- Control Sensitivity of .125" (.32 cm) Water Column Allows Use in Precision Processes
- Pressure Balanced Supply Valve Prevents Supply Pressure Changes From Affecting the Setpoint
- Optional Check Valve Permits Dumping of Downstream Pressure When Supply is Opened to Atmosphere
- Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flow Conditions



2 thru 200 PSIG Range



300 & 400 PSIG Range

= **"Most Popular"**

Specifications

Supply Pressure 500 PSIG, (35.0 bar), (3500 kPa) Maximum

Flow Capacity –
40 SCFM (68 m^3/HR) @ 100 PSIG, (7.0 bar), (700 kPa) Supply and 20 PSIG, (1.5 bar), (150 kPa) Setpoint

Exhaust Capacity –
5.5 SCFM (9.35 m^3/HR) where Downstream Pressure is 5 PSIG, (.35 bar), (35 kPa) above 20 PSIG, (1.5 bar), (150 kPa) Setpoint

Supply Pressure Effect –
Less than 0.1 PSIG, (.007 bar), (.7 kPa) for 100 PSIG, (7.0 bar), (700 kPa) change in Supply Pressure

Sensitivity .125" (.005 PSIG) (.32 cm) Water Column

Ambient Temperature -40°F to +200°F, (-40°C to 93°C)

Hazardous Locations –
Acceptable for use in Zones 1 and 2 for Gas Atmosphere: Groups IIA and IIB and Zones 21 and 22 for Dust Atmospheres

Materials of Construction

Body and Housing	Aluminum
Diaphragms	Buna N on Dacron (Standard Unit Only)
Trim	Brass, Zinc Plated Steel

The WRA102 Regulator is designed for applications that require high capacity and accurate process control. A poppet valve which is balanced by utilizing a rolling diaphragm, insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.

Dimensions

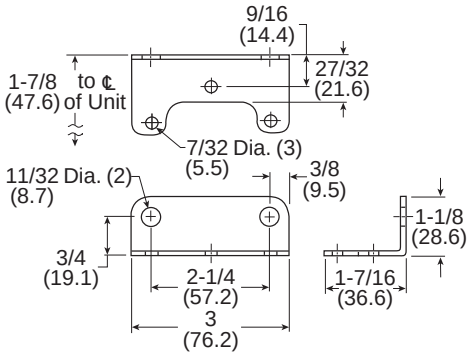
Models	Inches (mm)	A	B	B_1	C	C_1	D	E	E_1
Standard Unit WRA102		3.00 (76.2)	2.22 (56.5)	2.13 (53.9)	4.42 (111.9)	4.78 (121.6)	0.38 (9.4)	6.63 (168.5)	7.28 (184.9)

= "Most Popular"

WRA102 Kits & Accessories

Mounting Bracket Kit –

Zinc Plated Steel PS09921



Service Kits

0 to 200 PSIG, Relieving PS12125-1
0 to 200 PSIG, Non--relieving.....PS12125-4

Tamper Resistant Kit.....PS12165

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

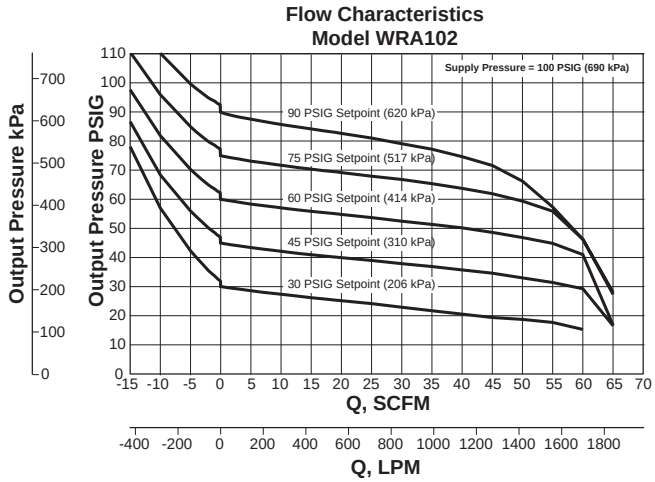
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

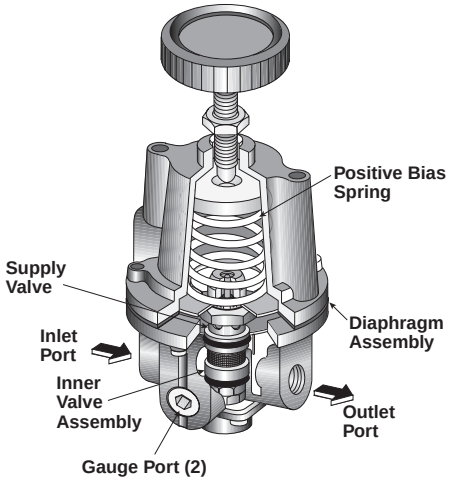
WRA102	6	2	

Springs	Pipe Size	Options
3 0.5 to 30 PSIG	2 1/4" NPT	Blank No Options
4 1 to 60 PSIG		H BSPP
6 2 to 150 PSIG		N Non-Relieving

Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Technical Information





Operating Principles

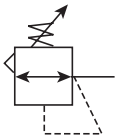
The WRA102 Series regulator use the force balance principal to control the movement of the Valve Assembly that controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Positive Bias Spring moves the Diaphragm Assembly downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Positive Bias Spring is balanced by the force of the downstream pressure that acts on the Diaphragm Assembly. The resultant force moves the Supply Valve upward to reduce the flow of air to the Outlet Port.

Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		0 to 30	0 to 60	0 to 150
In / Out Ports	1/4 Inch	WRA10232	WRA10242	WRA10262

Compact High Precision Relief Valve WRA102BP





WRA102BP

= "Most Popular"

Specifications

Set Point Range (Maximum)	System Pressure
2-200 PSIG (0.15-14 bar) (15-1400 kPa)	300 PSIG (21.0 bar) (2100 kPa)
300-400 PSIG (21-28 bar) (2100-2800 kPa)	500 PSIG (35.0 bar) (3500 kPa)

Flow Capacity (SCFM) –
40 (68 m³/HR) @ 100 PSIG, (7.0 bar), (700 kPa) System Pressure

Sensitivity	.125" (.005 PSIG) (.32 cm) Water Column
Ambient Temperature	-40°F to +200°F, (-40°C to +93°C)

Materials of Construction

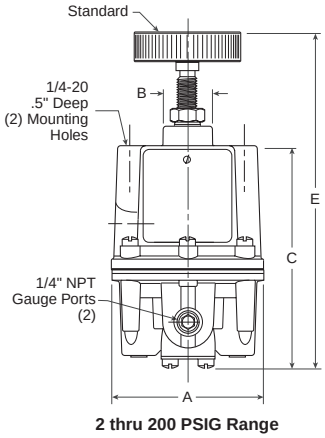
Body and Housing	Aluminum
Trim	Zinc Plated Steel, Brass
Nozzle	Nitrile on Dacron

Features

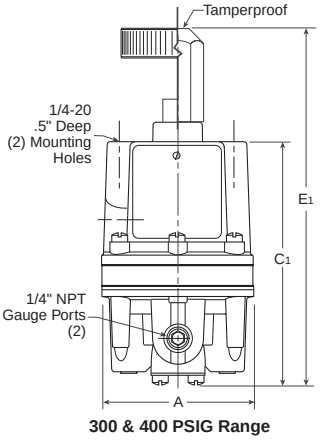
- Control Sensitivity of .125" (.32 cm) Water Column Allows Use in Precision Applications
- A Separate Control Chamber and Aspirator Tube Isolate the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Unit Construction Lets You Service the WRA102BP Without Removing it From the Line
- Mounting Bracket is Available

The WRA102BP is a high capacity relief valve that relieves excess pressure in a pneumatic system.

The WRA102BP provides greater accuracy than standard relief valves over a narrow pressure range. The WRA102BP is an excellent choice for a wide range of precision applications.



2 thru 200 PSIG Range



300 & 400 PSIG Range

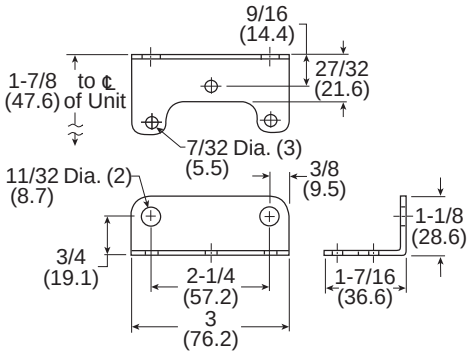
Dimensions

Models (Inches (mm))	A	B	C	C1	E	E1
Standard Unit WRA102BP	3.00 (76.2)	0.97 (24.6)	4.19 (106.4)	4.56 (115.9)	6.31 (160.3)	6.75 (171.4)

= "Most Popular"

WRA102BP Kits & Accessories

Mounting Bracket Kit –
Zinc Plated Steel PS09921



Service Kits
0 to 200 PSIG, Standard PS12127-1

Tamper Resistant Kit..... PS12165

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

WRA102	6	2	BP	

Springs	
3	0.5 to 30 PSIG
4	1 to 60 PSIG
6	2 to 150 PSIG

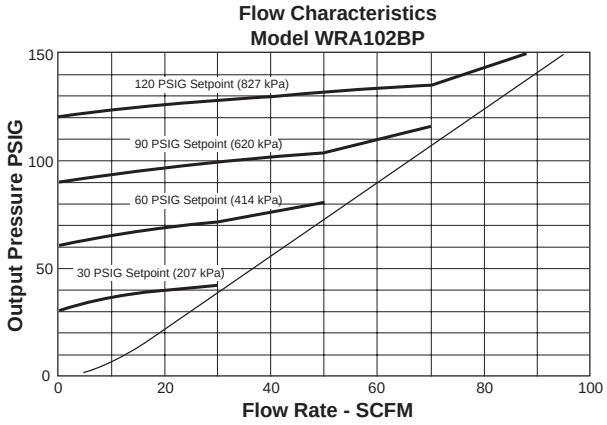
Pipe Size	
2	1/4" NPT

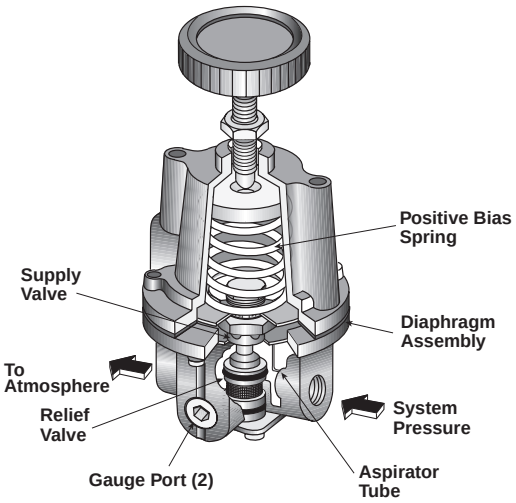
Options	
BP	Back Pressure

Options	
Blank	No Options
H	BSPP
N	Non-Relieving

Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Technical Information





Operating Principles

The WRA102BP Regulator uses the force balance principle to open the Relief Valve and vent system pressure when the set point is exceeded.

Downstream pressure is transmitted through the Aspirator Tube to the bottom of the Diaphragm Assembly. When you adjust the range screw for a specific set point, the Positive Bias Spring compresses and exerts a force on the top of the Diaphragm Assembly. As long as the pressure acting on the bottom of the Diaphragm Assembly produces a force less than the spring force acting on the top of the Diaphragm Assembly, the Relief Valve remains closed. When system pressure increases, the force on the bottom of the Diaphragm Assembly increases until it reaches the set point. When system pressure increases beyond the set point, the assembly moves upward, lifting the Relief Valve from its seat and vents the downstream air.

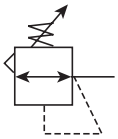
If downstream pressure decreases below the set point, the assembly moves downward closing the Relief Valve.

Ordering Information

Relieving		Reduced Pressure Range (PSIG)		
		0 to 30	0 to 60	0 to 150
In / Out Ports	1/4 Inch	WRA10232BP	WRA10242BP	WRA10262BP

High Precision Vacuum Regulator WRA171

= "Most Popular"





WRA171

Specifications

Vacuum Supply (Max)	29.92 Hg (760 torr)
Flow Capacity	3 SCFM @ 650 torr Supply, 250 torr Setpoint
Sensitivity	.125" (.005 PSIG) (.32 cm) Water Column
Ambient Temperature	-40°F to +200°F, (-40°C to +93°C)
Vacuum Supply Effect – Less than 1 torr for 100 torr (.04 Hg for 3.94 Hg) change in Vacuum Supply	

Materials of Construction

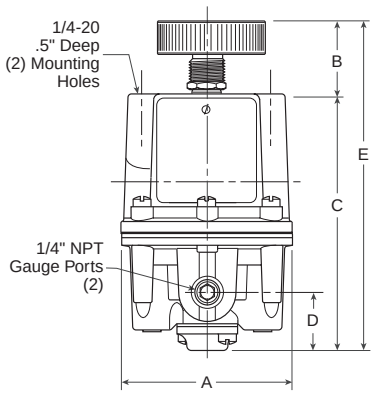
Body and Housing	Aluminum
Trim	Zinc Plated Steel, Brass
Elastomers	Nitrile

Features

- Control Sensitivity of .125" (.32 cm) Water Column Allows Use in Precision Applications
- Balanced Supply Valve Minimizes Effects of Vacuum Variation
- Aspirator Tube Compensates for Downstream Pressure Droop Under Flow Conditions
- Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Construction Allows Servicing Without Removing From the Line

The WRA171 is a high accuracy vacuum regulator that provides uniform vacuum regulation independent of vacuum supply changes and flow demand.

This unit has a diaphragm assembly with three springs to provide a more balanced loading of the diaphragm.



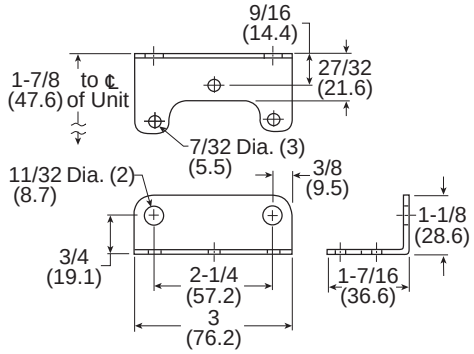
Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit WRA171		3.00 (76.2)	1.13 (28.7)	4.83 (122.6)	1.00 (25.4)	5.96 (151.3)

= "Most Popular"

WRA171 Kits and Accessories

Mounting Bracket.....PS09921



Service Kits
(Includes Diaphragm Assy, Valve Assy, Seat Assy & Gasket) –
0-30" Hg, Nitrile, Nonrelieving..... PS20966-9

Tamper Resistant Kit.....PS20967-1

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

WRA171	3	2	N	N	K	N

Springs
3 0 to 30 Hg

Pipe Size
2 1/4" NPT

Thread Type
N NPT

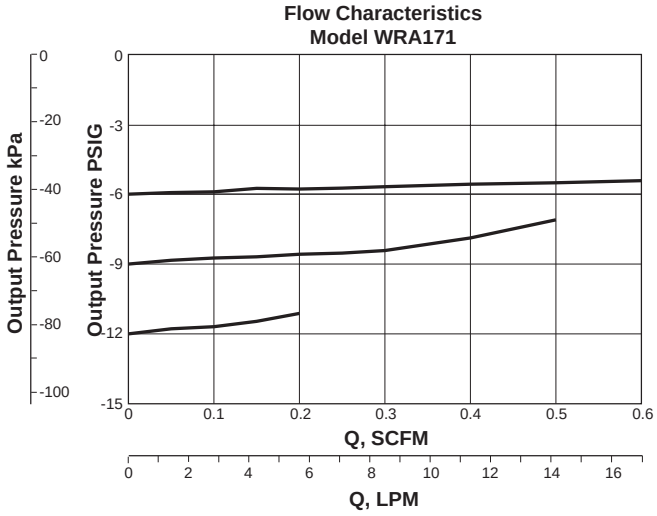
Options
N Nitrile

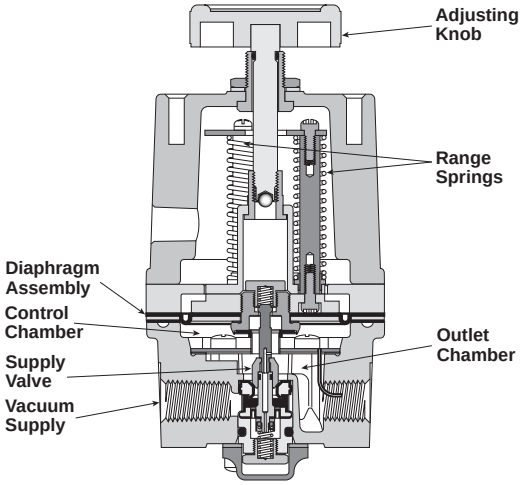
Options
K Knob Assembly

Options
N Non-Relieving

Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Technical Information





Operating Principles

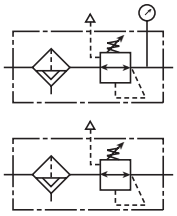
The Model WRA171 Series vacuum regulator uses the force balance principle to control the movement of the Valve Assembly that controls output vacuum.

When the regulator is adjusted for a specific set point, the upward force of the Range Springs moves the Diaphragm Assembly upward. The Supply Valve opens and allows air to pass to the inlet port. As the set point is reached, the upward force exerted by the Range Springs is balanced by the force of the vacuum that pulls downward on the Diaphragm Assembly. The resultant force moves the Supply Valve downward to reduce the flow of air to the inlet port. Outlet vacuum is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

Ordering Information

Relieving		Reduced Pressure Range (PSIG)
		0 to 30
In / Out Ports	1/4 Inch	WRA17132NNKN

Precision Filter / Regulator
WEA632

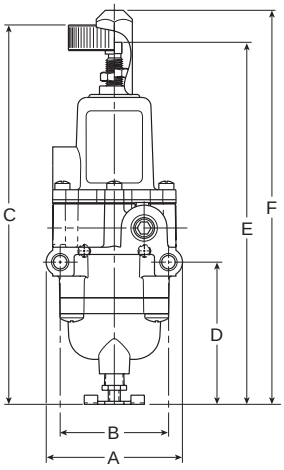




= "Most Popular"

Features

- The No-brass Construction is Well Suited to Harsh Environments
- Internal and External Epoxy Finish for Superior Corrosion Resistance
- Non-Bleed Design to Reduce Consumption.
- Integral Relief Valve
- A Gauge Port Provides Convenient Pressure Gauge Mounting
- The Standard 5-Micron Filter Minimizes Internal Contamination
- The Filter Dripwell Contains a Drain Plug to Easily Drain Trapped Liquids
- Standard Tapped Exhaust
- Soft Relief Seat Minimizes Air Loss.



Specifications

Supply Pressure	250 PSIG, (17 bar), (1700 kPa) Maximum
Flow Capacity (SCFM) – 25 (42.5 m^3/HR) @ 100 psig, (7 bar), (700 kPa) supply and 20 PSIG, (1.5 bar), (150 kPa) setpoint	
Exhaust Capacity (SCFM) – 0.8 (1.36 m^3/HR) where downstream pressure is 5 PSIG, (.35 bar), (35 kPa) above 20 PSIG, (1.5 bar), (150 kPa) setpoint. (0.8 SCFM for 120 # unit)	
Maximum Supply Pressure	250 PSIG, (14 bar), (1400 kPa)
Consumption	Undetectable
Supply Pressure Effect – Less than 1.25 PSIG, (.09 bar), (9 kPa) change for 100 psig, (7.0 bar), (700 kPa) change in supply pressure (1.90 psig for 120 # unit)	
Sensitivity	1.0" (.036 PSIG) (2.54 cm) Water Column
Temperature Range	-40° F to + 160° F, (-40° C to + 71° C)

Materials of Construction

Body and Housing	Epoxy Coated Aluminum
Trim	Stainless Steel, Nickel Plated Steel
Elastomers	Nitrile

Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit WEA632		2.83 (71.9)	2.25 (57.2)	7.88 (200)	2.96 (75)	7.52 (1916)	8.19 (209)

= "Most Popular"

WEA632 Kits & Accessories

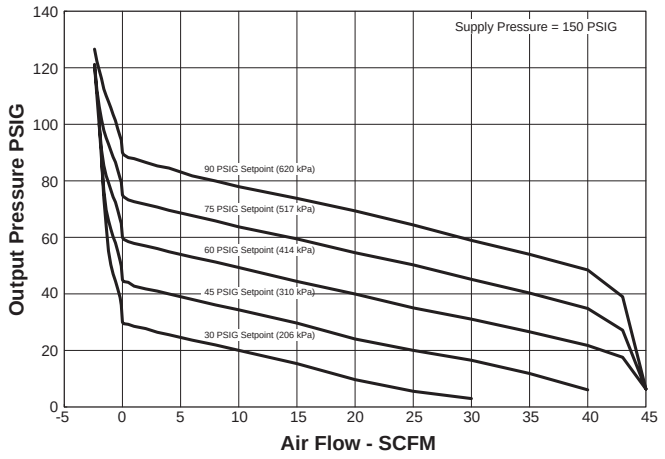
Service Kits

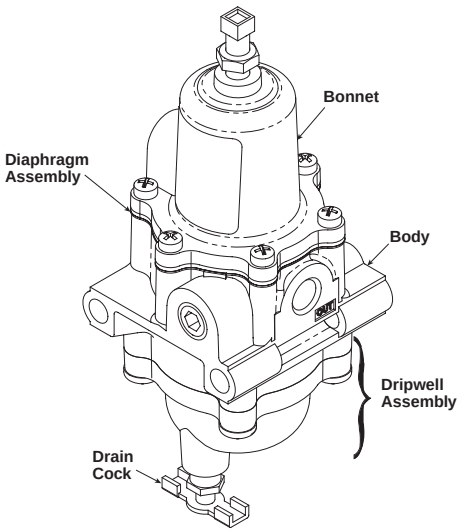
1 to 60, 2 to 120 PSIG..... PS19968-NR

Tamper Resistant Kit.....PS12165

Technical Information

Flow Characteristics
Model WEA632





⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

WEA632	5	2	N	S	

Springs
4 1 to 60 PSIG
5 2 to 120 PSIG

Pipe Size
2 1/4" NPT

Thread Type
N NPT
U BSPP

Adjustment
S Screw (Std.)
K Knob
T Tamperproof

Options
Blank None

Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Operating Principles

When you turn the Adjustment Screw to a specific setpoint, the Spring exerts a downward force against the top of the Diaphragm Assembly. This downward force opens the Supply Valve. Output pressure flows through the Outlet Port and the passage to the Control Chamber where it creates an upward force on the bottom of the Diaphragm Assembly.

When the setpoint is reached, the force of the Spring that acts on the top of the Diaphragm Assembly balances with the force of output pressure that acts on the bottom of the Diaphragm Assembly and closes the Supply Valve.

When the output pressure increases above the setpoint, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Output pressure flows through the Exhaust Valve and out of the Exhaust Vent on the side of the unit until it reaches the setpoint.

Ordering Information

Relieving		Reduced Pressure Range (PSIG)	
		0 to 60	2 to 120
In / Out Ports	1/4 Inch	WEA63242NS	WEA63252NS

Precision Pneumatic Input Signal Amplifier WBA208



Features

- The WBA208 Uses a Pneumatic Input Signal to Accurately Control Output Pressure Based on a Predetermined Ratio
- A Balanced Supply Valve Minimizes the Effects of Supply Pressure Variation
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flowing Conditions
- A Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Unit Construction Allows Servicing Without Removal
- Mounting Bracket Available

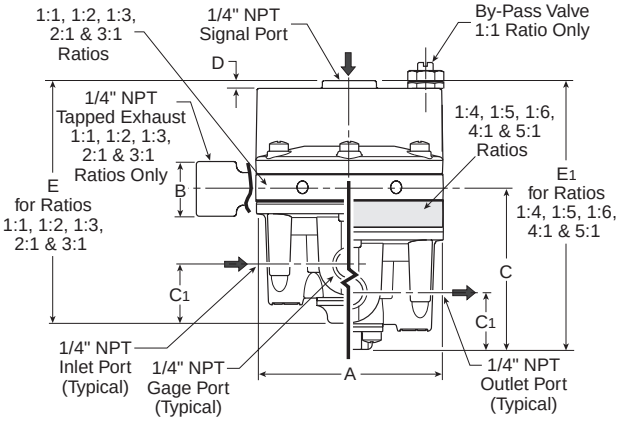
= "Most Popular"

Specifications

	Signal:Output		
Ratio	**1:1**	**1:2**	**1:3**
Maximum Output Pressure, PSIG (bar)	150 (10.0)	150 (10.0)	150 (10.0)
Maximum Supply Pressure, PSIG (bar)	250 (17.0)	250 (17.0)	250 (17.0)
Flow Capacity SCFM, (m^3/HR) 100 PSIG, (7.0 bar) Supply, 20 PSIG, (1.5 bar) Output.	45 (76.5)	45 (76.5)	45 (76.5)
Exhaust Capacity SCFM, (m^3/HR) Downstream Pressure 5 PSIG, (.35 bar) Above Output Pressure Set Point of 20 PSIG, (1.5 bar).	11 (18.7)	11 (18.7)	11 (18.7)
Sensitivity (Water Column)	.250" (.64 cm)	.500" (1.27 cm)	.750" (1.9 cm)
Ratio Accuracy % of 100 PSIG, (7.0 bar) Output Span	1.0	1.0	1.0
% of Output Span with (7.0 bar) Input Span	—	—	—
Supply Pressure Effect, PSIG (bar) for change of 100 PSIG, (7.0 bar).	0.10 (.007)	0.20 (.014)	0.30 (.021)
Ambient Temperature, °F (°C)	-40 to +200 (-40 to +93)		

Materials of Construction

Body and Housing	Aluminum
Diaphragm	Nitrile on Dacron Fabric
Trim	Zinc Plated Steel, Brass



Dimensions

Models	Inches (mm)	A	B	C	C_1	D	E	E_1
Standard Unit WBA208		3.00 (76.2)	.94 (23.8)	2.13 (53.9)	.94 (23.8)	.13 (3.2)	3.88 (98.3)	4.31 (109.5)

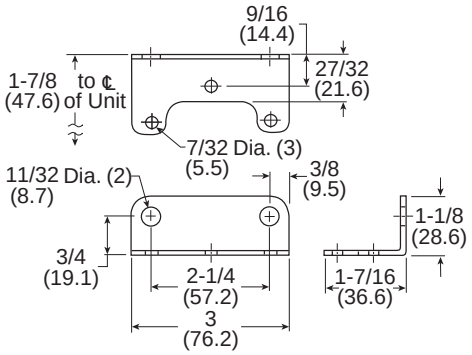
= "Most Popular"

WBA208 Kits and Accessories

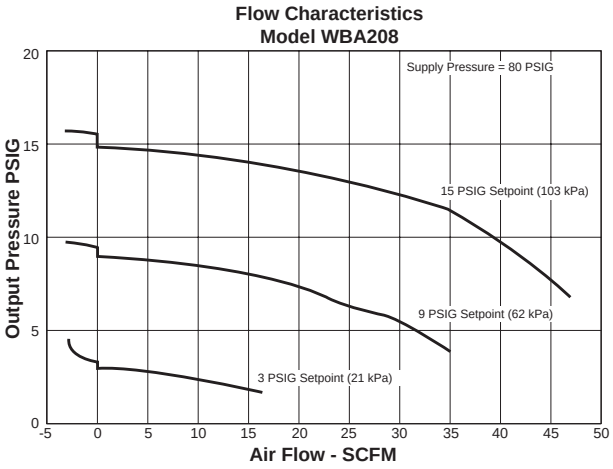
Mounting Bracket.....PS09921

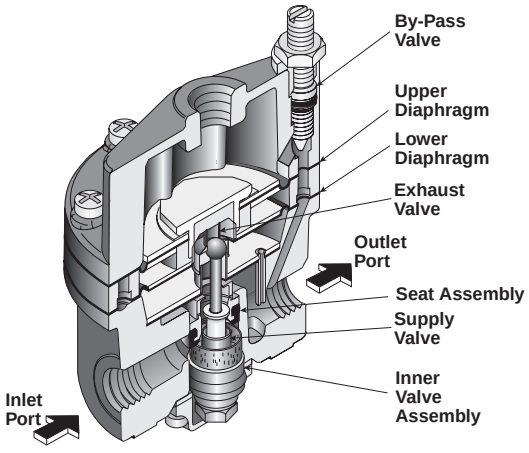
Service Kits

1:1 Ratio.....PS19513-11
1:1 Ratio w/ By-Pass Valve PS19513-11I
1:2 Ratio PS19513-12
1:3 Ratio PS19513-13



Technical Information





WBA208	1	2	

Pilot Ratio	
1	1:1
2	1:2
3	1:3

Pipe Size	
2	1/4" NPT

Options	
Blank	No Options
E	Tapped Exhaust
H	BSPP
I	By-Pass Valve

Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Operating Principles

The WBA208 Input Signal Amplifier is a pneumatic device capable of high flow and exhaust capacity. This device uses a force balance system to control the movement of the supply and exhaust valves.

At set point, the force due to signal pressure that acts on the top of the Upper Diaphragm balances with the force due to output pressure acting on the bottom of the Lower Diaphragm.

Ordering Information

Relieving		Pilot Ratio		
		1:1	1:2	1:3
In / Out Ports	1/4 Inch	WBA20812	WBA20822	WBA20832

Precision Pneumatic Input Signal Amplifier WBA45



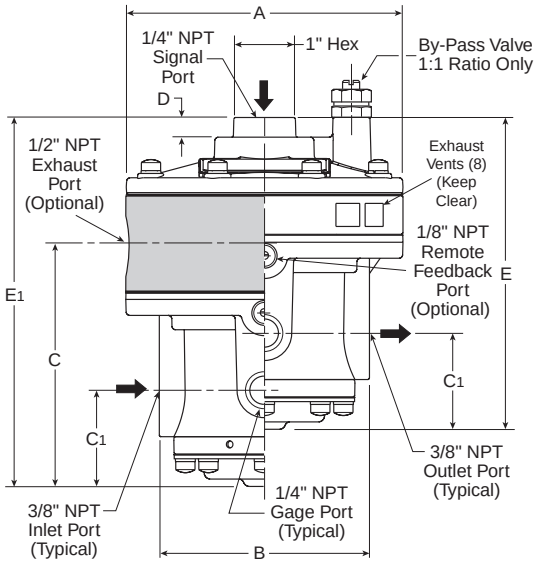
Features

- Five Signal to Output Ratios Meet Most Control Element Requirements
- Control Sensitivity of Water Column Allows Use in Precision Applications
- Large Supply and Exhaust Valves Provide High Forward and Exhaust Flows
- Soft Supply and Exhaust Valve Seats Minimize Air Consumption
- A Balanced Supply Valve Minimizes the Effect of Supply Pressure Variation
- An Aspirator Tube Compensates Downstream Pressure Droop Under Flow Conditions
- A Separate Control Chamber Isolates the Diaphragm From the Main Flow to Eliminate Hunting and Buzzing
- Optional Remote Feedback Port Minimizes Pressure Drop at Final Control Element Under Flow Conditions
- Unit Construction Lets You Service the WBA45 Without Removing it From the Line

= "Most Popular"

Specifications

	Signal:Output		
Ratio	**1:1**	**1:2**	**1:3**
Maximum Output Pressure, PSIG (bar)	150 (10.0)	150 (10.0)	150 (10.0)
Maximum Supply Pressure, PSIG (bar)	250 (17.0)	250 (17.0)	250 (17.0)
Flow Capacity SCFM, (m^3/HR) 100 PSIG, (7.0 bar) Supply, 20 PSIG, (1.5 bar) Output	150 (255)	150 (255)	150 (255)
Exhaust Capacity SCFM, (m^3/HR) Downstream Pressure 5 PSIG, (.35 bar) Above 20 PSIG, (1.5 bar) Setpoint	40 (62.5)	40 (62.5)	40 (62.5)
Sensitivity (Water Column)	1.0" (2.54 cm)	2.0" (5.08 cm)	3.0" (7.62 cm)
Ratio Accuracy – % of 100 PSIG, (7.0 bar) Output Span	3.0	3.0	3.0
% of Output Span with 100 PSIG (7.0 bar) Input Span	—	—	—
Supply Pressure Effect, PSIG (bar) for change of 100 PSIG, [7.0 bar], (700 kPa).	0.10 (.007)	0.20 (.014)	0.30 (.021)
Ambient Temperature, °F (°C)	-40 to +200 (-40 to +93)		
Hazardous Locations	Acceptable for use in Zones 1 and 2 for gas atmosphere; Groups IIA and IIB and Zones 21 and 22 for dust atmospheres.		



Dimensions

Models	Inches (mm)	A	B	C	C_1	D	E	E_1
Standard Unit WBA45		4.50 (114.3)	3.41 (86.5)	3.86 (98)	1.56 (39.6)	.31 (7.9)	5.07 (128.8)	5.83 (148.2)

= "Most Popular"

WBA45 Kits and Accessories

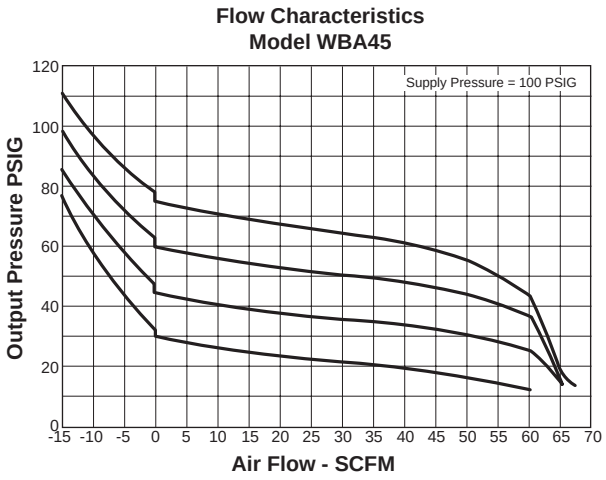
Service Kits

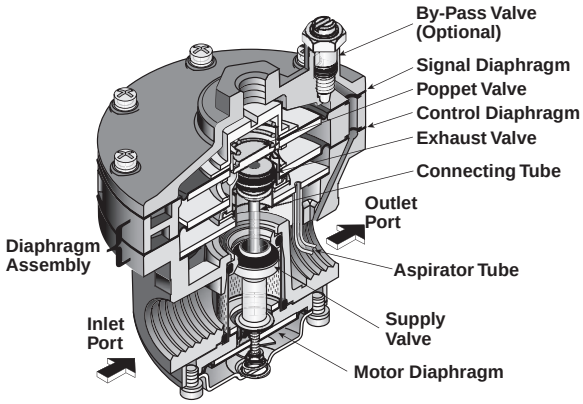
1:1 Ratio.....PS19549-1
1:1 Ratio w/ Tapped Exhaust PS19549-1E
1:3 Ratio PS19549-3
1:2 Ratio PS19549-2
1:1 w/ Tapped Exhaust, I Option..... PS19549-20E

Materials of Construction

Body and Housing .....Aluminum
Diaphragm..... Nitrile on Dacron Fabric
Trim..... Zinc Plated Steel, Brass

Technical Information





Operating Principles

When signal pressure on the top of the Signal Diaphragm creates a downward force on the Diaphragm Assembly, the Supply Valve opens. Output pressure flows through the Outlet Port and the Aspirator Tube to the Control Chamber to create an upward force on the bottom of the Control Diaphragm. When the setpoint is reached, the force of the signal pressure that acts on the top of the Signal Diaphragm balances with the force of the output pressure that acts on the bottom of the Control Diaphragm to close the Supply Valve.

When the output pressure increases above the signal pressure, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Because the Poppet Valve is closed, pressure flows down the Connecting Tube to the bottom of the Motor Diaphragm. This pressure keeps the Supply Valve tightly closed while in the exhaust mode. The Poppet Valve opens and excess output pressure exhausts through the vent in the side of the unit until it reaches the setpoint.

WBA45	1	4	A	

Pilot Ratio	
1	1:1
2	1:2
3	1:3

Pipe Size	
4	1/2" NPT
6	3/4" NPT

Type	
A	45 Series

Options	
Blank	No Options
E	Tapped Exhaust
H	BSPP
I	By-Pass Valve

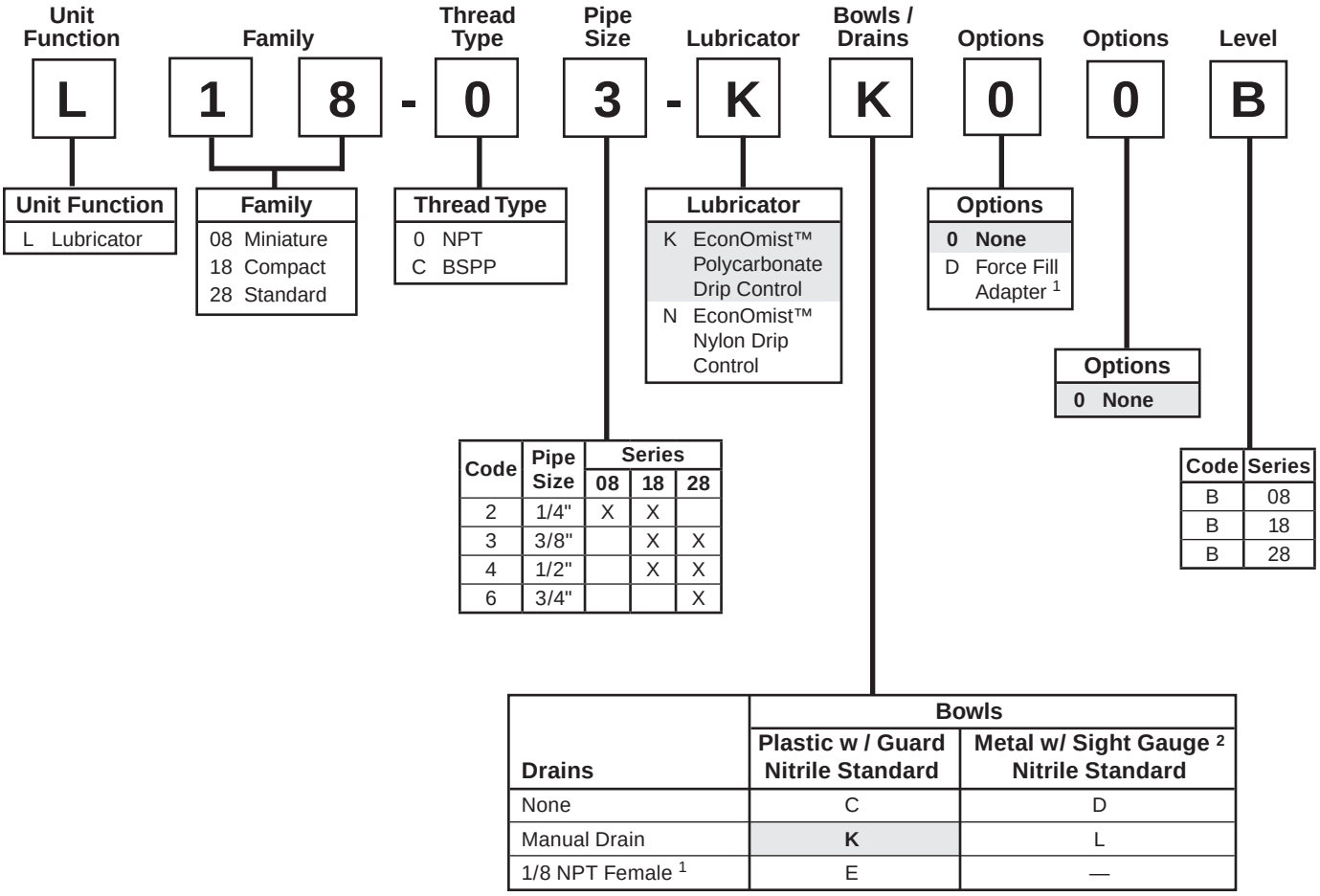
Note: Other Spring Ranges, Port Sizes, and Options Available. Please Consult Factory

Ordering Information

Relieving		Pilot Ratio		
		1:1	1:2	1:3
In / Out Ports	1/2 Inch	WBA4514A	WBA4524A	WBA4534A
	3/4 Inch	WBA4516A	WBA4526A	WBA4536A

Lubricator Numbering System

= "Most Popular"



1 Not available on L08

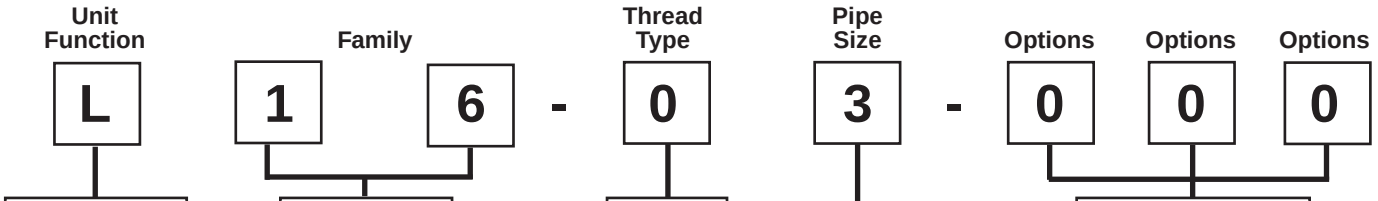
2 No sight gauge on L08

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

L 1 8 - 0 3 - K K 0 0 B

Lubricator Numbering System

= "Most Popular"



Unit Function	
L	Lubricators

Family	
01	Miniature
03	Miniature
1X	Compact
2X	Standard
3X	Large
4X	Extra Large
5X	Jumbo

Thread Type	
0	NPT
C	BSPP

Code	Pipe Size	Series						
		01	03	1X	2X	3X	4X	5X
1	1/8"		X					
2	1/4"	X	X	X	X			
3	3/8"	X		X	X			
4	1/2"			X	X			
6	3/4"					X		
8	1"					X		
B	1-1/2"						X	
C	2"							X

Options	
L01 Miniature	
0	**Standard**
M	Female Threads Inlet / Male Threads Outlet
L03 Miniature	
0	**Standard**
D	Poly Bowl with Manual Drain
M	Metal Bowl with Manual Drain
N*	Nylon Drip Control (Metal Bowl Only)
All Other Units	
0	**Standard**
G	Metal Bowl with Sight Gauge
D	Manual Drain
M	Metal Bowl

* Available only with Metal Bowl "M".

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8.
For example:

L16-03-0 0 0

B

Filters, Regulators, Lubricators

Lubricator
L01 EconOmist™



L01-02-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/4	36.0 SCFM (17.0 dm^3/s)
	3/8	38.1 SCFM (18.0 dm^3/s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Oil Capacity**	oz. (cm^3)	0.25 (7.4)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPT-Rc	1/4, 3/8
Weight	lb. (kg)	0.2 (0.1)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

** Oil Capacity refers to usable volume.

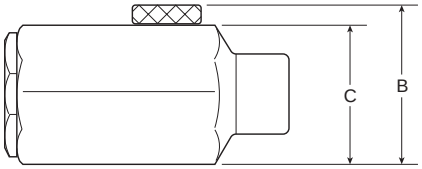
Materials of Construction

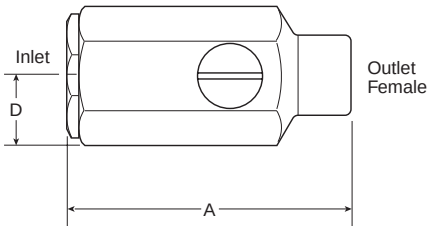
Body	Aluminum
Seals	Nitrile
Suggested Lubricant	Airline Oil F442001

In-Line Lubricator

In-Line Lubricators assure proper lubrication for small pneumatic hand tools. These in-line lubricators put the oil source right at the tool. Oil capacity is 1/4 oz. (1 ml) enough to last through an average 8-hour shift. This lubricator requires cyclical or intermittent airflow for proper operation, and consequently works best when installed at the tool inlet or on a short hose near the tool.

The L01 cannot be filled under pressure.





Dimensions

Models	Pipe Size Inlet	Pipe Size Outlet (Inches (mm))	A	B	C	D
Standard Unit	1/4" NPT Female	1/4" NPT Female	2.65 (67)	1.30 (33)	1.12 (28.5)	.65 (16.5)
L01-02-M00	1/4" NPT Female	1/4" NPT Male	2.93 (74)	1.30 (33)	1.12 (28.5)	.65 (16.5)
L01-03-M00	3/8" NPT Female	3/8" NPT Male	3.19 (81)	1.30 (33)	1.12 (28.5)	.65 (16.5)

= "Most Popular"

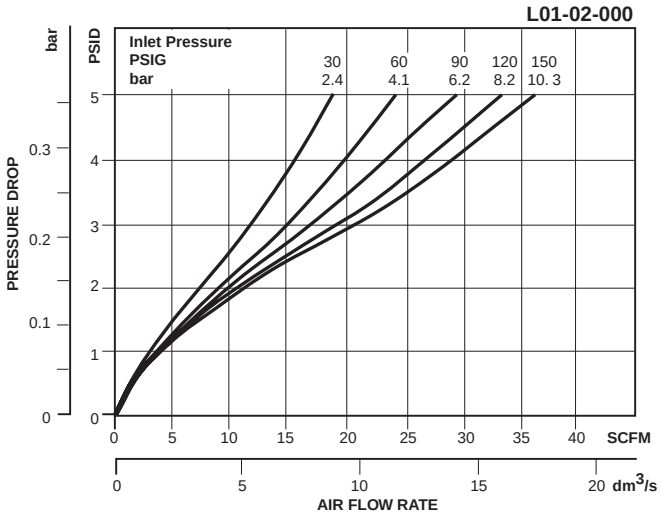
Replacement Kits

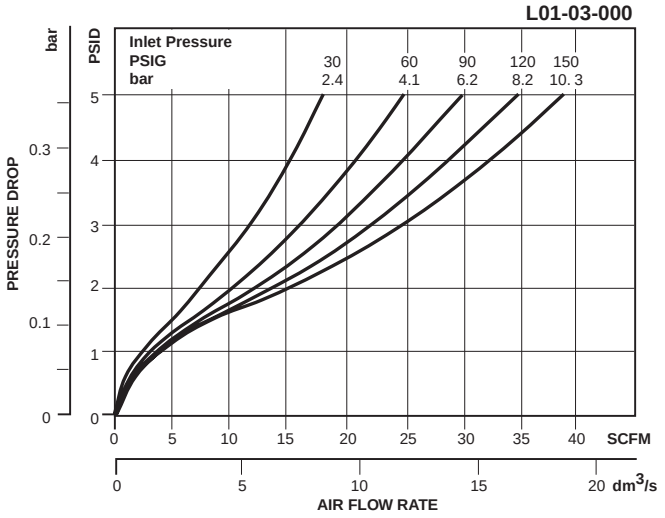
Fill Plug Kit – Brass Fill Plug and O-ring LRP-95-254

O-ring Repair Kit LRP-95-074

Accessories

Air Line Oil (1 Qt. Bottle)..... F442001





Ordering Information

Model Type	Port Size	Female Threads Inlet / Female Threads Outlet	Female Threads Inlet / Male Threads Outlet
In-Line Lubricator	1/4	L01-02-000	L01-02-M00
	3/8	L01-03-000	L01-03-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L03 EconOmist™



L03-01-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/8	20 SCFM (9.4 dm^3/s)
	1/4	20 SCFM (9.4 dm^3/s)
Minimum Flow for Lubrication		0.7 SCFM at 100 PSIG
Port Threads		1/8, 1/4 Inch
Pressure & Temperature Ratings –		
Polycarbonate Bowl –		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl –		0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
Suggested Lubricant Petroleum based oil of 100 to 200 SUS viscosity at 100°F and an aniline point greater than 200°F (DO NOT USE OILS WITH ADDITIVES, COMPOUNDED OILS CONTAINING SOLVENTS, GRAPHITE, DETERGENTS, OR SYNTHETIC OILS.)		
Weight		.4 lb. (.18 kg)

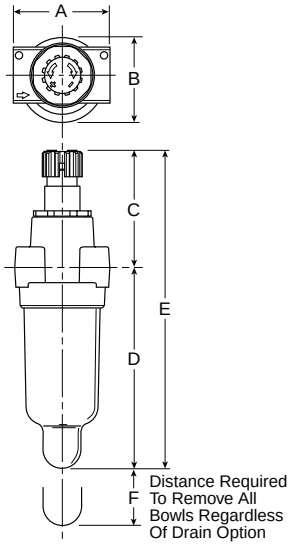
* Inlet pressure 90 PSIG (6.2 bar). Pressure drop 5 PSID (0.3 bar).

Features

- Proportional Oil Delivery over a Wide Range of Air Flows
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate
- Ideal for Low and Light Flow Applications with Changing Air Flow
- Transparent Sight Dome for 360° Visibility

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl (Without Sight Gauge)	Zinc
Drains – Manual – Body & Nut		Plastic
Seals		Nitrile
Sight Dome		Polycarbonate



Dimensions

Models (Inches (mm))	A	B	C	D	D†	E	E†	F
Standard Unit L03-XX-000	1.73 (44)	1.56 (40)	2.16 (55)	3.64 (92)	3.78 (96)	5.80 (147)	5.94 (151)	1.60 (41)

† With Twist Drain

= "Most Popular"

Replacement Kits

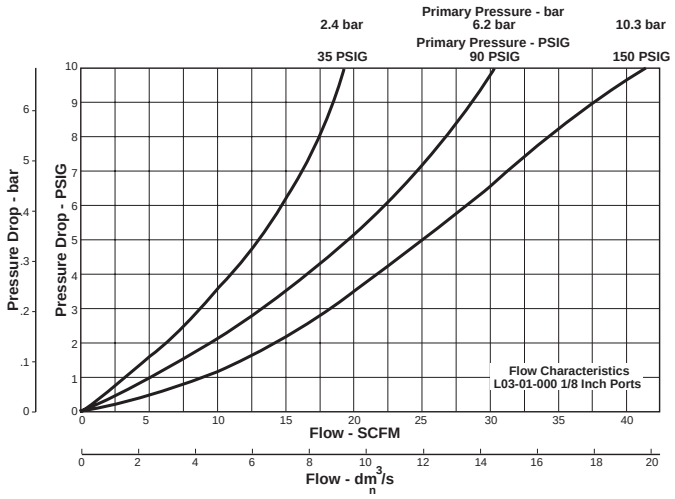
Bowl Kits –

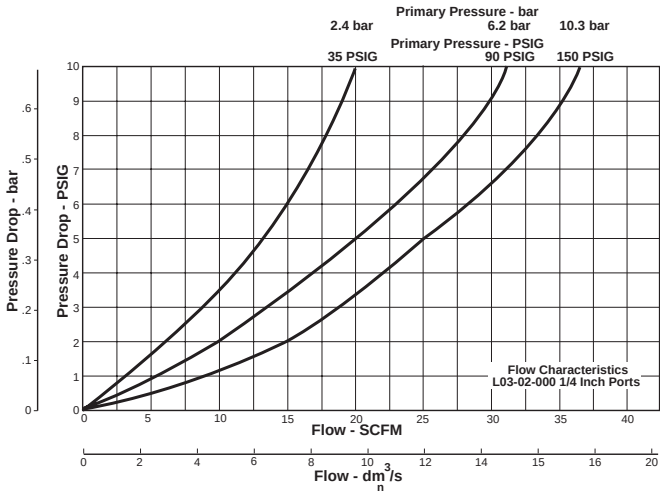
Poly Bowl, Manual Drain PS420
Metal Bowl – Manual Drain (No Sight Gauge) PS447B
Poly Bowl – No Drain PS421

Accessories

Air Line Oil (1 Qt. Bottle)..... F442001

Mounting Bracket Kit PS419





B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Polycarbonate Bowl	Metal Bowl
EconOmist™	1/8	L03-01-000	L03-01-M00
	1/4	L03-02-000	L03-02-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L08 EconOmist™



Features

- Integral Sight Dome and Adjustment Knob
- Fill-under Pressure Design
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- Quick-disconnect Bowl

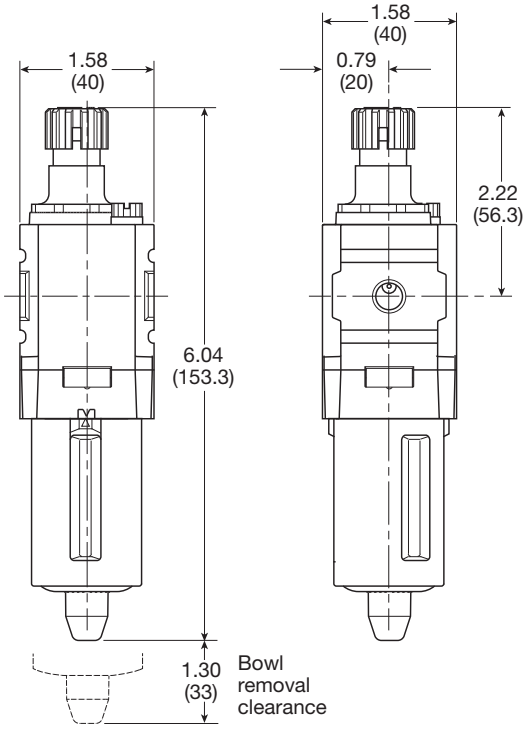
Specifications

Flow Capacity*	1/4	52 SCFM (25 dm^3/s, ANR)
Initial Drip Flow		1.3 SCFM
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 250 PSIG (17.2 bar)
Minimum Flow for Lubrication		1.3 SCFM @ 100 PSIG
Operating Temperature	Plastic Bowl Metal Bowl	14° to 125°F (-10° to 52°C) 14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.6 oz
Weight		0.29 lb. (0.13 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (0.34 bar).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Pick-up Filter		Sintered Bronze
Seals	Plastic Bowl Metal Bowl	Nitrile Nitrile
Sight Dome		Polycarbonate
Suggested Lubricant		Airline Oil F442001



Inches (mm)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Manual Drain GRP-96-714
- No Drain Port GRP-96-715

Plastic Bowl –
- Bowl Guard, Manual Drain LRP-96-736
- Bowl Guard, No Drain Port LRP-96-713

Replacement Kits

Bowl O-ring –
- Fluorocarbon GRP-96-711
- Nitrile GRP-96-710

Fill Plug Kit LRP-96-730

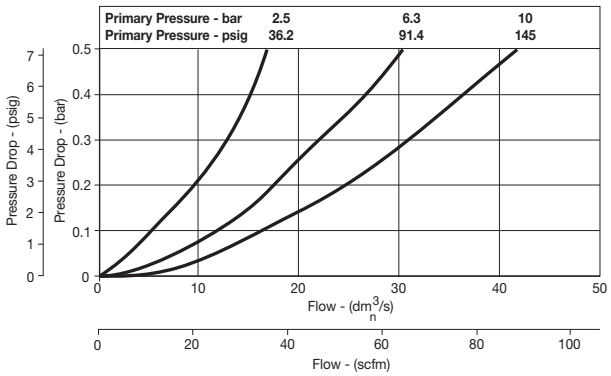
Sight Dome Assembly –
- Nylon LRP-96-720
- Polycarbonate, L08-XX-**K**XXX LRP-96-725

Siphon Tube Assembly LRP-96-731

Accessories

Wall Mounting Bracket –
- C-Type GPA-97-010
- T-Type GPA-96-737

L08 1/4" Lubricator



B

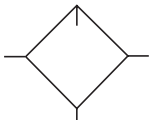
Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / No Sight Gauge
No Drain	1/4	L08-02-KC00B	L08-02-KD00B
Manual Drain	1/4	L08-02-KK00B	L08-02-KL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

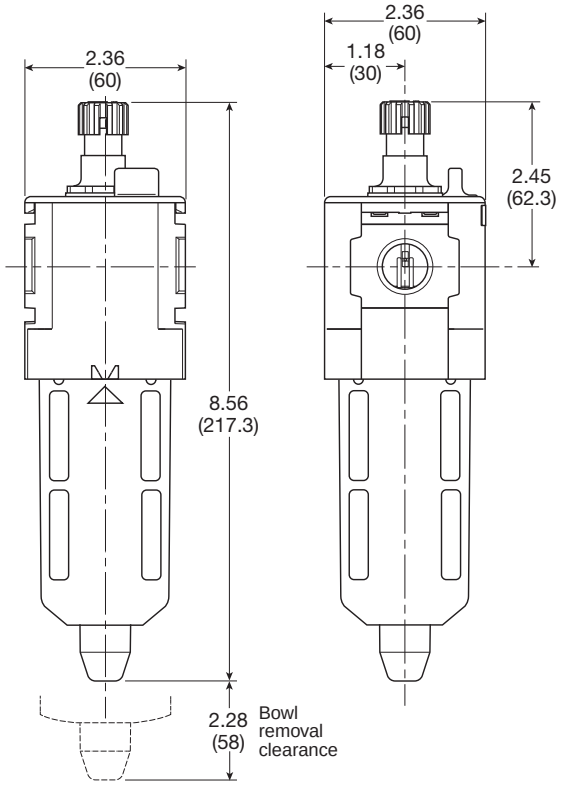
Lubricator
L18 EconOmist™





Features

- Integral Sight Dome and Adjustment Knob
- 1/2" NPT / BSPP-G Over-port
- Can be Filled while Under Pressure
- Quick-disconnect Bowl / Bowl Guard
- Manual Drain
- High Flow Capacities



Inches (mm)

Specifications

Flow Capacity*	1/4	88 SCFM (42 dm^3/s, ANR)
	3/8	90 SCFM (43 dm^3/s, ANR)
	1/2	96 SCFM (45 dm^3/s, ANR)
Initial Drip Flow		0.68 SCFM
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Minimum Flow for Lubrication		.7 SCFM @ 100 PSIG
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		4 oz
Weight		0.68 lb. (0.31 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (0.34 bar).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Pick-up Filter		Sintered Bronze
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Suggested Lubricant		Airline Oil F442001

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge, Manual Drain..... GRP-96-636

Plastic Bowl / Bowl Guard, Manual Drain..... LRP-96-701

Replacement Kits

Bowl O-ring –
- Fluorocarbon GRP-96-754
- Nitrile..... GRP-96-640

Bypass Assembly..... LRP-96-678

Fill Plug Kit LRP-96-679

Sight Dome Assembly –
- Polycarbonate, L18-XX-**K**K00..... LRP-96-310
- Nylon..... LRP-96-312

Siphon Tube Assembly LRP-96-677

Accessories

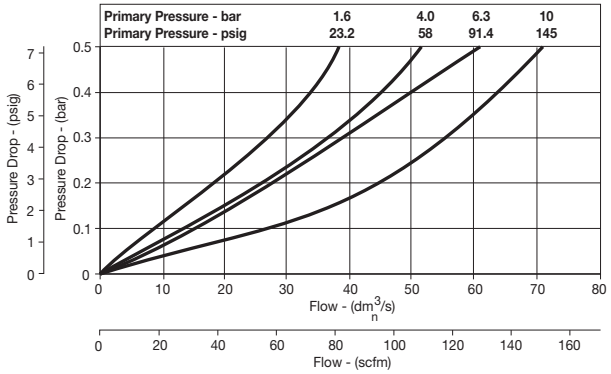
Force Fill Adapter..... LRP-96-704

Manual Drain..... GRP-96-685

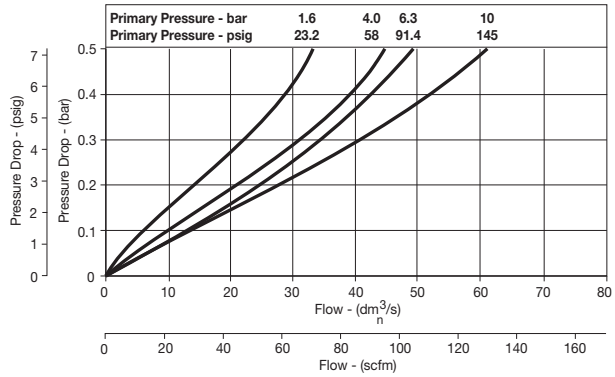
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket –
- L-Type GPA-96-604
- T-Type GPA-96-602

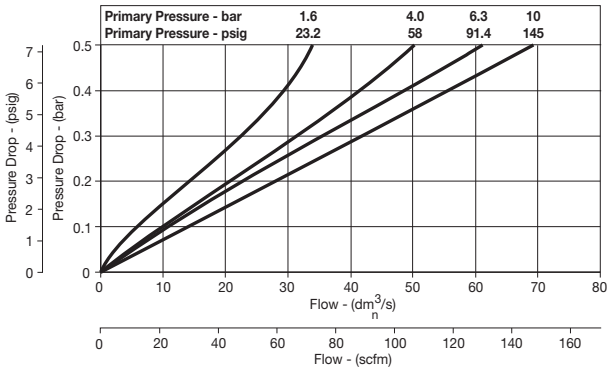
L18 1/4" Lubricator



L18 3/8" Lubricator



L18 1/2" Lubricator

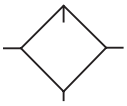


Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
No Drain	1/4	L18-02-KC00B	L18-02-KD00B
	3/8	L18-03-KC00B	L18-03-KD00B
	1/2	L18-04-KC00B	L18-04-KD00B
Manual Drain	1/4	L18-02-KK00B	L18-02-KL00B
	3/8	L18-03-KK00B	L18-03-KL00B
	1/2	L18-04-KK00B	L18-04-KL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L16 EconOmist™
L17 AtoMist™

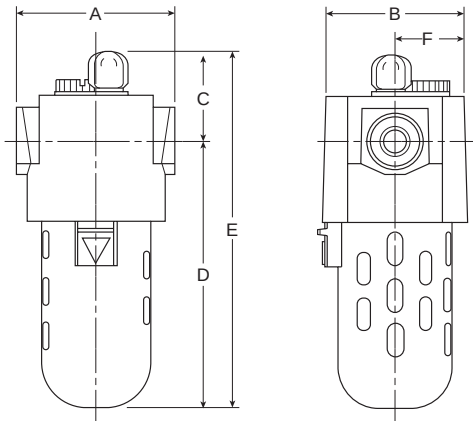




L16 / L17-02-000

Features

- L16 Model Can be Filled with Lubricant while Under Pressure **(L17 AtoMist™ Cannot be Filled Under Pressure)**
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Adjustable Oil Feed
- Optional Petcock Drain in Polycarbonate Bowl



= **"Most Popular"**

Specifications

Flow Capacity*	1/4	36.1 SCFM (17.0 dm^3/s)
	3/8	58.5 SCFM (27.6 dm^3/s)
	1/2	64.0 SCFM (30.2 dm^3/s)
Initial Drip Flow		.38 - 1.37 SCFM
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Minimum Flow for Lubrication		1.4 SCFM @ 100 PSIG
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	L16	5.0 oz
	L17	3.4 oz
Weight		1.8 lb. (0.82 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polycarbonate
Suggested Lubricant		Airline Oil F442001

Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L16-XX-000 & L17-XX-000		3.00 (76)	2.62 (66.5)	1.62 (41)	5.03 (128)	6.66 (169)	1.31 (33.3)
Manual Drain L16-XX-D00 & L17-XX-D00		3.00 (76)	2.62 (66.5)	1.62 (41)	5.83 (148)	6.58 (167)	1.31 (33.3)
Metal Bowl with Sight Gauge L16-XX-G00 & L17-XX-G00		3.00 (76)	2.62 (66.5)	1.62 (41)	6.21 (158)	7.80 (198)	1.31 (33.3)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge,
Brass Petcock Drain.....GRP-95-133

Plastic Bowl –
No Drain Port.....LRP-96-937
Plastic Petcock Drain LRP-96-543

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-253

Flow Guide –
1/4 NPT / BSPP-G , L16..... LRP-95-241
3/8 and 1/2 NPT / BSPP-G, L16 ..... LRP-95-242
1/4 NPT / BSPP-G , L17..... LRP-95-246
3/8 and 1/2 NPT / BSPP-G, L17 ..... LRP-95-247

Sight Dome Kit – Sight Dome and O-ring LRP-95-239

Tube, Siphon – Tube and Bronze Filter LRP-96-005

Accessories

Air Line Oil (1 Qt. Bottle)..... F442001

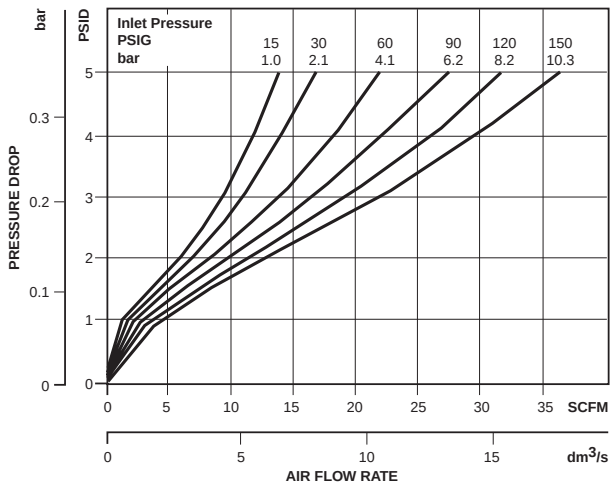
Low Level Switch LRP-95-093

Manual Drain –
Brass Petcock.....GRP-95-182
Plastic Petcock LRP-95-181

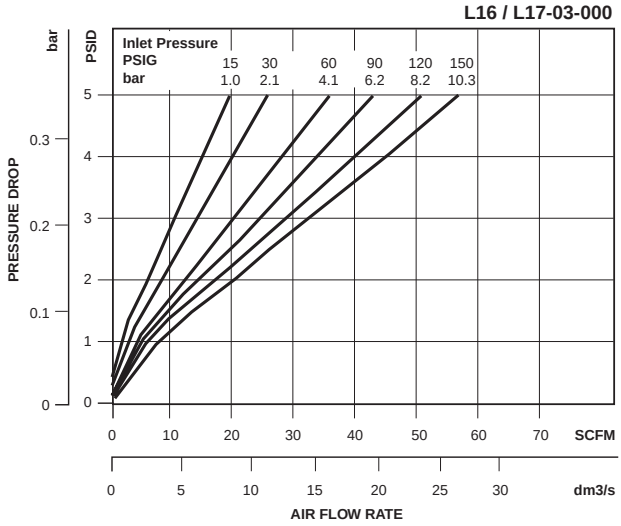
Tamper Resistant Kit.....LRP-95-587

Wall Mounting Bracket, L-Type GPA-95-016

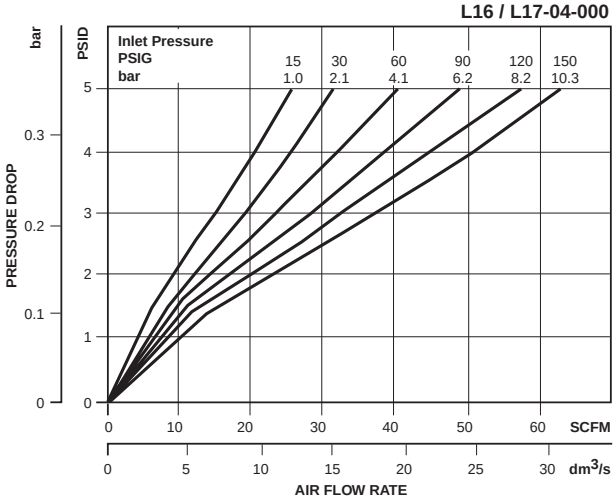
L16 / L17-02-000



L16 / L17-03-000



L16 / L17-04-000

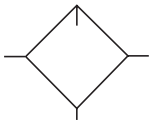


Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard with Manual Drain	Metal Bowl / Sight Gauge
EconOmist™	1/4	L16-02-000	L16-02-D00	L16-02-G00
	3/8	L16-03-000	L16-03-D00	L16-03-G00
	1/2	L16-04-000	L16-04-D00	L16-04-G00
AtoMist™	1/4	L17-02-000	L17-02-D00	L17-02-G00
	3/8	L17-03-000	L17-03-D00	L17-03-G00
	1/2	L17-04-000	L17-04-D00	L17-04-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

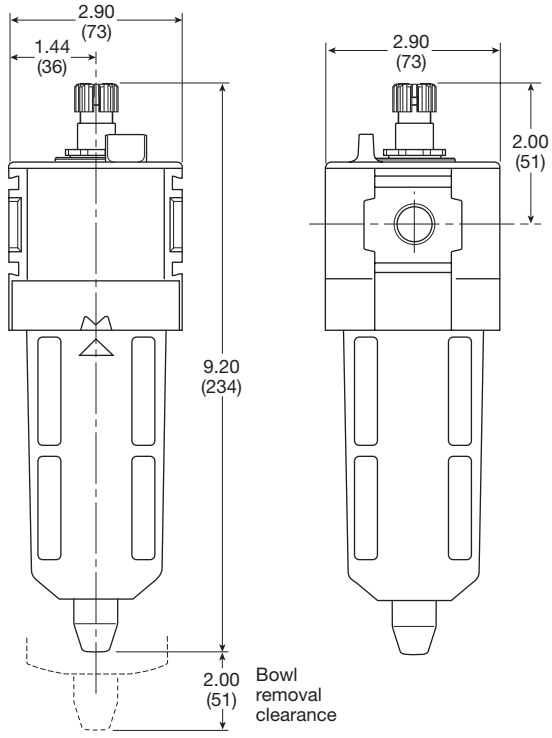
Lubricator
L28 EconOmist™





Features

- Integral Sight Dome and Adjustment Knob
- 3/4" NPT / BSPP-G Over-port
- Can be Filled while Under Pressure
- Quick-disconnect Bowl / Bowl Guard
- High Flow Capacities



Inches (mm)

Specifications

Flow Capacity*	3/8	110 SCFM (52 dm^3/s, ANR)
	1/2	110 SCFM (52 dm^3/s, ANR)
	3/4	150 SCFM (71 dm^3/s, ANR)
Initial Drip Flow		1.26 SCFM
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Minimum Flow for Lubrication		1.3 SCFM@ 100 PSIG
Operating Temperature	Plastic Bowl	14° to 125°F (-10° to 52°C)
	Metal Bowl	14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity		6 oz
Weight		1.04 lb. (0.47 kg)

* Inlet pressure 91.3 PSIG (6.3 bar). Pressure drop 4.9 PSID (0.34 bar).

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Pick-up Filter		Sintered Bronze
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Suggested Lubricant		Airline Oil F442001

= "Most Popular"

Replacement Bowl Kits

Metal Bowl with Sight Gauge, Manual Drain..... GRP-96-644

Plastic Bowl / Bowl Guard, Manual Drain..... LRP-96-702

Replacement Kits

Bowl O-ring, Nitrile..... GRP-96-654

Bowl O-ring, Fluorocarbon..... GRP-96-755

Bypass Assembly..... LRP-96-678

Fill Plug Kit..... LRP-96-679

Sight Dome Assembly –
Polycarbonate, L28-XX-**K**K00 ..... LRP-96-310
Nylon..... LRP-96-312

Siphon Tube Assembly..... LRP-96-681

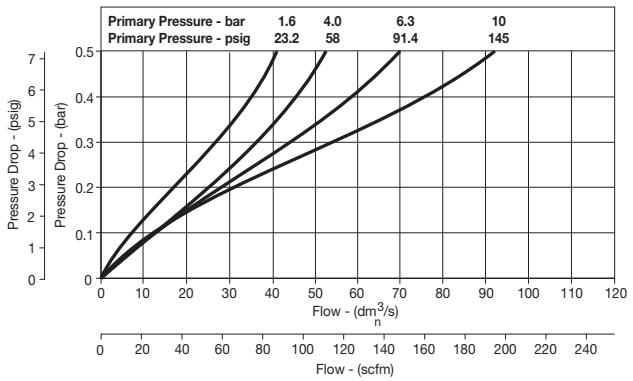
Accessories

Force Fill Adapter..... LRP-96-704

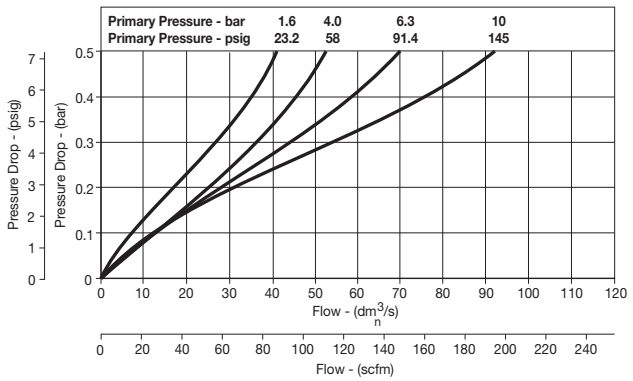
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket –
L-Type GPA-96-605
T-Type GPA-96-602

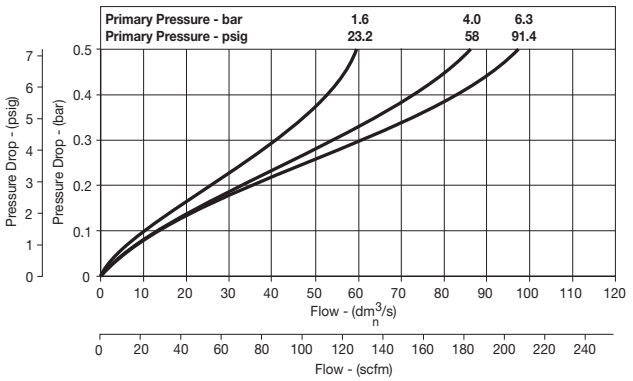
L28 3/8" Lubricator



L28 1/2" Lubricator



L28 3/4" Lubricator

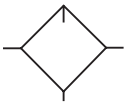


Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard	Metal Bowl / Sight Gauge
No Drain	3/8	L28-03-KC00B	L28-03-KD00B
	1/2	L28-04-KC00B	L28-04-KD00B
	3/4	L28-06-KC00B	L28-06-KD00B
Manual Drain	3/8	L28-03-KK00B	L28-03-KL00B
	1/2	L28-04-KK00B	L28-04-KL00B
	3/4	L28-06-KK00B	L28-06-KL00B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L26 EconOmist™
L27 AtoMist™



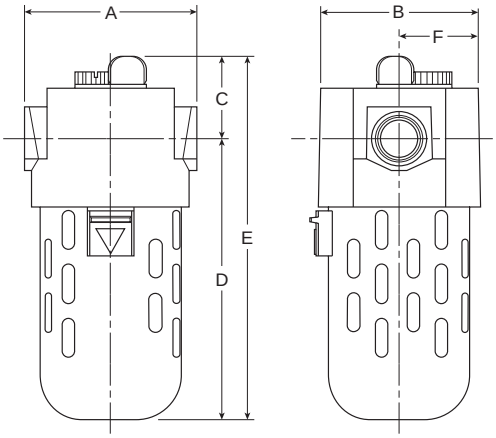


L26 / L27-02-000

= **"Most Popular"**

Features

- L26 Model Can be Filled with Lubricant while Under Pressure **(L27 AtoMist™ Cannot be Filled Under Pressure)**
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Bowl Guard with Integral Plastic Bowl and Safety Latch
- Adjustable Oil Feed
- Optional Petcock Drain in Polycarbonate Bowl



Specifications

Flow Capacity*	1/4	35 SCFM (16.5 dm^3/s)
	3/8	60 SCFM (28.3 dm^3/s)
	1/2	128 SCFM (60.4 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity	L26	10.0 oz
	L27	6.6 oz
Weight		2.4 lb. (1.07 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Gauge	Metal Bowl	Nylon
Sight Dome		Nylon
Suggested Lubricant		Airline Oil F442001

Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit L26-XX-000 & L27-XX-000	3.35 (85)	3.06 (78)	1.60 (41)	5.46 (139)	7.06 (179)	1.53 (38.9)
Manual Drain L26-XX-D00 & L27-XX-D00	3.35 (85)	3.06 (78)	1.60 (41)	6.42 (163)	7.76 (197)	1.53 (38.9)
Metal Bowl with Sight Gauge L26-XX-G00 & L27-XX-G00	3.35 (85)	3.06 (78)	1.60 (41)	6.42 (163)	7.80 (198)	1.53 (38.9)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl / Sight Gauge, Brass Petcock Drain GRP-95-931

Plastic Bowl –
- No Drain Port LRP-96-938
- Plastic Petcock Drain LRP-95-958

Plastic Bowl / Guard, Brass Petcock Drain LRP-95-967

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-253

Flow Guide –
- 1/4 NPT / BSPP-G, L26 ..... LRP-95-241
- 3/8 NPT / BSPP-G, L26 ..... LRP-95-242
- 1/2 NPT / BSPP-G, L26 ..... LRP-95-243
- 1/4 NPT / BSPP-G, L27 ..... LRP-95-246
- 3/8 NPT / BSPP-G, L27 ..... LRP-95-247
- 1/2 NPT / BSPP-G, L27 ..... LRP-95-248

Sight Dome Kit – Sight Dome and O-ring LRP-95-239

Tube, Siphon – Tube and Bronze Filter LRP-96-137

Accessories

Air Line Oil (1 Qt. Bottle)..... F442001

Auto-Fill™ Adapter Kit LRP-95-965

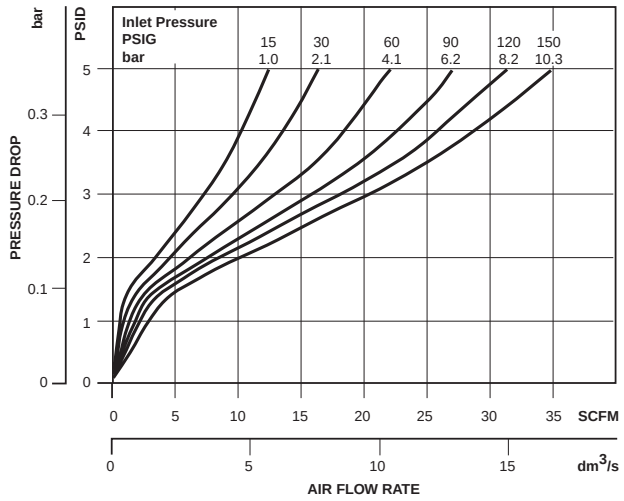
Low Level Switch LRP-95-093

Manual Drain –
- Brass Petcock..... GRP-95-182
- Plastic Petcock LRP-95-181

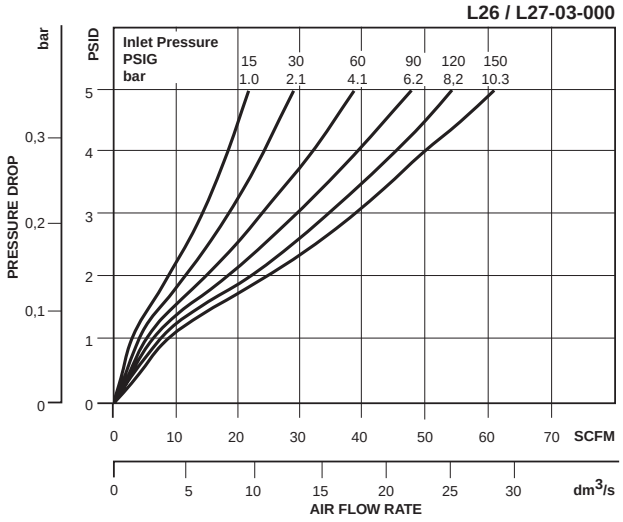
Tamper Resistant Kit..... LRP-95-587

Wall Mounting Bracket, L-Type GPA-95-946

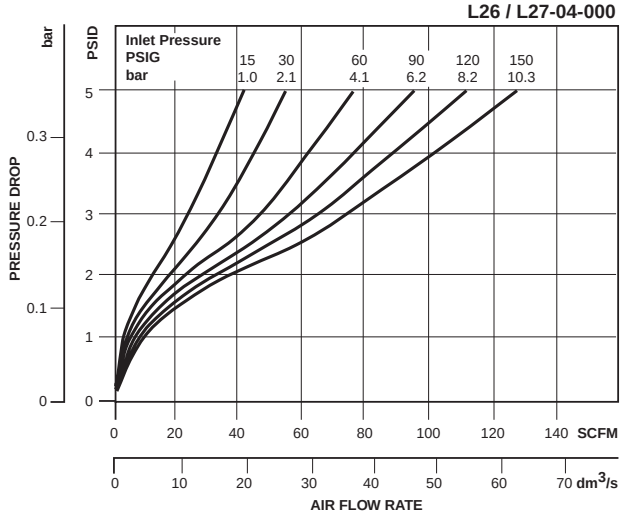
L26 / L27-02-000



L26 / L27-03-000



L26 / L27-04-000



Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard with Manual Drain	Metal Bowl / Sight Gauge
EconOmist™	1/4	L26-02-000	L26-02-D00	L26-02-G00
	3/8	L26-03-000	L26-03-D00	L26-03-G00
	1/2	L26-04-000	L26-04-D00	L26-04-G00
AtoMist™	1/4	L27-02-000	L27-02-D00	L27-02-G00
	3/8	L27-03-000	L27-03-D00	L27-03-G00
	1/2	L27-04-000	L27-04-D00	L27-04-G00

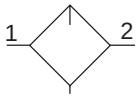
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L90

= "Most Popular"



Symbol



Lubricator with drain

Features

- Integral 3/4" or 1" ports (BSPP & NPT)
- Robust but lightweight aluminum construction
- Proportional oil delivery over a wide range of air flows
- Possible to fill under system pressure eliminating down time
- Large oil reservoir

L90 - 0 6 - L D 0 0

Series	
Lubricator	L90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Lubricator	
L	EconOmist™

Bowl / drain	
D	Metal bowl / sight gauge, no drain

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Flow ‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm³ (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	Oil mist, fill under pressure	315	17.5 (254)	-10 (14)	60 (140)	500 (16.9)	247 (9.7)	90 (3.5)	94 (3.7)	0.8 (1.8)	**L90-06-LD00**
1"	Oil mist, fill under pressure	390	17.5 (254)	-10 (14)	60 (140)	500 (16.9)	247 (9.7)	90 (3.5)	94 (3.7)	0.8 (1.8)	**L90-08-LD00**

† **Standard part numbers shown in bold. For other models refer to Options chart above.**
‡ Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 (7.3 psig) pressure drop.

Specifications

Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*	-10°C to 60°C (14°F to 140°F)

* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

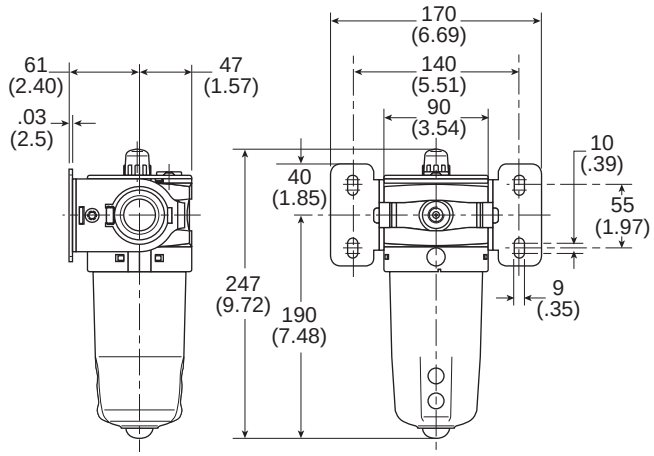
Low flow start point (lubrication pick-up): at 6.3 bar (91.4 psig) inlet pressure 0.5 dm^3/s (1.1 scfm).

Flow with 6.3 bar (91.4 psig) inlet pressure and 0.5 bar (7.3 psig) pressure drop.

Material specifications

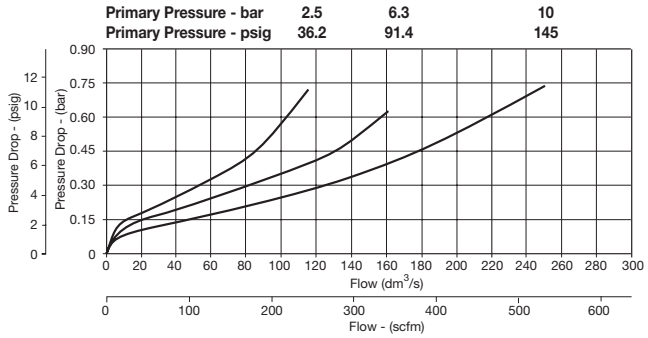
Body	Aluminum
Sight glass	Polypropylene
Sight dome	Polyamide
Lubricator cover	ABS
Top & bottom end cap	Glass filled nylon
Bayonet support	Nylon
Seals	Nitrile NBR

Dimensions mm (inches)

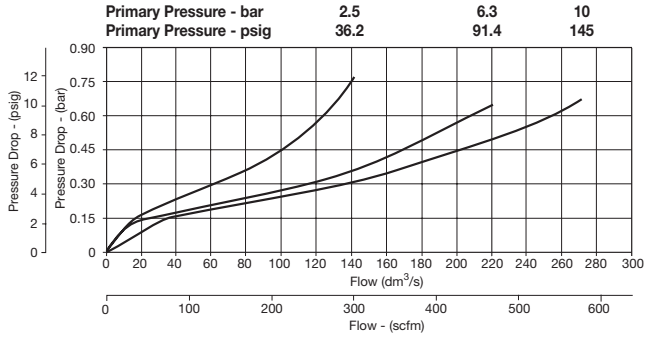


Flow characteristics

(3/4") Lubricator



(1") Lubricator



Service kits

Bowl kit..... P3YKA00BSN

Refill plug P3YKA00PL

Lubricator oil..... F442002

Lubricator
L30 EconOmist™



L30-06-000

= **"Most Popular"**

Specifications

Flow Capacity*	3/4	196 SCFM (92.4 dm^3/s)
	1	374 SCFM (176.4 dm^3/s)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	3/4, 1
Bowl Capacity		26.0 oz
Weight		5.6 lb. (2.54 kg)

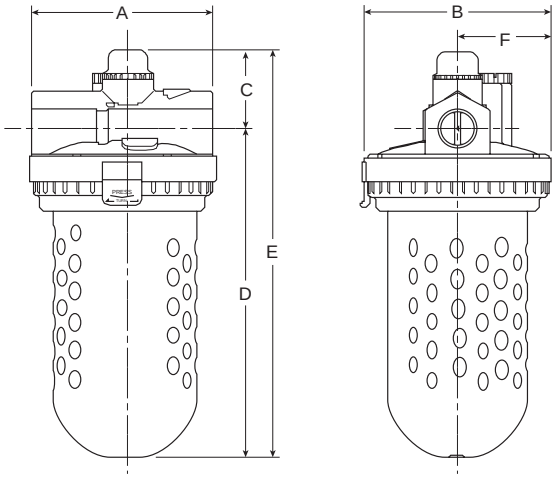
* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Sight Dome		Nylon
Sight Gauge	Metal Bowl	Tempered Safety Glass
Suggested Lubricant		Airline Oil F442001

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Adjustable Oil Feed
- Standard Transparent Bowl with Metal Bowl Guard
- Optional Petcock in Polycarbonate Bowl
- Can be Filled while Under Pressure



Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit L30-XX-000	4.63 (117)	4.79 (122)	1.98 (50)	8.36 (212)	10.38 (264)	2.40 (61)
Manual Drain L30-XX-D00	4.63 (117)	4.79 (122)	1.98 (50)	8.90 (226)	10.90 (277)	2.40 (61)
Metal Bowl with Sight Gauge L30-XX-G00	4.63 (117)	4.79 (122)	1.98 (50)	8.90 (226)	10.95 (278)	2.40 (61)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl / Sight Gauge, Brass Petcock Drain..... GRP-95-676

Plastic Bowl –
- Guard, Plastic Petcock Drain LRP-95-830
- No Drain Port..... LRP-96-940
- Plastic Petcock Drain LRP-96-160

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-253

Flow Guide –
- 3/4 NPT / BSPP-G LRP-95-189
- 1 NPT / BSPP-G..... LRP-95-190

Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Tube, Siphon – Tube and Bronze Filter LRP-96-182

Accessories

Air Line Oil (1 Qt.) F442001

Air Line Oil (1 Gal.) F442002

Auto-Fill™ Adapter Kit LRP-95-698

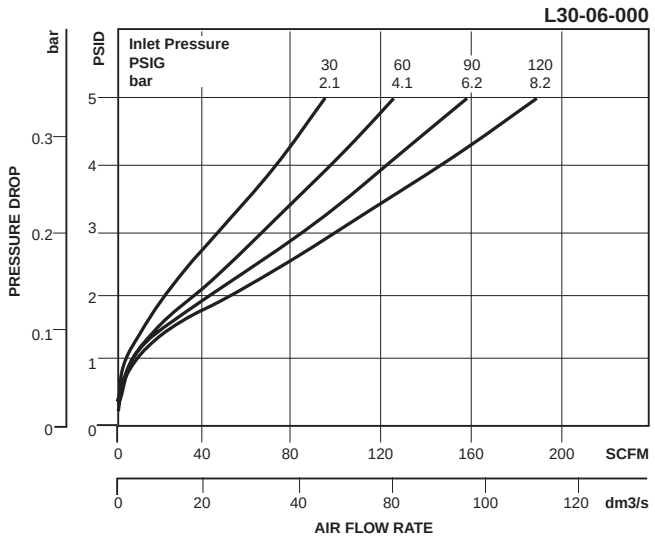
Force Fill Adapter..... GRP-96-394

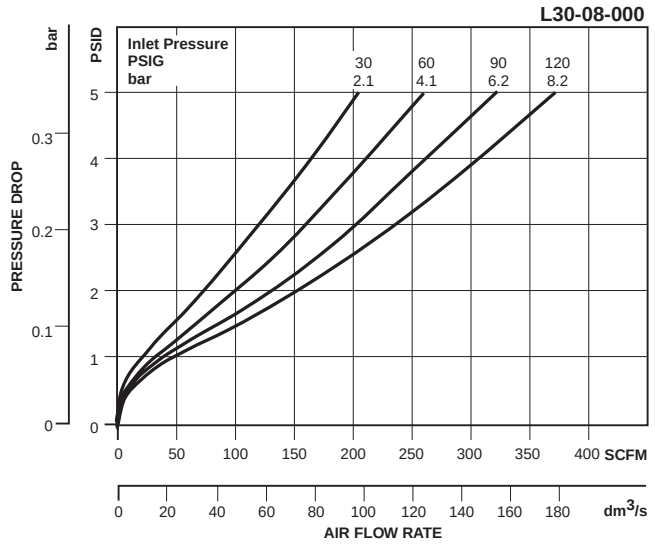
Manual Drain –
- Brass Petcock..... GRP-95-182
- Plastic Petcock LRP-95-181

Sight Gauge Kit..... LRP-95-771

Tamper Resistant Kit..... LRP-95-587

Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734





Ordering Information

Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard with Manual Drain	Metal Bowl / Sight Gauge
EconOmist™	3/4	L30-06-000	L30-06-D00	L30-06-G00
	1	L30-08-000	L30-08-D00	L30-08-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L31 EconOmist™

= "Most Popular"



L31-08-000

Specifications

Flow Capacity*	1	374 SCFM (176.4 dm^3/s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1
Bowl Capacity		96.0 oz
Weight		16.1 lb.(7.3 kg)

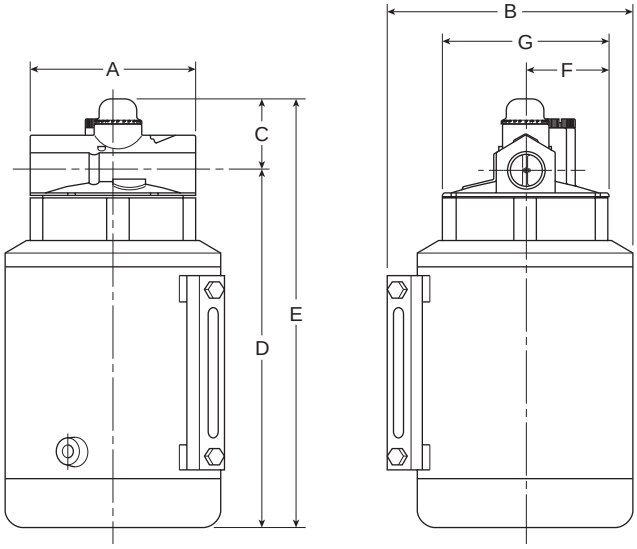
* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Zinc
Bowl	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass
Suggested Lubricant	Airline Oil F442001

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Metal Bowl with Sight Gauge Standard
- Manual Drain Standard
- Can be Filled while Under Pressure



Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L31-08-000		4.63 (117)	7.27 (185)	1.98 (50)	9.97 (253)	11.96 (304)	3.00 (76.2)	4.63 (117)

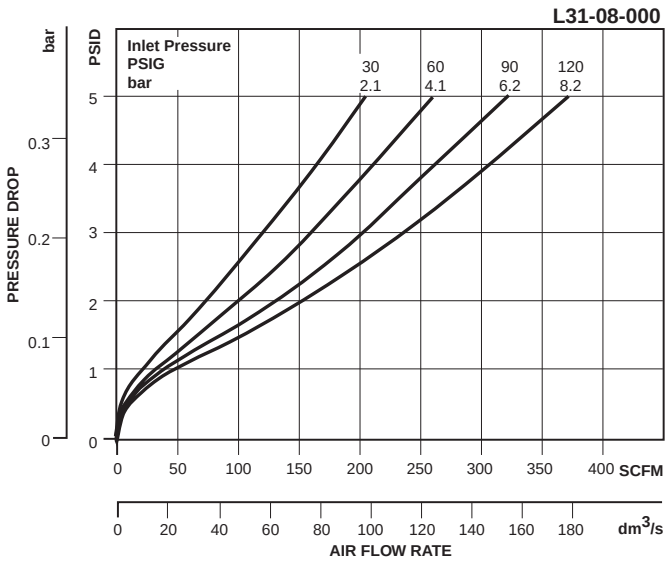
= "Most Popular"

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-253
Flow Guide, 1 NPT / BSPP-G..... LRP-95-190
Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Accessories

Air Line Oil (1 Gal.) F442002
Air Line Oil (4 Gal. Case)..... F442005
Force Fill Adapter..... GRP-96-394
Manual Drain, Brass Petcock GRP-95-182
Tamper Resistant Kit..... LRP-95-587
Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl with Sight Gauge and Manual Drain
EconOmist™	1	L31-08-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L32 EconOmist™

= "Most Popular"



L32-08-000

Specifications

Flow Capacity*	1	374 SCFM (176.4 dm^3/s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1
Bowl Capacity		208.0 oz
Weight		18 lb. (8.2 kg)

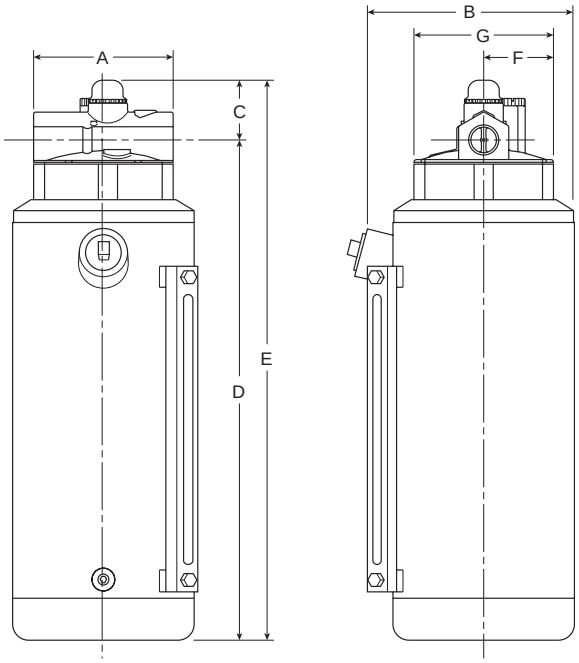
* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Zinc
Bowl	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass
Suggested Lubricant	Airline Oil F442001

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Metal Bowl with Sight Gauge Standard
- Manual Drain Standard
- Can be Filled while Under Pressure



Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L32-XX-000		4.63 (117)	8.30 (211)	1.98 (50)	16.54 (420)	18.52 (470)	3.00 (76.2)	4.63 (117)

= "Most Popular"

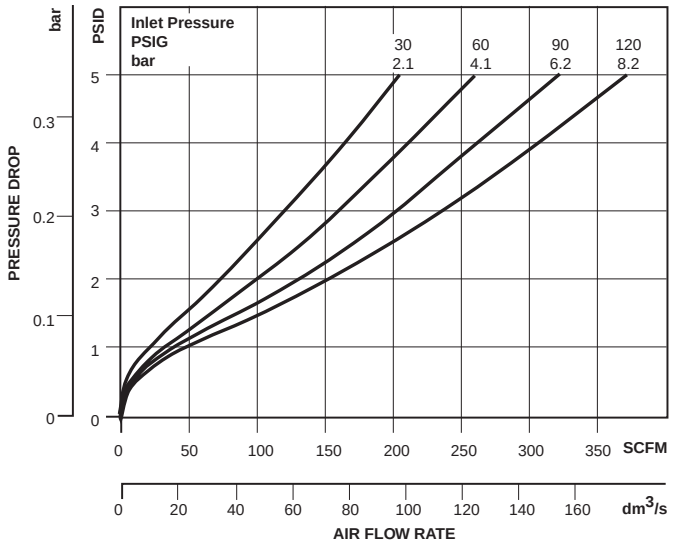
Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-253
Flow Guide, 1 NPT / BSPP-G..... LRP-95-190
Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Accessories

Air Line Oil (4 Gal. Case)..... F442005
Force Fill Adapter..... GRP-96-394
Manual Drain, Brass Petcock GRP-95-182
Tamper Resistant Kit..... LRP-95-587
Wall Mounting Bracket, U-Bolt Pipe Clamp..... GRP-95-734

L32-08-000



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl with Sight Gauge and Manual Drain
EconOmist™	1	L32-08-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L40 EconOmist™

= "Most Popular"



L40-0B-000

Specifications

Flow Capacity*	1-1/2	927 SCFM (437 dm^3/s)
Initial Drip Flow		.95 SCFM
Maximum Supply Pressure		150 PSIG (10.3 bar)
Minimum Flow for Lubrication		1 SCFM @ 100 PSIG
Operating Temperature		32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2
Bowl Capacity		26.0 oz
Weight		9.4 lb. (4.3 kg)

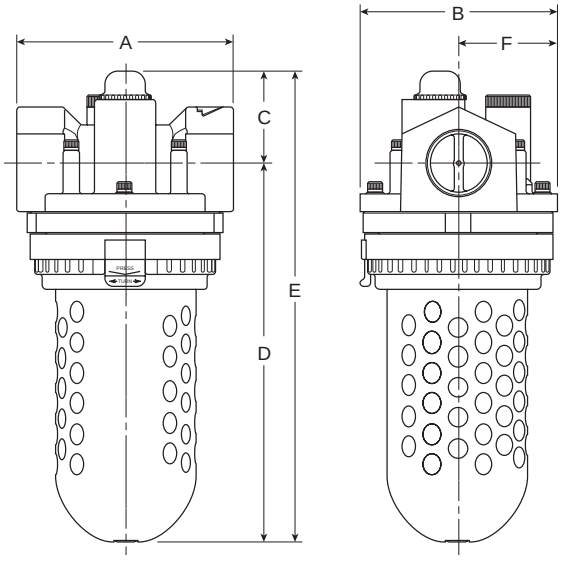
* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Zinc
Bowl	Polycarbonate
Seals	Nitrile
Sight Dome	Nylon
Suggested Lubricant	Airline Oil F442001

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Adjustable Oil Feed
- Standard Transparent Bowl with Metal Bowl Guard
- Can be Filled while Under Pressure



Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit L40-XX-000		5.50 (140)	4.79 (122)	2.27 (58)	9.40 (239)	11.67 (296)	2.40 (61)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Brass Petcock Drain.....FRP-95-593
- Sight Gauge, Brass Petcock Drain GRP-95-676

Plastic Bowl –
- Plastic Petcock Drain LRP-96-160
- Guard, Plastic Petcock Drain LRP-95-830
- No Drain Port LRP-96-940

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-250

Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Tube, Siphon – Tube and Bronze Filter LRP-96-182

Accessories

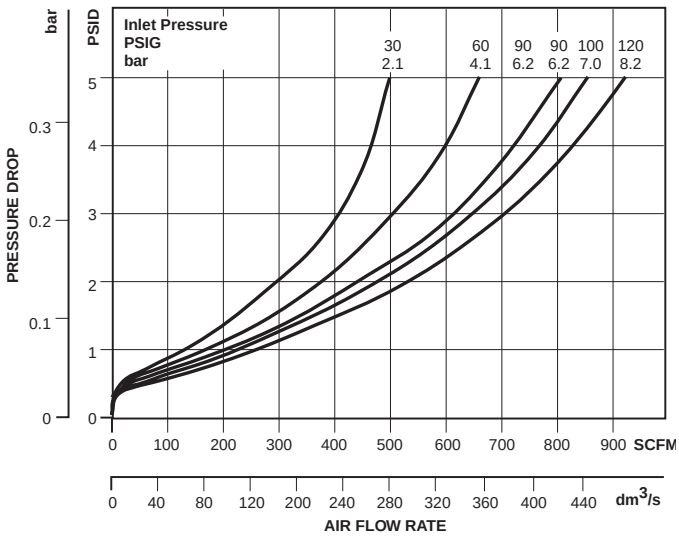
Air Line Oil (1 Qt.) F442001

Air Line Oil (1 Gal.) F442002

- Brass Petcock.....GRP-95-182
- Plastic Petcock LRP-95-181

Tamper Resistant Kit.....LRP-95-587

L40-0B-000



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl / Sight Gauge / Manual Drain	Polycarbonate Bowl / Bowl Guard	Polycarbonate Bowl / Bowl Guard / Manual Drain
EconOmist™	1-1/2	L40-0B-G00	L40-0B-000	L40-0B-D00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L41 EconOmist™

= "Most Popular"



L41-0B-000

Specifications

Flow Capacity*	1-1/2	927 SCFM (437 dm^3/s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2
Bowl Capacity		96.0 oz
Weight		16.3 lb. (7.4 kg)

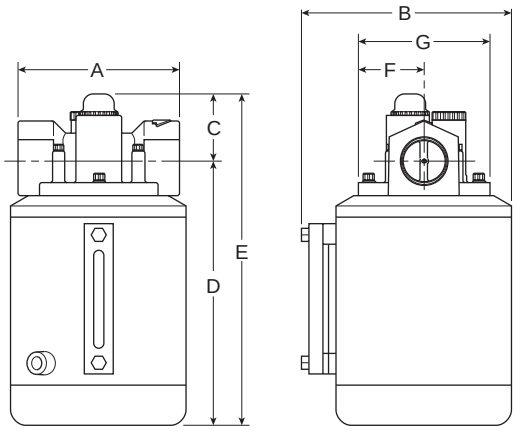
* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Zinc
Bowl	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass
Suggested Lubricant	Airline Oil F442001

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Can be Filled while Under Pressure



Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L41-XX-000		5.50 (140)	7.19 (183)	2.28 (58)	9.03 (229)	11.31 (287)	3.00 (76.2)	4.50 (1147)

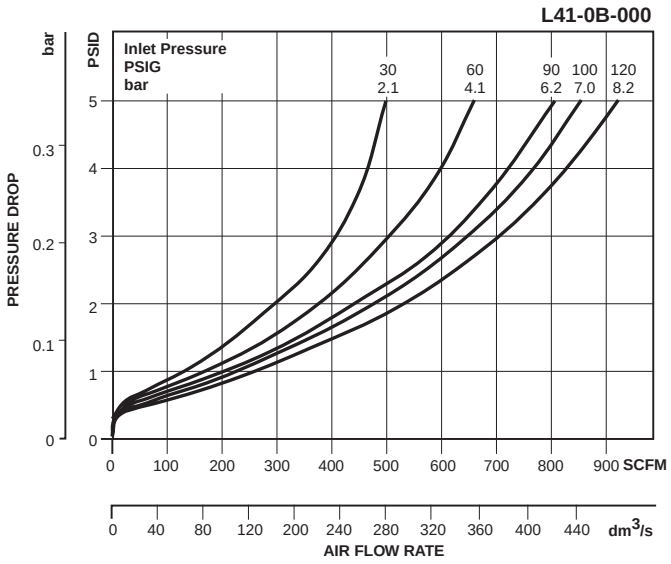
= "Most Popular"

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-250
Flow Guide LRP-95-251
Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Accessories

Air Line Oil (1 Gal.) F442002
Air Line Oil (4 Gal. Case) F442005
Manual Drain, Brass Petcock GRP-95-182
Tamper Resistant Kit LRP-95-587



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl / Sight Gauge
EconOmist™	1-1/2	L41-0B-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L42 EconOmist™

= "Most Popular"



L42-0B-000

Specifications

Flow Capacity*	1-1/2	927 SCFM (437 dm^3/s)
Maximum Supply Pressure		200 PSIG (13.8 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1-1/4, 1-1/2
Bowl Capacity		208.0 oz
Weight		22.5 lb. (10.2 kg)

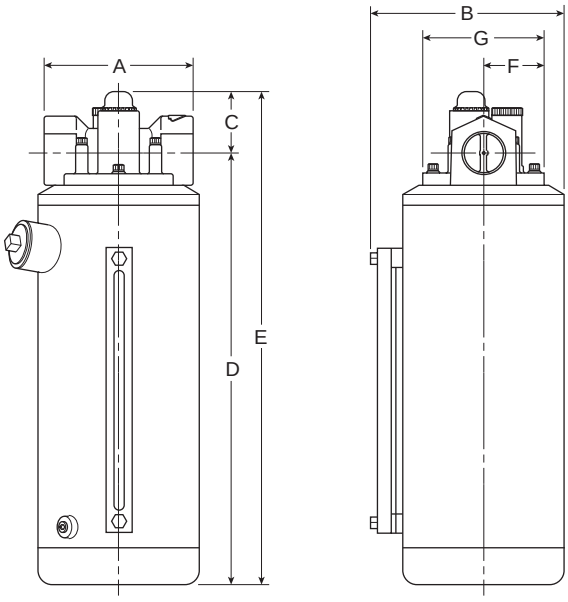
* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Zinc
Bowls	Steel (Welded)
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Tempered Safety Glass
Suggested Lubricant	Airline Oil F442001

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Adjustable Oil Feed
- Can be Filled while Under Pressure



Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit L42-XX-000		5.50 (140)	7.19 (183)	2.28 (58)	16.01 (407)	18.29 (465)	3.00 (76.2)	4.50 (114)

= "Most Popular"

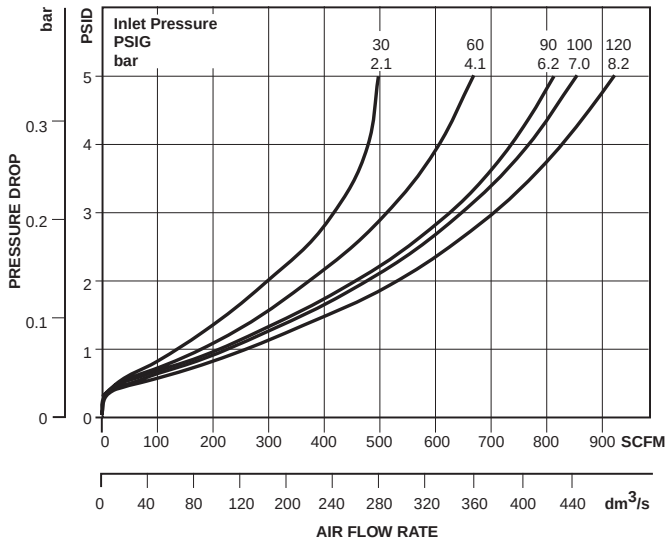
Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-250
Flow Guide LRP-95-251
Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Accessories

Air Line Oil (4 Gal. Case)..... F442005
Force Fill Adapter..... LRP-96-420
Manual Drain, Brass Petcock GRP-95-182
Tamper Resistant Kit..... LRP-95-587

L42-0B-000



B

Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Metal Bowl / Sight Gauge
EconOmist™	1-1/2	L42-0B-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Lubricator
L50 EconOmist™

= "Most Popular"



L50-0C-000

Features

- Full View Sight Dome
- Siphon Tube Filter Provides Clean Lubricant Downstream
- Quick-Disconnect Clamp Ring for Easy Bowl Removal
- Adjustable Oil Feed
- Standard Transparent Bowl with Metal Bowl Guard
- Can be Filled while Under Pressure

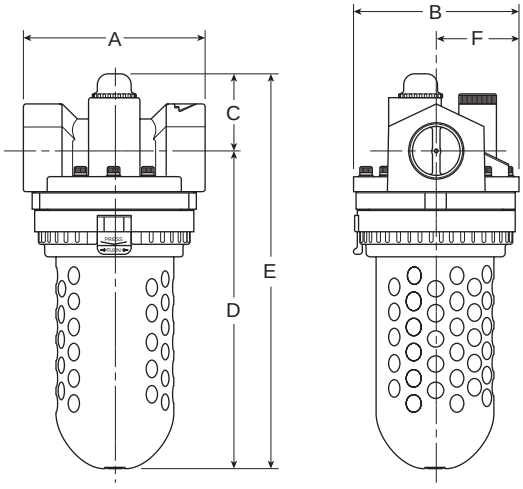
Specifications

Flow Capacity*	2	1186 SCFM (560 dm /s)
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl Metal Bowl	32° to 125°F (0° to 52°C) 32° to 150°F (0° to 65,5°C)
Port Size	NPT / BSPP-G	2
Bowl Capacity		26.0 oz
Weight		10.2 lb. (4.6 kg)

* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Seals	Plastic Bowl Metal Bowl	Nitrile Fluorocarbon
Sight Dome		Nylon
Sight Gauge	Metal Bowl	Tempered Safety Glass
Suggested Lubricant		Airline Oil F442001



Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit L50-0C-000	5.50 (140)	5.00 (127)	2.64 (67)	9.68 (246)	12.32 (313)	2.50 (64)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl / Sight Gauge, Brass Petcock Drain..... GRP-95-676

Plastic Bowl –
- Plastic Petcock Drain LRP-96-160
- Guard, Plastic Petcock Drain LRP-95-830
- No Drain Port..... LRP-96-940

Replacement Kits

Fill Plug Kit – Fill Plug and O-ring LRP-95-250

Flow Guide..... LRP-95-252

Sight Dome Kit – Sight Dome and O-ring LRP-95-249

Tube, Siphon – Tube and Bronze Filter LRP-96-182

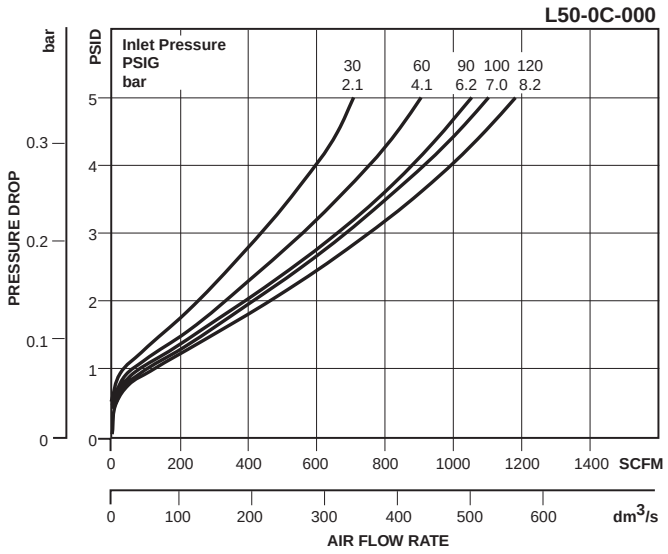
Accessories

Air Line Oil (1 Qt.) F442001

Air Line Oil (1 Gal.) F442002

Manual Drain –
- Brass Petcock.....GRP-95-182
- Plastic Petcock LRP-95-181

Tamper Resistant Kit..... LRP-95-587



B

Filters, Regulators, Lubricators

Ordering Information

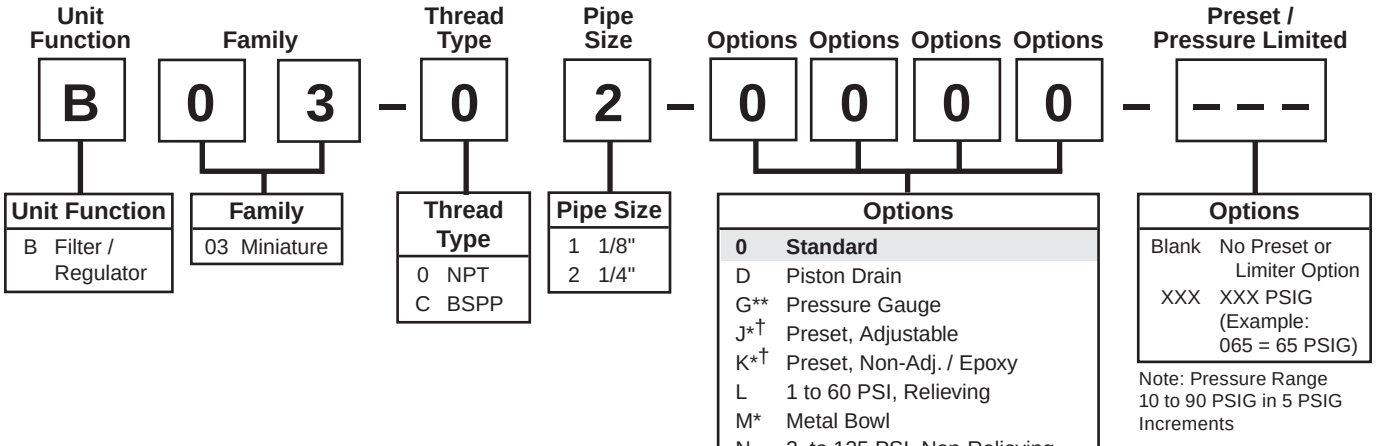
Model Type	Port Size	Polycarbonate Bowl / Bowl Guard	Metal Bowl / Sight Gauge
EconOmist™	2	L50-0C-000	L50-0C-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Filter / Regulator Numbering System

= "Most Popular"



Unit Function
B Filter / Regulator

Family
03 Miniature

Thread Type
0 NPT
C BSPP

Pipe Size
1 1/8"
2 1/4"

Options	
0	**Standard**
D	Piston Drain
G**	Pressure Gauge
J*†	Preset, Adjustable
K*†	Preset, Non-Adj. / Epoxy
L	1 to 60 PSI, Relieving
M*	Metal Bowl
N	2 to 125 PSI, Non-Relieving
P	1 to 30 PSI, Relieving
Q	1 to 15 PSI, Relieving
R*†	Pressure Limiter
S	1 to 60 PSI, Non-Relieving
T	1 to 30 PSI, Non-Relieving
U	1 to 15 PSI, Non-Relieving

Options	
Blank	No Preset or Limiter Option
XXX	XXX PSIG (Example: 065 = 65 PSIG)

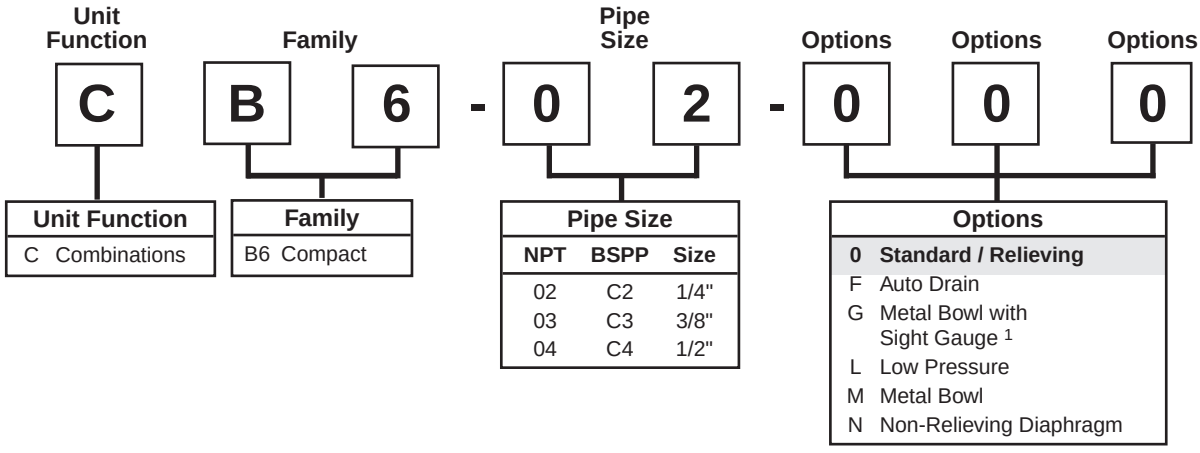
Note: Pressure Range 10 to 90 PSIG in 5 PSIG Increments

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8 and 9.
For example: B 0 3 - 0 1 - D M 0 0

NOTE: 0000 in position 6, 7, 8 and 9 signifies standard product.
(Poly Bowl, Manual Drain, 2 to 125 PSIG, Relieving)

Spring Type by Preset / Limited Pressure:
For Preset / Limited Pressure 10 to 25 use 30 PSI Spring
For Preset / Limited Pressure 26 to 50 use 60 PSI Spring
For Preset / Limited Pressure 51 to 90 use 125 PSI Spring

* Inlet pressure is 100 PSIG. For other pressures, consult factory.
** Not available with BSPP thread type.
† Must specify preset or limited pressure.



Unit Function
C Combinations

Family
B6 Compact

Pipe Size		
NPT	BSPP	Size
02	C2	1/4"
03	C3	3/8"
04	C4	1/2"

Options	
0	**Standard / Relieving**
F	Auto Drain
G	Metal Bowl with Sight Gauge [1]
L	Low Pressure
M	Metal Bowl
N	Non-Relieving Diaphragm

[1] For miniature family units, G option is a pressure gauge. For compact, G option is a metal bowl with sight gauge.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, and 8.
For example:

CB6-02-0 0 0

Note: 000 in positions 6, 7 and 8 signifies standard product.

Filter / Regulator Numbering System

= "Most Popular"

Unit Function	Family			Thread Type	Pipe Size		Diaphragm Function	Bowls / Drains	Options	Options
B	B	3	-	0	2	-	F	K	G	0

Unit Function
B Filter / Regulator

Family
B3 Brass Miniature
A3 Aluminum Miniature

Thread Type
0 NPT
C BSPP [1]

Pipe Size
1 1/8"
2 1/4"

Options
0 None
G Pressure Gauge
R Remote Air Piloted
T Tamper Resistant Regulator Adj
Z Brass Bonnet and Hex Adjustment Knob

Diaphragm Function	Fluorocarbon	Spring Range 1 to 25 PSIG (0.07 to 1.7 bar)	1 to 60 PSIG (0.07 to 4.1 bar)	2 to 125 PSIG (0.14 to 8.6 bar)
Relieving	No	C	D	**F**
	Yes	J	K	L
Non-relieving [1]	No	P	W	R
	Yes	V	X	Y

Options
0 None
G Pressure Gauge
R Remote Air Piloted
T Tamper Resistant Regulator Adj
Z Brass Bonnet and Hex Adjustment Knob

Drains	Bowls Plastic	Bowls Metal
Manual Drain	**K**	**L**
Piston Drain	R	S

NOTE: Standard pressure adjustment is plastic "snap lock" knob and plastic bonnet with plastic panel mount nut.

[1] ISO, R228 (G Series)

Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 8 and 9.
For example:

BB3-02-F K G T

B90	-	0	6	-	A	H	0	0

Series
Filter / Regulator Combination B90

Thread type*
NPT 0
BSPP C

Port size
3/4 6
1 8

Function / pressure range
A Relieving / 0 to 174 PSI
H Relieving / 0 to 232 PSI

Bowl / drain type
H Metal bowl / sight gauge & auto drain
L Metal bowl / sight gauge / manual & semi auto drain

Option
0 None
G Pressure Gauge
A† Lockable type

Notes:
* For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
† Not field convertible.
Bold items are most common.

Filter / Regulator Numbering System

= "Most Popular"

Unit Function	Family		Thread Type	Pipe Size	Filter / Regulator Combo		Bowls / Drains	Options	Options	Level	
B	1	8	- 0	3	- F		K	G	0	B	

Unit Function

B	Filter / Regulator Combination

Family

08	Miniature
18	Compact
28	Standard

Thread Type

0	NPT
C	BSPP [1]

Code	Pipe Size	Series 08	Series 18	Series 28
2	1/4"	X	X	
3	3/8"		X	X
4	1/2"		X	X
6	3/4"			X

Options

0	**None**
C	Tamper Resistant Regulator Adj [2]
G	**Pressure Gauge [4]**
P	Metal Panel Nut
S	Square Pressure Gauge (18 Only)

Options

0	**None**
G	**Pressure Gauge [4]**
P	Metal Panel Nut
S	Square Pressure Gauge (18 Only)

Code	Series
B	08
B	18
B	28

Drains	Bowls: Plastic w / Guard	Bowls: Metal w/ No Sight Gauge	Bowls: Metal w/ Sight Gauge [3]
1/8 NPT Female (18, 28 Only)	E	U	F
Automatic Drain (18, 28 Only)	**G**	A	H
Manual Drain	**K**	M	L
Piston Drain (08 Only)	**R**	—	S

Diaphragm Function	Fluorocarbon	Spring Range: 0 to 30 PSIG (0 to 2 bar)	0 to 60 PSIG (0 to 4 bar)	0 to 125 PSIG (0 to 8 bar)	0 to 250 PSIG [5] (0 to 17 bar)
Relieving	No	C	D	**F**	G
	Yes	J	K	L [1]	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

1 ISO, R228 (G Series).
2 Tamper resistant kit not installed. Kit shipped loose in carton, for 08, 18 & 28 Series.
3 B08 Filter / Regulator has an all metal bowl (no sight gauge).
4 For 08 Series only: "G" in position 8 or 9 is for unit w/ flush-mounted pressure gauge. Units without gauge have 1/8" threaded gauge ports, and a center back mounted pressure gauge must be ordered separately.
5 R08 series operating range 0 to 232 PSIG (1 to 16 bar).

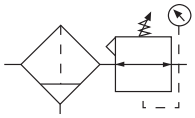
"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

NOTE: When selecting from the options columns, please enter letters in alphabetical order, for positions 7, 8, 9. For example:

B 1 8 - 0 3 - F K 0 0 B

Filter / Regulator B03





B03-02-0000

= "Most Popular"

Features

- Excellent Water Removal Efficiency
- Unbalanced Poppet Standard
- Solid Control Piston for Extended Life
- Space Saving Package offers both Filter and Regulator features in One Integral Unit
- Non-rising Adjustment Knob
- Two Full Flow 1/8" Gauge Ports

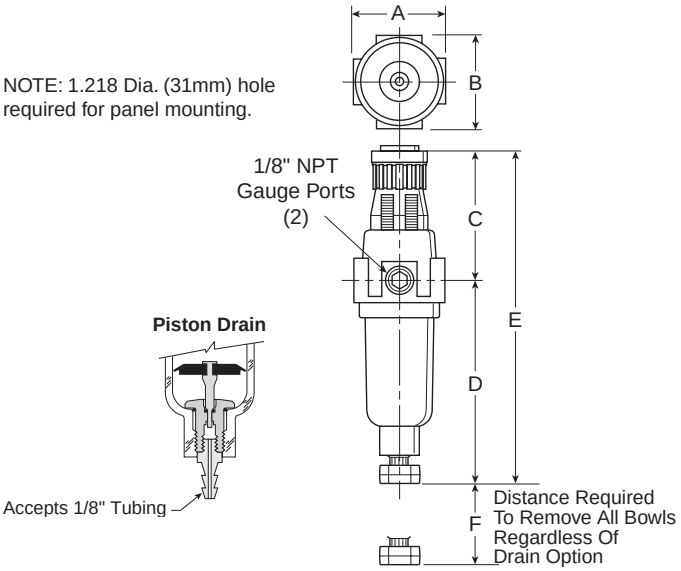
Specifications

Flow Capacity*	1/8	16 SCFM (7.5 dm^3/s)
	1/4	18 SCFM (8.5 dm^3/s)
Gauge Ports (2)		1/8 Inch
Port Threads		1/8, 1/4 Inch
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
Secondary Pressure Ranges –		
Standard Pressure		2 to 125 PSIG (0 to 8.6 bar)
Medium Pressure		1 to 60 PSIG (0 to 4.1 bar)
Medium Pressure		1 to 30 PSIG (0 to 2.1 bar)
Low Pressure		1 to 15 PSIG (0 to 1.0 bar)
Weight		.4 lb. (.18 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar). and 10 PSIG pressure drop.

Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector	Plastic
Bowls – Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Filter Elements – 5 Micron (Standard)	Plastic
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals	Nitrile



Dimensions

Model	Inches (mm)	A	B	C	D	D†	E	E†	F
Standard Unit B03-XX-XXXX		1.62 (41)	1.58 (40)	2.42 (61)	3.79 (96)	3.64 (92)	6.21 (158)	6.06 (154)	1.60 (41)

† With Piston Drain

= "Most Popular"

Replacement Kits

Filter Element Kit, 5 Micron PS403

Metal Bowl –
- Piston Drain PS451B
- Manual Drain PS447B

Poly Bowl –
- Piston Drain PS408B
- Manual Drain PS404

Poppet / Piston Kits –
- Unbalanced, Non-Relieving PS428P
- Unbalanced, Relieving PS426P

Accessories

Gauge, Pressure –
- 30 PSIG (0 to 2.1 bar) K4515N18030
- 60 PSIG (0 to 4.1 bar) K4515N18060
- 160 PSIG (0 to 11.0 bar) K4515N18160

Mounting Bracket Kit* (Includes Panel Mount Nut) PS417B

Panel Mount Nut* –
- Plastic P78652
- Metal P01531

Springs –
- 1 to 15 PSIG Range P01176
- 1 to 30 PSIG Range P01175
- 1 to 60 PSIG Range P01174
- 2 to 125 PSIG Range P01173

*Tighten panel mount nut 2.8 to 3.4 Nm (25 to 30 in-lbs) of torque.

⚠ WARNING

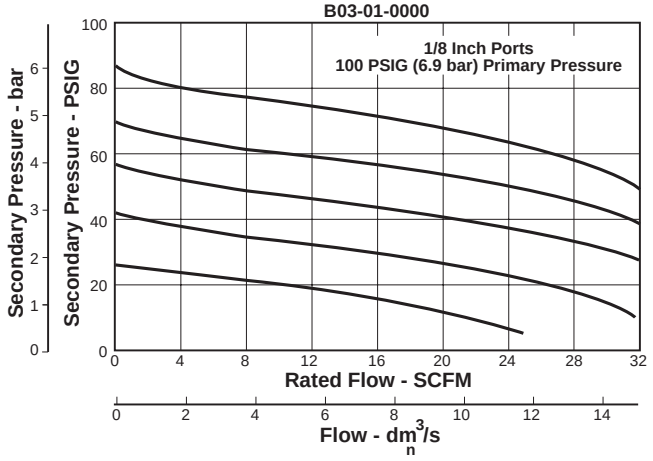
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

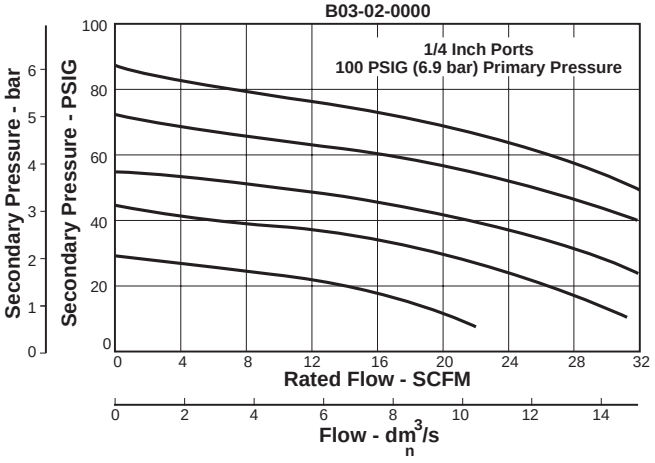
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Flow Characteristics
B03-01-0000



Flow Characteristics
B03-02-0000



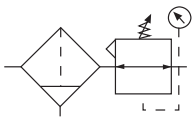
Ordering Information

Model Type	Port Size	Plastic Bowl	Metal Bowl
Manual Drain	1/8	B03-01-0000	B03-01-M000
	1/4	B03-02-0000	B03-02-M000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Miniature Filter / Regulator
BB3 – Brass
BA3 – Aluminum

= "Most Popular"





BB3-02-FK00

Features

- Brass Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Plastic Bowl or Black Painted Zinc Metal Bowl
- High Flow: 1/4" -16 SCFM
- Fluorocarbon Seals Optional

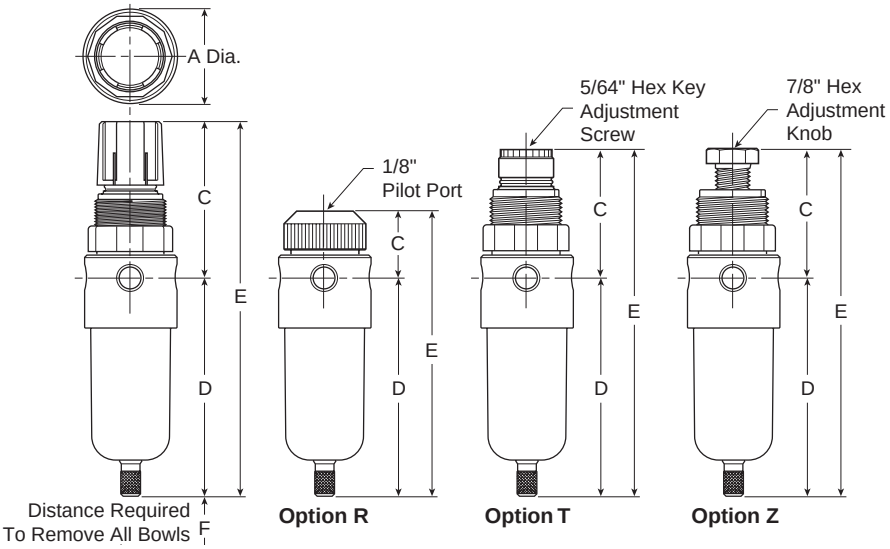
Specifications

Flow Capacity*	1/4	16 SCFM (7.6 dm^3/s)
Maximum Supply Pressure		
Polycarbonate Bowl		150 PSIG (10.37 bar)
Metal Bowl		300 PSIG (20.7 bar)
Operating Temperature		40°F to 125°F (4.4°C to 52°C)
Port Size	NPT / BSPP-G	1/8, 1/4
Standard Filtration		5 Micron
Weight		0.8 lb. (0.36 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 75 PSIG (5.2 bar).

Materials of Construction

Body		Brass
Bowls		Polycarbonate or Zinc - Painted Black
Manual Drain		Brass
Diaphragm and Seals		Nitrile
Element Holder / Deflector / Bonnet		Acetal
Filter Elements	Type A	Polyethylene
Knob		Acetal
Springs		Plated Steel
Valve Assembly and Bottom Plug		Brass



NOTES: Panel Nut included, but not shown on dimensional drawing.
1.19" dia. (30,2) mm hole required for panel mounting.

Dimensions

Model (Inches (mm))	A	C	C Option R	C Option T	C Option Z	D	E	E Option R	E Option T	E Option Z	F
Standard Unit - Brass Body BB3-02-XXXX	1.56 (40)	2.63 (67)	1.09 (27.7)	2.04 (51.8)	2.08 (52.8	3.63 (92)	6.25 (159)	4.72 (119.9)	5.67 (144.0)	5.71 (145.0)	1.58 (40)
Standard Unit - Aluminum Body BA3-02-XXXX	1.56 (40)	2.63 (67)	1.09 (27.7)	2.04 (51.8)	2.08 (52.8	3.63 (92)	6.25 (159)	4.72 (119.9)	5.67 (144.0)	5.71 (145.0)	1.58 (40)

= "Most Popular"

Replacement Element and Repair Kits

5 Micron Element FRP-96-806

Bonnet, Knob, Adjusting Screw Kit RRP-96-821

Bonnet, Tamper Resistant Adjustment Kit RRP-96-822

Diaphragm and Valve Repair Kit –
- Relieving RRP-96-819
- Non-Relieving RRP-96-820

Plastic Bowl –
- No Guard, Manual Twist Drain GRP-96-808
- No Guard, Piston Drain GRP-96-809

Metal Bowl –
- Manual Twist Drain GRP-96-810
- Piston Drain GRP-96-811

Accessories

Gauge, Pressure –
- 0 to 60 PSI (0 to 4.1 bar), 1-1/2" Dial Face, 1/8" NPT K4515N18060
- 0 to 160 PSI (0 to 11.0 bar), 1-1/2" Dial Face, 1/8" NPT, CBM K4515N18160

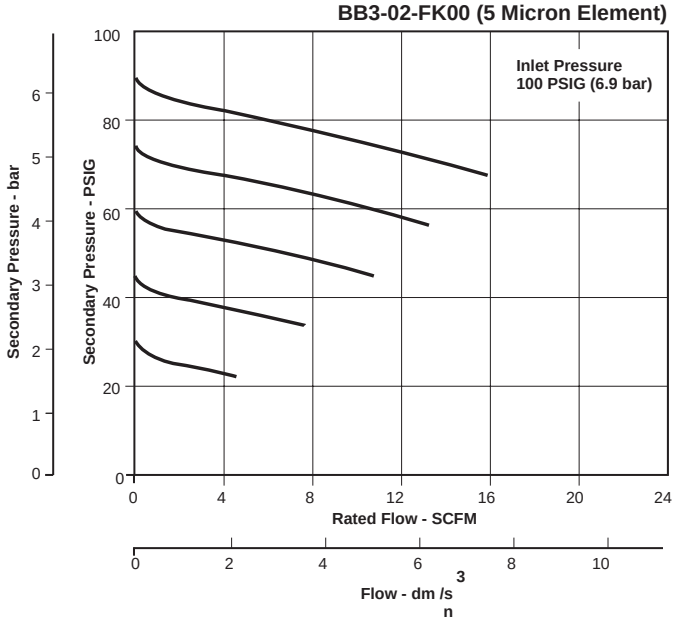
Manual Drain GRP-96-812

Piston Type Drain GRP-96-813

Panel Mount Nut –
- Aluminum RPA-96-733
- Plastic RPA-96-734

Wall Mounting Bracket –
- L-Type GRP-95-147
- L-Type with Plastic Panel Mount Nut GRP-95-747

BB3-02-FK00 (5 Micron Element)



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

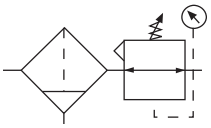
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Relieving 2 to 125 PSI (0.14 to 8.6 bar) No Bowl Guard	Relieving 1 to 60 PSI (0.07 to 4.1 bar) No Bowl Guard	Relieving 1 to 25 PSI (0.07 to 1.7 bar) No Bowl Guard	Relieving 2 to 125 PSI (0.14 to 8.6 bar) Metal Bowl	Relieving 1 to 60 PSI (0.07 to 4.1 bar) Metal Bowl	Relieving 1 to 25 PSI (0.07 to 1.7 bar) Metal Bowl
Manual Drain	1/8"	BB3-01-FK00	BB3-01-DK00	BB3-01-CK00	BB3-01-FL00	BB3-01-DL00	BB3-01-CL00
	1/4"	BB3-02-FK00	BB3-02-DK00	BB3-02-CK00	BB3-02-FL00	BB3-02-DL00	BB3-02-CL00
Piston Drain	1/8"	BB3-01-FR00	BB3-01-DR00	BB3-01-CR00	BB3-01-FS00	BB3-01-DS00	BB3-01-CS00
	1/4"	BB3-02-FR00	BB3-02-DR00	BB3-02-CR00	BB3-02-FS00	BB3-02-DS00	BB3-02-CS00
Manual Drain	1/8"	BA3-01-FK00	BA3-01-DK00	BA3-01-CK00	BA3-01-FL00	BA3-01-DL00	BA3-01-CL00
	1/4"	BA3-02-FK00	BA3-02-DK00	BA3-02-CK00	BA3-02-FL00	BA3-02-DL00	BA3-02-CL00
Piston Drain	1/8"	BA3-01-FR00	BA3-01-DR00	BA3-01-CR00	BA3-01-FS00	BA3-01-DS00	BA3-01-CS00
	1/4"	BA3-02-FR00	BA3-02-DR00	BA3-02-CR00	BA3-02-FS00	BA3-02-DS00	BA3-02-CS00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Filter / Regulator
B08



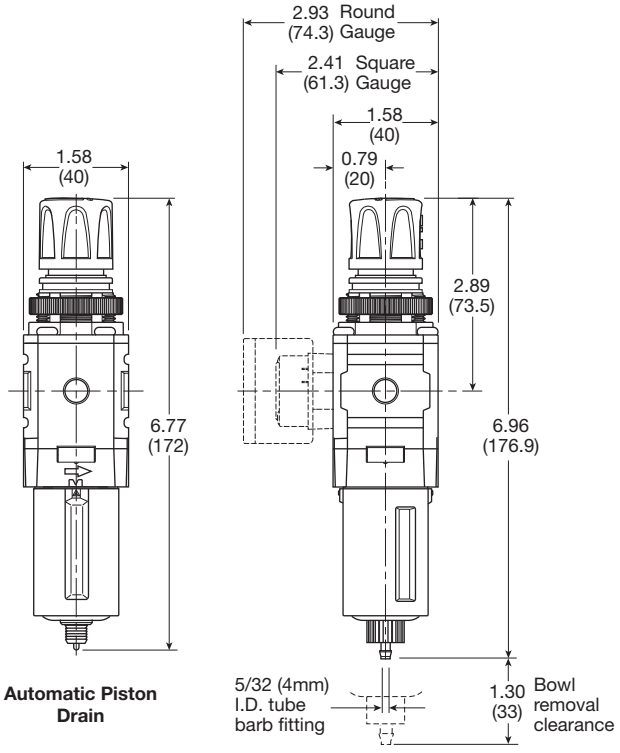


Features

- Space-Saving Integral Filter / Regulator Design
- Unique Flush-mounted Pressure Gauge Available
- Balanced Valve Design
- Modern Design and Appearance
- Light Weight
- High Flow Capacities
- Quick-Disconnect Bowl / Bowl Guard

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



Inches (mm)

Specifications

Flow Capacity*	1/4	73 SCFM (35 dm^3/s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar) 0 to 60 PSIG (0 to 4 bar) 0 to 125 PSIG (0 to 8 bar) 0 to 232 PSIG (0 to 16 bar)
Gauge Ports (2)**	NPT	1/8
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 250 PSIG (17.2 bar)
Operating Temperature†	Plastic Bowl Metal Bowl	14° to 125°F (-10° to 52°C) 14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Bowl Capacity		0.4 oz
Standard Filtration		5 Micron
Weight		0.42 lb. (0.19 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

** Non-gauge option only.

† Units with square gauges: 5°F to 150°F (-15°C to 65.5°C)

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Air quality: Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)

Materials of Construction

Adjustment Knob		Acetal
Body		Aluminum
Body Cap		ABS
Bonnet		PBT
Bowl	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Bowl Guard		Nylon
Diaphragm Assembly		Brass / Nitrile
Filter Element		Polyethylene
Panel Nut		Acetal
Seals	Plastic Bowl Metal Bowl	Nitrile Nitrile
Springs		Steel
Valve Assembly		Brass / Nitrile

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Bowl Kits

Metal Bowl, Manual Drain.....GRP-96-714

Plastic Bowl / Bowl Guard, Manual Drain.....GRP-96-712

Replacement Element Kit

Type "A", 5 Micron FRP-96-729

Replacement Kits

Adjusting Knob..... RRP-16-005-000

Diaphragm Assembly –
- Non-relieving GRP-96-726B
- Relieving..... GRP-96-725B

Spring, Regulating –
- 0 to 125 PSIG (0 to 8.5 bar)..... GRP-96-717B

Accessories

Automatic Piston Drain GRP-96-716

Panel Mount Nut –
- Aluminum.....RPA-96-733
- Plastic RPA-96-734

Gauge, Pressure Flush Mounted –
- 0 to 60 PSIG.....K4511SCR060
- 0 to 150 PSIG.....K4511SCR150
- 0 to 4 bar K4511SCR04B
- 0 to 11 bar K4511SCR11B

0 to 60 PSIG (0 to 4.1 bar)
- 1-1/2" Dial Face, 1/8 NPT, CBM.....K4515N18060

0 to 160 PSIG (0 to 11.0 bar)
- 1-1/2" Dial Face, 1/8 NPT, CBM.....K4515N18160

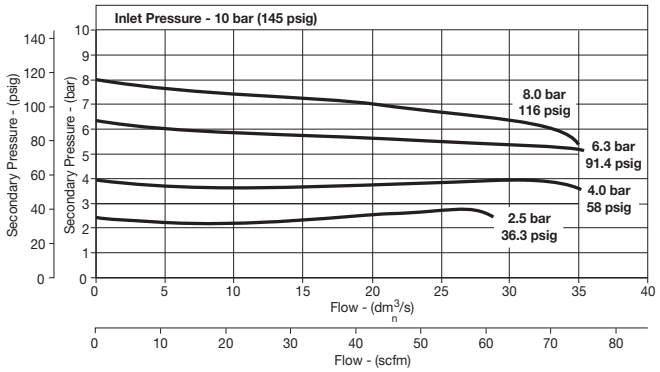
Square with Adapter Kit
- 0-4 bar P6G-PR10040
- 0-11 bar.....P6G-PR10110
- 0-60 psig.....P6G-PR90060
- 0-160 psig P6G-PR90160

Tamper Resistant Kit.....RPA-96-735

Tamperproof Lock and Cover Kit.....RPA-96-736

Wall Mounting Bracket -
- C-Type GPA-97-010
- L-Type.....GRP-96-739

B08 1/4" Filter / Regulator



B

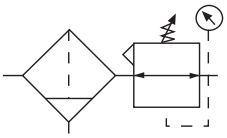
Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / Manual Drain / Without Gauge 0 to 30 PSIG (0 to 0.2 bar)	Plastic Bowl / Bowl Guard / Manual Drain / Without Gauge 0 to 125 PSIG (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / Manual Drain / With Gauge 0 to 20 PSIG (0 to 2.0 bar)	Plastic Bowl / Bowl Guard / Manual Drain / With Gauge 0 to 125 PSIG (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / Manual Drain / Low Pressure / Without Gauge 0 to 60 PSIG (0 to 4.1 bar)	Plastic Bowl / Bowl Guard / Automatic Piston / With Gauge 0 to 125 PSIG (0 to 8.6 bar)
Relieving	1/4	B08-02-CK00B	B08-02-FK00B	B08-02-CKG0B	B08-02-FKG0B	B08-02-DK00B	B08-02-FRG0B
Non-relieving	1/4	B08-02-PK00B	B08-02-RK00B	B08-02-PKG0B	B08-02-RKG0B	B08-02-WK00B	B08-02-RRG0B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Filter / Regulator B18



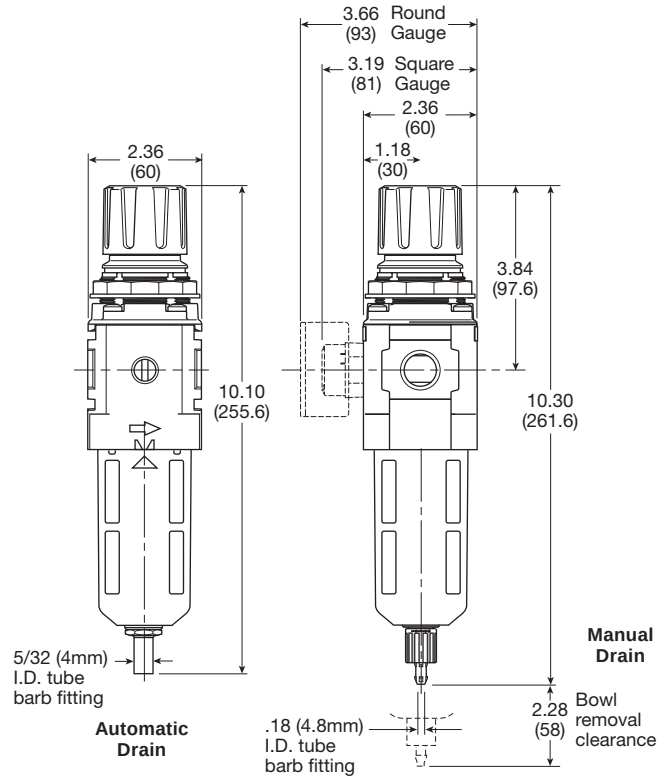


Features

- 5 Micron Filtration
- Balanced Valve Design
- Spring Loaded Diaphragm
- 1/2" NPT / BSPP-G Over-Ported
- Quick-Disconnect Bowl / Bowl Guard
- Light Weight
- High Flow Capacities

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



Inches (mm)

Specifications

Flow Capacity*	1/4	148 SCFM (70 dm^3/s, ANR)
	3/8	158 SCFM (75 dm^3/s, ANR)
	1/2	164 SCFM (77 dm^3/s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2 bar) 0 to 60 PSIG (0 to 4 bar) 0 to 125 PSIG (0 to 8 bar) 0 to 250 PSIG (0 to 17 bar)
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Bowl Capacity		1.72 oz
Standard Filtration		5 Micron
Weight		1.17 lb. (0.53 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Air quality: Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)

Materials of Construction

Adjustment Knob		Acetal
Body		Aluminum
Body Cap		ABS
Bowl	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard		Nylon
Diaphragm Assembly		Nitrile / Steel
Element Retainer / Baffle		Acetal
Filter Element		Sintered Polyethylene
Panel Nut		Acetal
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating / Valve	Steel / S.S.
Valve Assembly		Brass / Nitrile

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Sight Gauge, Automatic Drain GRP-96-637
- Sight Gauge, Manual Drain..... GRP-96-636

Plastic Bowl –
- Bowl Guard, Automatic Drain..... GRP-96-635
- Bowl Guard, Manual Drain..... GRP-96-634

Replacement Element Kits

Type "A", 5 Micron.....FRP-96-639
Retainer, Deflector, and Element Kit FRP-96-641

Replacement Kits

Adjusting Knob..... RRP-16-340-000

Diaphragm Assembly –
- Non-relieving RRP-96-657B
- Relieving.....RRP-96-656B

Spring, Regulating –
- 0 to 30 PSIG (0 to 2.1 bar).....RRP-96-659B
- 0 to 60 PSIG (0 to 4.1 bar).....RRP-96-660B
- 0 to 125 PSIG (0 to 8.6 bar).....RRP-96-661B
- 0 to 250 PSIG (0 to 17.2 bar).....RRP-96-662B

Accessories

Automatic Drain –
- Fluorocarbon.....GRP-95-981
- Nitrile.....GRP-95-973

Drain, Manual Override GRP-96-000

Manual Drain GRP-96-685

Panel Mount Nut –
- Aluminum.....RRP-96-673
- Plastic RRP-96-675B

Gauge, Pressure –
- 50mm (2") round 1/4" center back mount
  - 0-30 PSIG / 0-2 bar K4520N14030
  - 0-60 PSIG / 0-4 bar K4520N14060
  - 0-160 PSIG / 0-11 bar K4520N14160
  - 0-300 PSIG / 0-20 bar K4520N14300
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT.. ..... K4517N14160D

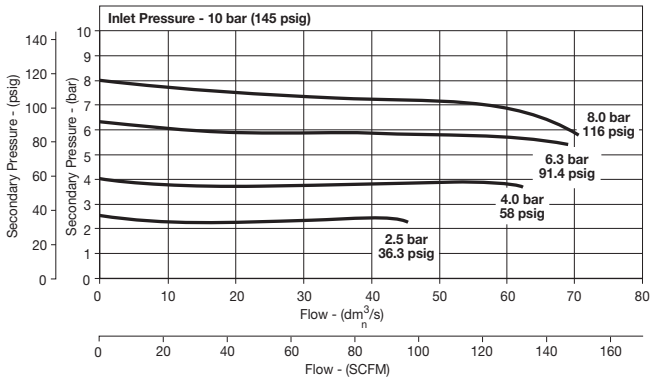
Tamper Resistant Kit.....RRP-96-671

Tamperproof Lock & Cover Kit.....RPA-96-736

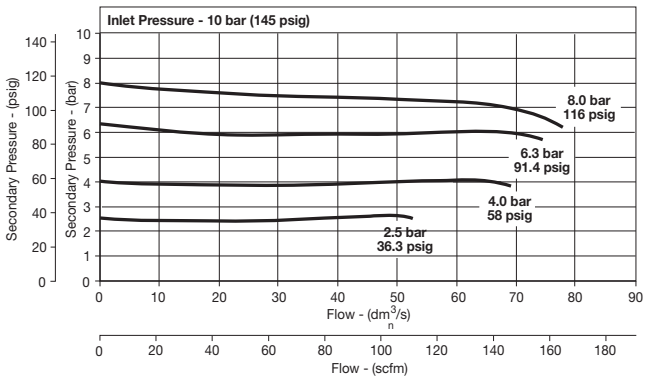
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket
- L-Type (Body).....GPA-96-604
- L-Type (Bonnet). GPA-96-606
- T-Type GPA-96-602

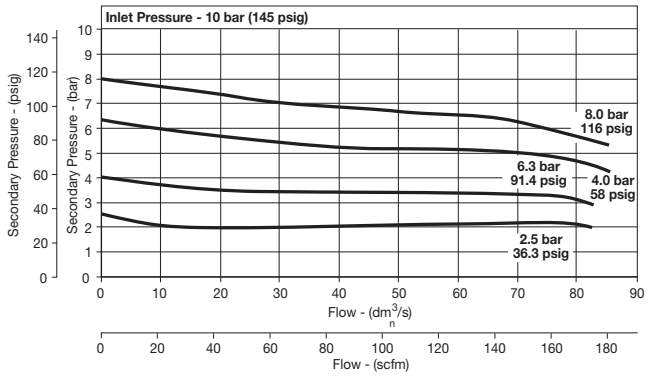
B08 1/4" Filter / Regulator



B18 3/8" Filter / Regulator



B08 1/2" Filter / Regulator

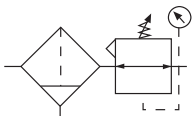


Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Metal Bowl / Sight Gauge With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Manual Drain	1/4	B18-02-FKG0B	B18-02-FLG0B
	3/8	B18-03-FKG0B	B18-03-FLG0B
	1/2	B18-04-FKG0B	B18-04-FLG0B
Automatic Drain	1/4	B18-02-FGG0B	B18-02-FHG0B
	3/8	B18-03-FGG0B	B18-03-FHG0B
	1/2	B18-04-FGG0B	B18-04-FHG0B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Filter / Regulator
CB6





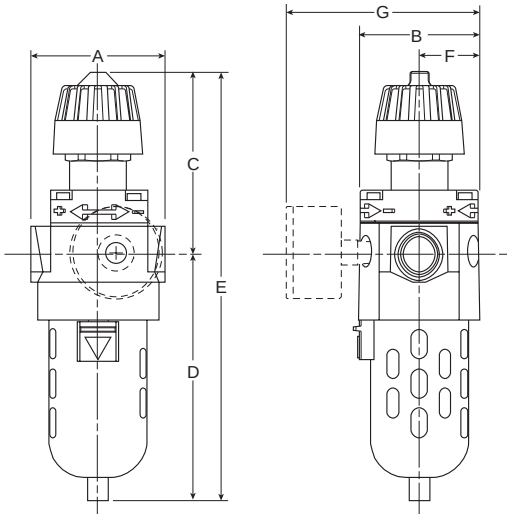
CB6-02-000

Features

- 5 Micron Filtration
- Balanced Valve
- Manual Flex Drain
- Integral Plastic Bowl / Bowl Guard
- Quick-Disconnect Bowl

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



NOTE: 1.31" Dia. (33.3 mm) hole required for panel nut mounting.

= "Most Popular"

Specifications

Flow Capacity*	1/4	64.0 SCFM (30.2 dm^3/s)
	3/8	70.0 SCFM (33.0 dm^3/s)
	1/2	70.0 SCFM (33.0 dm^3/s)
Adjusting Range Pressure		0 to 50 PSIG (0 to 3.5 bar) 0 to 125 PSIG (0 to 8.6 bar)
Gauge Port (2)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	200 PSIG (13.8 bar)
Operating Temperature	Plastic Bowl	32° to 125°F (0° to 52°C)
	Metal Bowl	32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration		5 Micron
Weight		2.4 lb. (1.1 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

"F" Series Filters, Type "A" 5 Micron Elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Zinc
Bonnet, Knob		PBT
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Diaphragm		Nitrile / Zinc
Filter Element		Polyethylene
Panel Nut		Acetal
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Fluorocarbon
Stem, Element Retainer and Deflector		Acetal
Springs		Steel
Valve Assembly		Brass / Nitrile

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G
Standard Unit CB6-XX-000	3.00 (76)	2.64 (67)	3.95 (100)	5.43 (137.9)	9.38 (238)	1.34 (34)	4.18 (106)
Automatic Drain CB6-XX-F00	3.00 (76)	2.64 (67)	3.95 (100)	5.55 (140.9)	9.50 (241)	1.34 (34)	4.18 (106)
Metal Bowl CB6-XX-M00	3.00 (76)	2.64 (67)	3.95 (100)	6.05 (153.7)	10.00 (254)	1.34 (34)	4.18 (106)
Metal Bowl with Sight Gauge CB6-XX-G00	3.00 (76)	2.64 (67)	3.95 (100)	6.15 (156)	10.10 (256.5)	1.34 (34)	4.18 (106)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Automatic Float Drain FRP-95-950
- Brass Petcock Drain FRP-95-178

Metal Bowl / Sight Gauge, Brass Petcock Drain GRP-95-133

Plastic Bowl, Flex Tip Drain FRP-95-017

Plastic Bowl / Bowl Guard –
- Automatic Float Drain FRP-95-015
- Flex Top Drain FRP-95-014

Replacement Element Kits

Type "A", 5 Micron w/ Nitrile Bowl O-Ring FRP-95-160

Replacement Kits

Diaphragm Assembly –
- Non-relieving RRP-96-216
- Self-relieving RRP-96-213

Spring, Regulating –
- 0 to 50 PSIG (0 to 3.4 bar) Blue Color RRP-95-222
- 0 to 125 PSIG (0 to 8.5 bar) Silver Color RRP-95-224

Accessories

Automatic Mech. Drain, 1/8" NPT –
- Fluorocarbon GRP-95-981
- Nitrile GRP-95-973

Manual Flex Tip Drain FRP-95-610

Wall Mounting Bracket –
- Gauge Port Adapter, 1/4" NPT RRP-95-590
- L-Type GPA-95-012

Drain, Manual Override for
- Auto Float Drain, 1/8 NPT GRP-96-000

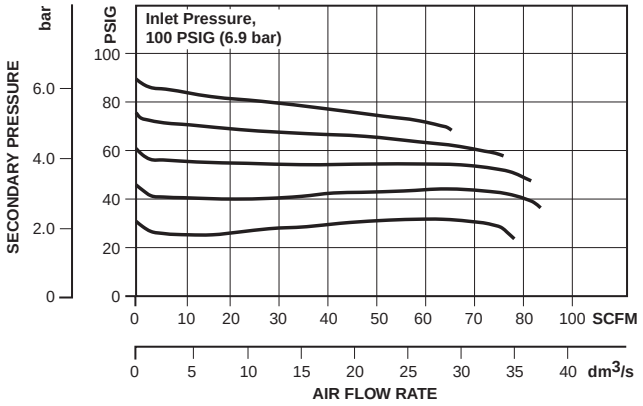
Gauge, Pressure, 2" Dial Face, 1/4" NPT CBM –
- 0 to 60 PSIG (0 to 4.1 bar) K4520N14060W
- 0 to 160 PSIG (0 to 11.0 bar) K4520N14160W
- 0 to 300 PSIG (0 to 21 bar) K4520N14300W
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT .. K4517N14160D

Panel Nut, Plastic GPA-95-032

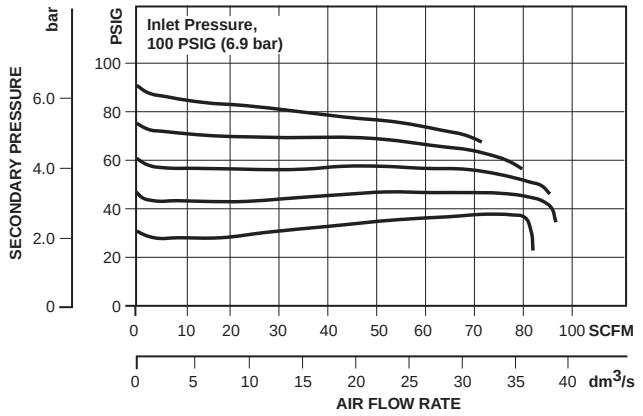
Tamper Resistant Kit RPA-95-006

NOTE: Gauge not included, order separately by accessory number.

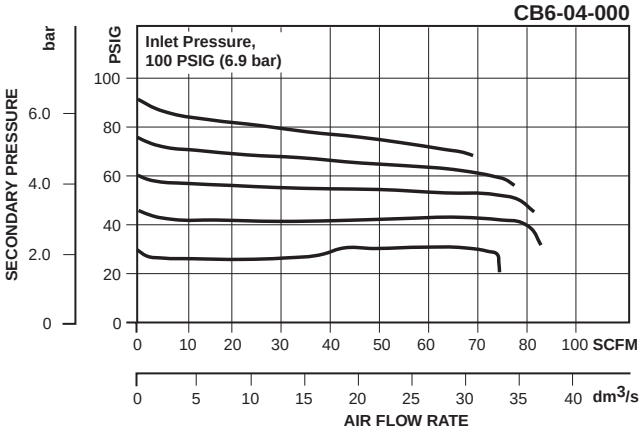
CB6-02-000



CB6-03-000



CB6-04-000

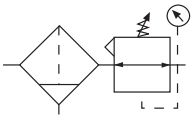


Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard 0 to 125 PSIG (0 to 8.6 bar)	Metal Bowl 0 to 125 PSIG (0 to 8.6 bar)	Metal Bowl w/ Sight Gauge 0 to 125 PSIG (0 to 8.6 bar)	Metal Bowl Low Pressure 0 to 50 PSIG (0 to 3.4 bar)
Manual Drain	1/4	CB6-02-000	CB6-02-M00	CB6-02-G00	CB6-02-LM0
	3/8	CB6-03-000	CB6-03-M00	CB6-03-G00	CB6-03-LM0
	1/2	CB6-04-000	CB6-04-M00	CB6-04-G00	CB6-04-LM0
Automatic Drain	1/4	CB6-02-F00	CB6-02-FM0	CB6-02-FG0	CB6-02-FLM
	3/8	CB6-03-F00	CB6-03-FM0	CB6-03-FG0	CB6-03-FLM
	1/2	CB6-04-F00	CB6-04-FM0	CB6-04-FG0	CB6-04-FLM

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Precision Filter / Regulator PC6





PC6-02-000

B

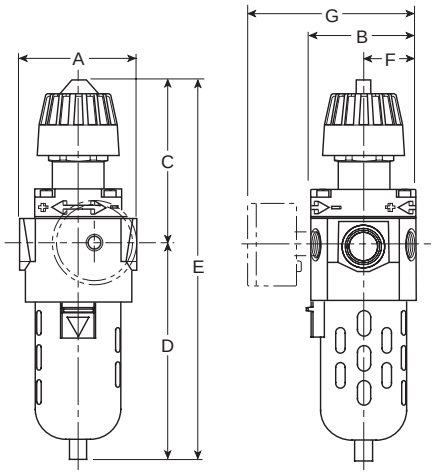
Filters, Regulators, Lubricators

Precision Filter / Regulator

The PC6 models are general purpose regulators specifically designed for applications that require reliable performance and accurate pressure control.

Features

- *Stable Output* – Aspirator Design Minimizes "Droop" at Higher Flow Levels
- *Accuracy* – High Diaphragm-to-Valve-Area Ratio Combined with Unbalanced Valve Provides High Precision with Minimal Initial Pressure Droop
- *Quality Air* – 5 Micron Filtration for Superior Protection of Critical Downstream Equipment
- *Easy Maintenance* – May be Disassembled and Serviced without Removal from Air Line
- *Competitive* – Compact, Integral Filter / Regulator Can be Used Where Limited Space or Lower Cost is Required



NOTE: 1.31" Dia. (33.3 mm) hole required for panel nut mounting.

= **"Most Popular"**

Specifications

Flow Capacity*	PC6	19.0 SCFM (9.0 dm^3/s)
Gauge Port (2)	NPT / BSPT-Rc	1/4
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 200 PSIG (13.8 bar)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Operating Temperature	Plastic Bowl Metal Bowl	32° to 125°F (0° to 52°C) 32° to 150°F (0° to 65.5°C)
Weight		2.4 lb. (1.1 kg)

* Inlet pressure 100 PSIG (6.9 bar).
Secondary pressure PC6, 45 PSIG (3.1 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Zinc
Bonnet, Knob		PBT
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Zinc
Diaphragm		Nitrile / Zinc
Filter Element		Polypropylene
Panel Nut		Acetal
Seals	Plastic Bowl	Nitrile
Springs		Steel
Stem, Element Retainer and Deflector		Acetal
Valve Assembly		Brass / Nitrile

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G
Standard Unit PC6-XX-000	3.00 (76)	2.64 (67)	3.95 (100)	5.43 (137.9)	9.38 (238)	1.34 (34)	4.18 (106)
Automatic Drain PC6-XX-F00	3.00 (76)	2.64 (67)	3.95 (100)	5.55 (140.9)	9.50 (241)	1.34 (34)	4.18 (106)
Automatic Drain PC6-XX-G00	3.00 (76)	2.64 (67)	3.95 (100)	6.15 (156)	10.10 (256.5)	1.34 (34)	4.18 (106)

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Automatic Drain PRP-96-006
- Manual Drain PRP-95-070

Metal Bowl / Sight Gauge, Brass Petcock Drain PRP-95-071

Plastic Bowl, FlexTip Drain FRP-95-017

Plastic Bowl / Bowl Guard –
- Automatic Drain FRP-95-015
- FlexTip Drain FRP-95-014

Replacement Element Kits

Type "A", 5 Micron FRP-95-160

Replacement Kits

Diaphragm Assembly –
- Non-relieving, Nitrile PRP-95-055
- Self-relieving, Nitrile PRP-95-025

Spring, Regulating –
- 0 to 15 PSIG (1 bar) RRP-95-233
- 0 to 30 PSIG (2,1 bar) RRP-95-916
- 0 to 50 PSIG (0 to 3,4 bar) RRP-95-222
- 0 to 125 PSIG (0 to 8,5 bar) RRP-95-224

Accessories

Automatic Mechanical Drain
- 1/8 NPT, Fluorocarbon GRP-95-981
- 1/8 NPT, Nitrile GRP-95-973

Drain, Manual Override for
- Auto Float Drain, 1/8 NPT GRP-96-000

FlexTip Drain FRP-95-610

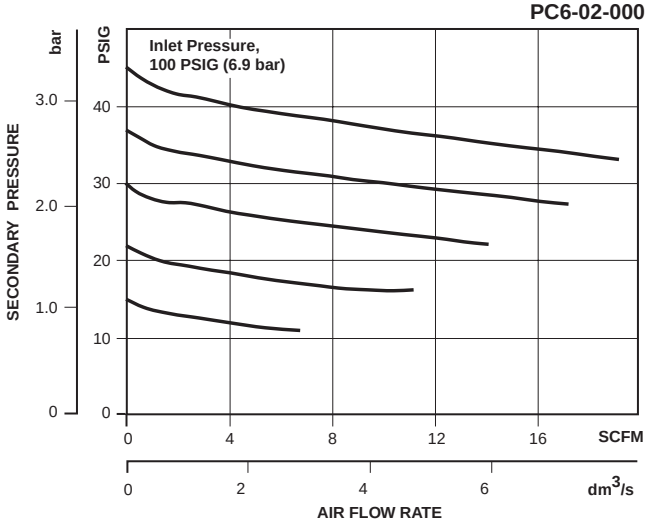
Gauge, Pressure, 2" Dial Face, 1/4 NPT, CBM –
- 0 to 30 PSIG (0 to 2,1 bar) K4520N14030W
- 0 to 60 PSIG (0 to 4 bar) K4520N14060W
- 0 to 120 PSIG (0 to 8,3 bar) K4520N14160W
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT .. K4517N14160D

Panel Nut, Plastic GPA-95-032

Tamper Resistant Kit RPA-95-006

Wall Mounting Bracket –
- Gauge Port Adapter, 1/4 NPT RRP-95-590
- L-Type w/Panel Mount Nut GPA-95-011

PC6-02-000



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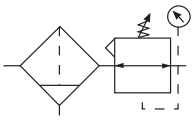
Filters, Regulators, Lubricators

Ordering Information

Model Type	Port Size	Standard Unit 0 to 50 PSIG (0 to 3.4 bar)	Automatic Mechanical Drain	Sight Gauge	High Pressure 0 to 125 PSIG (0 to 8.6 bar)	Low Pressure 0 to 30 PSIG (0 to 2.1 bar)	Metal Bowl	Fluorocarbon Seals
Relieving	1/4	PC6-02-000	PC6-02-F00	PC6-02-G00	PC6-02-H00	PC6-02-L00	PC6-02-M00	PC6-02-V00
	3/8	PC6-03-000	PC6-03-F00	PC6-03-G00	PC6-03-H00	PC6-03-L00	PC6-03-M00	PC6-03-V00
	1/2	PC6-04-000	PC6-04-F00	PC6-04-G00	PC6-04-H00	PC6-04-L00	PC6-04-M00	PC6-04-V00
Non-relieving	1/4	PC6-02-N00	PC6-02-FN0	PC6-02-GN0	PC6-02-HN0	PC6-02-LN0	PC6-02-MN0	PC6-02-VN0
	3/8	PC6-03-N00	PC6-03-FN0	PC6-03-GN0	PC6-03-HN0	PC6-03-LN0	PC6-03-MN0	PC6-03-VN0
	1/2	PC6-04-N00	PC6-04-FN0	PC6-04-GN0	PC6-04-HN0	PC6-04-LN0	PC6-04-MN0	PC6-04-VN0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Filter / Regulator
B28





B

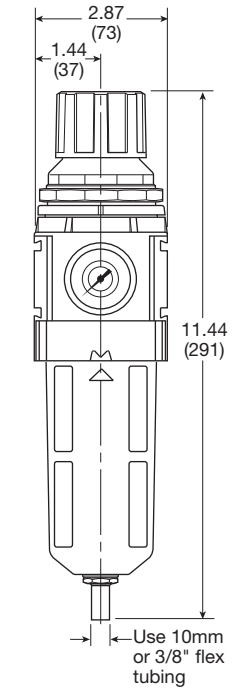
Filters, Regulators, Lubricators

Features

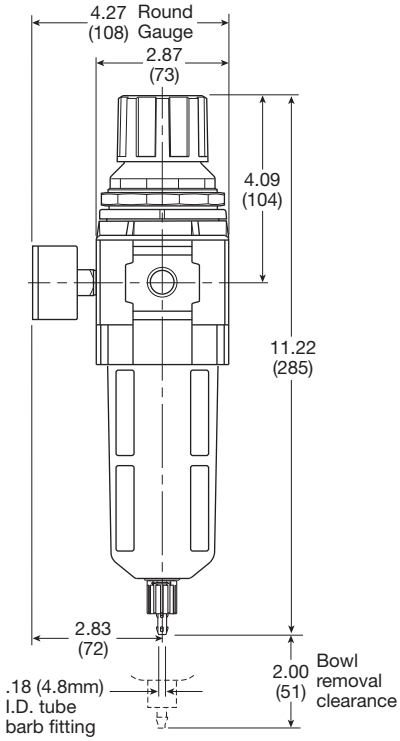
- 5 Micron Filtration
- Balanced Valve Design
- Spring Loaded Diaphragm
- 3/4" NPT / BSPP-G Over-Ported
- Quick-Disconnect Bowl / Bowl Guard
- Light Weight
- High Flow Capacities

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.



Automatic Drain



Manual Drain

Inches (mm)

Specifications

Flow Capacity*	3/8	200 SCFM (94 dm^3/s, ANR)
	1/2	200 SCFM (94 dm^3/s, ANR)
	3/4	235 SCFM (109 dm^3/s, ANR)
Adjusting Range Pressure		0 to 30 PSIG (0 to 2.1 bar) 0 to 60 PSIG (0 to 4.1 bar) 0 to 125 PSIG (0 to 8.6 bar) 0 to 250 PSIG (0 to 17.2 bar)
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Bowl Capacity		2.87 oz
Standard Filtration		5 Micron
Weight		1.87 lb. (0.85 kg)

* Inlet pressure 145 psig (10 bar). Secondary pressure 91.3 psig (6.3 bar) and 14.5 psig (1 bar) pressure drop.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Air quality: Within ISO 8573-1: 1991 Class 3 (Particulates)
Within ISO 8573-1: 2001 Class 6 (Particulates)

Materials of Construction

Adjustment Knob		Acetal
Body		Aluminum
Body Cap		ABS
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly		Nitrile / Zinc
Element Retainer / Baffle		Acetal
Filter Element		Sintered Polyethylene
Panel Nut		Acetal
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating / Valve	Steel / S.S.
Valve Assembly		Brass / Nitrile

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

= "Most Popular"

Replacement Bowl Kits

Metal Bowl –
- Sight Gauge, Automatic Drain GRP-96-645
- Sight Gauge, Manual Drain..... GRP-96-644

Plastic Bowl –
- Bowl Guard, Automatic Drain..... GRP-96-643
- Bowl Guard, Manual Drain..... GRP-96-642

Replacement Element Kits

Type" A", 5 Micron.....FRP-96-653

Element, Deflector, Retainer kit..... FRP-96-283

Replacement Kits

Adjusting Knob.....RRP-16-341-000

Diaphragm Assembly –
- Non-relieving.....RRP-96-987
- Relieving.....RRP-96-986

Spring, Regulating –
- 0 to 30 PSIG (0 to 2.1 bar).....RRP-96-163
- 0 to 60 PSIG (0 to 4.1 bar).....RRP-96-164
- 0 to 125 PSIG (0 to 8.6 bar).....RRP-96-165
- 0 to 250 PSIG (0 to 17.2 bar).....RRP-96-166

Valve Assembly.....RRP-96-049

Accessories

Automatic Drain –
- Fluorocarbon GRP-95-981
- Nitrile GRP-95-973

Manual Drain..... GRP-96-685

Panel Mount Nut –
- Aluminum.....RRP-96-674
- Plastic RRP-96-676

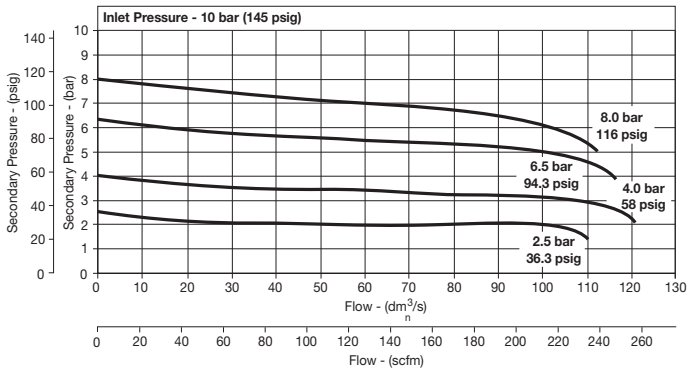
Gauge, Pressure –
- 50mm (2") round 1/4" center back mount
  - 0-30 PSIG / 0-2 bar K4520N14030
  - 0-60 PSIG / 0-4 bar K4520N14060
  - 0-160 PSIG / 0-11 bar K4520N14160
  - 0-300 PSIG / 0-20 bar K4520N14300
- 0 to 160 PSIG, 1-3/4" Digital Round, 1/4" NPT K4517N14160D

Tamper Resistant Kit.....RRP-96-672

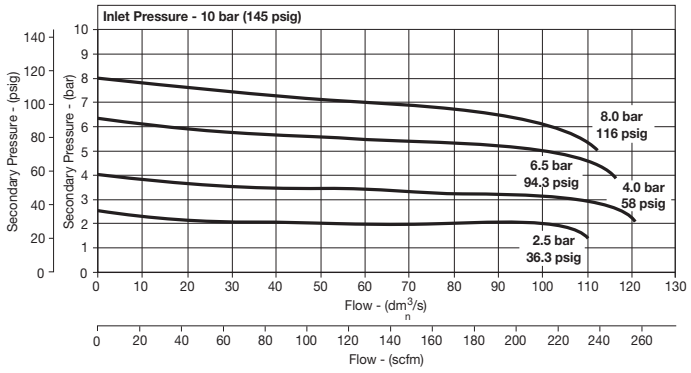
Sight Gauge Kit..... GRP-96-825

Wall Mounting Bracket –
- L-Type (Body) GPA-96-605
- L-Type (Bonnet).....GPA-96-607
- T-Type GPA-96-602

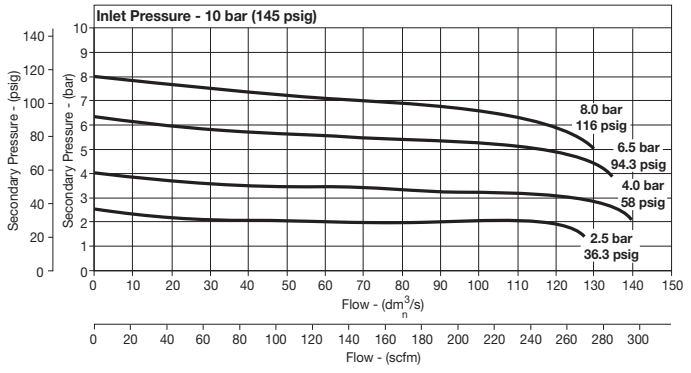
B28 3/8" Filter / Regulator



B28 1/2" Filter / Regulator



B18 3/8" Filter / Regulator



Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)	Metal Bowl / Sight Gauge With Gauge 5 to 125 PSIG (0.4 to 8.6 bar)
Manual Drain	1/4	B28-03-FKG0B	B28-03-FLG0B
	3/8	B28-04-FKG0B	B28-04-FLG0B
	1/2	B28-06-FKG0B	B28-06-FLG0B
Automatic Drain	1/4	B28-03-FGG0B	B28-03-FHG0B
	3/8	B28-04-FGG0B	B28-04-FHG0B
	1/2	B28-06-FGG0B	B28-06-FHG0B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

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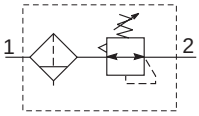
Filters, Regulators, Lubricators

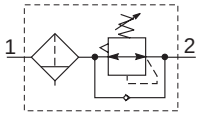
Filter / Regulator B90



= "Most Popular"

Symbols





Features

- Integral 3/4" or 1" ports (BSPP or NPT)
- High efficiency element as standard
- Excellent water removal efficiency
- Robust but lightweight aluminum construction
- Secondary pressure ranges 12 and 16 bar
- Rolling diaphragm for extended life
- Secondary aspiration plus balanced poppet provides quick response and accurate pressure regulation
- Reverse flow / relieving option
- Low temperature -40° with combined manual / semi-auto drain as standard

B90 - 0 6 - A H 0 0

Series	
Filter / Regulator Combination	B90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Function / pressure range	
A	Relieving / 0 to 174 PSI
H	Relieving / 0 to 232 PSI

Bowl / drain type	
H	Metal bowl / sight gauge & auto drain
L	Metal bowl / sight gauge / manual & semi auto drain

Option	
0	None
G	Pressure Gauge
A†	Lockable type

Notes:
***** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
† Not field convertible.
Bold items are most common.

Ordering information

Port size	Description	Flow ‡ scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Bowl capacity cm³ (oz)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	12 bar, relieving, combined manual / semi auto drain	335	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-06-AL00**
3/4"	12 bar, relieving, auto drain	335	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-06-AH00**
3/4"	12 bar, relieving, gauge, combined manual / semi auto drain	335	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-06-ALG0**
3/4"	12 bar, relieving, gauge, auto drain	335	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-06-AHG0**
1"	12 bar, relieving, combined manual / semi auto drain	465	17.5 (254)	-40 (-40)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-08-AL00**
1"	12 bar, relieving, auto drain	465	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-08-AH00**
1"	12 bar, relieving, gauge, combined manual / semi auto drain	465	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-08-ALG0**
1"	12 bar, relieving, gauge, auto drain	465	17.5 (254)	-10 (14)	60 (140)	130 (4.4)	345 (13.5)	90 (3.5)	94 (3.7)	1.5 (3.3)	**B90-08-AHG0**

† **Standard part numbers shown in bold. For other models refer to Options chart above.**
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.
Lockable regulators will require key lock kit (opposite page).

Specifications

Fluid	Compressed air
Maximum inlet pressure*	17.5 bar (254 psig)
Temperature range*:	
Auto drain	-10°C to 60°C (14°F to 140°F)
Combined drain	-40°C to 60°C (-40°F to 140°F)
Particle removal	5 micron
Air quality	Within ISO 8573-1: 1991 Class 3 and 5 (particulates) Within ISO 8573-1: 2001 Class 6 and 7 (particulates)
Typical flow with 10 bar (145 psig) inlet pressure and 6.3 bar (91 psig) set pressure and 0.5 bar (7.3 psig) pressure drop	1" size 465 scfm
Manual / semi-auto drain	Closed at 0.8 bar (11.6 psig) G1/8 thread male
Auto drain bowl pressure to close drain	0.8 bar (11.6 psig)
Operating range manual override facility	0.8 bar (11.6 psig) to 17.5 bar (254 psig)
Bowl capacity	130 cm³ (4.4 US oz)
Gauge ports (x2)	1/4"

* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F).

Material specifications

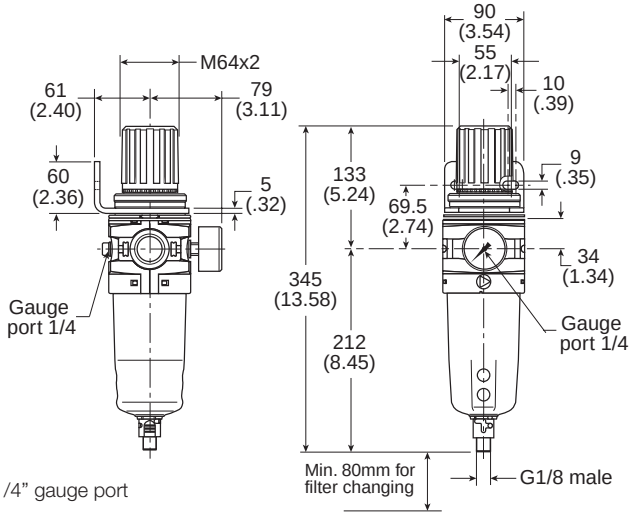
Body		Aluminum
Sight glass		Polypropylene
Body cover		ABS
Element		Sintered polypropylene
Seals		Nitrile NBR
Drains	Manual / semi-auto:	Acetal
	Automatic:	PA / Ø 10mm brass connection
Bonnet		Glass filled polyamide
Control knob		Glass filled polyamide
Valve		Brass / NBR
Screws		Steel / zinc plated

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions mm (inches)



* 1/4" gauge port

Service kits

5 micron element kit.....P3YKA00ESE

Bowl kit
- Manual/semi auto drain (combined) P3YKA00BSC
- Auto drain P3YKA00BSA

Key lock kit..... P3XKA00AS

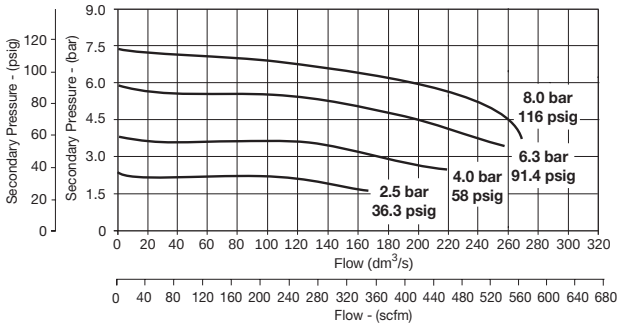
Diaphragm kit
- Relieving type.....P3YKA00RR
- Non-relieving type P3YKA00RN

Angle bracket + metal lock ring P3YKA00MS

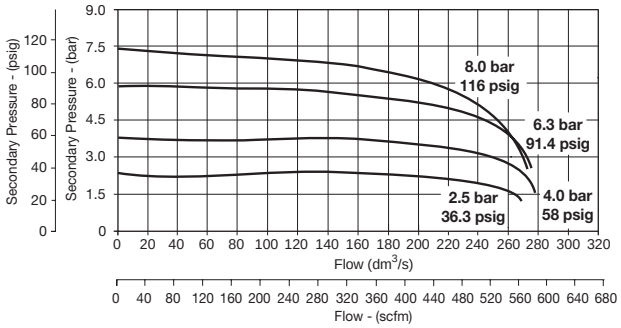
Panel mount nut.....P3YKA00MM

Flow characteristics

(3/4") 5 Micron Filter / Regulator



(1") 5 Micron Filter / Regulator



Filter / Regulator-Lubricator Numbering System

= "Most Popular"

Unit Function	Family		–	Thread Type	Pipe Size	–	Options	Options	Options	Options
D	0	3	–	0	1	–	0	0	0	0

Unit Function
D FR + L

Family
03 Miniature

Thread Type
0 NPT
C BSPP

Pipe Size
1 1/8"
2 1/4"

Options
0 Standard
D Piston Drain
G* Pressure Gauge
L 1 to 60 PSI, Relieving
M Metal Bowl
N 2 to 125 PSI, Non-Relieving
P 1 to 30 PSI, Relieving
Q 1 to 15 PSI, Relieving
S 1 to 60 PSI, Non-Relieving
T 1 to 30 PSI, Non-Relieving
U 1 to 15 PSI, Non-Relieving

* Not available with BSPP thread type.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8, and 9.
For example: M 0 3 - 0 1 - D M 0 0

NOTE: 0000 in position 6, 7, 8 and 9 signifies standard product.
(Poly Bowl, Manual Drain on Filter, no Drain on Lubricator, 2 to 125 PSIG, Relieving)

Unit Function	Family		Thread Type	Pipe Size	–	Options	Options	Options
C	B	7	– 0	3	–	0	0	0

Unit Function / Family
CB7 FR+L Compact

Thread Type
0 NPT
C BSPP

Pipe Size
2 1/4
3 3/8"
4 1/2"

Options
0 Standard
F Auto Drain
G Metal Bowl with Sight Gauge

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Note: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8.
For example:

C B7 - 0 3 - 0 0 0

Unit function		Thread type*		Port size		Regulator function / pressure		Bowl / drain type		Option		Option	
D90	-	0		6	-	A		H		G		M	
Filter / Regulator + Lubricator	D90	**NPT**	**0**	**3/4**	**6**	**A**	**Relieving / 0-174 PSI**	**H**	**Metal bowl with sight gauge / auto drain**	G	Gauge	M	Mounting bracket
		BSPP	C	**1**	**8**			**L**	**Metal bowl with sight gauge / manual drain**				

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Filter / Regulator-Lubricator Numbering System

= "Most Popular"

Unit Function	Family			Thread Type	Pipe Size		Filter / Reg - Lubricator	Bowls / Drains	Options	Options	Level
D	1	8	-	0	3	-	F	K	G	0	B

Unit Function

D	Filter / Regulator Combination and Lubricator

Family

08	Miniature
18	Compact
28	Standard

Thread Type

0	NPT
C	BSPP [2]

Code	Pipe Size	Series		
		08	18	28
2	1/4"	X	X	
3	3/8"		X	X
4	1/2"		X	X
6	3/4"			X

Code	Series
B	08
B	18
B	28

Options

0	**None**
B	Add End Blocks
C	Tamper Resistant Regulator Kit [1]
D	Force Fill Adapter
G	**Pressure Gauge (08 Square), (18 & 28 Round)**
N	Lubricator with No Drain
P	Metal Panel Nut
S	Square Gauge (18 Series Only)

Diaphragm Function	Fluorocarbon	Spring Range			
		0 to 30 PSIG (0 to 2.1 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 125 PSIG (0 to 8.6 bar)	0 to 250 PSIG [4] (0 to 17.2 bar)
Relieving	No	C	D	**F**	G
	Yes	J	K	L[1]	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

Options

0	**None**
B	Add End Blocks
C	Tamper Resistant Regulator Kit [1]
D	Force Fill Adapter
G	**Pressure Gauge (08 Square), (18 & 28 Round)**
N	Lubricator with No Drain
P	Metal Panel Nut
S	Square Gauge (18 Series Only)

Drains	Bowls	
	Plastic w / Guard Nitrile Standard	Metal w/ Sight Gauge [3] Nitrile Standard
Automatic Drain (18 & 28 Series Only)	**G**	H
Manual Drain	**K**	L
Piston Drain (08 Series Only)	R	S

1 Tamper resistant kit not installed. Kit shipped loose in carton.
2 ISO, R228 (G Series).
3 08 series has all metal bowl (no sight gauge).
4 08 series operating range 0 to 232 PSIG (1 to 16 bar).

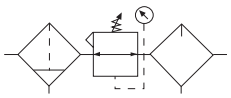
"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Note: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, 9. For example:

D 1 8 - 0 3 - F K G 0 B
Rev.

Combination D03



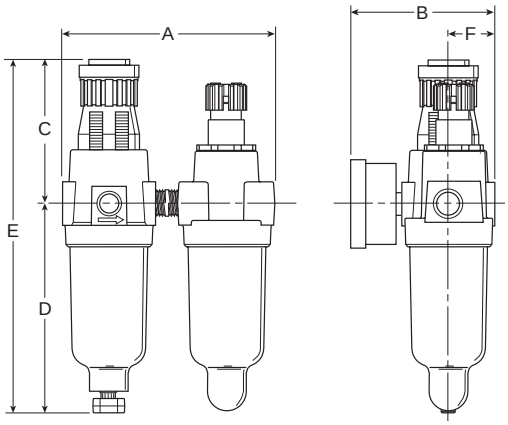


D03-02-0000

= **"Most Popular"**

Features

- Excellent Water Removal Efficiency
- Unbalanced Poppet Standard
- Solid Control Piston for Extended Life
- Non-rising Adjustment Knob
- Two Full Flow 1/8" Gauge Ports
- Proportional Oil Delivery over a Wide Range of Air Flows
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate
- Ideal for Low and Light flow Applications with Changing Air Flow
- Transparent Sight Dome for 360° Visibility



Specifications

Flow Capacity*	1/8	20 SCFM (9.4 dm^3/s)
	1/4	20 SCFM (9.4 dm^3/s)
Gauge Ports (2)		1/8
Minimum Flow for Lubrication		0.7 SCFM at 100 PSIG
Port Threads		1/8, 1/4
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
Secondary Pressure Ranges –		
Standard Pressure		2 to 125 PSIG (0 to 8.6 bar)
Medium Pressure		1 to 60 PSIG (0 to 4.1 bar)
Medium Pressure		1 to 30 PSIG (0 to 2.1 bar)
Low Pressure		1 to 15 PSIG (0 to 1.0 bar)
Weight		.9 lb. (.36 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector	Plastic
Bowls –	
Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Filter Elements – 5 Micron (Standard)	Plastic
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals	Nitrile
Sight Dome	Polycarbonate
Suggested Lubricant	Airline Oil F442001

Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit D03-XX-XXXX		3.75 (95)	2.83 (71.9)	2.42 (61)	3.79 (96)	6.21 (158)	.79 (20)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

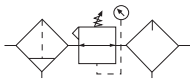
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Plastic Bowl with Gauge	Metal Bowl with Gauge
Manual Drain	1/8	D03-01-G000	D03-01-GM00
	1/4	D03-02-G000	D03-02-GM00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination D08





Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Flush-Mount Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

Specifications

Flow Capacity*	1/4	28 SCFM (14 dm^3/s, ANR)
Gauge Port (2)**	NPT	1/8
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl Metal Bowl	14° to 125°F (-10° to 52°C) 14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Standard Filtration		5 Micron
Weight		1.43 lb. (0.6 kg)

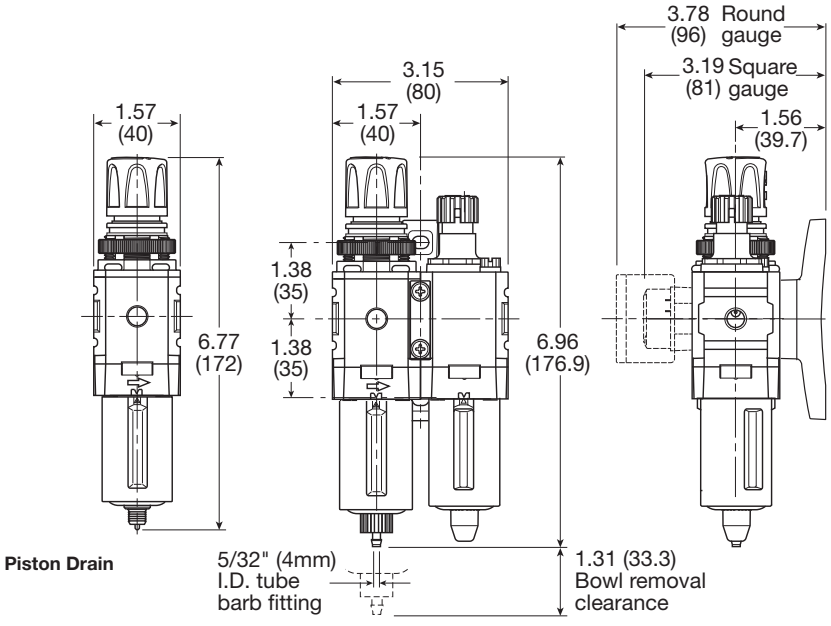
* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

** Non-gauge option only.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Bonnet		PBT
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Diaphragm Assembly		Brass / Nitrile
Filter Element		Polyethylene
Knob		Acetal
Seals	Plastic Bowl Metal Bowl	Nitrile Nitrile
Sight Dome		Polycarbonate
Springs		Steel
Suggested Lubricant		Airline Oil F442001
Valve		Brass / Nitrile



Inches (mm)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model	Port Size	Plastic Bowl w / Plastic Bowl Guard 0 to 125 PSI (0 to 8.6 bar) Without Gauge	Plastic Bowl w / Plastic Bowl Guard 0 to 125 PSI (0 to 8.6 bar) With Gauge	Metal Bowl 0 to 125 PSI (0 to 8.6 bar) Without Gauge	Metal Bowl w / 0 to 125 PSI (0 to 8.6 bar) With Gauge
Manual Drain	1/4	D08-02-FK00B	D08-02-FKG0B	D08-02-FL00B	D08-02-FLG0B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination
CB7



CB7-02-000

= **"Most Popular"**

Specifications

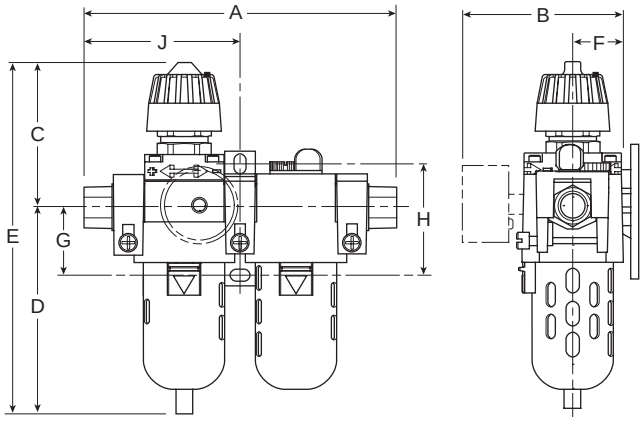
Flow Capacity*	1/4	36.1 SCFM (17.0 dm^3/s)
	3/8	58.5 SCFM (27.6 dm^3/s)
	1/2	64.0 SCFM (30.2 dm^3/s)
Gauge Ports (2)	NPT / BSPP-G	1/4
Port Threads	NPT	1/4, 3/8, 1/2
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 200 PSIG (0 to 14 bar) 32°F to 175°F (0°C to 80°C)
Weight		5.58 lb. (2.5 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Features

- Components Integrated into Single Unit
- Metal Bowl with Sight Gauge Option
- Pressure Gauge Standard
- Integral Plastic Bowl / Bowl Guard
- Quick Disconnect Bowl
- Standard Self-relieving



Materials of Construction

Body	Zinc
Bonnet, Knob	PBT
Bowls –	
Transparent	Polycarbonate
Metal	Zinc
Diaphragm	Nitrile / Zinc
Drain Stem	Acetal / Polycarbonate
Filter Elements	Polypropylene
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals –	
Transparent	Nitrile
Metal	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Stem, Element Retainer and Deflector	Acetal
Suggested Lubricant	Airline Oil F442001

Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G	H	J
Standard Unit With End Blocks CB7-XX-000		8.35 (212)	4.18 (106)	3.95 (44)	5.43 (137.9)	9.38 (238)	1.34 (34)	1.73 (44)	2.98 (75.7)	4.17 (76)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠ WARNING

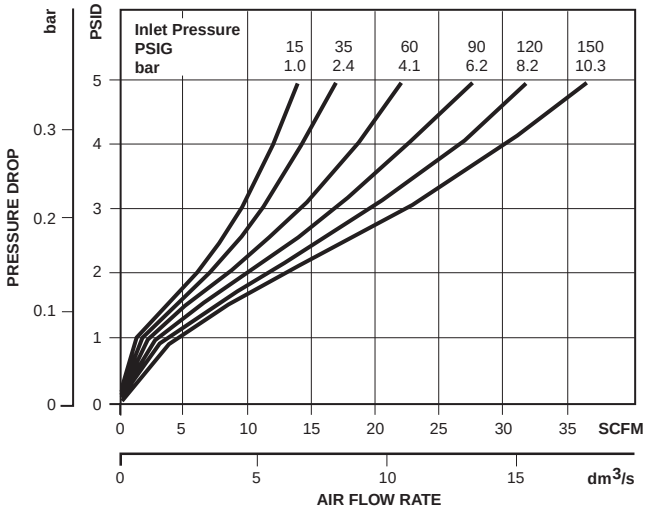
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

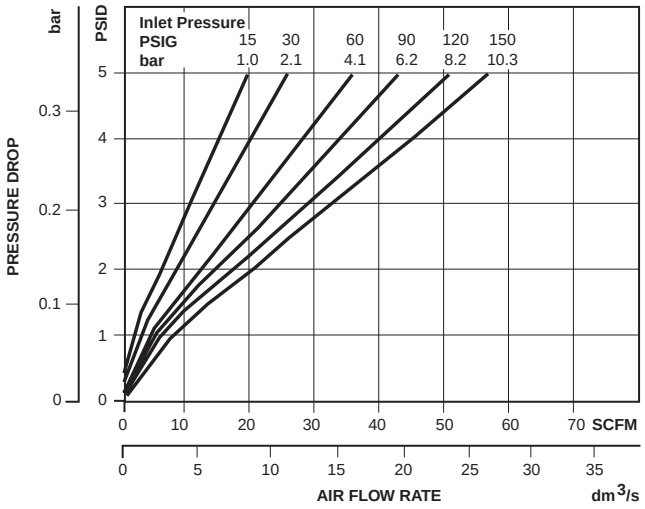
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

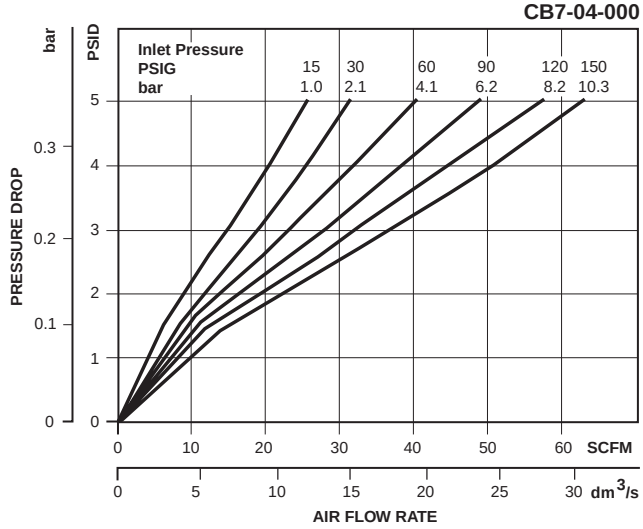
CB7-02-000



CB7-03-000



CB7-04-000

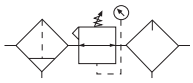


Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard with End Blocks 0 to 125 PSIG (0 to 8.5 bar)	Metal Bowl / Sight Gauge 0 to 125 PSIG (0 to 8.5 bar)	Automatic Drain 0 to 125 PSIG (0 to 8.5 bar)
CB7	1/4	CB7-02-000	CB7-02-G00	CB7-02-F00
	3/8	CB7-03-000	CB7-03-G00	CB7-03-F00
	1/2	CB7-04-000	CB7-04-G00	CB7-04-F00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

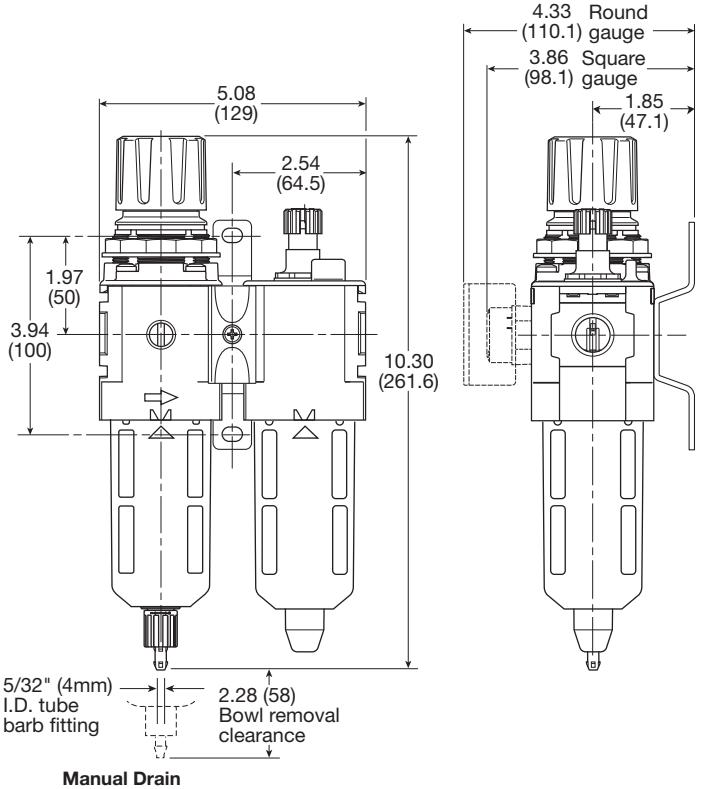
Combination D18





Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard



Manual Drain

Inches (mm)

Specifications

Flow Capacity*	1/4	45 SCFM (22 dm^3/s, ANR)
	3/8	70 SCFM (33 dm^3/s, ANR)
	1/2	90 SCFM (43 dm^3/s, ANR)
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration		5 Micron
Weight		2.98 lb. (1.3 kg)

* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bonnet / Knob		Nylon / Acetal
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly		Nitrile / Steel
Element Retainer / Baffle and Deflector		Acetal Polypropylene
Filter Element	5 micron	Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome		Polycarbonate
Sight Gauge		Polyamide (Nylon)
Springs	Main Regulating	Steel
	Valve	Stainless Steel
Suggested Lubricant		Airline Oil F442001
Valve Assembly		Brass / Nitrile

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

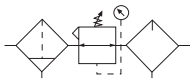
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard Without Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard With Gauge 0 to 125 PSI (0 to 8.6 bar)
Manual Drain	1/4	D18-02-FK00B	D18-02-FKG0B
	3/8	D18-03-FK00B	D18-03-FKG0B
	1/2	D18-04-FK00B	D18-04-FKG0B
Automatic Drain	1/4	D18-02-FG00B	D18-02-FGG0B
	3/8	D18-03-FG00B	D18-03-FGG0B
	1/2	D18-04-FG00B	D18-04-FGG0B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

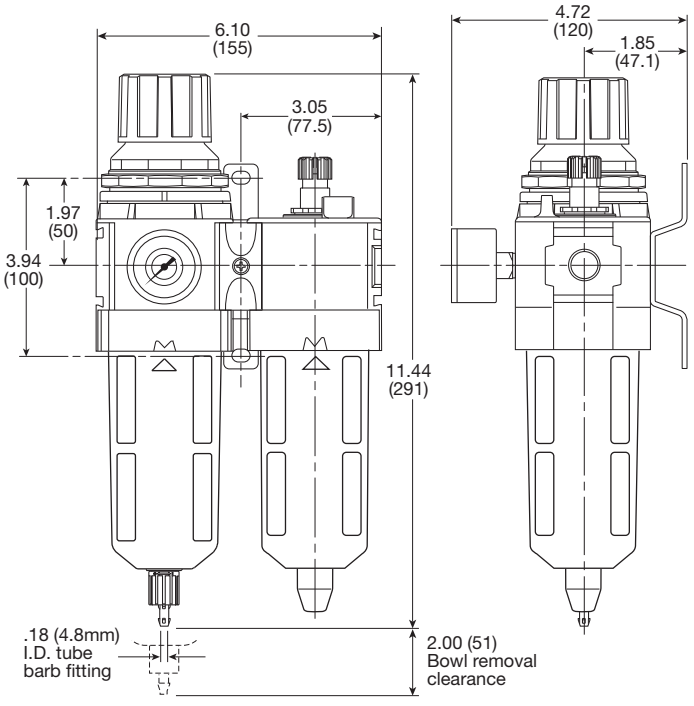
Combination D28





Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard



Manual Drain

Inches (mm)

Specifications

Flow Capacity*	3/8	110 SCFM (52 dm^3/s, ANR)
	1/2	110 SCFM (52 dm^3/s, ANR)
	3/4	150 SCFM (71 dm^3/s, ANR)
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT/BSPP-G	3/8, 1/2, 3/4
Standard Filtration		5 Micron
Weight		4.65 lb. (2.1 kg)

* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Body Cap		ABS
Bonnet / Knob		Nylon / Acetal
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly		Nitrile / Zinc
Element Retainer / Baffle and Deflector		Acetal Polypropylene
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating	Steel
	Valve	Stainless Steel
Suggested Lubricant		Airline Oil F442001
Valve Assembly		Brass / Nitrile / Acetal

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

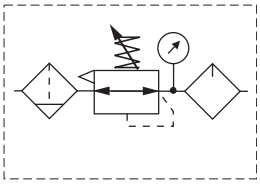
Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Sight Gauge With Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard With Gauge & End Blocks 0 to 125 PSI(0 to 8.6 bar)
Manual Drain	3/8	D28-03-FKG0B	D28-03-FLG0B	D28-03-FKBGB
	1/2	D28-04-FKG0B	D28-04-FLG0B	D28-04-FKBGB
	3/4	D28-06-FKG0B	D28-06-FLG0B	D28-06-FKBGB
Automatic Drain	3/8	D28-03-FGG0B	D28-03-FHG0B	D28-03-FGBGB
	1/2	D28-04-FGG0B	D28-04-FHG0B	D28-04-FGBGB
	3/4	D28-06-FGG0B	D28-06-FHG0B	D28-06-FGBGB

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination
D90

= "Most Popular"





B

Filters, Regulators, Lubricators

Options

D90	-	0	6	-	A	H	G	M

Unit function	
Filter / Regulator + Lubricator	D90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Regulator function / pressure	
A	Relieving / 0-174 PSI

Bowl / drain type	
H	Metal bowl with sight gauge / auto drain
L	Metal bowl with sight gauge / manual drain

Option	
G	Gauge

Option	
M	Mounting bracket

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Filter / Regulator + Lubricator Combinations
5 micron element, 12 bar (174 psig) regulator + gauge and wall mounting bracket

Ordering information

Port size	Flow‡ scfm	Weight kg (lb)	Combined manual / semi-auto drain part number†	Auto drain part number†
3/4"	315	2.8 (6.2)	**D90-06-ALGM**	**D90-06-AHGM**
1"	340	2.8 (6.2)	**D90-08-ALGM**	**D90-08-AHGM**

† **Standard part numbers shown in bold. For other models refer to Options chart below.**
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

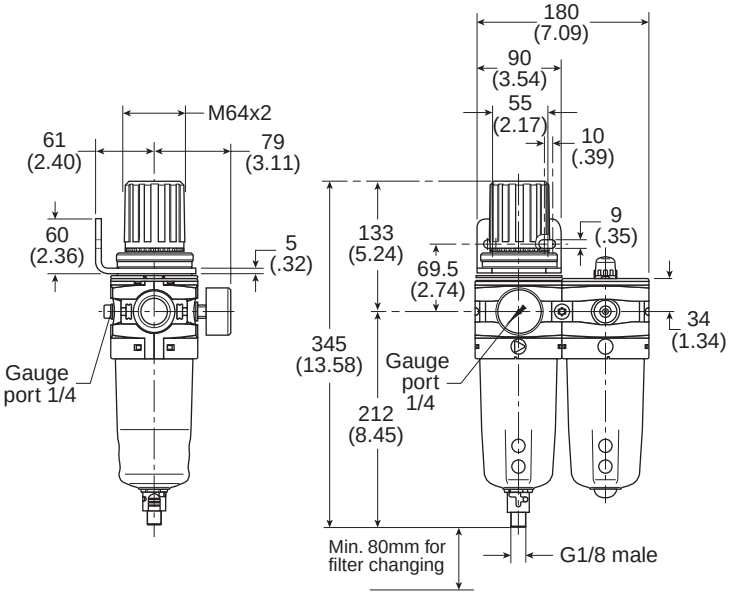
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

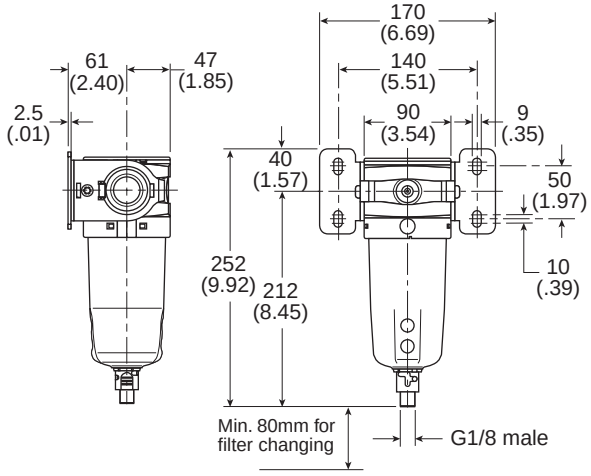
CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions mm (inches)





Combination Numbering System

= "Most Popular"

Unit Function	Family			Thread Type	Pipe Size		Options	Options	Options	Options
C	0	3	–	0	1	–	0	0	0	0

Unit Function
C F-R-L Trio

Family
03 Miniature

Thread Type
0 NPT
C BSPP

Pipe Size
1 1/8"
2 1/4"

Options	
0	**Standard**
D	Piston Drain
G*	Pressure Gauge
L	1 to 60 PSI, Relieving
M	Metal Bowl
N	2 to 125 PSI, Non-Relieving
P	1 to 30 PSI, Relieving
Q	1 to 15 PSI, Relieving
S	1 to 60 PSI, Non-Relieving
T	1 to 30 PSI, Non-Relieving
U	1 to 15 PSI, Non-Relieving

* Not available with BSPP thread type.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8, and 9.
For example: M 0 3 - 0 1 - D M 0 0

NOTE: 0000 in position 6, 7, 8 and 9 signifies standard product.
(Poly Bowl, Manual Drain on Filter, no Drain on Lubricator, 2 to 125 PSIG, Relieving)

Unit Function	Family			Thread Type	Pipe Size		Options	Options	Options
C	1	6	–	0	3	–	0	0	0

Unit Function
C F-R-L Trio

Family
16 Compact
26 Standard
31 Large

Thread Type
0 NPT

Code	Pipe Size	Series 16	Series 26	Series 31
2	1/4"	X	X	
3	3/8"	X	X	
4	1/2"	X	X	
6	3/4"			X
8	1"			X

Options	
0	**Standard**
G	Metal Bowl with Sight Gauge
0	Standard Relieving

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Note: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 6, 7, 8.
For example:

C 1 6 - 0 3 - 0 0 0

C90	-	0	6	-	A	H	G	M

Unit function	
Filter + Regulator + Lubricator	**C90**
Filter / Regulator + Lubricator	**D90**

Thread type*	
NPT	**0**
BSPP	C

Port size	
3/4	**6**
1	**8**

Regulator function / pressure	
A	**Relieving / 0-174 PSI**

Bowl / drain type	
H	**Metal bowl with sight gauge / auto drain**
L	**Metal bowl with sight gauge / manual drain**

Option	
G	Gauge

Option	
M	Mounting bracket

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Combination Numbering System

= "Most Popular"

Unit Function	Family			Thread Type	Pipe Size		F-R-L Trio		Bowls / Drains	Options	Options	Level
C	1	8	-	0	3	-	F		K	G	0	B

Unit Function

C F-R-L Trio

Family

08 Miniature
18 Compact
28 Standard

Thread Type

0 NPT
C BSPP [2]

Code	Pipe Size	Series		
		08	18	28
2	1/4"	X	X	
3	3/8"		X	X
4	1/2"		X	X
6	3/4"			X

Code	Series
B	08
B	18
B	28

Options

0	**None**
C	Tamper Resistant Regulator Kit [1]
D	Force Fill Adapter
G	**Pressure Gauge (08 Square) (18 & 28 Round)**
L	Differential Pressure Indicator (18 & 28 Only)
N	Lubricator with No Drain
P	Metal Panel Nut
R	Electronic Differential Pressure Indicator (18 & 28 Series Only)
S	Square Gauge (18 Series only)

Diaphragm Function	Fluorocarbon	Spring Range			
		0 to 30 PSIG (0 to 2.1 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 125 PSIG (0 to 8.6 bar)	0 to 250 PSIG [4] (0 to 17.2 bar)
Relieving	No	C	D	**F**	G
	Yes	J	K	L	M
Non-relieving	No	P	W	R	S
	Yes	V	X	Y	Z

Wilkerson combination models are offered with the T-bracket(s) as standard.

Drains	Bowls	
	Plastic w / Guard Nitrile Standard	Metal w/Sight Gauge [3] Nitrile Standard
Automatic Drain (18 & 28 Series Only)	**G**	H
Manual Drain	**K**	L
Piston Drain (08 Series Only)	R	S

Options

0	**None**
B	Add End Blocks
C	Tamper Resistant Regulator Kit [1]
D	Force Fill Adapter
G	**Pressure Gauge (08 Square), (18 & 28 Round)**
L	Differential Pressure Indicator (18 & 28 Only)
N	Lubricator with No Drain
P	Metal Panel Nut
R	Electronic Differential Pressure Indicator (18 & 28 Series Only)
S	Square Gauge (18 Series Only)

1 Tamper resistant kit not installed. Kit shipped loose in carton.

2 ISO, R228 (G Series).

3 08 series has all metal bowl (no sight gauge).

4 08 series operating range 0 to 232 PSIG (1 to 16 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, 9. For example:

C 1 8 - 0 3 - F K G 0 B

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.

Combination C03



C03-02-0000

= "Most Popular"

Specifications

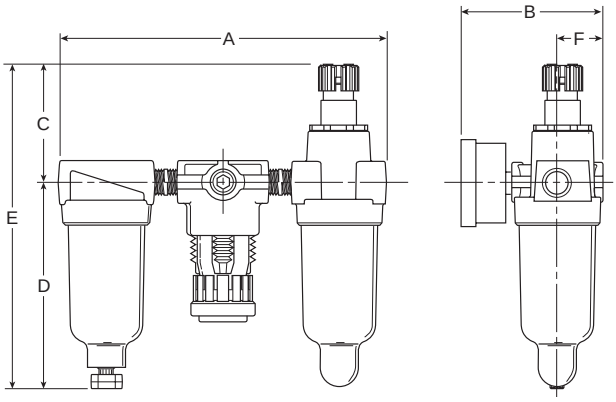
Flow Capacity*	1/8	20 SCFM (9.4 dm^3/s)
	1/4	20 SCFM (9.4 dm^3/s)
Gauge Ports (2)		1/8
Minimum Flow for Lubrication		0.7 SCFM at 100 PSIG
Port Threads		1/8, 1/4
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 250 PSIG (0 to 17.2 bar) 32°F to 175°F (0°C to 80°C)
Secondary Pressure Ranges –		
Standard Pressure		2 to 125 PSIG (0 to 8.6 bar)
Medium Pressure		1 to 60 PSIG (0 to 4.1 bar)
Medium Pressure		1 to 30 PSIG (0 to 2.1 bar)
Low Pressure		1 to 15 PSIG (0 to 1.0 bar)
Weight		.9 lb. (.36 kg)

* Inlet pressure 100 PSIG (6.9 bar). Secondary pressure 90 PSIG (6.2 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Features

- Excellent Water Removal Efficiency
- Unbalanced Poppet Standard
- Solid Control Piston for Extended Life
- Non-rising Adjustment Knob
- Two Full Flow 1/8" Gauge Ports
- Proportional Oil Delivery over a Wide Range of Air Flows
- Precision Needle Valve Assures Repeatable Oil Delivery and Provides Simple Adjustment of Delivery Rate
- Ideal for Low and Light flow Applications with Changing Air Flow
- Transparent Sight Dome for 360° Visibility
- Regulator can be mounted with knob in up or down position. (Factory supplied in down position)



Materials of Construction

Adjusting Nut	Brass
Adjusting Stem & Spring	Steel
Body	Zinc
Bonnet, Knob, Seat, Piston, Holder & Deflector	Plastic
Bowls –	
Transparent	Polycarbonate
Metal (Without Sight Gauge)	Zinc
Filter Elements – 5 Micron (Standard)	Plastic
Manual Drain –	
Body & Stem	Plastic
Seals	Nitrile
Piston Drain –	
Piston & Seals	Nitrile
Stem, Seat, Adaptor & Washers	Aluminum
Seals	Nitrile
Sight Dome	Polycarbonate
Suggested Lubricant	Airline Oil F442001

Dimensions

Model	Inches (mm)	A	B	C	D	E	F
Standard Unit C03-XX-XXXX		5.77 (147)	2.83 (71.9)	2.16 (55)	3.82 (97)	5.98 (152)	.79 (20)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

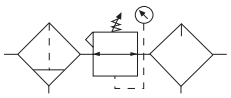
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Plastic Bowl with Gauge	Plastic Bowl without Gauge	Metal Bowl with Gauge	Metal Bowl without Gauge
Manual Drain	1/8	C03-01-G000	C03-01-0000	C03-01-GM00	C03-01-M000
	1/4	C03-02-G000	C03-02-0000	C03-02-GM00	C03-02-M000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination C08





Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Flush-Mount Pressure Gauge and Modular T-bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

Specifications

Flow Capacity*	1/4	27 SCFM (13 dm^3/s, ANR)
Gauge Port** (2)	NPT	1/8
Maximum Supply Pressure	Plastic Bowl Metal Bowl	150 PSIG (10.3 bar) 250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl Metal Bowl	14° to 125°F (-10° to 52°C) 14° to 150°F (-10° to 65.5°C)
Port Size	NPT / BSPP-G	1/4
Standard Filtration		5 Micron
Weight		1.96 lb. (0.9 kg)

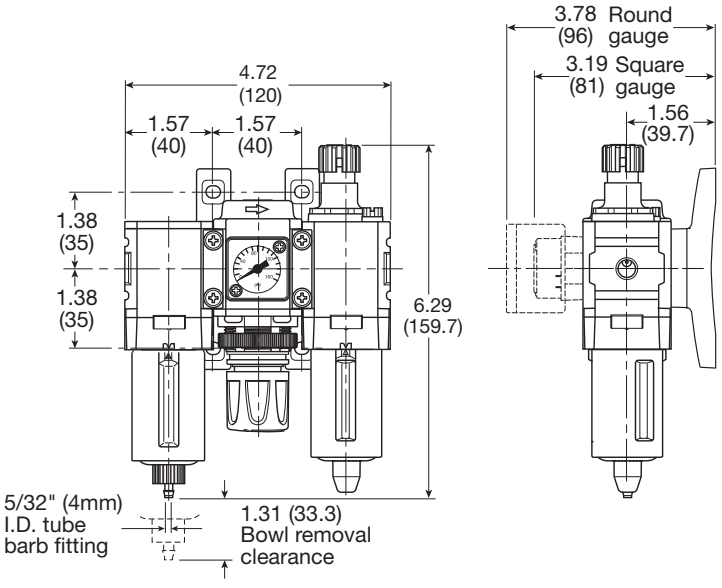
* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

** Non-gauge option only.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Bonnet		PBT
Bowl	Plastic Bowl Metal Bowl	Polycarbonate Aluminum
Bowl Guard		Nylon
Diaphragm Assembly		Brass / Nitrile
Filter Element		Polyethylene
Knob		Acetal
Seals	Plastic Bowl Metal Bowl	Nitrile Nitrile
Sight Dome		Polycarbonate
Springs		Steel
Suggested Lubricant		Airline Oil F442001
Valve		Brass / Nitrile



Inches (mm)

Manual Drain

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

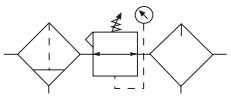
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / Without Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Without Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / With Gauge 0 to 125 PSI (0 to 8.6 bar)
Manual Drain	1/4	C08-02-FK00B	C08-02-FKG0B	C08-02-FL00B	C08-02-FLG0B

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination C18





Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

Specifications

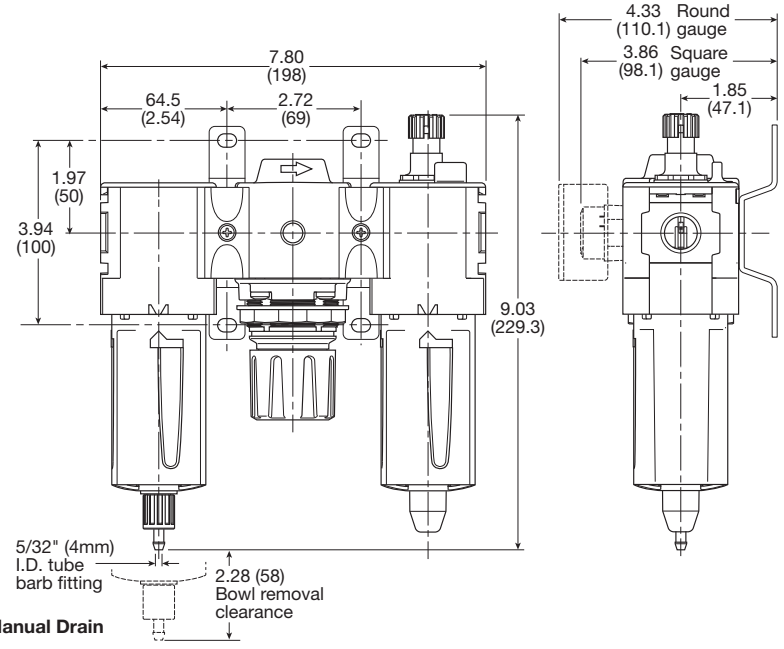
Flow Capacity*	1/4	42 SCFM (20 dm^3/s, ANR)
	3/8	68 SCFM (32 dm^3/s, ANR)
	1/2	85 SCFM (40 dm^3/s, ANR)
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	1/4, 3/8, 1/2
Standard Filtration		5 Micron
Weight		4.04 lb. (1.83 kg)

* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Bonnet / Knob		Nylon / Acetal
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly		Nitrile / Zinc
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating Valve	Steel Stainless Steel
Suggested Lubricant		Airline Oil F442001
Valve		Brass / Nitrile



Inches (mm) **Manual Drain**

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

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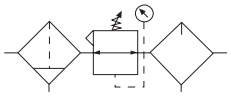
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Sight Gauge / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / With Gauge & End Blocks 0 to 125 PSI (0 to 8.6 bar)
Manual Drain	1/4	C18-02-FKG0B	C18-02-FLG0B	C18-02-FKBGB
	3/8	C18-03-FKG0B	C18-03-FLG0B	C18-03-FKBGB
	1/2	C18-04-FKG0B	C18-04-FLG0B	C18-04-FKBGB
Automatic Drain	1/4	C18-02-FGG0B	C18-02-FHG0B	C18-02-FGBGB
	3/8	C18-03-FGG0B	C18-03-FHG0B	C18-03-FGBGB
	1/2	C18-04-FGG0B	C18-04-FHG0B	C18-04-FGBGB

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination C16





C16-02-000

= **"Most Popular"**

Specifications

Flow Capacity*	1/4	36.1 SCFM (17.0 dm^3/s)
	3/8	58.5 SCFM (27.6 dm^3/s)
	1/2	64.0 SCFM (30.2 dm^3/s)
Gauge Ports (2)	NPT	1/4
Port Threads	NPT	1/4, 3/8, 1/4
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 200 PSIG (0 to 13.8 bar) 32°F to 175°F (0°C to 80°C)
Standard Filtration		5 Micron
Weight		7.3 lb. (3.3 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

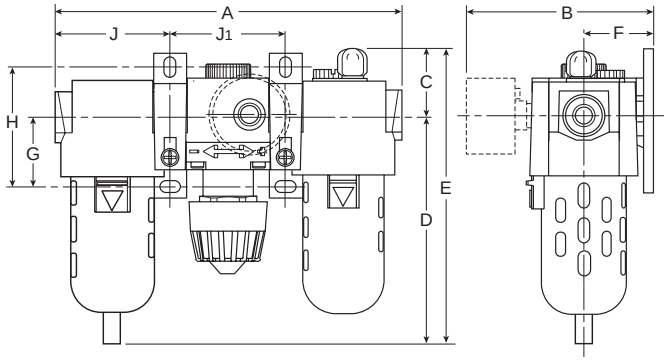
"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body	Zinc
Bonnet, Knob	PBT
Bowls –	
Plastic Bowl	Polycarbonate
Metal Bowl	Zinc
Diaphragm	Nitrile / Zinc
Filter Element	Polypropylene
Seals –	
Plastic Bowl	Nitrile
Metal Bowl	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Suggested Lubricant	Airline Oil F442001
Valve Assembly	Brass / Nitrile / Acetal

Features

- Components Integrated into Single Unit
- Metal Bowl with Sight Gauge Option
- Pressure Gauge Standard
- Integral Plastic Bowl / Bowl Guard
- Quick Disconnect Bowl
- Standard Self-relieving



Dimensions

Model (Inches (mm))	A	B	C	D	E	F	G	H	J	J1
Standard Unit with End Blocks C16-XX-000	11.30 (287)	4.30 (109)	1.62 (41)	5.50 (139.7)	7.12 (180.8)	1.30 (33)	1.74 (44)	2.98 (75.7)	5.65 (143.5)	2.91 (73.9)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠ WARNING

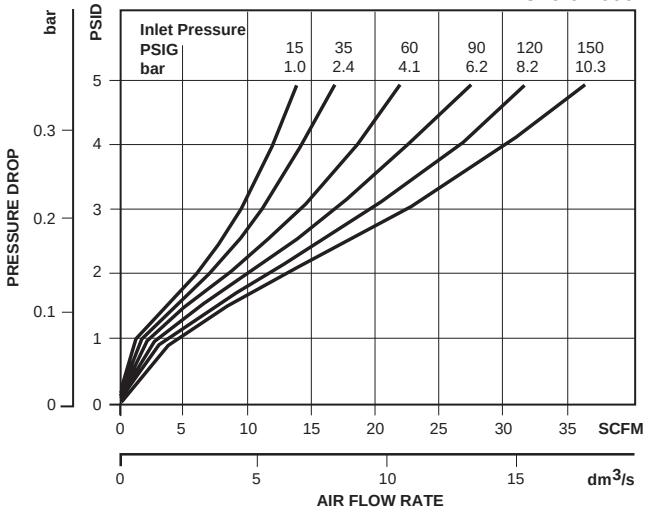
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

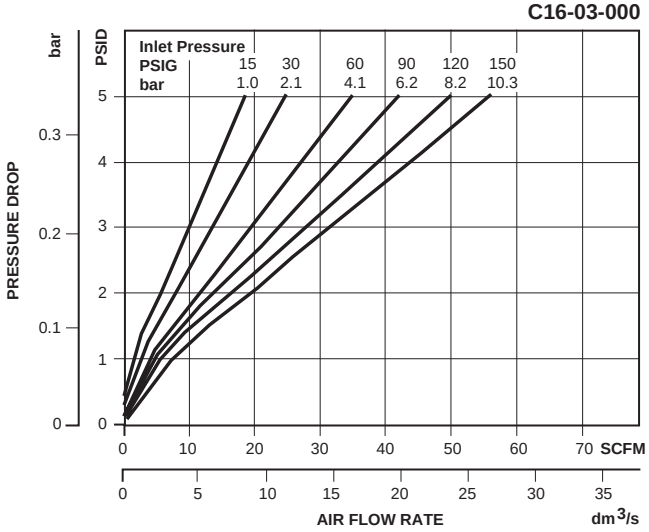
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

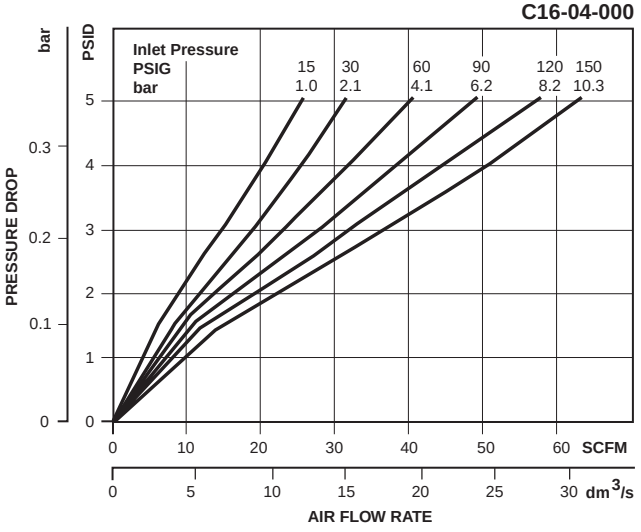
C16-02-000



C16-03-000



C16-04-000

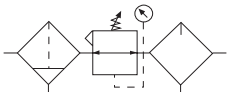


Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard with End Blocks 0 to 125 PSIG (0 to 8.5 bar)	Metal Bowl / Sight Gauge 0 to 125 PSIG (0 to 8.5 bar)
C16	1/4	C16-02-000	C16-02-G00
	3/8	C16-03-000	C16-03-G00
	1/2	C16-04-000	C16-04-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination C28





Features

- Components Integrated into Single Unit
- Modern Design and Appearance
- Light Weight, Ready-to-Mount Assembly Comes Standard with Pressure Gauge and Modular T-Bracket / Joiner Assembly
- High Flow Capacity
- Quick-Disconnect Bowl / Bowl Guard

Specifications

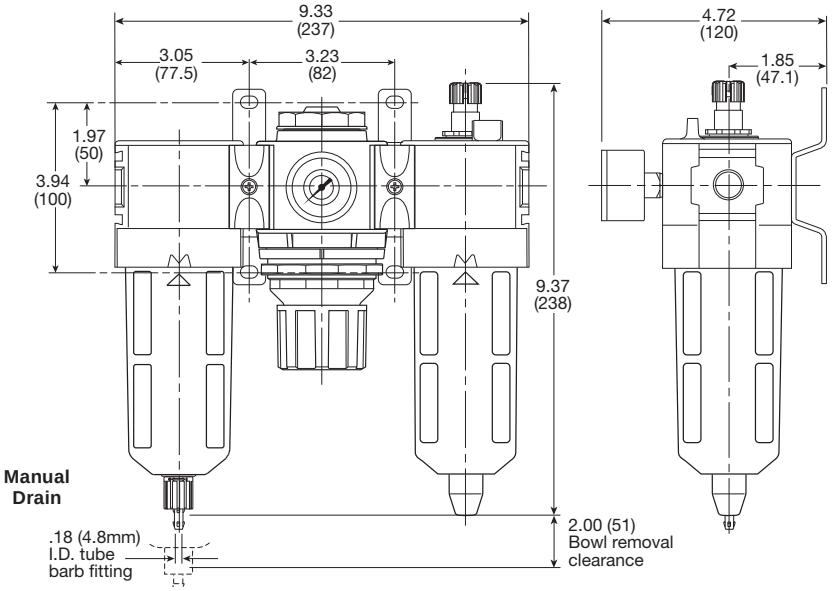
Flow Capacity*	3/8	90 SCFM (43 dm^3/s, ANR)
	1/2	90 SCFM (43 dm^3/s, ANR)
	3/4	110 SCFM (52 dm^3/s, ANR)
Gauge Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure	Plastic Bowl	150 PSIG (10.3 bar)
	Metal Bowl	250 PSIG (17.2 bar)
Operating Temperature	Plastic Bowl	-13° to 125°F (-25° to 52°C)
	Metal Bowl	-13° to 150°F (-25° to 65.5°C)
Port Size	NPT / BSPP-G	3/8, 1/2, 3/4
Standard Filtration		5 micron
Weight		5.90 lb. (2.6 kg)

* Inlet pressure 145 PSIG (10 bar), Secondary pressure 91.3 PSIG (6.3 bar), 14.5 PSIG (1 bar) pressure drop.

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body		Aluminum
Bonnet / Knob		Nylon / Acetal
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Aluminum
Diaphragm Assembly		Nitrile / Zinc
Filter Element		Polyethylene
Seals	Plastic Bowl	Nitrile
	Metal Bowl	Nitrile
Sight Dome		Polycarbonate
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Springs	Main Regulating Valve	Steel Stainless Steel
Suggested Lubricant		Airline Oil F442001
Valve		Brass / Nitrile / Acetal



Inches (mm)

= **"Most Popular"**

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Metal Bowl / Sight Gauge / With Gauge 0 to 125 PSI (0 to 8.6 bar)	Plastic Bowl / Bowl Guard / With Gauge & End Blocks 0 to 125 PSI (0 to 8.6 bar)
Manual Drain	3/8	C28-03-FKG0B	C28-03-FLG0B	C28-03-FKBGB
	1/2	C28-04-FKG0B	C28-04-FLG0B	C28-04-FKBGB
	3/4	C28-06-FKG0B	C28-06-FLG0B	C28-06-FKBGB
Automatic Drain	3/8	C28-03-FGG0B	C28-03-FHG0B	C28-03-FGBGB
	1/2	C28-04-FGG0B	C28-04-FHG0B	C28-04-FGBGB
	3/4	C28-06-FGG0B	C28-06-FHG0B	C28-06-FGBGB

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination C26



C26-02-000

Features

- Components Integrated into Single Unit
- Metal Bowl with Sight Gauge Option
- Pressure Gauge Standard
- Integral Plastic Bowl / Bowl Guard
- Quick Disconnect Bowl
- Standard Self-relieving

= **"Most Popular"**

Specifications

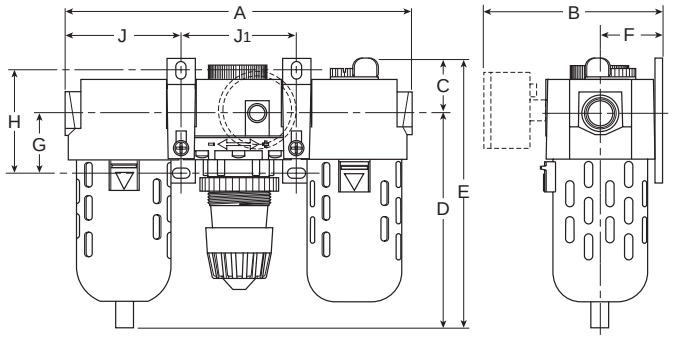
Flow Capacity*	1/4	35.0 SCFM (16.5 dm^3/s)
	3/8	60.0 SCFM (28.3 dm^3/s)
	1/2	128 SCFM (60.4 dm^3/s)
Gauge Ports (2)	NPT / BSPP-G	1/4
Port Threads	NPT	1/4, 3/8, 1/2
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 200 PSIG (0 to 13.8 bar) 32°F to 175°F (0°C to 80°C)
Standard Filtration		5 Micron
Weight		10.5 lb. (4.7 kg)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body	Zinc
Bonnet, Knob	PBT
Bowls –	
Plastic Bowl	Polycarbonate
Metal Bowl	Zinc
Diaphragm	Nitrile / Zinc
Filter Element	Polypropylene
Seals –	
Plastic Bowl	Nitrile
Metal Bowl	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Suggested Lubricant	Airline Oil F442001
Valve Assembly	Brass / Nitrile / Acetal



Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G	H	J	J1
Standard Unit with End Blocks C26-XX-000		12.35 (314)	4.80 (122)	1.60 (41)	6.40 (162.6)	8.00 (203)	1.50 (38)	1.74 (44)	2.98 (75.7)	6.17 (157)	3.35 (85.1)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠ WARNING

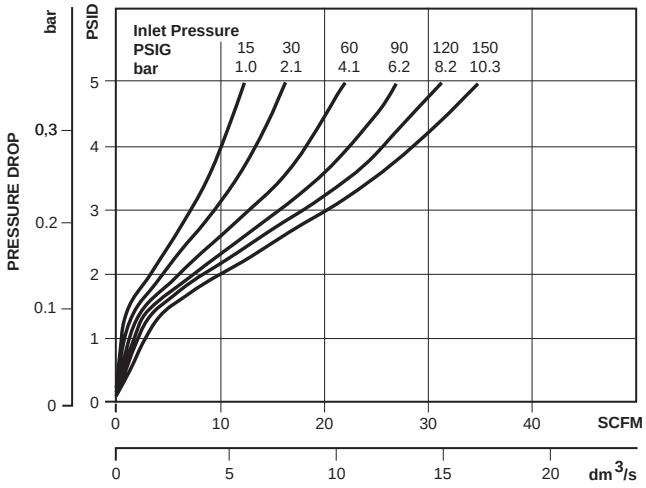
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

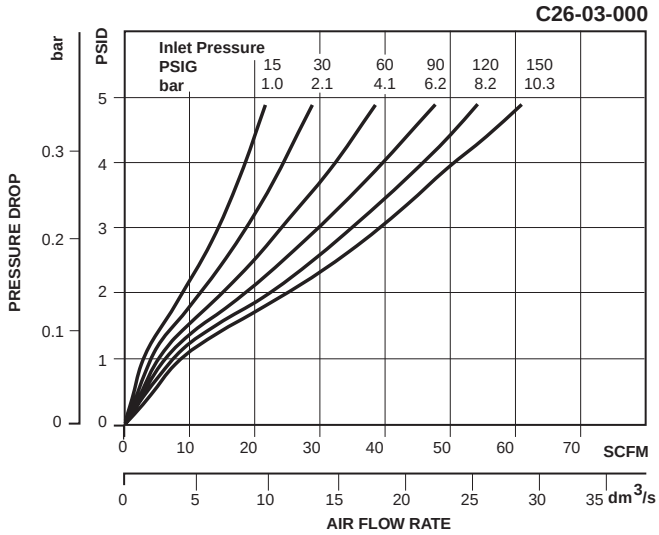
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

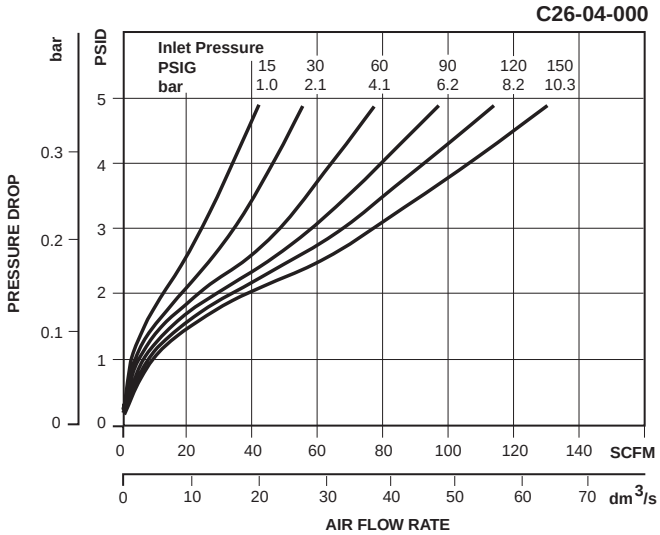
C26-02-000



C26-03-000



C26-04-000



Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard with End Blocks 0 to 125 PSIG (0 to 8.5 bar)	Metal Bowl / Sight Gauge 0 to 125 PSIG (0 to 8.5 bar)
C26	1/4	C26-02-000	C26-02-G00
	3/8	C26-03-000	C26-03-G00
	1/2	C26-04-000	C26-04-G00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination C31

= "Most Popular"



C31-06-000

Features

- 5 Micron Filtration
- High Flow Capacity
- Large Bowl Reservoir
- Pressure Gauge
- Standard Self-relieving

Specifications

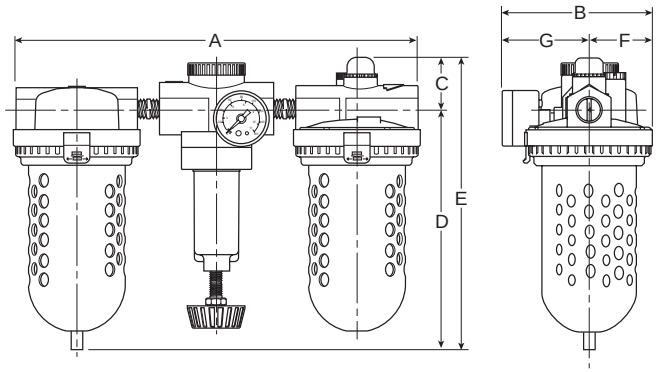
Flow Capacity*	3/4, 1	374 SCFM (176.5 dm^3/s)
Gauge Ports (2)	NPT	1/4
Port Threads	NPT	3/4, 1
Pressure & Temperature Ratings –		
Plastic Bowl		0 to 150 PSIG (0 to 10.3 bar) 32°F to 125°F (0°C to 52°C)
Metal Bowl		0 to 200 PSIG (0 to 13.8 bar) 32°F to 175°F (0°C to 80°C)
Standard Filtration		5 Micron
Weight		18.2 lb. (8.2 kg)

* Inlet pressure 120 PSIG (8.3 bar). Pressure drop 5 PSID (0.3 bar).

"F" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

Materials of Construction

Body	Zinc
Bonnet, Piston	Zinc
Bowls –	
Plastic Bowl	Polycarbonate
Metal Bowl	Zinc
Filter Element	Polypropylene
Seals –	
Plastic Bowl	Nitrile
Metal Bowl	Fluorocarbon
Sight Dome	Nylon
Springs	Steel
Suggested Lubricant	Airline Oil F442001
Valve Assembly	Brass / Nitrile / Acetal



Dimensions

Model	Inches (mm)	A	B	C	D	E	F	G
Standard Unit C31-XX-000		15.30 (389)	5.70 (145)	1.98 (50)	8.96 (228)	10.94 (278)	2.40 (60.9)	3.30 (83.8)

= "Most Popular"

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠ WARNING

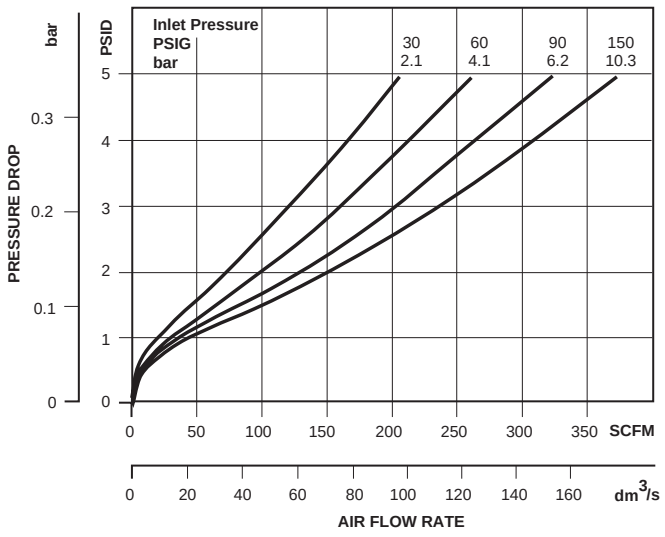
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

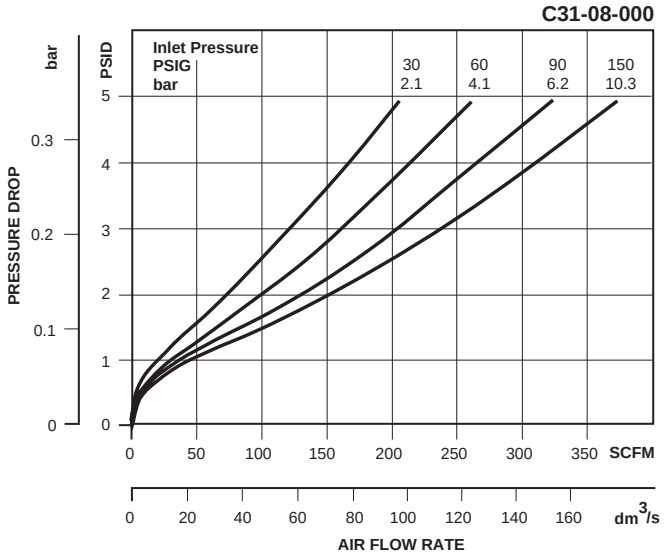
REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

C31-06-000



C31-08-000



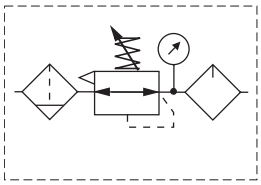
Ordering Information

Model Type	Port Size	Plastic Bowl / Bowl Guard 0 to 125 PSIG (0 to 8.5 bar)
C31	3/4	C31-06-000
	1	C31-08-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Combination
C90

= "Most Popular"





Options

C90	-	0	6	-	A	H	G	M
Unit function		Thread type*	Port size		Regulator function / pressure	Bowl / drain type	Option	Option
Filter + Regulator + Lubricator C90		NPT 0 BSPP C	3/4 6 1 8		A Relieving / 0-174 PSI	H Metal bowl with sight gauge / auto drain L Metal bowl with sight gauge / manual drain	G Gauge	M Mounting bracket

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Filter + Regulator + Lubricator Combinations
5 micron element, 12 bar (174 psig) regulator + gauge and wall mounting bracket

Ordering information

Port size	Flow‡ scfm	Weight kg (lb)	Combined manual / semi-auto drain part number†	Auto drain part number†
3/4"	170	3.3 (7.3)	**C90-06-ALGM**	**C90-06-AHGM**
1"	170	3.3 (7.3)	**C90-08-ALGM**	**C90-08-AHGM**

† **Standard part numbers shown in bold. For other models refer to Options chart below.**
‡ Flow with 10 bar (145 psig) inlet pressure, 6.3 bar (91.4 psig) set pressure and 1 bar (14.5 psig) pressure drop.

Note: For Kits and Repair Parts, see individual pages for Filters, Regulators, and Lubricators.

⚠WARNING

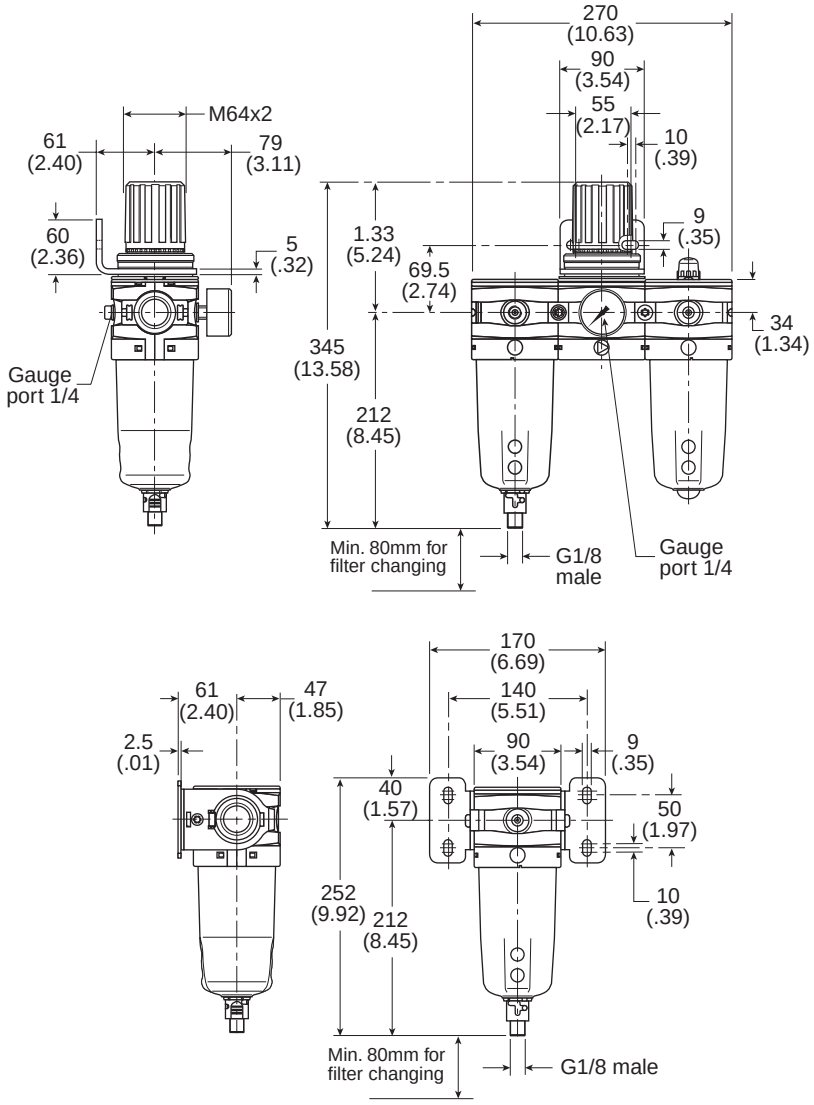
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions mm (inches)



Notes

C

Additional Modular Products

Additional Modular Products



Slow-Start / Quick Dump Valves C2-C3
E09 ....C4
E18 / E28....C6
E28 ....C8
E90 ....C12
S18 / S28....C14
S90 ....C16
Q09 / Q19....C18

Electronic Proportional Regulator C20-C21
ER09, ER19 ....C22
ER90....C38
ER1 / ER2 ....C40

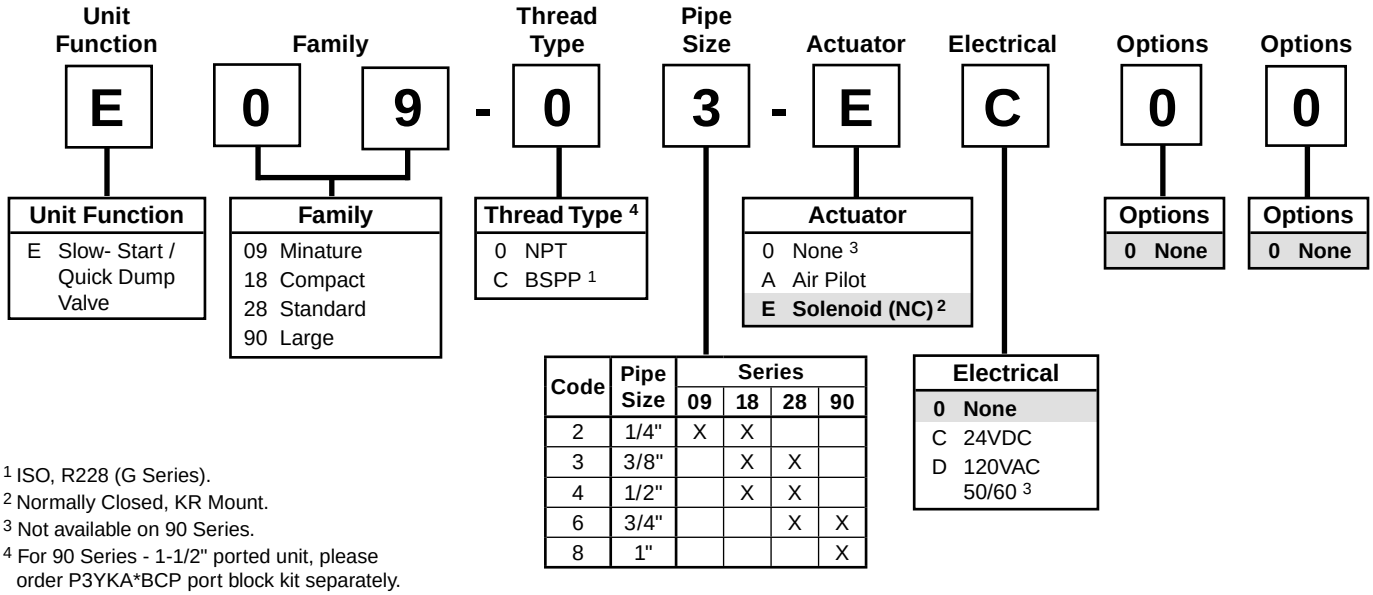
Electronic Proportional Valve....C43
EPV C44

Safety Lockout Valves....C52
V40 / V60 / V73 ....C52
V90 ....C53

Diverter Blocks....C54
N08....C55
N18 / N28 ....C56
NJ8 ....C57
P3YKA....C58
P3YMA C58

Slow-Start / Quick Dump Valve Numbering System

= "Most Popular"



Code	Pipe Size	Series			
		09	18	28	90
2	1/4"	X	X		
3	3/8"		X	X	
4	1/2"		X	X	
6	3/4"			X	X
8	1"				X

[1] ISO, R228 (G Series).
[2] Normally Closed, KR Mount.
[3] Not available on 90 Series.
[4] For 90 Series - 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.

C

Additional Modular Products

Slow-Start / Quick Dump Valve

The Slow-Start / Quick Dump Valve is designed as a three-way Quick Dump Valve with a built-in Slow-Start capability. This Slow-Start capability allows control of downstream pressure buildup at start-up of a compressed air system. The combination of Slow-Start and Quick Dump reduces the number of pneumatic components and the unique volume-independent design allows any number of additions to the pneumatic circuit without readjusting the Slow-Start function.

Slow-Start Valve Numbering System

= "Most Popular"

Unit Function	Family		Thread Type	Pipe Size		Actuator	Electrical	Options	Options
S	1	8	- 0	3	-	A	0	0	0

Unit Function
S Slow Start

Family
18 Compact
28 Standard
90 Large

Thread Type [2]
0 NPT
C BSPP [1]

Actuator
A Internal Air Pilot

Electrical
0 None

Options
0 None

Options
0 None

Code	Pipe Size	Series		
		18	28	90
2	1/4"	X		
3	3/8"	X	X	
4	1/2"	X	X	
6	3/4"		X	X
8	1"			X

[1] ISO, R228 (G Series).
[2] For 90 Series - 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.

C

Additional Modular Products

Slow-Start Valve

The Slow Start Valve is used in compressed air systems to control the rate of downstream pressure buildup at start-up. The Slow Start Valve is also referred to as the "Monday Morning" valve or smooth start valve.

The Slow Start Valve allows cylinders, valves and other pneumatically operated components to gradually move into their normal start-up position. The design and operation of the slow start valve can reduce the possibility of equipment or part damage and occupational hazard to the worker.

The normally closed slow start valves are air-piloted.

Testing was conducted by applying a P1 pressure and measuring an increasing P2 pressure until P2 reached P1.

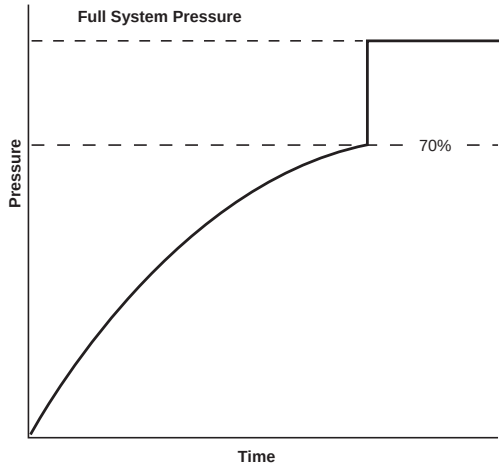
Response time conducted with 46.36 in^3 (759.8 cm^3) volume.

The S18 and S28 Slow Start Valves are volume dependent devices. The amount of time it takes for the valve to open fully is dependent on the system volume downstream of the slow start valve. The adjusting screw meters the air flow that is pressurizing the system volume. When the system volume is pressurized to approximately 70% of the line pressure, the main valve inside the slow start valve is snapped open. When this occurs, the system volume (i.e. the cylinders, air motors, air tools, etc.) sees full line pressure.

The S18 / S28 is offered as standard in the internal air-piloted version. It can be field converted to solenoid-operated by removing the top cap to access the KR solenoid valve mounting pattern, which pre-drilled and tapped on all bodies. A CNOMO Mount Solenoid valve can also be used by ordering kit number VRP-95-713, KR to CNOMO adapter block.

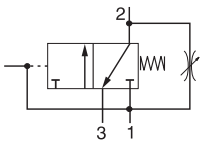
Note: Minimum Operating Pressure = 30 PSIG (2.1 bar)

Maximum Flow Across Needle Valve = 12 SCFM (5.6 dm^3/s)



Combined Soft-Start Dump Valve & Remote Operated Dump Valve E09

= "Most Popular"





E09-02 -EC00

Specifications

Flow Capacity*	1/4	17 SCFM (36 dm³/s)
Exhaust Port		1/4
Air Pilot Port		1/8
Port Threads –	NPT or BSPT	1/4
Pressure & Temperature Ratings –		
Solenoid		150 PSIG (10 bar) 122°F (50°C)
Air Pilot		250 PSIG (17 bar) 176°F (80°C)
Minimum Operating Pressure		44 PSIG (3 bar)
Weight		13 oz. (.41 kg)

* Inlet pressure 91 PSIG (6.3 bar). Pressure drop 14.5 PSID (1 bar).

Materials of Construction

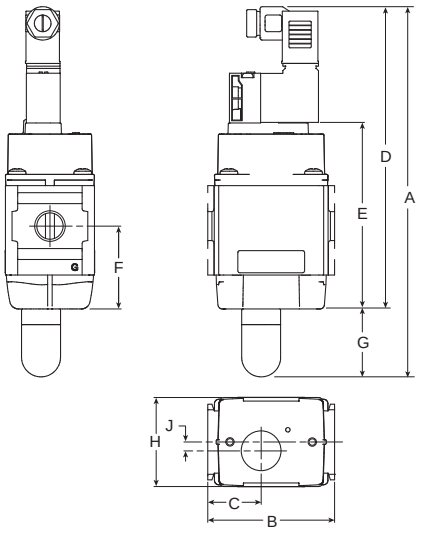
Body	Aluminum
Body Cover	Polyester
Seals	Nitrile NBR

C

Additional Modular Products

Features

- Modular Design with 1/4" (BSPT or NPT)
- Provides for the Safe Introduction of Pressure
- The 3-way, 2-position Function Automatically Dumps Downstream Pressure on the Loss of Pilot Signal
- 24VDC, 120VAC Solenoid or Air Pilot Versions Available
- Soft Start Fill Rate Easily Adjusted
- Solenoid or Air Pilot Options
- High Flow & Exhaust Capability

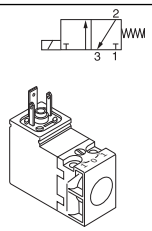


Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G	H	J
Standard Unit E09-02-EC00	6.53 (166)	2.24 (57)	94 (24)	5.35 (136)	3.30 (84)	1.45 (37)	1.20 (30.5)	1.57 (40)	0.15 (4)

= “Most Popular”

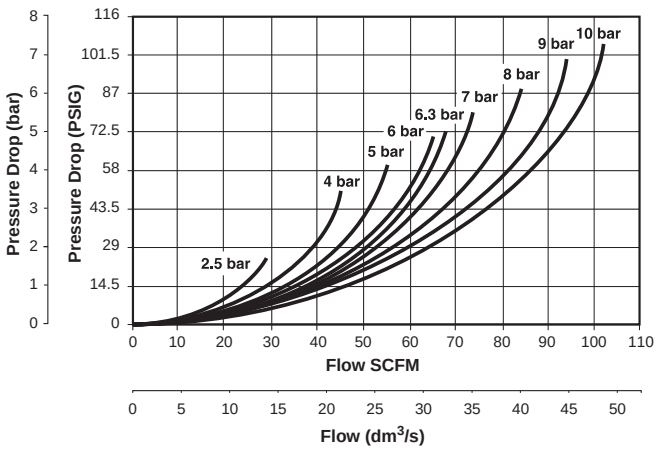
Solenoids 15mm NC, 1.2W / 1.6 VA Standard Flow DIN



Voltage	Weight g	Order code Override, blue, non locking flush
12 VDC	38	P2E-KV32B1
24 VDC	38	P2E-KV32C1
115 VAC 50 Hz/ 120 VAC 60 Hz	38	P2E-KV31F1
230 VAC 50 Hz/ 240 VAC 60 Hz	38	P2E-KV31J1

Flow characteristics

1/4 Soft Start & Dump Valve



Mounting Brackets

Description	Order code
L-Bracket mounting kit	P3HKA00ML
Foot bracket mounting kit	P3HKA00MC

C

Additional Modular Products

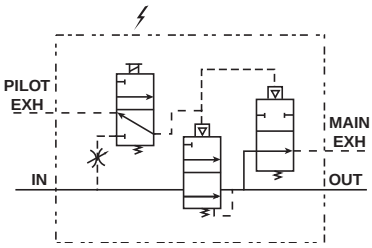
Ordering Information

Model Type	Port Size	24VDC Solenoid & Cable Plug	120VAC Solenoid & Cable Plug	Air Pilot Operated
E09	1/4	E092-02-EC00	E092-02-ED00	E09-02-A000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Slow-Start / Quick Dump Valve E18 / E28

= "Most Popular"

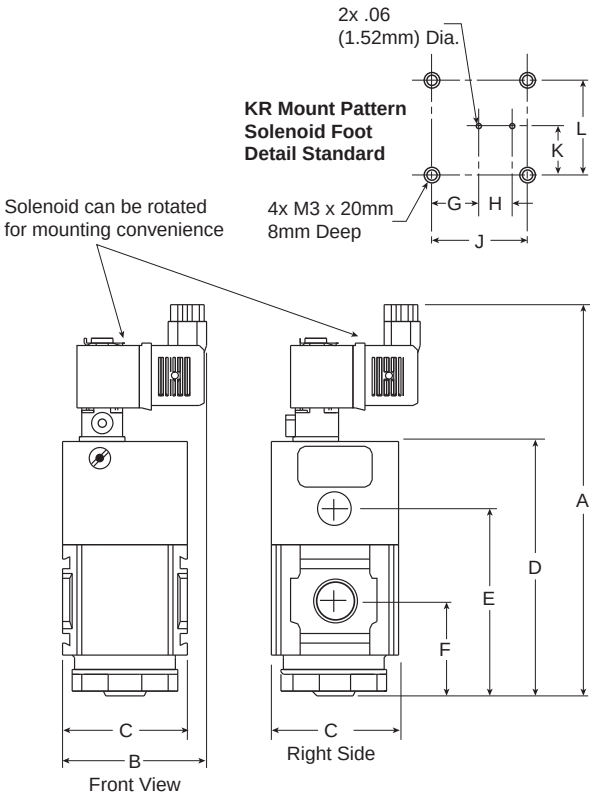




E18-03-EC00

Features

- Modular Design
- True Volume Independence
- High Flow Capacity
- Choice of Two Exhaust Port Locations



Specifications

Flow Capacity*	E18	1/4	95 SCFM (44.8 dm³/s)
		3/8	101 SCFM (47.7 dm³/s)
		1/2	113 SCFM (53.3 dm³/s)
	E28	3/8	196 SCFM (92.5 dm³/s)
		1/2	210 SCFM (99.1 dm³/s)
		3/4	230 SCFM (108.5 dm³/s)
Exhaust Ports Right Side and Rear	NPT / BSPP-G		E18 3/8 E28 3/8
Maximum Supply Pressure			150 PSIG (10.3 bar)
Minimum Pressure			30 PSIG (2.1 bar)
Operating Temperature			32° to 150°F (0° to 65.5°C)
Port Size	NPT / BSPP-G	E18	1/4, 3/8, 1/2
		E28	3/8, 1/2, 3/4
Weight	lb. (kg)	E18	2.23 (1.01)
		E28	2.50 (1.14)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Aluminum
Bottom Plug	33% Glass-Filled Nylon
Seals	Nitrile
Springs	Music Wire / Stainless Steel
Valve Assembly	Brass / Nitrile

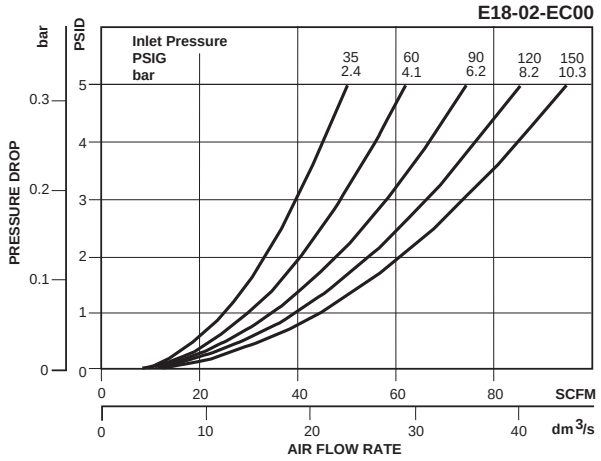
Replacement Kits

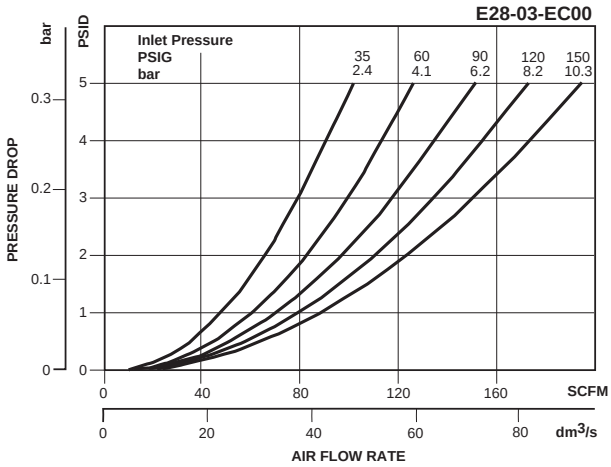
Actuating Valve, KR Mount, 24VDC.....VRP-95-776
Actuating Valve, KR Mount, 120VAC.....VRP-95-777
Actuating Valve, CNOMO, 24VDC.....VRP-95-778
Actuating Valve, CNOMO, 120VAC.....VRP-95-779
Muffler.....VRP-95-780
Valve / Spring Kit.....VRP-95-781
Repair Kit (Includes Valve / Spring).....VRP-95-782
Body Cap Kit (E18).....VRP-95-784
Body Cap Kit (E28).....VRP-95-785
KR to CNOMO Adapter Block.....VRP-95-712
C-Bracket –
E18.....GPA-97-086
E28.....GPA-97-087

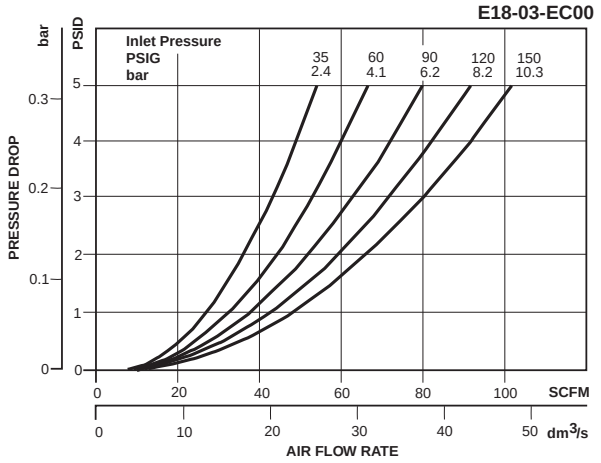
Dimensions

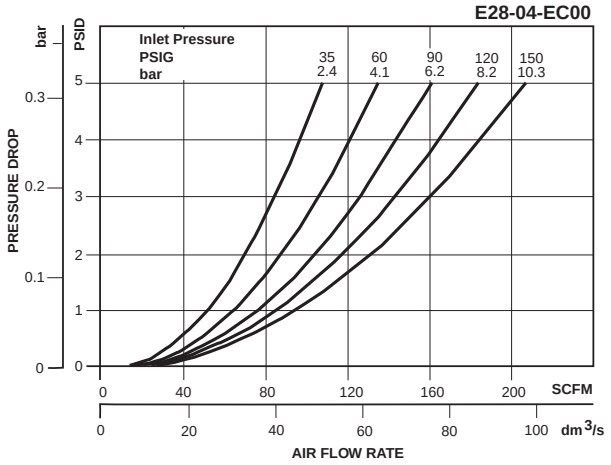
Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K	L
Standard Unit E18-XX-EC00		7.32 (186)	2.70 (68.5)	2.36 (60)	4.79 (121.6)	3.52 (89.4)	1.79 (45.4)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)
Standard Unit E28-XX-EC00		7.32 (186)	2.96 (75.1)	2.88 (73.1)	4.79 (121.6)	3.52 (89.4)	1.79 (45.4)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)

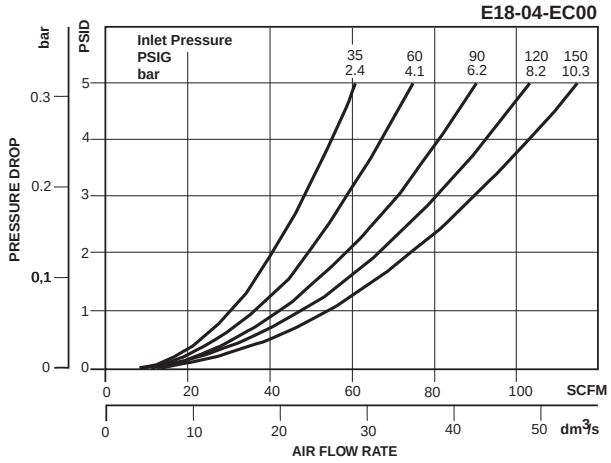
= “Most Popular”

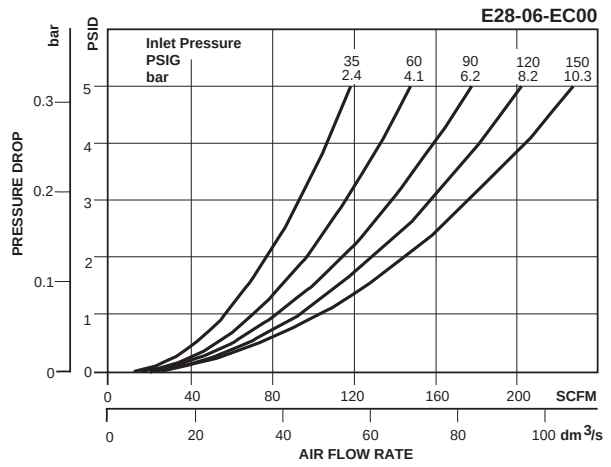










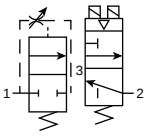


Ordering Information

Model Type	Port Size	24V / DC N.C.	120V / 60 Hz N.C.
E18	1/4	E18-02-EC00	E18-02-ED00
	3/8	E18-03-EC00	E18-03-ED00
	1/2	E18-04-EC00	E18-04-ED00
E28	3/8	E28-03-EC00	E28-03-ED00
	1/2	E28-04-EC00	E28-04-ED00
	3/4	E28-06-EC00	E28-06-ED00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Redundant Safety Exhaust Valve E28





C

Additional Modular Products

Features

- Proven control reliable technology with integrated soft start
- Soft start application of air to the system when energized; can be adjusted for slower or faster buildup of system pressure
- Rapid exhaust of downstream air when de-energized to remove stored energy and allow safe access
- Memory, monitoring, and air flow control functions are integrated into two identical valve elements. Valves lock-out if asynchronous movement of valve elements occurs during actuation or de-actuation, resulting in a residual outlet pressure of less than 1% of supply.
- Reset can only be accomplished by the integrated electrical (solenoid) reset. Cannot be reset by removing and re-applying supply pressure.
- Basic 3/2 normally closed valve function: Dirt tolerant, wear compensating poppet design for quick response and high flow capacity.
- LED indicators of main solenoid operation, reset solenoid operation, and status indicator condition.
- Optional transducer for monitoring of downstream pressure in the system.
- Dual exhaust silencers included.
- Not for use with clutch / brake applications.
- For use in conjunction with a safety relay or safety PLC.

Specifications

Pilot Solenoids:	According to VDE 0580
Enclosure Rating:	According to DIN 400 50 IP65
Connector Socket:	According to DIN 43650 Form A
	Three Solenoids, Rated for Continuous Duty
Standard Voltages:	24VDC
Power Consumption (Each Solenoid): For Primary and Reset Solenoids:	1.2 Watts on DC
Enclosure Rating:	IP65, IEC 60529
Electrical Connection:	M12, 5 Pin
Ambient Temperature:	15°F to 122°F (-10°C to 50°C)
Media Temperature:	40°F to 175°F (4°C to 80°C)
Flow Media:	Compressed Air, Filtered to Minimum 40 Micron
Inlet Pressure:	30 to 150 PSIG (2 to 10 bar)
Pressure Switch (Status Indicator) Rating:	5 Amps at 30 Volts DC.
Monitoring:	Dynamically, cyclically, internally during each actuating and de-actuating movement. Monitoring function has memory and requires an overt act to reset unit after lockout.
Mounting Orientation:	Vertically with Pilot Solenoids on Top
Port Threads:	3/4 NPT, 3/4 BSPP
Control Reliable:	Category 4 (Cat 4); performance Level e (PLe) in accordance with Machine Directive - EN ISO 13849-1 (certification pending)

Accessories

Black Grill 1834C05-001

Cables

M12, 5-Pin Female To Flying Lead Cable, TPE; 2 m (6.6 ft) ..... RKC 4.5T-2/S1587

M12, 5-Pin Male To Flying Lead Cable, TPE; 2 m (6.6 ft) ..... RSC 4.5T-2/S1587

End Block

1/2 NPT GPA-96-612
3/4 NPT GPA-96-613
1/2 BSPP GPA-96-622
3/4 BSPP GPA-96-623

Joiner Set GPA-96-601

Pressure Switch 1227A30-001

Pressure Transducer 1232H30-001

T-bracket w/ Joiner Set GPA-96-603

T-bracket (Fits to Joiner Set or End Block) GPA-96-602

Silencer (s) 3/4" 5500A5013

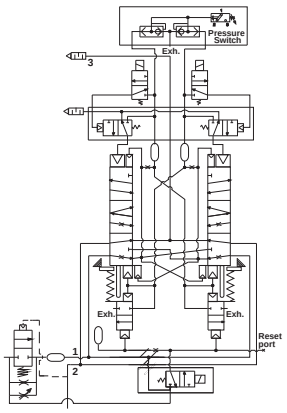
Solenoid (Main & Reset) 1527B7916-001

Square Flush Mounting Gauge Kit

0-160 psig K4511SCR160

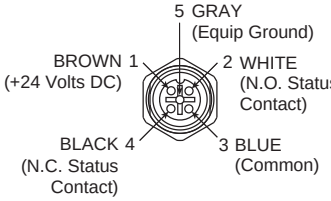
= "Most Popular"

E28 Schematic

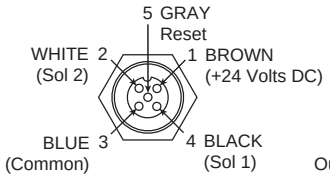


Pin Wiring

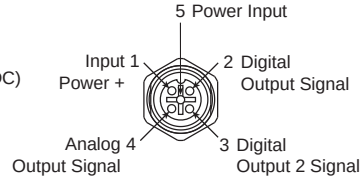
5-Pin "A" Code Female Connector (Feedback)



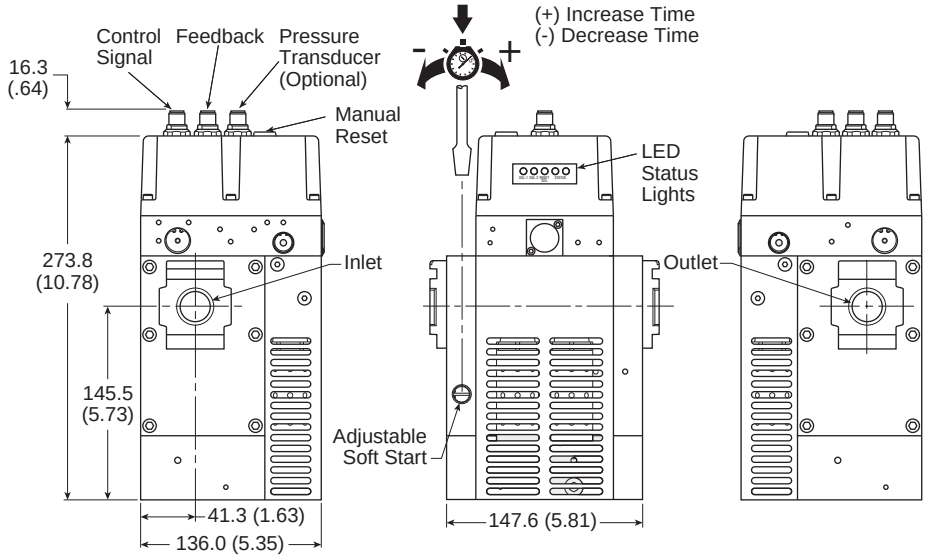
5-Pin "A" Code Male Connector (Control Signal)

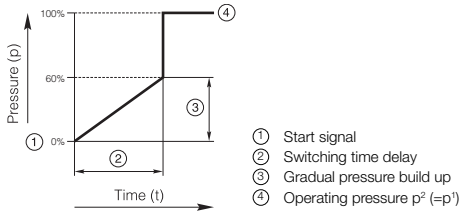


5-Pin "A" Code Female Connector (Digital Pressure Transducer Wiring (optional))

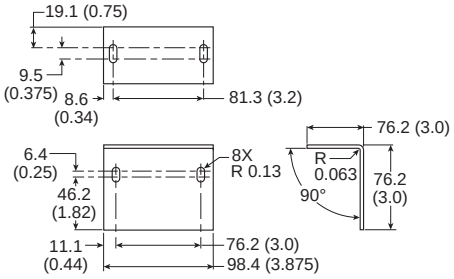


Dimensions





Angle Mounting Bracket



Note: Mounting bracket and installation screws included and required to install unit in the system.

Ordering Information

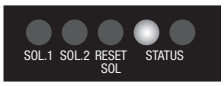
Port Size		Transducer	Cv		Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Order Code*
Inlet	Outlet		1 to 2	2 to 3					
3/4	3/4	w/o transducer	3.7	8.5	273.8 (10.78)	136.0 (5.35)	147.6 (581)	7.3 (16.1)	**E28-06-EC4N**
3/4	3/4	w/ transducer	3.7	8.5	273.8 (10.78)	136.0 (5.35)	147.6 (581)	7.4 (16.3)	**E28-06-EC4T**

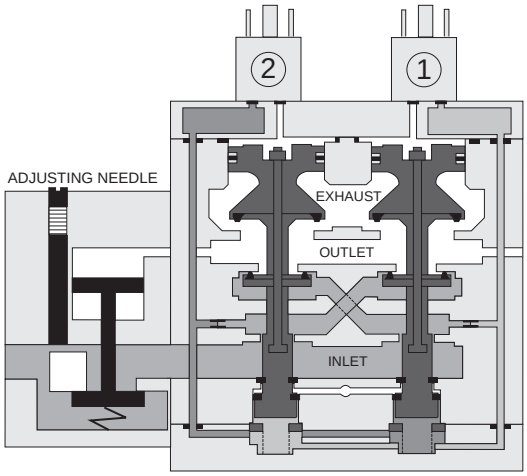
* NPT port threads. For BSPP threads , replace "**0**" in the part number with a "**C**".

Valve De-actuated (ready-to-run):

The flow of inlet air pressure to the inlet chamber of the main valve internals is restricted by a fixed orifice and an adjustable flow control as well as an air piloted 2-way normally closed poppet valve. The flow of inlet air pressure into the crossover passages is restricted by the size of the passage between the stem and the valve body opening. Flow is sufficient to quickly pressurize pilot supply / timing chambers 1 and 2. The inlet poppets prevent air flow from crossover passages into the outlet chamber. Air pressure acting on the inlet poppets and return pistons securely hold the valve elements in the closed position. (Reset adapter omitted for clarity.)

The green “Status” LED will be illuminated indicating the valve is ready to run.



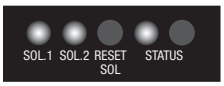


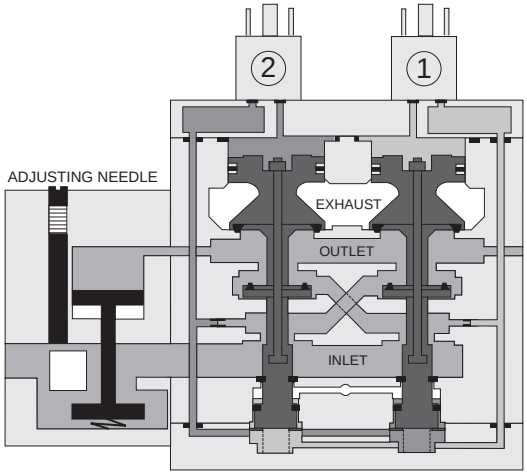
Valve Actuated:

Energizing the pilot valves simultaneously applies pressure to both pistons, forcing the internal parts to move to their actuated (open) position, where inlet air flow to crossover passages is fully open, inlet poppets are fully open and exhaust poppets are fully closed. The outlet is then pressurized at a rate allowed by the fixed orifice and the adjusted flow control. Once the air pressure in the outlet chamber reaches approximately 60% of inlet pressure, the air piloted 2-way normally closed poppet valve opens fully and the pressure in the inlet, crossovers, outlet, and timing chambers are quickly equalized. The adjustable flow control will control the time it takes for the outlet air pressure to reach approximately 60% of inlet pressure.

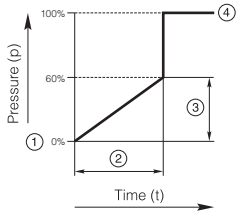
De-energizing the pilots quickly causes the valve elements to return to the ready-to-run position.

Solenoid 1, Solenoid 2 and the green “Status” LED's will be illuminated indicating the valve is operating properly.





Soft Start Function:



① Start signal
② Switching time delay
③ Gradual pressure build up
④ Operating pressure p^2 (=p^1)

C

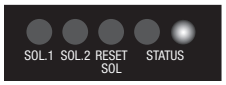
Additional Modular Products

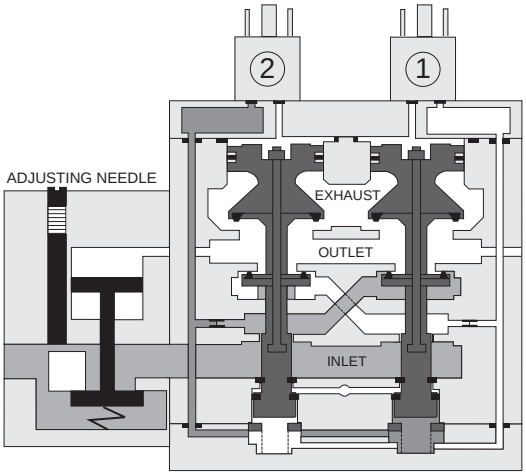
Valve Fault and Lock-out:

Whenever the valve elements operate in a sufficiently asynchronous manner, either on actuation or de-actuation, the valve will move to a locked-out position. In the locked-out position, one crossover and its related timing chamber will be exhausted, and the other crossover and its related timing chamber will be fully pressurized. The valve element (side 2) that is partially actuated has pilot air available to fully actuate it, but no air pressure on the return piston to fully de-actuate the valve element.

Air pressure in the crossover acts on the differential of side 2 stem diameters creating a latching force. Side 1 is in a fully closed position, and has no pilot air available to actuate, but has full pressure on the inlet poppet and return piston to hold the element in the fully closed position. Inlet air flow on side 1 into its crossover is restricted, and flows through the open inlet poppet on side 2, through the outlet into the exhaust port, and from the exhaust port to atmosphere. Residual pressure in the outlet is less than 1% of inlet pressure. The return springs are limited in travel, and can only return the valve elements to the intermediate (locked-out) position. Sufficient air pressure acting on the return pistons is needed to return the valve elements to a fully closed position.

The red “Status” LED will be illuminated indicating the valve in fault and lock-out must be reset





Valve Reset (electrical or manual):

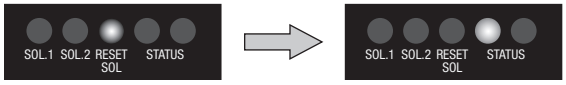
The reset procedure is as follows:

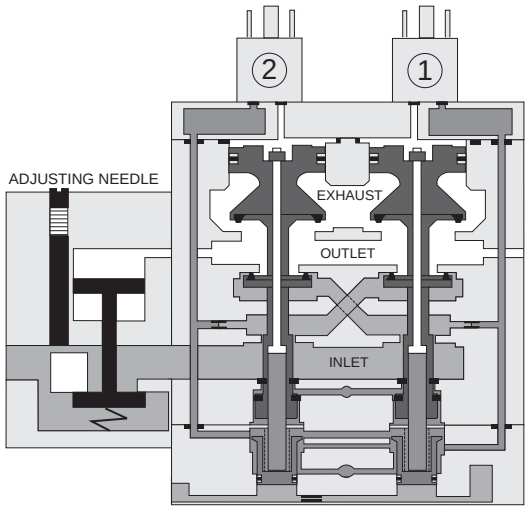
- Remove the electrical signals to the main coils
- Ensure there is air supplied to the valve
- Energize the reset solenoid for a minimum of 200 ms
- Allow a 200 ms delay after de-energizing the reset solenoid and re-energizing the main solenoids

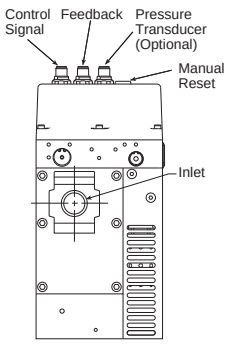
The valve will remain in the locked-out position, even if the inlet air supply is removed and re-applied.

A remote reset signal must be applied to reset the valve. A momentary, remote electrical signal must be applied to the reset solenoid to apply pressure to the reset pistons in the valve. Actuation of the reset piston physically pushes the main valve elements to their closed position. Inlet air fully pressurizes the crossovers and holds the inlet poppets on seat. Actuation of the reset piston opens the reset poppet, thereby, immediately exhausting pilot supply air, thus, preventing valve operation during reset (Reset adapter added to illustration.). De-actuation of reset pistons causes the reset poppets to close and pilot supply to fully pressurize. Reset air pressure is applied by a 3/2 normally closed solenoid, or a manual push button mounted on the reset adapter in the top valve cover.

The green “Status” LED will be illuminated once the valve is reset.







C

Additional Modular Products

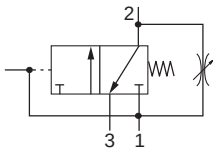
Combined Soft-Start Dump Valve & Remote Operated Dump Valve E90

= "Most Popular"



90 Series Combined Soft Start / Dump Valves, provide for the safe introduction of pressure to machines or systems. Soft Start / Dump Valves when set, allow the pressure to gradually build to the set point before fully opening to deliver full flow at line pressure.

Symbol



- Modular design with 3/4" & 1" integral ports (BSPP or NPT)
- Provides for the safe introduction of pressure
- Automatically dumps downstream pressure on the loss of pilot signal
- Adjustable slow start
- Solenoid or air pilot options
- High flow & exhaust capability

The controlled introduction of pressure can be an important safety factor and prevent damage to tooling when air pressure is introduced at machine or system start up.

E90 - 0 6 - E C 0 0

Series	
High flow emergency stop valve with slow start	**E90**

Thread type*	
NPT	**0**
BSPP	C

Port size	
3/4	**6**
1	**8**

Actuator option	
E	**Solenoid**
A	Air pilot

Option	
C	**24VDC**
0	**None**

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Flow scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	Air pilot operated	371	17.5 (254)	-10 (14)	60 (140)	145 (5.71)	90 (3.5)	104 (4.1)	1.4 (3.1)	E90-06-A000
3/4"	24VDC 30mm coil	371	16 (232)	-10 (14)	60 (140)	130 (5.12)	90 (3.5)	104 (4.1)	1.6 (3.5)	E90-06-EC00
1"	Air pilot operated	424	17.5 (254)	-10 (14)	60 (140)	130 (5.12)	90 (3.5)	104 (4.1)	1.4 (3.1)	E90-08-A000
1"	24VDC 30mm coil	424	16 (232)	-10 (14)	60 (140)	130 (5.12)	90 (3.5)	104 (4.1)	1.6 (3.5)	E90-08-EC00

† **Standard part numbers shown in bold. For other models refer to Options chart above.**

Specifications

Fluid	Compressed air
Max. pressure solenoid operated 30mm coil	16 bar (232 psig)
Minimum operating pressure	2 bar (29 psig)
Temp. range* solenoid operated	-10°C to 60°C (14°F to 140°F)
Temp. range* air pilot operated	-10°C to 60°C (14°F to 140°F)
Air pilot port	1/8"
Exhaust port	1"
Gauge port	1/4"

* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F)
Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

Material specifications

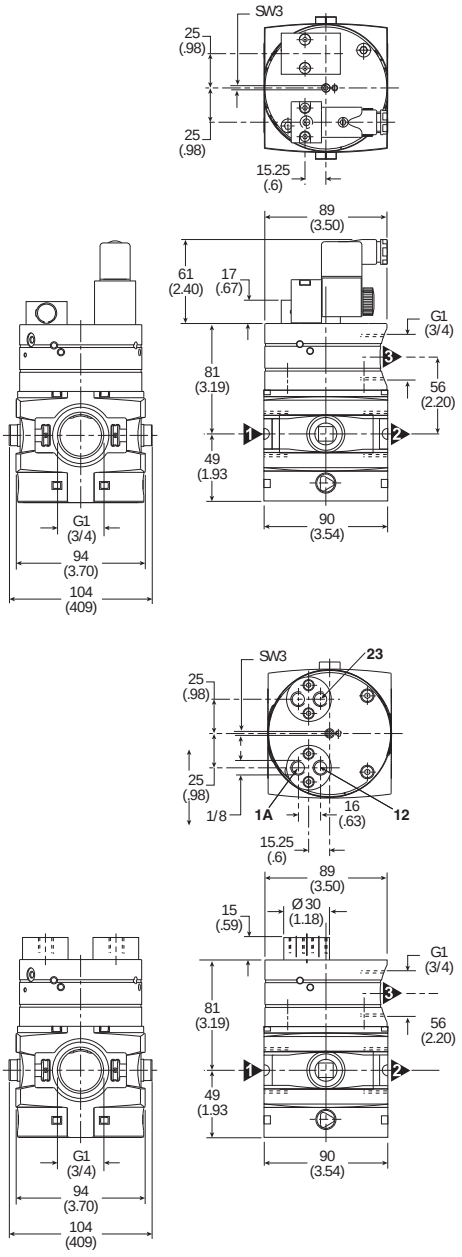
Body	Aluminum
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR

Note: For solenoid coil and cable plug options see page 24.

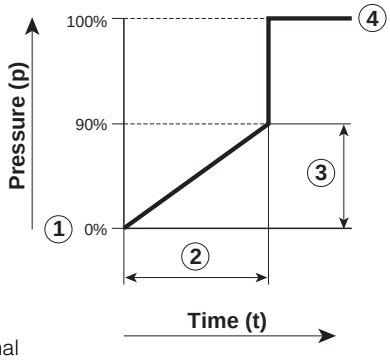
C

Additional Modular Products

Dimensions mm (inches)

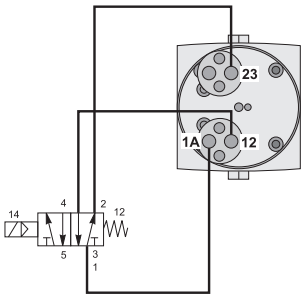


Flow characteristics

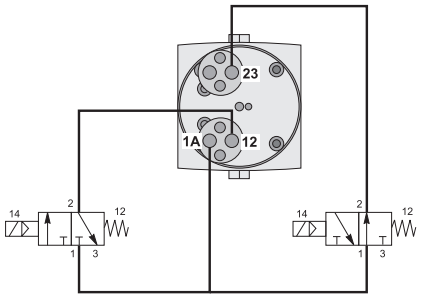


① Start signal
② Switching time delay
③ Gradual pressure build up
④ Operating pressure p^2 (= p^1)

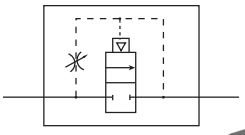
Combined start / stop function



Combined start / stop function with acknowledgement



Slow Start Valve S18 / S28





S18-02-A000

= "Most Popular"

Specifications

Flow Capacity*	S18	1/4	95 SCFM (44.8 dm³/s)
		3/8	101 SCFM (47.6 dm³/s)
		1/2	113 SCFM (53.3 dm³/s)
	S28	3/8	196 SCFM (92.5 dm³/s)
		1/2	210 SCFM (99.0 dm³/s)
		3/4	230 SCFM (108.5 dm³/s)
Maximum Flow Rate Across Needle Valve			12 SCFM (5.7 dm³/s)
Operating Temperature			32° to 150°F (0° to 65.5°C)
Maximum Supply Pressure			150 PSIG (10.3 bar)
Minimum Operating Pressure			30 PSIG (2.1 bar)
Port Size	NPT / BSPP-G	S18	1/4, 3/8, 1/2
		S28	3/8, 1/2, 3/4
Weight	lb. (kg)	S18	.93 (.42)
		S28	1.16 (.53)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

Features

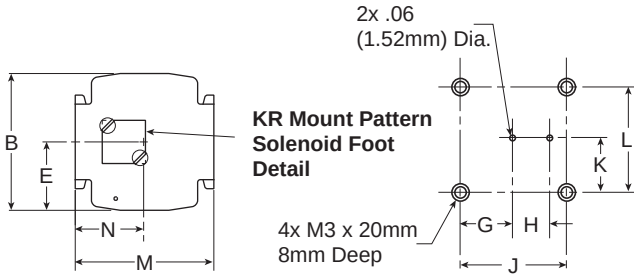
- Can Reduce the Possibility of Equipment or Part Damage and Occupational Hazard to the Worker
- Volume Dependent Devices
- Air-Piloted
- Modern Design and Appearance

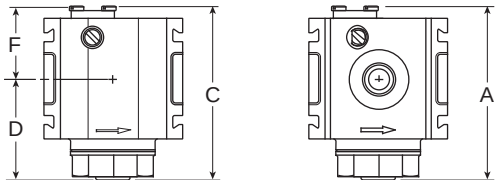
Materials of Construction

Body	Aluminum
Bottom Plug	33% Glass-Filled Nylon
Valve Assembly	Brass / Nitrile
Springs	Music Wire
Seals	Nitrile

Replacement Kit

Valve Assembly Kit VRP-96-927

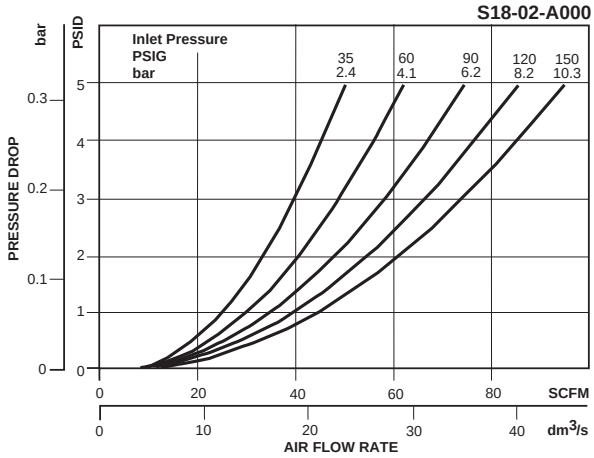


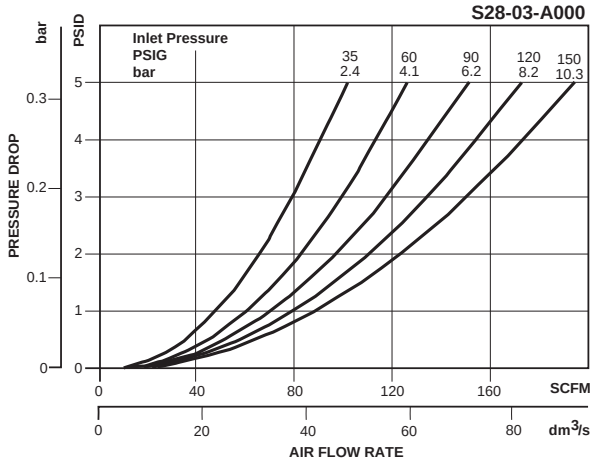


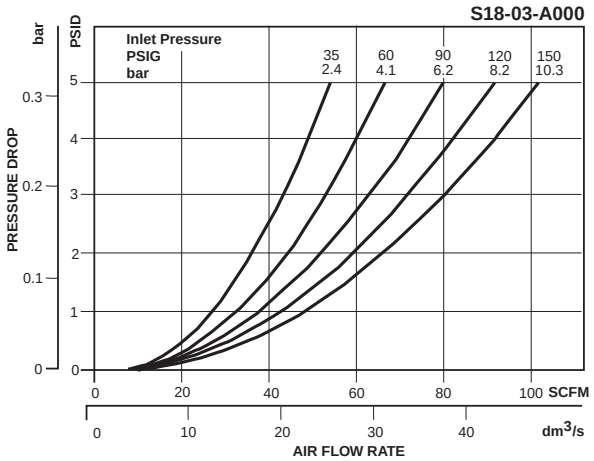
Dimensions

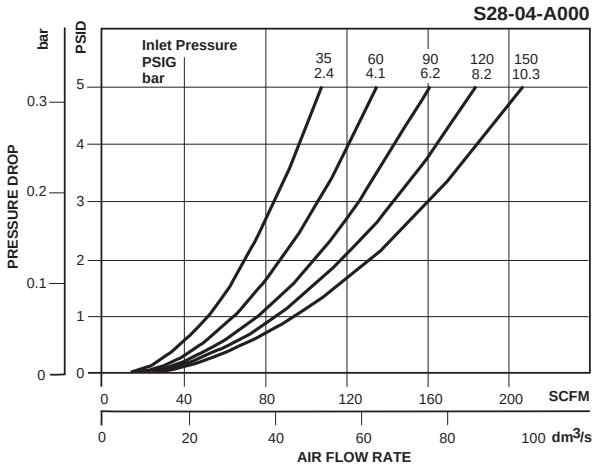
Models	Inches (mm)	A	B	C	D	E	F	G	H	J	K	L	M	N
Standard Unit S18-XX-A000		2.94 (75)	2.36 (60)	2.94 (75)	1.71 (43.5)	1.18 (30)	1.23 (31)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)	2.36 (60)	1.18 (30)
Standard Unit S28-XX-A000		3.03 (77)	2.88 (73)	3.03 (77)	1.79 (45.5)	1.44 (36.5)	1.24 (31)	0.28 (7.0)	0.18 (4.6)	0.55 (14)	0.28 (7.0)	0.55 (14)	2.88 (73)	1.44 (36.5)

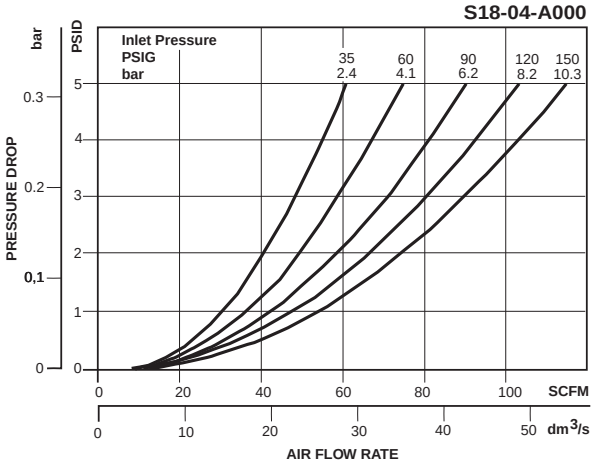
= “Most Popular”

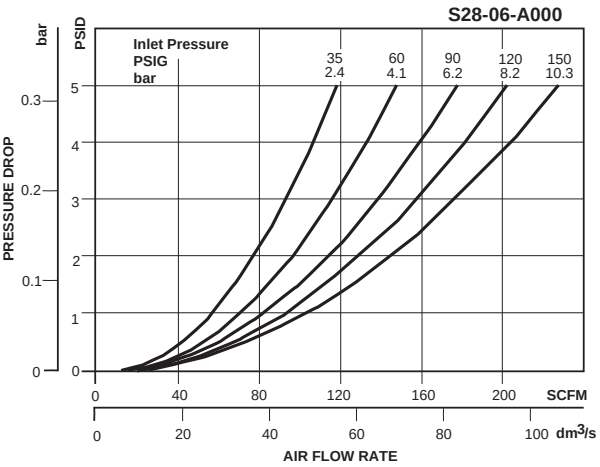












Ordering Information

Model Type	Port Size	Internal Air Pilot Minimum Flow 12 SCFM (5,6 dm 3/s)
S18	1/4	S18-02-A000
	3/8	S18-03-A000
	1/2	S18-04-A000
S28	3/8	S28-03-A000
	1/2	S28-04-A000
	3/4	S28-06-A000

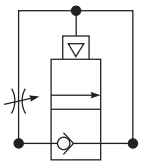
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Slow Start Valve S90

= "Most Popular"



Symbol



- Integral 3/4" or 1" ports
- Smooth start-up of pneumatic system
- Air pilot operation
- Adjustable slow start
- High flow

C

Additional Modular Products

S90 - 0 6 - A 0 0 0

Series	
Soft Start Valve	S90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Function	
Air Pilot	A

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Flow scfm	Max. bar (psig)	Min temp °C (°F)	Max temp °C (°F)	Height mm (inches)	Width mm (inches)	Depth mm (inches)	Weight kg (lb)	Part number †
3/4"	Soft start valve	324	17.5 (253.8)	-10 (14)	60 (140)	85 (3.3)	90 (3.5)	97 (3.8)	.8 (1.8)	S90-06-A000
1"	Soft start valve	324	17.5 (253.8)	-10 (14)	60 (140)	85 (3.3)	90 (3.5)	97 (3.8)	.8 (1.8)	S90-08-A000

† **Standard part numbers shown in bold. For other models refer to Options chart above.**

Specifications

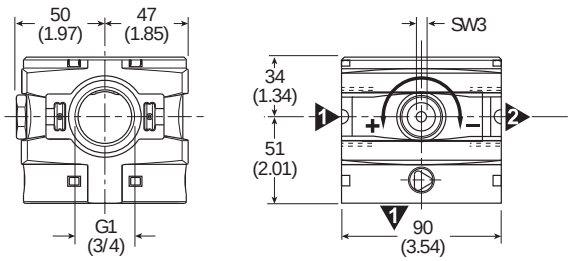
Fluid	Compressed air
Max. pressure air pilot operated	17.5 bar (254 psig)
Minimum operating pressure	2 bar (29 psig)
Temp. range* solenoid operated	-10°C to 60°C (14°F to 140°F)
Temp. range* air pilot operated	-10°C to 60°C (14°F to 140°F)

* Air supply must be dry enough to avoid ice formation at temperatures below 2°C (35.6°F)
Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

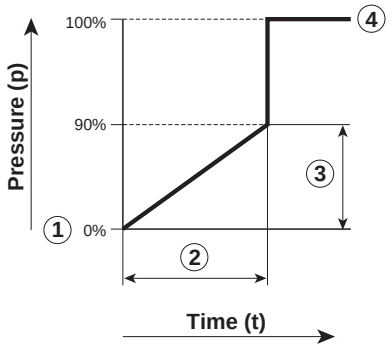
Material specifications

Body	Aluminum
Body cover	ABS
Valve	Brass / NBR composite
Pilot valve booster	Aluminum
Seals	Nitrile NBR

Dimensions mm (inches)

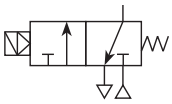


Flow characteristics



① Start signal
② Switching time delay
③ Gradual pressure build up
④ Operating pressure p^2 (= p^1)

Dump Valves Q09 / Q19



= "Most Popular"



Q09-02-2E000



Q19-02-2E000

Features

- Modular Design with 1/4" or 1/2" Integral Ports (NPT, BSPP & BSPT)
- Provides for the Safe Introduction of Pressure
- The 3-way, 2-position Function Automatically Dumps Downstream Pressure on the Loss of Pilot Signal
- Solenoid or Air Pilot Options
- High Flow & Exhaust Capability
- Silencer Included

Specifications

Flow Capacity*	Q09 1/4	36 SCFM (17 dm^3/s)
	Q19 1/2	108 SCFM (51 dm^3/s)
Max. Pressure Solenoid operated		150 PSIG (10 bar)
Max. Pressure Air Pilot operated		250 PSIG (17 bar)
Min. Operating Pressure		44 PSIG (3 bar)
Temperature Max.† Solenoid Operated		14°F to 122°F (-10°C to 50°C)
Temperature Max.† Air Pilot Operated		-4°F to 176°F (-20°C to 80°C)
Air Pilot Port	1/8"	
Exhaust Port		Q09 - 1/4" / Q19 - 1/2"
Weight	1/4" 120VAC	0.8lbs (0.37kg)
	1/4" 24VDC	0.9lbs (0.41kg)
	1/4" Air Pilot	0.8lbs (0.37kg)
	1/2" 120VAC	1.5lbs (0.69kg)
	1/2" 24VDC	2.0lbs (0.91kg)
	1/2" Air Pilot	1.9lbs (0.87kg)

* Inlet pressure 91 PSIG (6.3 bar). Pressure drop 15 PSID (1 bar).

† Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Snap pressure: Full flow when downstream pressure reaches 50% of the inlet pressure

Materials of Construction

Body	Aluminum
Body Cover	Polyester
Seals	Nitrile NBR

Mounting Brackets

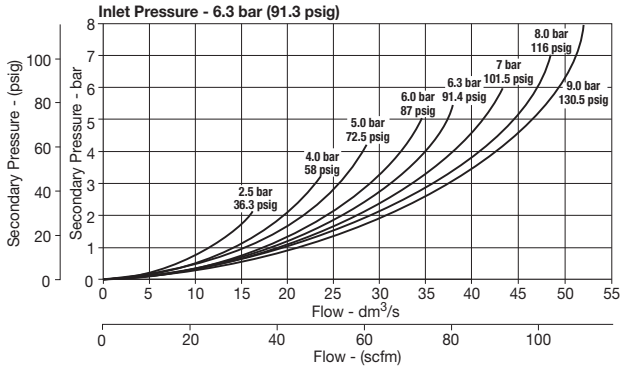
Description	Order code **Q09**	Order code **Q19**
L-Bracket mounting kit	**P3HKA00ML**	**P3KKA00ML**
Foot bracket mounting kit	**P3HKA00MC**	**P3KKA00MC**

Ordering Information

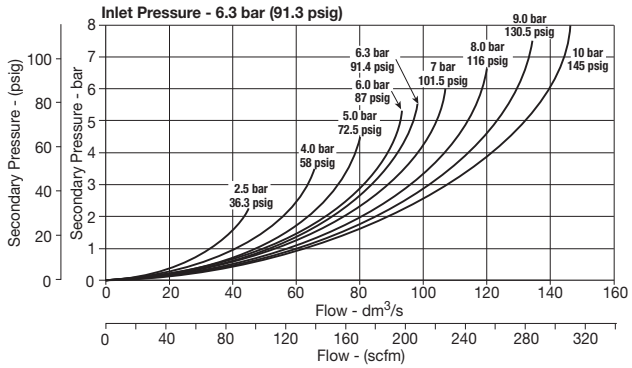
Model Type	Port Size	Description	Order Code
Q09	1/4"	120VAC Solenoid & cable plug	Q09-02-ED00
	1/4"	24VDC Solenoid & cable plug	Q09-02-EC00
	1/4"	External air pilot operated	Q09-02-A000
Q19	1/2"	120VAC 30mm coil & cable plug incl.	Q19-04-ED00
	1/2"	24VDC 30mm coil & cable plug incl.	Q19-04-EC00
	1/2"	External air pilot operated	Q19-04-A000

= “Most Popular”

1/4 Remote Dump Valve



1/2 Remote Dump Valve



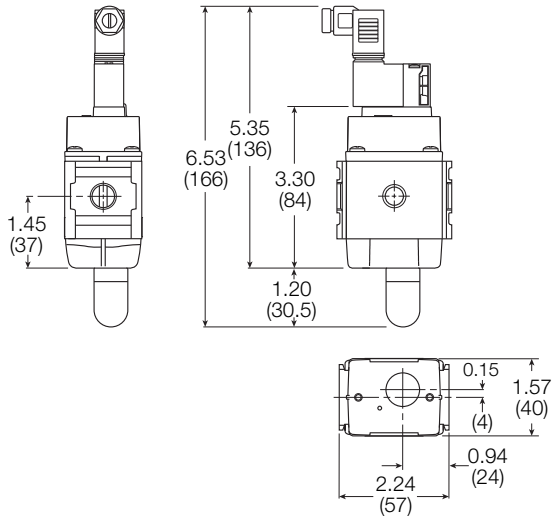
Remotely operated dump valves automatically shut off upstream pressure and exhaust the downstream pressure when the pilot pressure is released.
To maintain these units in the open position a pilot supply to the air pilot operated version or an electrical signal to the solenoid operated version must be maintained.
The valve will automatically dump when the holding signal is removed.

C

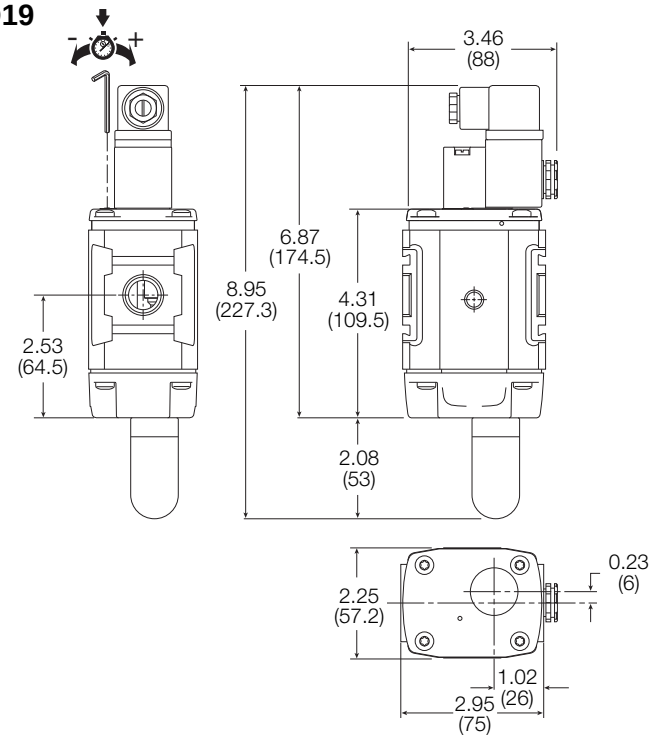
Additional Modular Products

Dimensions
inches (mm)

Q09

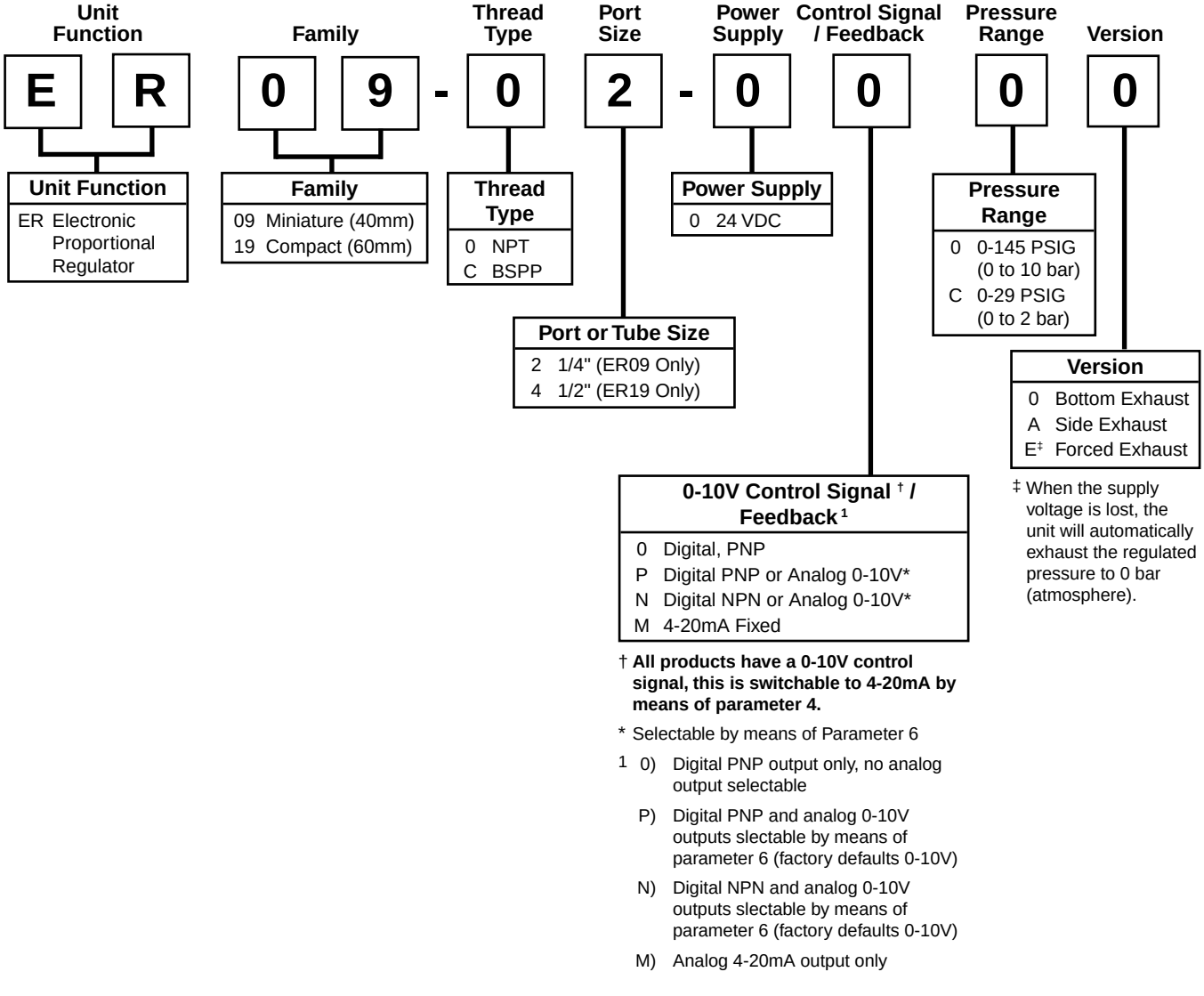


Q19



Electronic Proportional Regulator Numbering System

= "Most Popular"



‡ When the supply voltage is lost, the unit will automatically exhaust the regulated pressure to 0 bar (atmosphere).

† **All products have a 0-10V control signal, this is switchable to 4-20mA by means of parameter 4.**

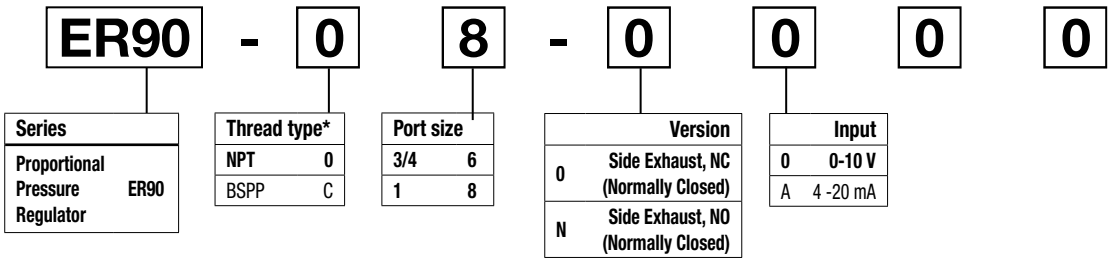
* Selectable by means of Parameter 6

1 0) Digital PNP output only, no analog output selectable

P) Digital PNP and analog 0-10V outputs slectable by means of parameter 6 (factory defaults 0-10V)

N) Digital NPN and analog 0-10V outputs slectable by means of parameter 6 (factory defaults 0-10V)

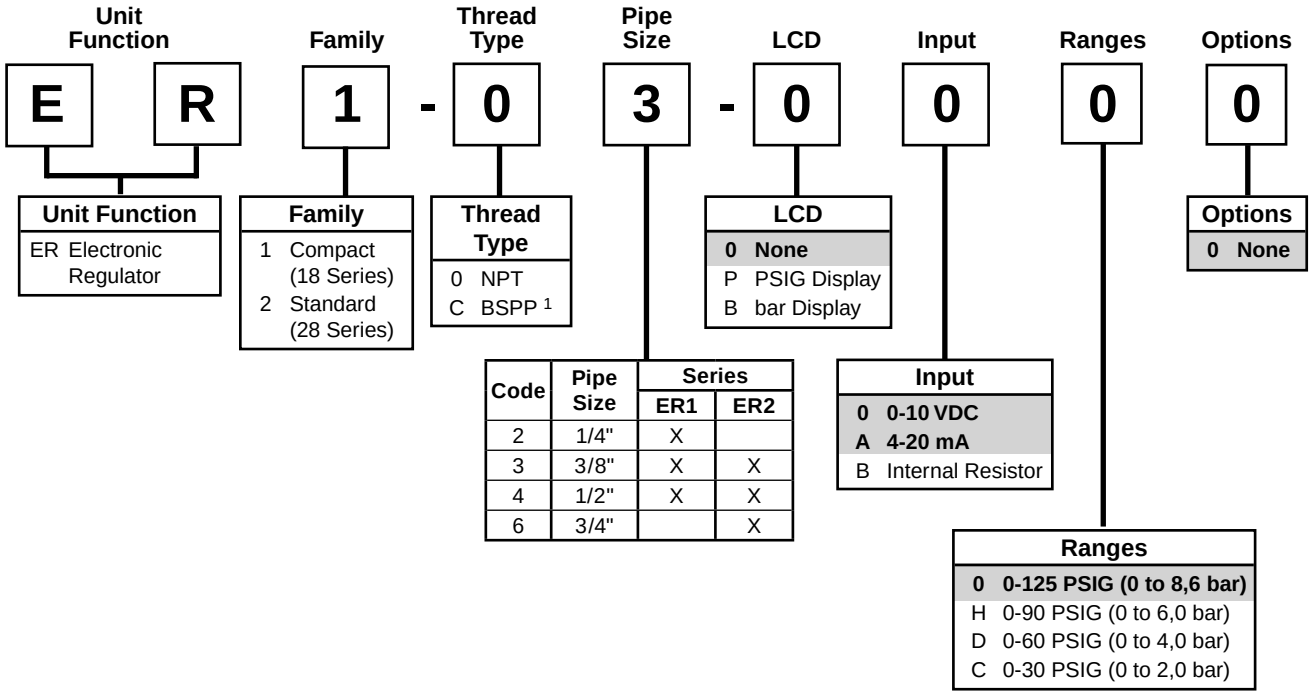
M) Analog 4-20mA output only



***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.

Electronic Regulator Numbering System

= "Most Popular"



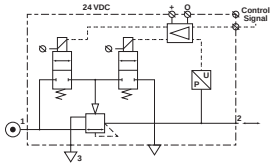
[1] ISO, R228 (G Series)

C

Additional Modular Products

Electronic Proportional Regulator ER09, ER19

= "Most Popular"





ER09 **ER19**

Materials

Magnet Core	Steel
Solenoid Valve Poppet	FPM
Solenoid Valve Housing	Techno Polymer
Regulator Body (ER09 / ER19)	Aluminum
Regulator Top Housing	Nylon
Valve Head	Brass & NBR
Remaining Seals	NBR

C

Additional Modular Products

Features

- Very fast response times
- Accurate output pressure
- Micro parameter settings
- Selectable I/O parameters
- Quick, full flow exhaust
- LED display indicates output pressure
- No air consumption in steady state
- Multiple mounting options
- Protection to IP65

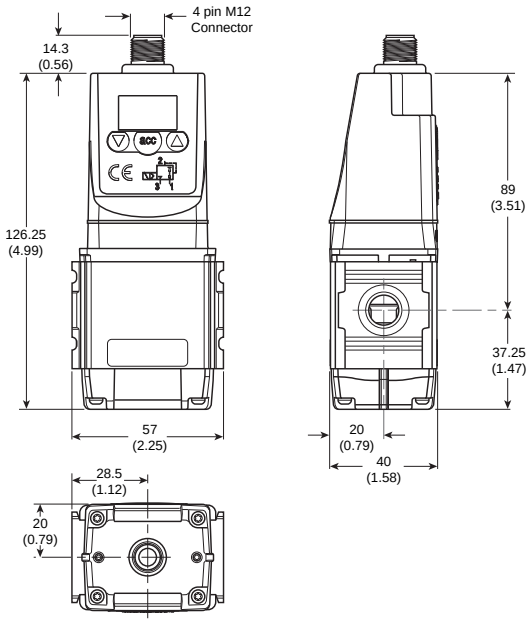
Accessories

Cable (M12, 4-Pin connection w/2m cable) CB-M12-4P-2M
DIN Rail Mounting Kit – ER09 .....P3HKA00ML
Foot Bracket Mounting Kit – ER09 ..... P3HKA00MC
L-Bracket Mounting Kit – ER19 ..... P3KKA00ML
Foot Bracket Mounting Kit – ER19..... P3KKA00MC
Seal Kit (valve seat, cover seal) 3538200
Valve Kit (2 valves, screws, cover seal) 3538100

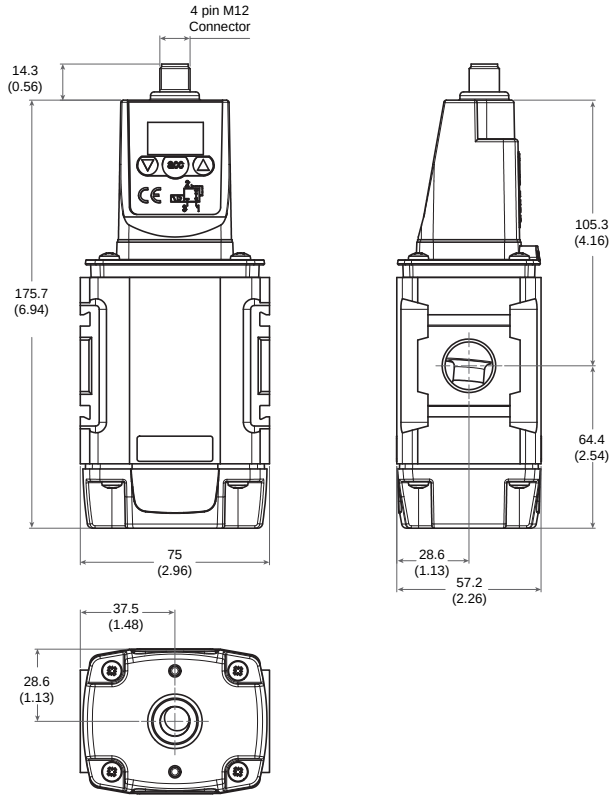
Ordering Information

Port Size	Order Code	Control Signal	Output Signal	Output Pressure
1/4	**ER09-02-00C0**	0 - 10 V	Digital PNP Only	0-29 PSIG (0 -2 bar)
1/4	**ER09-02-0000**	0 - 10 V	Digital PNP Only	0-145 PSIG (0 -10 bar)
1/4	**ER09-02-0PC0**	0 - 10 V	Digital PNP or 0-10V	0-29 PSIG (0 -2 bar)
1/4	**ER09-02-0P00**	0 - 10 V	Digital PNP or 0-10V	0-145 PSIG (0 -10 bar)
1/4	**ER09-02-0NC0**	0 - 10 V	Digital NPN or 0-10V	0-29 PSIG (0 -2 bar)
1/4	**ER09-02-0N00**	0 - 10 V	Digital NPN or 0-10V	0-145 PSIG (0 -10 bar)
1/4	**ER09-02-0MC0**	0 - 10 V	4-20mA Analog Only	0-29 PSIG (0 -2 bar)
1/4	**ER09-02-0M00**	0 - 10 V	4-20mA Analog Only	0-145 PSIG (0 -10 bar)
1/2	**ER19-04-00C0**	0 - 10 V	Digital PNP Only	0-29 PSIG (0 -2 bar)
1/2	**ER19-04-0000**	0 - 10 V	Digital PNP Only	0-145 PSIG (0 -10 bar)
1/2	**ER19-04-0PC0**	0 - 10 V	Digital PNP or 0-10V	0-29 PSIG (0 -2 bar)
1/2	**ER19-04-0P00**	0 - 10 V	Digital PNP or 0-10V	0-145 PSIG (0 -10 bar)
1/2	**ER19-04-0NC0**	0 - 10 V	Digital NPN or 0-10V	0-29 PSIG (0 -2 bar)
1/2	**ER19-04-0N00**	0 - 10 V	Digital NPN or 0-10V	0-145 PSIG (0 -10 bar)
1/2	**ER19-04-0MC0**	0 - 10 V	4-20mA Analog Only	0-29 PSIG (0 -2 bar)
1/2	**ER19-04-0M00**	0 - 10 V	4-20mA Analog Only	0-145 PSIG (0 -10 bar)

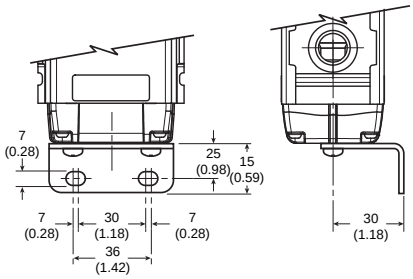
ER09 Bottom Exhaust Version



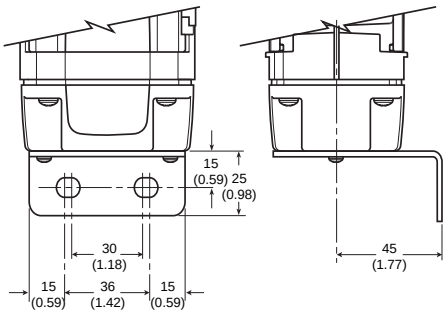
ER19 Bottom Exhaust Version



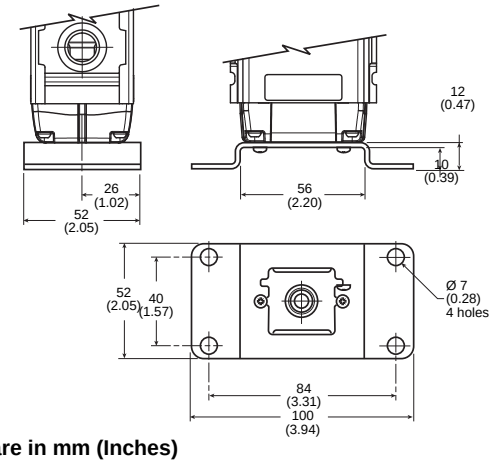
L-Bracket



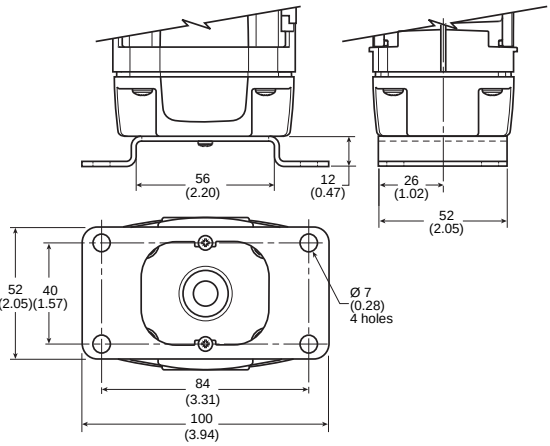
L-Bracket



Foot Bracket



Foot Bracket



Dimensions are in mm (Inches)

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Additional Modular Products

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Additional Modular Products

Energy Saving

Low Watt Power Consumption

No Unnecessary Loss of Air in Steady State

Man-Machine Interface

High Visibility LED Display

Easy to Read Characters

All Controls on the Same Face

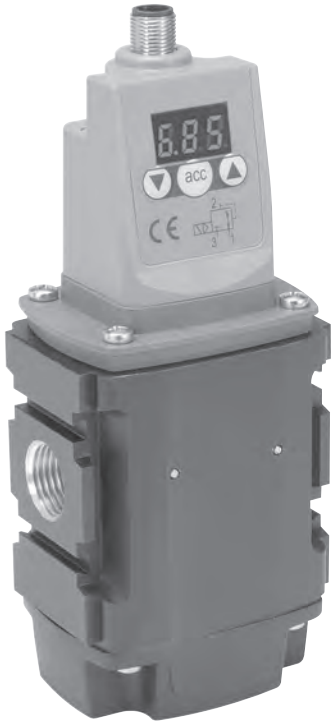
Total Flexibility

User Friendly and Easily Accessible Software Controls

One Basic Unit Suits All Customer Requirements -
0-10V Control Signal Standard
4-20mA Control Signal Software Selectable

Modular Mounting

10 bar & 2 bar Version





Special Applications

Clean Line Design

Suitable for Washdown: IP65

Forced Exhaust Option Available

4 Output Signal Versions Available

Compact and Light Weight

40 & 60 mm Body Sizes

Light Weight Aluminum Bodies

Flexible Mounting Options

Stand-alone or Modular Mounting

Foot Bracket Mounting

DIN-Rail Mounting

Outstanding Performance

Very Fast Response Times

Full Flow Exhaust

Excellent Linearity

High Flow

Generic Industries



The new Proportional Regulator is designed to quickly and accurately adjust and maintain a set output pressure.

The unit will operate regardless of flow, in response to an electronic control signal. The media can be compressed air or an inert gas.

Applications for this technology are virtually unlimited; from paint spray control, paper manufacturing and printing to weaving and laser cutting control; in fact anywhere that requires accurate remote pressure control.

Automation

In the field of general automation, the need to control processes or movement via electronic signals is of paramount importance. The Proportional Regulator unit provides the facility to incorporate pressure control into a fully integrated control system.



Packaging and Food



The Packaging and Food industry provides another ideal area for application of the Electronic Proportional Regulator, where fine control of tension on wrapping foils and paper is required. The degree of control and the ability to manually change parameters makes this unit ideally suited to the varying requirements of this industry.

Automotive

Applications for this innovative product in the Automotive industry can be seen in major manufacturers' "body-in-white" lines.

The control of clamping and welding forces during panel assembly is an ideal application, also accurate control in paint dipping and spraying can be achieved.



Why Proportional Technology ?

The Difference Between Open or Closed Circuit Control

Standard pressure regulators go a long way towards meeting customers needs. In most cases these regulators work well in general pneumatic and automation applications. However, sometimes the application calls for more precise pressure control. The effects of time, cycling, input, back pressure or pressure and flow variation can all cause inconsistencies in pneumatic systems. Proportional Regulators are designed to eliminate those inconsistencies.

Open Control Circuit

In a normal pressure regulated control system, the inlet pressure (p1) is converted into the output pressure (p2) by the regulator. The set pressure (set value) is usually manually set by adjusting the control knob and in normal circumstances the regulator maintains the output pressure (actual value).

No facility for monitoring the output pressure is provided and there is consequently no way of checking that the set value and the actual value are the same. Also, no account is taken of external influences such as air consumption by the system, which can drastically alter the actual value.

Closed Loop Control Circuit

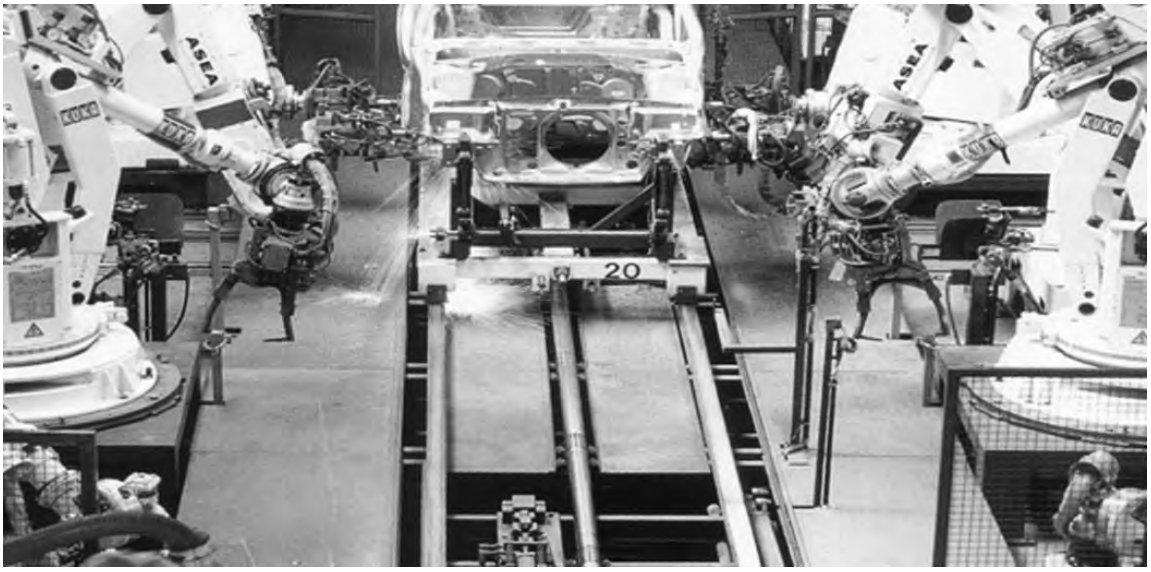
The input signal (Electronic Control Signal) is converted into the output value (P2 Output Pressure). This output value is continuously measured and compared with the input signal. If they are different, the unit adjusts the output value to correspond to the set value, to close the loop.

Proportional Pressure Regulators

The Proportional Regulators provide all the advantages of a closed circuit regulated system. When a set value is defined via the input signal (e.g. 0-10 V), the pressure regulator sets the corresponding output pressure (e.g. 0-150 PSI/0-10 bar). At the same time the integrated pressure sensor measures the actual pressure at the unit's outlet (actual value).

If the electronic regulation system finds that the actual value has deviated from the set value, it immediately corrects the actual value. This is a continuous process ensuring fast, accurate pressure regulation.

Typical Application in Automotive Body in White Welding Pressure Control



Pneumatics

Working Media

Compressed air or inert gasses, filtered to 40µ.

Operating Pressure

	Max. Operating Pressure
2 bar unit	3 bar (43.5 PSI)
10 bar unit	10.5 bar (152 PSI)
Min. Operating Pressure	P2 Pressure + 0.5 bar (7.3 PSI)

Pressure Control Range

Available in two pressure ranges, 0-2 bar (0-29 PSI) or 0-10 bar (0-145 PSI). Pressure range can be changed through the software at all times. (parameter 19)

Temperature Range

32°F to 122°F (0°C to 50°C)

Weight

ER09 0.64 lbs (.291 kg)

ER19 1.42 lbs (.645 kg)

Air Consumption

No consumption in stable regulated situation.

Display

The regulator is provided with a digital display, indicating the output pressure, either in PSI or bar.

The factory setting is as indicated on the label, can be changed through the software at all times (parameter 14).

Electronics

Supply Voltage

24 VDC +/- 10%

Power Consumption

1.1 W with unloaded signal outputs

Current Consumption

Max. 200 mA with no load

Control Signals

The electronic pressure regulator can be externally controlled through an analog control signal of 0-10 V, adjustable to 4-20 mA via parameter 4.

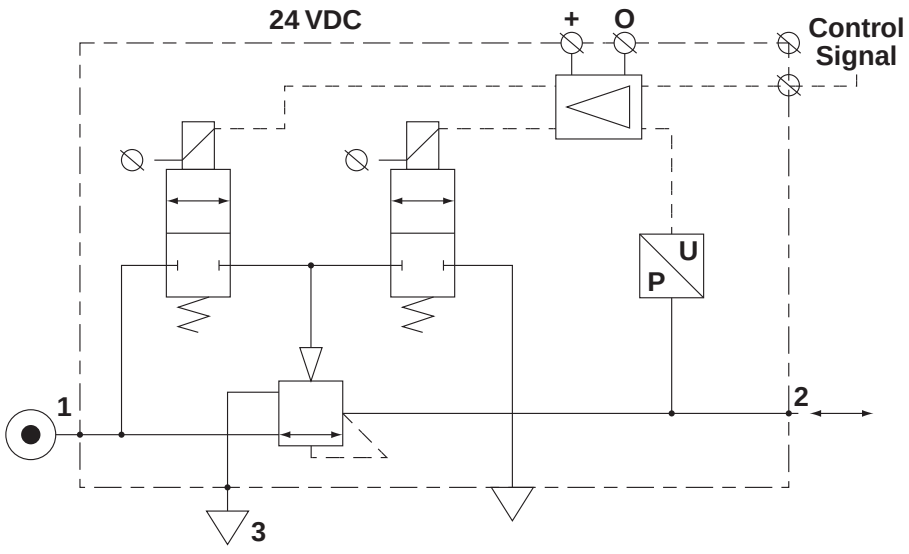
Connections

Central M12 male connector 4-pole.

The electrical connections are as follows:

Pin No.		Function	Color
1	24 V	Supply	Brown
2	0 to 10 V	Control Signal Ri = 100k Ω	White
	4 to 20mA	Control Signal Ri = 500 Ω	
3	0 V (GND)	Supply	Blue
4	24 V	Alarm Output Signal	Black

Schematic



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Additional Modular Products

Technical Information

Dead Band
The dead band is preset at 1.3% of Full Scale*, adjustable via parameter 13.

Accuracy
Linearity = < 0.3% of Full Scale.*

Proportional Band
The proportional band is preset at 10% of Full Scale.*

Fail Safe Operation
- If the ER09 / ER19 unit has an “0” or “A” in the 12th digit of the model number
  - – When the supply voltage drops, the electronic control reverts to the fail safe mode. The last known output pressure is maintained at approximately the same level depending upon air consumption. The digital display indicates the last known pressure setting.
  - – When the supply voltage is reinstated to the correct level, the valve moves from the fail safe mode and the output pressure immediately follows the control signal requirement. The display indicates the actual output pressure.
  - – Note: In the event of loss of both power and inlet pressure the unit will exhaust downstream pressure.
- If the ER09 / ER19 unit has an “E” in the 12th digit of the model number
  - – When the supply voltage drops, the electronic control reverts to “Forced Exhaust Mode” and will automatically exhaust the downstream (regulated) pressure.
  - – When the supply voltage is reinstated to the correct level the unit will return to normal operation and follows the control signal requirement. The display indicates the actual pressure.
- If the unit has been programmed in manual mode (not with a control signal) the unit will EXHAUST and the regulator will need to be reset when power is applied.

Full Exhaust
Complete exhaust of the regulator is defined as
P2 ≤ 1% Full Scale

* Full Scale (F.S.)
For 2 bar versions this will be 2 bar, for the 10 bar version full scale will be 10 bar.

Degree of Protection
IP65

EU Conformity
CE: standard
EMC: according to directive 89/336/EEC
The new pressure regulator is in accordance with:

EN 61000-6-1:2001
EN 61000-6-2:2001
EN 61000-6-3:2001
EN 61000-6-4:2001

These standards ensure that this unit meets the highest level of EMC protection.

Mounting Position
Preferably vertical, with the cable gland on top.

Advanced Functionality

Pilot Valve Protection

When the required output pressure can not be achieved due to lack of input pressure, the unit will open fully and will display “NoP”. Approximately every 10 seconds the unit will retry. The output pressure will then be approximately equal to the inlet pressure. As soon as the input pressure is back on the required level, the normal control function follows.

Safety Exhaust

Should the control signal fall below 0.1 volts, the valve will automatically dump downstream system pressure.

Input Protection

The unit has built-in protection against failure and burnout resulting from incorrect input value, typically:

The 24v DC suppl ectly connected to the setpoint input, the display will show ‘OL’, as an overload indication. The unit will need to be rewired and when correctly connected will operate normally.

The overload indicator ‘OL’ will also appear should the wrong input value be applied or the wrong input value be programmed: 4 - 20m instead of 0 - 10V. To correct this a different set point value should be input or the unit reprogrammed to correct the set point value acceptance. (via parameter 4).

Response Times

Response time	ER09	ER19
2 to 4 bar	25 msecs	35 msecs
1 to 6 bar	55 msecs	135 msecs
4 to 2 bar	70 msecs	85 msecs
6 to 1 bar	80 msecs	225 msecs

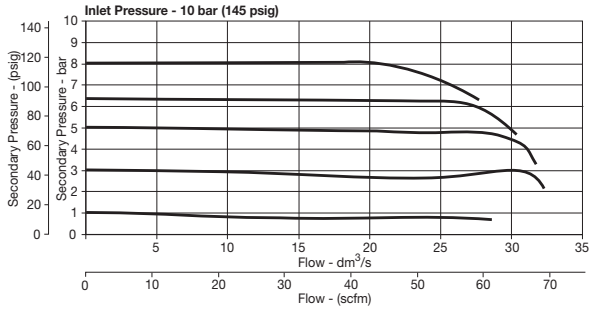
To fill volume of:
100cm^3 - ER09
330cm^3 - ER19
connected to the outlet of the regulator.

Settings

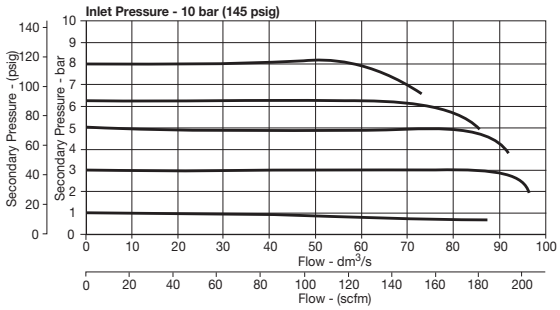
The regulator is pre-set at the factory. If required, adjustments can be made.

Flow Charts

ER09 Regulator 1/4” Ports



ER19 Regulator 1/2” Ports



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Additional Modular Products

How to Change Parameters

Pressing the Accept key “acc” for more than 3 seconds, will activate parameter change mode. The user can then select the parameters by pressing up or down key. (display will show Pxx). When parameter number is correct, pressing accept again will enter parameter number.(display will show parameter value).

Pressing the up or down key will change the parameter itself. (display will flash indicating parameter editing mode). Pressing the accept key will accept the new parameter value. (all digits will flash whilst being accepted).

After releasing all keys , the next parameter number will be presented on the display. (you may step to the next parameter). When no key is pressed, after 3 seconds the display will show the actual output pressure.

When the unit is initially powered up allow approximately 10 seconds for the unit to “boot-up” before changing parameter settings.

Only parameter numbers 0, 4, 6, 8, 9, 14, 18, 19, 20, 12, 13 and 21 are accessible to edit. All other parameters are fixed.

Manual mode:

When keys DOWN and UP are pressed during startup, (connecting to the 24V power supply) manual mode is activated. This means that the user is able to in/decrease the output pressure of the regulator, by pressing the UP or DOWN key. During this action the display will blink, indicating that the manual mode is activated. After powering up again, the unit will revert back to normal mode.

Back to Factory Setting

After start up. (Power is on)
Entering this value in parameter 0 will store the calibrated factory data into the working parameters.
(Default calibration data is used)

Parameter Number 0 – Reset Back to Factory Settings

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P00	000. Flashing Decimal	003. Flashing Decimal	003 Flashing	P01
Description	Accesses changeable parameters.	Accesses parameter no. 0.	Displays current parameter value.	Edits parameter. 3 = standard factory settings. If other than 3, use Up or Down Arrow and accept 3	Accepts and saves new parameter setting.	Sequences to next parameter.

Set Control Signal

The unit is factory set for 0-10 V control signal. If 4-20 mA control signal is required, change parameter 4.

Parameter Number 4 – Set Control Signal in Volts or Milliamps

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P04	001. Flashing Decimal	000. Flashing Decimal	000 Flashing	P05
Description	Accesses changeable parameters.	Accesses parameter no. 4.	Displays current parameter value. 1 = V 0 = mA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Set Output Signal

Parameter 6 is used to set the type of output signal to your PLC.
This parameter is used as follows:

Output Signal option “0” = Digital Output – PNP
- Factory set at “0” Non Adjustable

Output Signal option “P” = Digital PNP or Analog 1-10V
- Factory set at “1” for Analog Signal
- Convert to Digital PNP by changing parameter to “0” setting

Output Signal option “N” = Digital NPN or Analog 1-10V
- Factory set at “1” Analog Signal
- Convert to Digital NPN by changing parameter to “0”

Output Signal option “M” = Analog 4-20 mA
- Factory set at “2” Non Adjustable

Parameter Number 6 – Set Output Signal

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P06	001. Flashing Decimal	###. Flashing Decimal (Value 0, 1 or 2)	###. Flashing	P07
Description	Accesses changeable parameters.	Accesses parameter no. 6.	Displays current parameter value. 1 = m factory default for P3H with analog options	Edits parameter. 0 = digital (NPN or PNP) 1 = analog 0..10V 2 = analog 4..20 mA	Accepts and saves new parameter setting.	Sequences to next parameter.

Adjust Span Analog Output Signal

Set value is a % of Full Analog range. As an example for a 0-10V output signal, the original factory setting of 100% will give you an adjustment of 0-10V. If you reset Parameter 8 to 50%, the new output range would be 0-5V or 50% of the full range.

In the event that the output signal is to low, in a certain application, you can adjust it by increasing Parameter 8 to a maximum value of 130% of scale.

Note that all values are nominal and that an actual measurement may be required to ensure signal strength.

Parameter Number 8 – Adjust Span Analog Output Signal

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P08	100. Flashing Decimal (For 2 bar versions value = 92)	###. Flashing Decimal (Value between 0 and 130)	###. Flashing	P09
Description	Accesses changeable parameters.	Accesses parameter no. 8.	Displays current parameter value.	Edits parameter.	Accepts and saves new parameter setting and implements the new analog signal span.	Sequences to next parameter.

Adjust Digital Display

If necessary, adjustments can be made to the digital display when using an external pressure sensor.

Parameter Number 9 – Adjust Digital Display Value (Pressure Calibration)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P09	###. Flashing Decimal	###. Flashing Decimal	### Flashing	P 10
Description	Accesses changeable parameters.	Accesses parameter no. 9.	Displays current digital display	Use up or down arrows and accept to adjust the display value if using an external pressure sensor.	Accepts and saves new parameter setting.	Sequences to next parameter.

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Additional Modular Products

Set Pressure Scale

Units with NPT port threads are supplied with a factory set psig pressure scale. Use parameter 14 to change scale to bar.

Parameter Number 14 – Set Pressure Scale in psig or bar

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 14	001. Flashing Decimal	000. Flashing Decimal	000 Flashing	P 15
Description	Accesses changeable parameters.	Accesses parameter no. 14.	Displays current parameter value. 1 = psig 0 = bar 2 = MPA	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Preset Minimum Pressure

If there is a need for a pre-set Minimum pressure, use parameter 18. (Note: preset pressure is affected by % P19.)

Parameter Number 18 – Set Minimum Preset Pressure

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 18	000. Flashing Decimal	###. Flashing Decimal (value between 0 and 200)	### Flashing	P 19
Description	Accesses changeable parameters.	Accesses parameter no. 18.	Displays current parameter value. Incremental value is: 2 bar unit: x 2 mbar x % P19 10 bar unit: x 10 mbar x % P19	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

C

Additional Modular Products

Set Pressure Correction

Pressure correction allows the user to set a Maximum pressure as a percentage of secondary pressure F.S.

Example: If F.S. is 10 bar, set parameter 19 to 50 for Maximum preset pressure of 5 bar.

Pressure correction also affects the Minimum preset pressure in parameter 18.

Example: If F.S. is 10 bar and parameter 18 is set to a value of 100 (1 bar), and parameter 19 is set to 50%, then the actual Minimum preset pressure seen is 0.5 bar.

Parameter Number 19 – Set Maximum Preset Pressure

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 19	100. Flashing Decimal	###. Flashing Decimal (value between 0 and 100)	### Flashing	P20
Description	Accesses changeable parameters.	Accesses parameter no. 19.	Displays current parameter value. Incremental value is: % of F.S.	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Behavior Control

The regulation speed of the pressure regulator can be modified by means of one parameter. (P 20)

The value in this parameter has a range from 0-5. A higher value indicates slower regulation speed, but will be more stable.

Parameter Number 20 – Set Behavior Control

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P20	003.	###. Flashing Decimal (value between 0 and 5)	### Flashing	P21
Description	Accesses changeable parameters.	Accesses parameter no. 20.	Displays current parameter value.	Edits parameter 0 = custom set* 1 = fastest (narrow proportional band) 2 = fast 3 = normal 4 = slow 5 = slowest (proportional band is broad)	Accepts and saves new parameter setting.	Sequences to next parameter.

* When the value 0 is entered, you are able to create your own custom settings true parameters 12, 13 and 21.

C

Additional Modular Products

Fine Settings
Set Proportional Band

Proportional band is used for setting the reaction sensitivity of the regulator. The displayed value is X 10 mbar and has a range between 50 (0.5 bar) and 250 (2.5 bar).

Parameter Number 12 – Set Proportional Band (P20 Must be Set to 0)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 12	100. Flashing Decimal	###. Flashing Decimal (value between 50 and 250)	### Flashing	P 13
Description	Accesses changeable parameters.	Accesses parameter no. 12.	Displays current parameter value. Incremental value is: x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Set Deadband

Deadband is the Minimum limit of accuracy at which the regulator is set for normal operation. The displayed value is X 10 mbar and has a range between 4 (40 mbar) and 40 (400 mbar).

Parameter Number 13 – Set Deadband (P20 Must be Set to 0)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P 13	0 15. Flashing Decimal	# # #. Flashing Decimal (value between 4 and 40)	# # # Flashing	P 14
Description	Accesses changeable parameters.	Accesses parameter no. 13.	Displays current parameter value. Incremental value is x 10 mbar	Edits parameter.	Accepts and saves new parameter setting.	Sequences to next parameter.

Proportional Effect

Parameter Number 21 – Set Proportional Effect (P20 Must be Set to 0)

Step	1	2	3	4	5	
Press	acc 3-6 seconds	▼ or ▲	acc	▼ or ▲	acc	
Until Display Reads	Pxx	P21	0 10. Flashing Decimal	# # #. Flashing Decimal (value between 5 and 100)	# # # Flashing	P22
Description	Accesses changeable parameters.	Accesses parameter no. 21.	Displays current parameter value.	Edits parameter. 5 = fastest regulation 100 = slowest regulation.	Accepts and saves new parameter setting.	Sequences to next parameter.

Parameter Number 39 – Displays Current Software Version

Step	1	2	3	
Press	acc 3-6 seconds	▼ or ▲	acc	
Until Display Reads	Pxx	P39	# # # Flashing Decimal	
Description	Accesses changeable parameters.	Accesses parameter no. 39.	Displays current parameter value. XXX = current software version	

Problem	Possible Reason	Solution
Display will not light up	No 24 volts power supply	Check if the wiring is connected according to the schematic wiring diagram
Unit will not, or not correctly respond to given setpoint	Wrong current applied (I.e. Volt instead of mA or mA instead of Volt	Change setpoint current or re configure the setpoint current through the software by changing parameter 4
		Check wiring if the setpoint signal lead is connected to the right pin within the male M12 connector (should be pin 2)
	Setpoint signal is not stable enough	Stabilize setpoint signal input
Display shows NoP.	Unit detects that required output pressure is higher than the supplied pressure	Adjust the inlet pressure to a higher value, preferably 0,5 bar higher than requested output pressure
		Give lower setpoint value which corresponds to a output pressure lower than the inlet pressure
	No inlet pressure at all	Connect port 1 to the supply pressure
Unit behavior is not considered normal	Faulty settings made in the parameters	Reset the unit to factory settings by using the green key function under parameter 0
Desired pressure can not be reached	Setpoint value to low	Increase setpoint value
	Pre-set pressure limit has been changed to a lower max. outlet pressure	Change max. outlet pressure back to required pressure by changing parameter 19
	Supply pressure is to low	Increase supply pressure
Secondary side stays pressurized	Setpoint value is higher than 0,1 Volt	Lower your setpoint value, preferably to 0 Volts
		Reset parameter 18 to 0
	Pre-set pressure has been enabled to a certain pressure	
Display shows unrealistic value	Display maybe configured in the wrong value (bar instead of psi)	Check through parameter 14, if the display value is set on either psi or bar, if necessary change it to the required setting
Unit response time too slow or too quick	Volume behind the unit is either too big or too small	Adjust the regulating speed of the unit through parameter 20
Unit gives too much overshoot	Relation between volume and response me is out of balance	Adjust response time to a higher value through parameter 20, to achieve more accurate behavior
Unit is adjusting / regulating constantly	Air leakage in the system behind the unit	Resolve leakage
	Constant changing volume behind the unit	Unit needs to regulate to keep required pressure at the same level
		Try to minimize the volume changes
	“Deadband “area is set too small	Enlarge deadband setting through parameter 13 in the software (parameter 20 has to be set to 0 before changing parameter 13)
Can not enter software through touchpad	Unit is currently working/processing	Make sure that the unit is in steady state while activating the software
	Activating time is too short	Hold the accept button for at least 3 seconds
Display indicates ‘OL’	Wiring not according to diagram (24 volt connected on the setpoint connection pin)	Rewire so that on the setpoint connection pin will be either 0-10v or 4-20mA
	Wrong setpoint value given in relation to programmed setpoint value acceptance	Change over setpoint value to either V or mA or Reprogram the unit to the correct setpoint value via parameter 4
Any other problem	Please consult factory	

Glossary

Hysteresis – The mechanical limits of accuracy of the unit. The regulator cannot be adjusted within the inherent mechanical limits of the design.

Dead Band – The minimum limit of accuracy at which the regulator is set for normal operation. This band must be equal to, or exceed, the inherent design limits of the regulator or the hysteresis band.

Proportional Band – The band used for setting reaction sensitivity of the regulator. The regulator senses the excursion from the set pressure and adjusts response in relation to the degree of excursion beyond the dead band. This band must exceed the dead band of the unit.

Proportional Effect – The speed at which the unit approaches P2 (secondary pressure).

Sensitivity – The smallest change in the control signal, or feedback signal, to cause a change in regulated output pressure.

Repeatability – a measurement of how consistently the unit can reproduce an output pressure in relation to a specific set pressure.

Linearity – A measure of how closely the relationship of output pressure vs. the control signal deviates from a straight line function.

Proportional Pressure Regulator ER90

= "Most Popular"

- Integral 3/4" or 1" ports (BSPP & NPT)
- Accurate output pressure
- Very fast response times
- Robust but lightweight design



ER90 - 0 8 - 0 0 0 0

Series	
Proportional Pressure Regulator	ER90

Thread type*	
NPT	**0**
BSPP	C

Port size	
3/4	**6**
1	**8**

Version	
0	**Side Exhaust, NC (Normally Closed)**
N	**Side Exhaust, NO (Normally Closed)**

Input	
0	**0-10 V**
A	4 -20 mA

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

Ordering information

Port size	Description	Control signal	Output signal)	Outlet pressure	Weight kg (lb)	Part number†
3/4"	Normally closed	0 - 10 V	0 - 10 V	0 - 10 bar (0 to 145 psig)	1.2 (2.7)	ER90-06-0000
1"	Normally closed	0 - 10 V	0 - 10 V	0 - 10 bar (0 to 145 psig)	1.2 (2.7)	ER90-08-0000

† **Standard part numbers shown in bold. For other models refer to Options chart above.**

Specifications

Operating pressure range	P^1 min		1 bar (14.5 psig)
Inlet pressure [1]	P^1 max		16 bar (232 psig)
Operating pressure range	P^2 min		0.2 bar (2.9 psig)
Outlet pressure	P^2 max		10 bar (145 psig)
Operating temperature			0°C to 50°C (32°F to 122°F)
Maximum flow	Qn	l/min	20000
		m^3/h	1200
		SCFM	706
Hysteresis	P^2 max	< 1%	
Repeatability	P^2 max	< 0.5%	
Sensitivity	P^2 max	< 0.5%	
Linearity	P^2 max	< 1%	
Nominal voltage	U_n V DC	24V = ±10%	
Residual ripple	10%		
Power consumption	I_{Bmax}	0.15 A	
Set value input	Uw	V	0 - 10
	I	mA	0 - 20
		mA	4 - 20
Input resistance	R_E	243 K Ω	
Actual valve output	U_X	0 - 10 V	
Output current	I_{Amax}	10 mA	
Degree of protection	IP65 to DIN 40050, EN 60529		

[1]) $p^1 > p^2 + 10\% p^2$
[2]) at p^1 - 10 bar to p^2 - 6.3 bar

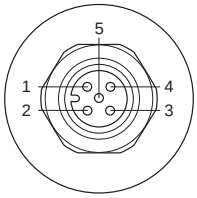
Material specifications

Housing	Aluminum
Pilot valve booster	Brass / NBR composite aluminum
Standard seals	NBR
Body cover screws	Steel / zinc plated

Cables

Type	Part number
M12, 5-pin female to flying lead cable, TPE; 2m (6.6 ft)	**RKC 4.5T-2/S1587**

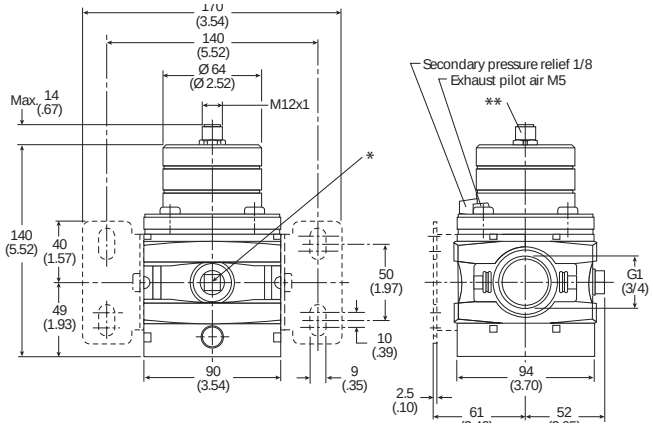
Connection diagram



Connector M12 x 1

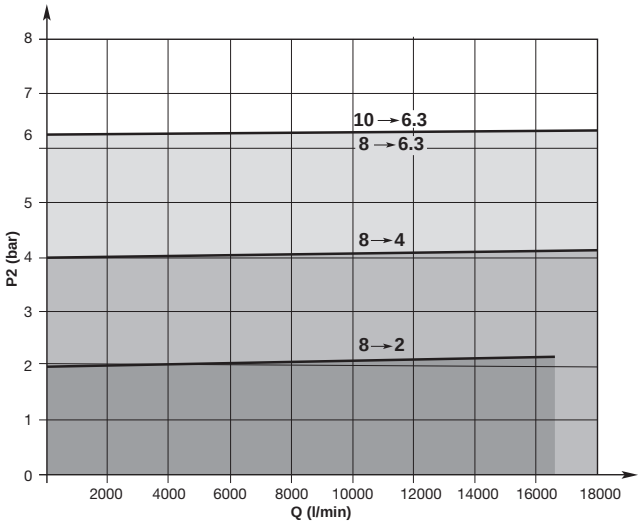
Pin No.		Function
1	24 V	Supply
2	0 V	Reference & mass capacity
3	0 - 10 V	Set value input
4	0 V	Signal
5	0 - 10 V	Analog output

Dimensions mm (inches)



* Two opposite gauge ports 1/4, plug screw mounted
** Connection for 5-pin plug M12 x 1

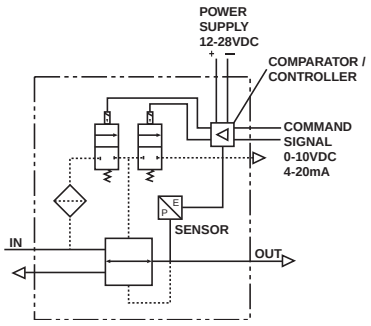
Flow characteristics



C

Additional Modular Products

Electronic Regulator ER1 / ER2





ER1-02-0000

= "Most Popular"

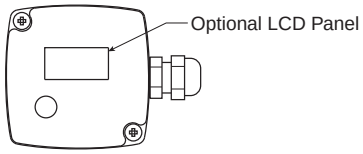
Specifications

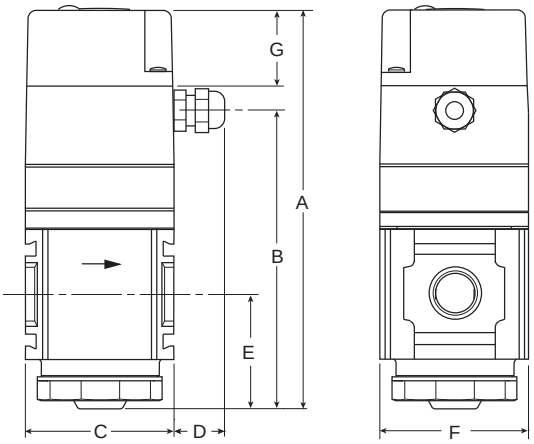
Flow Capacity*	ER1	1/4	165 SCFM (77.9 dm³/s)
		3/8	200 SCFM (94.4 dm³/s)
		1/2	200 SCFM (94.4 dm³/s)
	ER2	3/8	200 SCFM (94.4 dm³/s)
		1/2	200 SCFM (94.4 dm³/s)
		3/4	200 SCFM (94.4 dm³/s)
Adjusting Range			0 to 125 PSIG (0 to 8.6 bar)
Hysteresis / Repeatability			± .8% of Full Scale
Linearity			< 1.0 PSIG (0.6 bar
Maximum Supply Pressure			150 PSIG (10.3 bar)
Operating Temperature			32° to 125°F (0° to 52°C)
Port Size	NPT / BSPP-G		1/4, 3/8, 1/2, 3/4
Response			with Step Input 600 ms
Sensitivity			± .8% of Full Scale
Weight	lb. (kg)		ER1 1.76 (0.8) ER2 2.43 (1.1)

* Inlet pressure 150 PSIG (10.3 bar). Secondary pressure 90 PSIG (6.2 bar).

Features

- Optional LCD Panel Displays P2 Pressure in PSIG or bar
- Modern Design and Appearance
- Light Weight
- High Flow Capacity
- 5 Micron Filtration to Controller is Built-in





Materials of Construction

Body	Aluminum
Body Cover	ABS
Bottom Plug	33% Glass-Filled – Nylon 6-12
Diaphragms	Nitrile / Zinc / Brass
Diaphragm Plate	Acetal
Panel Nut	Acetal
Seals	Nitrile
Springs	Music Wire / Stainless Steel
Valve Assembly	Brass / Nitrile

Accessories

Bottom Valve & Spring ERP-95-794

C-Bracket –
- ER1 ..... GPA-97-086
- ER2 ..... GPA-97-087

Diaphragm Kit –
- ER1 ..... ERP-95-792
- ER2 ..... ERP-95-793

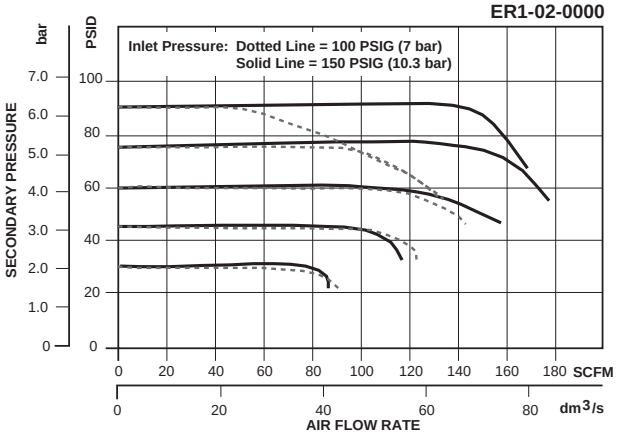
Exhaust Muffler VRP-95-780

Dimensions

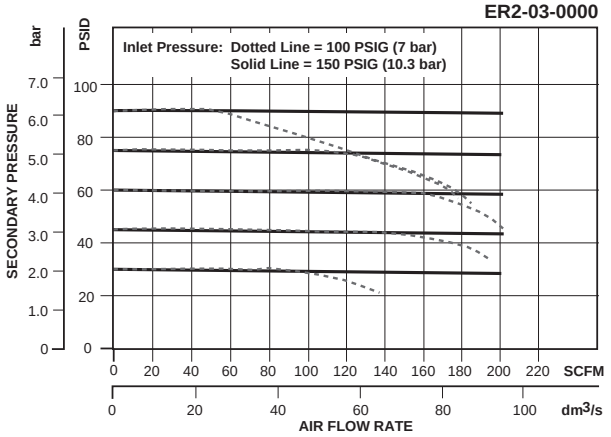
Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit ER1-XX-0000		6.31 (160)	4.71 (120)	2.35 (60)	0.79 (20)	1.79 (45)	2.35 (60)	1.20 (30)
Standard Unit ER2-XX-0000		6.31 (160)	4.71 (120)	2.88 (73)	0.79 (20)	1.79 (45)	2.88 (73)	1.20 (30)

= "Most Popular"

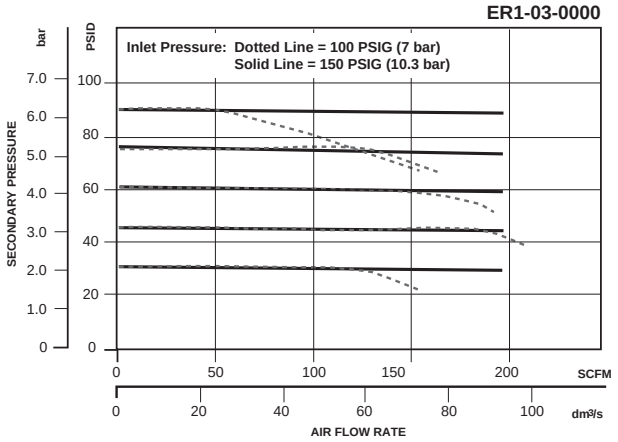
ER1-02-0000



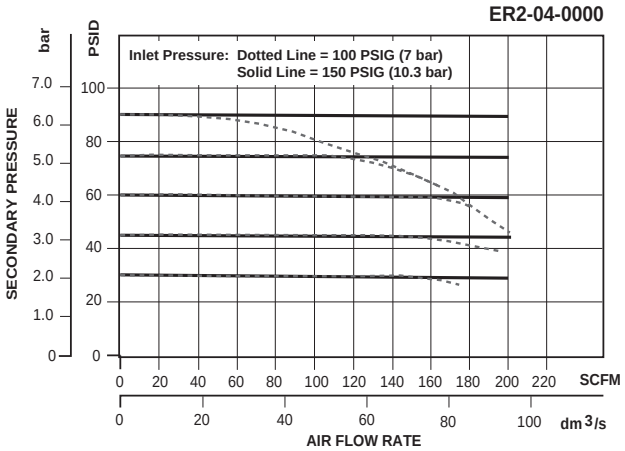
ER2-03-0000



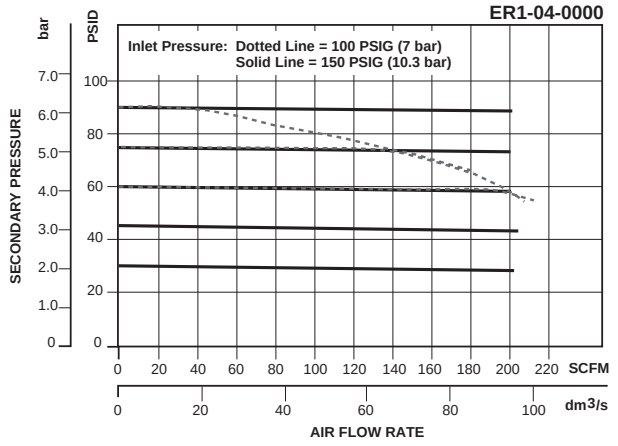
ER1-03-0000



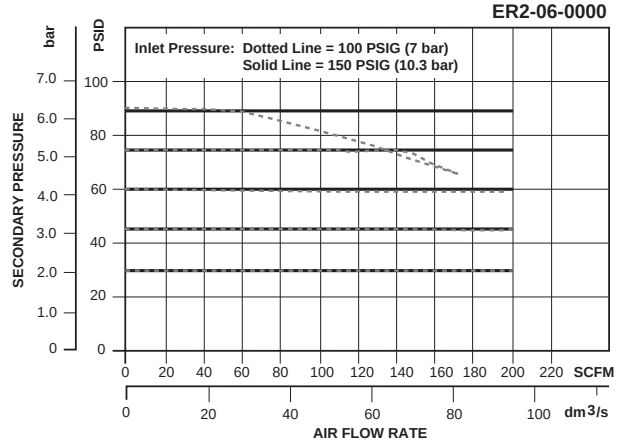
ER2-04-0000



ER1-04-0000



ER2-06-0000



C

Additional Modular Products

Ordering Information

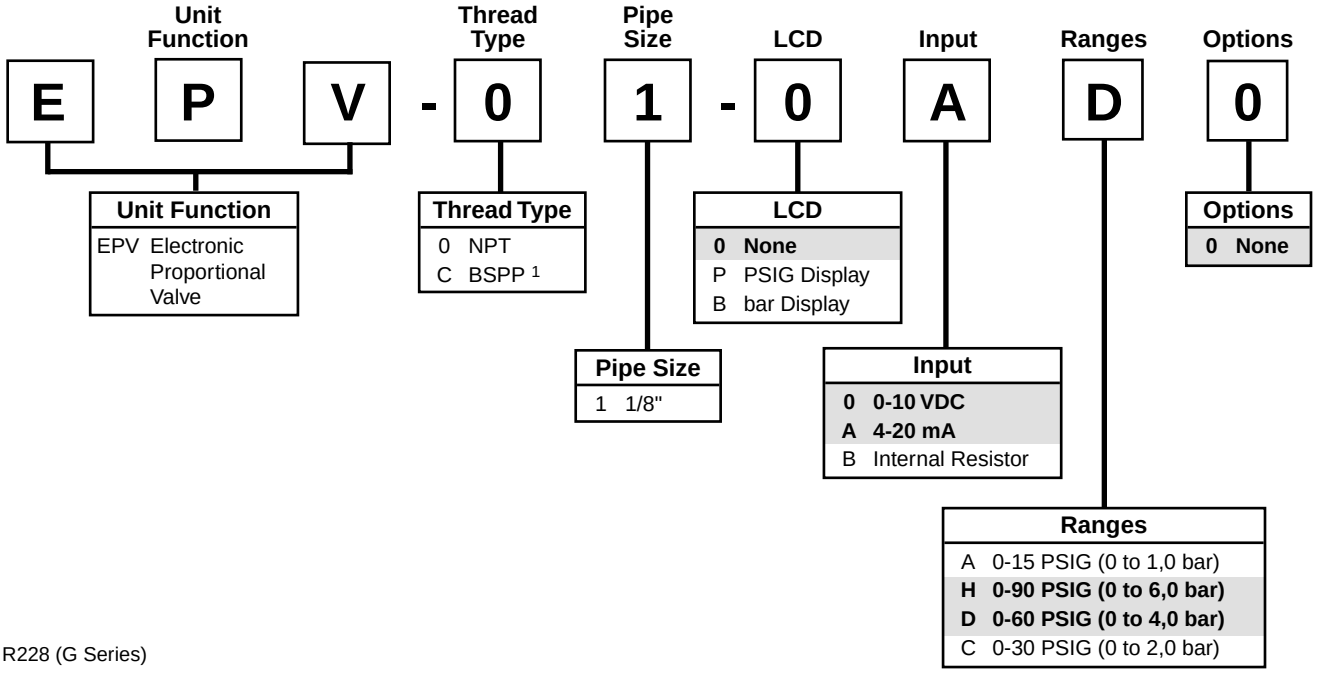
Model Type	Port Size	0 to 10VDC With LCD (PSI)	0 to 10VDC With LCD (bar)	4 to 20mA With LCD (PSI)	4 to 20mA With LCD (bar)	0 to 10VDC Without LCD	4 to 20mA Without LCD	Internal With LCD (PSI)	Internal With LCD (bar)
ER1	1/4	ER1-02-P000	ER1-C2-B000	ER1-02-PA00	ER1-C2-BA00	ER1-02-0000	ER1-02-0A00	ER1-02-PB00	ER1-C2-BB00
	3/8	ER1-03-P000	ER1-C3-B000	ER1-03-PA00	ER1-C3-BA00	ER1-03-0000	ER1-03-0A00	ER1-03-PB00	ER1-C3-BB00
	1/2	ER1-04-P000	ER1-C4-B000	ER1-04-PA00	ER1-C4-BA00	ER1-04-0000	ER1-04-0A00	ER1-04-PB00	ER1-C4-BB00
ER2	3/8	ER2-03-P000	ER2-C3-B000	ER2-03-PA00	ER2-C3-BA00	ER2-03-0000	ER2-03-0A00	ER2-03-PB00	ER2-C3-BB00
	1/2	ER2-04-P000	ER2-C4-B000	ER2-04-PA00	ER2-C4-BA00	ER2-04-0000	ER2-04-0A00	ER2-04-PB00	ER2-C4-BB00
	3/4	ER2-06-P000	ER2-C6-B000	ER2-06-PA00	ER2-C6-BA00	ER2-06-0000	ER2-06-0A00	ER2-06-PB00	ER2-C6-BB00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Electronic Proportional Valve Numbering System

= "Most Popular"



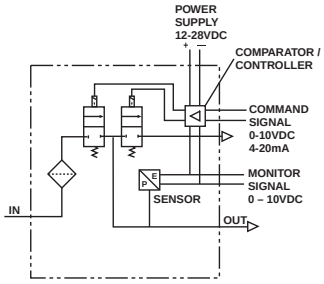
[1] ISO, R228 (G Series)

C

Additional Modular Products

Electronic Proportional Valve EPV

= "Most Popular"





EPV-01-00H0

Features

- Optional LCD Panel Displays P2 Pressure in PSIG or bar
- Modern Design and Appearance
- Light Weight
- 0-10 VDC, 4-20mA, or Internal Control Signal Options Available

Specifications

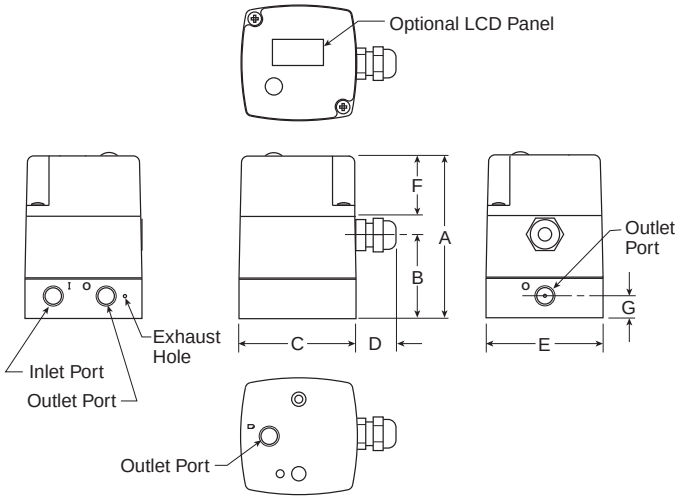
Flow Rate		C_V = .02
Linearity		< 1.0 PSIG (.06 bar)
Maximum Supply Pressure		150 PSIG (10.3 bar)
Operating Temperature		32° to 125°F (0° to 52°C)
Output Pressure Ranges		15 / 30 / 60 / 90 PSIG 1/2, 1/4, 1/6, 2 bar
Overall Accuracy		0.8% Scale
Port Size	NPT / BSPP-G	1/8
Response*		50 mSEC
Step Response**		with Step Input 600 mSEC
Weight	lb. (kg)	.92 (.42)

* Response time for the unit to recognize and correct for a change in set value or conditions.

** Step response is the time to go from 10 to 90% of set value with a 60 PSIG (4.0 bar) step input.

Materials of Construction

Body / Cap	Aluminum
Body Cover	ABS
Seals	Nitrile
Valve Assembly	Brass / Nitrile



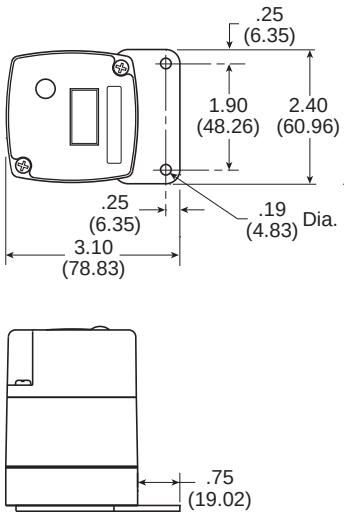
Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit EPV-XX-0000		3.28 (83)	1.69 (43)	2.35 (60)	0.79 (20)	2.35 (60)	1.20 (30)	0.45 (11)

= "Most Popular"

The EPV provides highly accurate pressure for static and low flow applications. In addition, the EPV is available in both 1/8" NPT or G-series outlet ports on three sides and has a unique compact design which allows for easy installation.

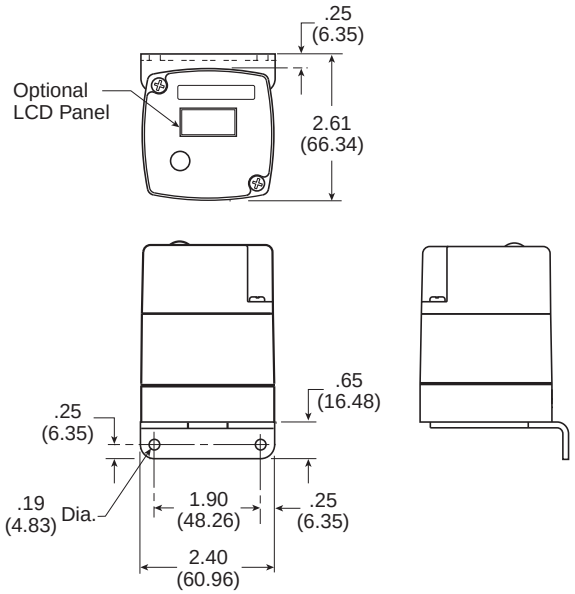
For optimum valve and system performance, we recommend a pre-filter package consisting of a 5 micron particulate filter and a .01 micron coalescing filter.



Flat Bracket

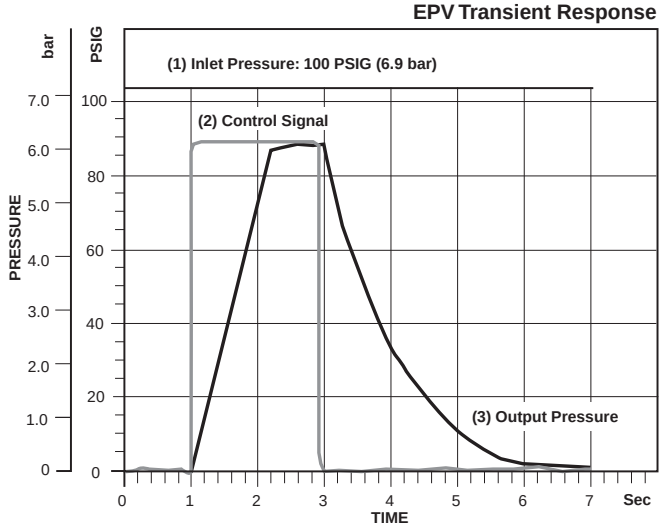
Replacement Kits

Flat Bracket Kit.....EPP-95-351
Angled Bracket Kit EPP-95-352
Control Board, EPV 15 / 30 PSIG.....EPP-95-782



Angled Bracket

EPV Transient Response



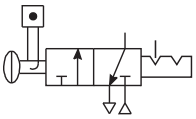
Ordering Information

Model Type	Port Size	Display	0 to 10VDC w/ LCD	4 to 20mA w/ LCD	Internal With LCD
EPV	1/8	PSI	EPV-01-P0H0	EPV-01-PAH0	EPV-01-PBH0
		bar	EPV-C1-B0H0	EPV-C1-BAH0	EPV-C1-BBH0
		None	EPV-01-00H0	EPV-01-0AH0	—

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Modular Ball Valve
V40, V60, V73

= "Most Popular"





Specifications

Operating Temperature		-40°C to 80°C (40°F to 176°F)
Max. Supply Pressure		17 bar (246 psi)
Port Size	NPT / BSPP / BSPT	1/4, 3/8, 1/2, 3/4
Weight	**V40:**	0.15 kg (0.33 lbs)
	V60:	0.36 kg (0.79 lbs)
	V73:	0.55 kg (1.21 lbs)

Materials of Construction

Body		Aluminum
Seals		PTFE
Ball	**V40**	Brass
	V60 / V73	Chrome plated brass

C

Additional Modular Products

Features

The Modular Ball Valves provide shut off line pressure with a non-sticking 90° turn handle to prevent unauthorized adjustment. When the inlet pressure is turned off the downstream air pressure vents through the exhaust port. The padlock slide may be assembled on either side. It is recommended that this is assembled after mounting.

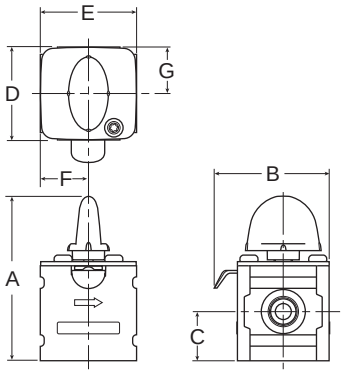
The Safety Lockout valves conform to OSHA #29 CFR part 1910 — control of hazardous energy source (lockout / tagout).

Note: This padlock slide is a permanent assembly and may not be removed later

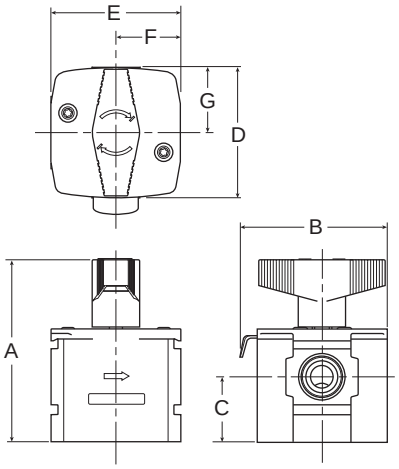
Ordering Information

Model Type	Port Size	Thread Type	Flow SCFM
V40-02-B000B	1/4	NPT	42
V60-03-B000B	3/8	NPT	190
V60-04-B000B	1/2	NPT	258
V73-04-B000B	1/2	NPT	561
V73-06-B000B	3/4	NPT	678

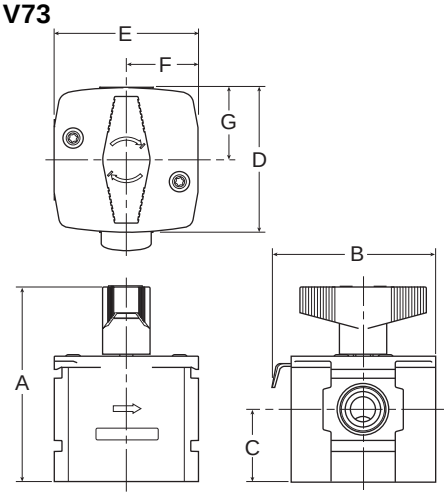
V40



V60



V73



Dimensions

Models (Inches (mm))	A	B	C	D	E	F	G
Standard Unit V40-XX-B000B	2.81 (71.4)	1.96 (50)	0.84 (21.4)	1.57 (40)	1.65 (42)	0.82 (21)	0.78 (20)
Standard Unit V60-XX-B000B	3.46 (88)	2.87 (73)	1.00 (25.4)	2.36 (60)	2.36 (60)	1.18 (30)	1.18 (30)
Standard Unit V73-XX-B000B	3.87 (98.4)	3.25 (82.6)	1.44 (36.5)	2.87 (73)	2.87 (73)	1.43 (36.5)	1.43 (36.5)

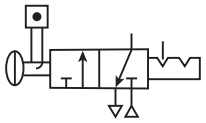
Modular Ball Valve V90



Ball / Lockout Valve shuts off downstream line pressure in the closed position with a 90° turn of the handle. In the closed position, inlet air pressure is blocked and downstream / system air is exhausted through a threaded port. To prevent unauthorized adjustment, the padlock slide may be assembled on either side. It is recommended that this slide is installed after final system assembly.

The Safety Lockout valves conform to OSHA #29 CFR part 1910 – control of hazardous energy source (lockout / tagout).

Symbol



- Positive bubble tight shut-off
- 90° turn handle to prevent unauthorized adjustment
- Padlockable (up to 6 times)
- When the inlet pressure is turned off the downstream vents through the exhaust port

V90	-	0	6	-	B	0	0	0

Series	
Ball Valve	V90

Thread type*	
NPT	0
BSPP	C

Port size	
3/4	6
1	8

Option	
Ball	B

***Note:** For 1-1/2" ported unit, please order P3YKA*BCP port block kit separately.
Bold items are most common.

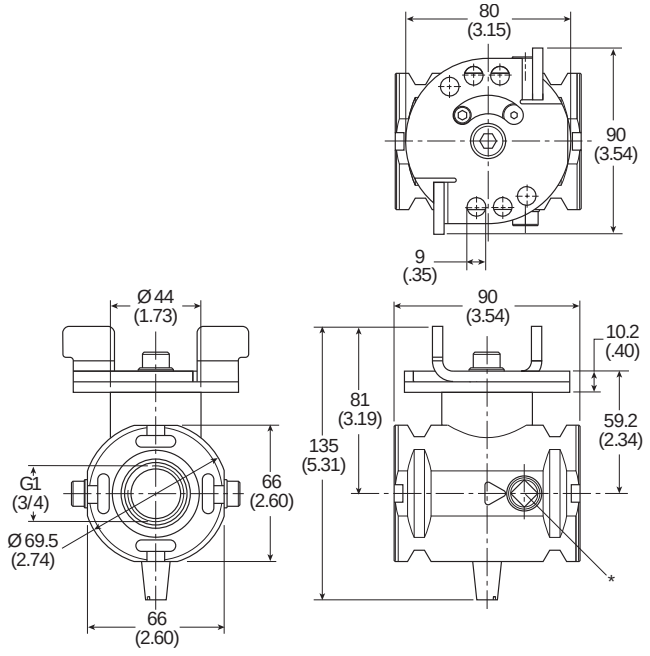
Specifications

Flow capacity	3/4"	333 dm³/s (705.6 scfm)
	1"	333 dm³/s (705.6 scfm)
Max. pressure air pilot operated		17.5 bar (254 psig)
Operating temperature		-10°C to 60°C (14°F to 140°F)
Weight	3/4"	1.1 kg (2.4 lb)
	1"	1.1 kg (2.4 lb)

Material Specifications

Body	Aluminum
Valve ball	Brass / Nickle plated
Handle	Aluminum
Seals	Nitrile NBR
Exhaust silencer	Sintered bronze

Dimensions mm (inches)



08 Series Diverter Block Numbering System

= "Most Popular"

Unit Function	Family			Thread Type		Auxiliary Ports		Options		Options		Options		Options	
N	0	8	-	0		2	-	0		0		0		0	

Unit Function	Family	Thread Type	Auxiliary Ports	Options	Options	Options	Options
N Diverter Block	08 Miniature	0 NPT C BSPP [1]	2 1/4"	**0 None**	**0 None**	**0 None**	**0 None**

[1] ISO, R228 (G Series)

C

Additional Modular Products

18 / 28 Series Diverter Block Numbering System

Unit Function	Family			Thread Type		Pipe Size		Options		Auxiliary Ports		Options		Options	
N	1	8	-	0		4	-	0		0		0		0	

Unit Function	Family	Thread Type	Pipe Size	Options	Auxiliary Ports	Options	Options
N Diverter Block	18 Miniature 28 Standard	0 NPT C BSPP [1]	4 1/2" In / Out 6 3/4" In / Out	**0 None**		**0 None**	**0 None**

Auxiliary Ports		
	18	28
1/4"	A	N/A
3/8"	**0**	C
1/2"	D	**0**
3/4"	N/A	E
1"	N/A	N/A

[1] ISO, R228 (G Series)

NJ8 Diverter Block Numbering System

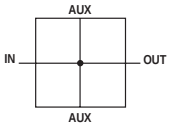
Unit Function			Thread Type		Through Port		Auxiliary Ports		Options		Options		Options	
N	J	8	-	0	6	-	D		0		0		0	

Unit Function	Thread Type	Through Port	Options	Options	Options	Options
NJ8 Diverter Block	0 NPT C BSPP	6 3/4"	A 1/4" C 3/8" **D 1/2"**	**0 None**	**0 None**	**0 None**

Auxiliary Ports
2 Each (one top, one bottom)

Diverter Block N08

= "Most Popular"





N08-02-0000

Specifications

Flow Capacity*	1/4	140 SCFM (66.1 dm^3/s)
Auxiliary Port (2)	NPT / BSPP-G	1/4
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		-40° to 150°F (0° to 65.5°C)
Port Size (In / Out)	NPT / BSPP-G	1/4
Weight	lb. (kg)	.42 (0.19)

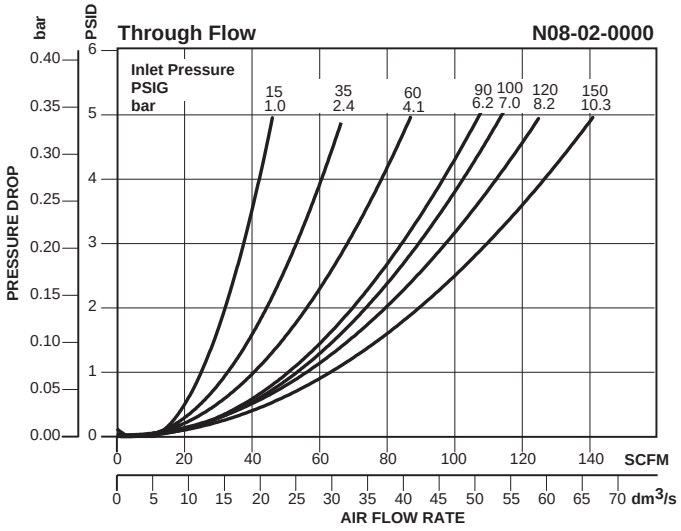
* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

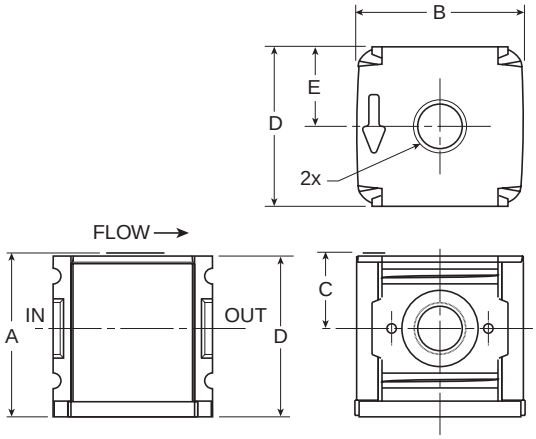
Materials of Construction

Body	Zinc

Features

- Available in 1/4 Threaded Ports
- Modern Design and Appearance
- Light Weight
- Two 1/4 Threaded Auxiliary Ports Standard
- Two Additional Auxiliary Ports Optional
- Can be Mounted Anywhere in the FRL System
- Includes One Pipe Plug





Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit N08-02-0000		1.61 (41)	1.66 (42)	0.74 (19)	1.58 (40)	0.79 (20)

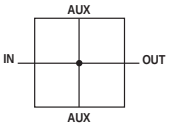
Ordering Information

Model Type	In / Out Port Size	Auxiliary Port Size	Model
N08	1/4	1/4	N08-02-0000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Diverter Block N18 / N28

= "Most Popular"





N18-04-0000

Specifications

Flow Capacity*	N18	1/2	400 SCFM (189 dm3/s)
	N28	3/4	647 SCFM (305 dm3/s)
Auxiliary Port (2)	NPT / BSPP-G	N18	3/8
		N28	1/2
Maximum Supply Pressure			300 PSIG (20.7 bar)
Operating Temperature			32° to 150°F (0° to 65.5°C)
Port Size (In / Out)	NPT / BSPP-G	N18	1/2
		N28	3/4
Weight	lb. (kg)	N18	.261 (.346)
		N28	.94 (1.08)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

Body	Aluminum

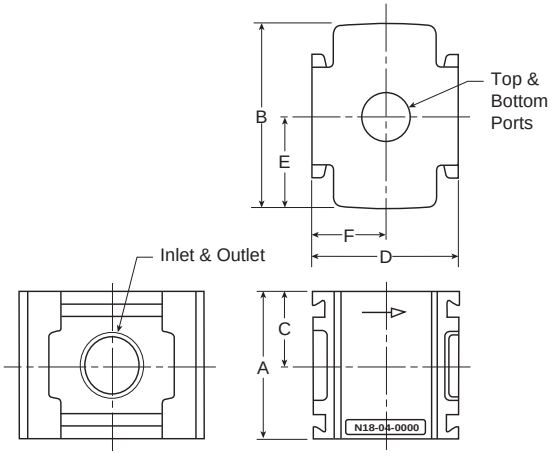
Features

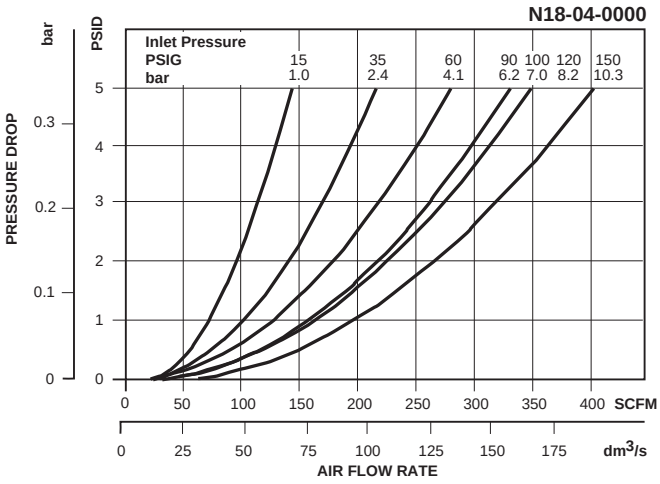
- Available in 1/2 (N18) or 3/4 (N28) Threaded Ports
- Two Auxiliary Ports Standard
- Can be Mounted Anywhere in the FRL System

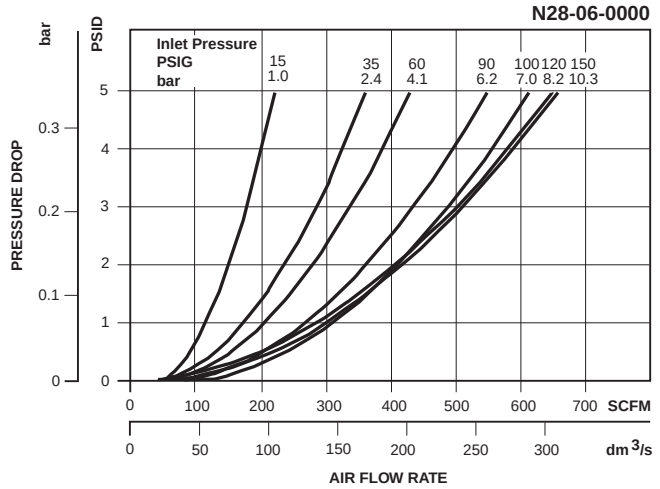
Ordering Information

Model Type	In / Out Port Size	Auxiliary Port Size	Model
N18	1/2	1/4	N18-04-0A00
		3/8	N18-04-0000
		1/2	N18-04-0D00
N28	3/4	3/8	N28-06-0C00
		1/2	N28-06-0000
		3/4	N28-06-0E00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.





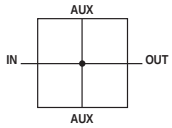


Dimensions

Models	Inches (mm)	A	B	C	D	E	F
Standard Unit N18-XX-0000		1.88 (48)	2.36 (60)	0.94 (24)	1.88 (48)	1.18 (30)	0.94 (24)
Standard Unit N28-XX-0000		1.88 (48)	2.88 (73)	0.94 (24)	2.60 (66)	1.44 (36.5)	1.30 (33)

Diverter Block NJ8

= "Most Popular"





NJ8-06-D000

Specifications

Flow Capacity*	(Model D000)	750 SCFM (354 dm^3/s)
Auxiliary Port (2)	NPT / BSPP-G	1/4, 3/8, 1/2
Maximum Supply Pressure		300 PSIG (20.7 bar)
Operating Temperature		32° to 150°F (0° to 65.5°C)
Port Size (Out Only)	NPT / BSPP-G	3/4
Weight	lb. (kg)	.74 (0.34)

* Inlet pressure 150 PSIG (10.3 bar). Pressure drop 5 PSID (0.3 bar).

Materials of Construction

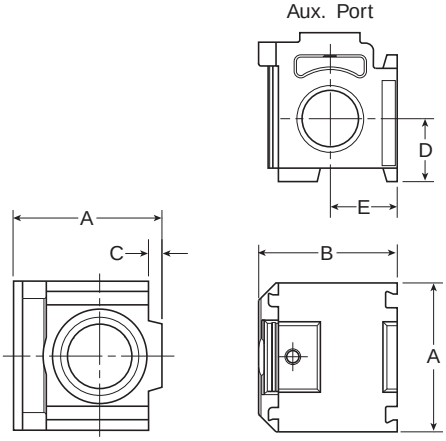
Body	Zinc

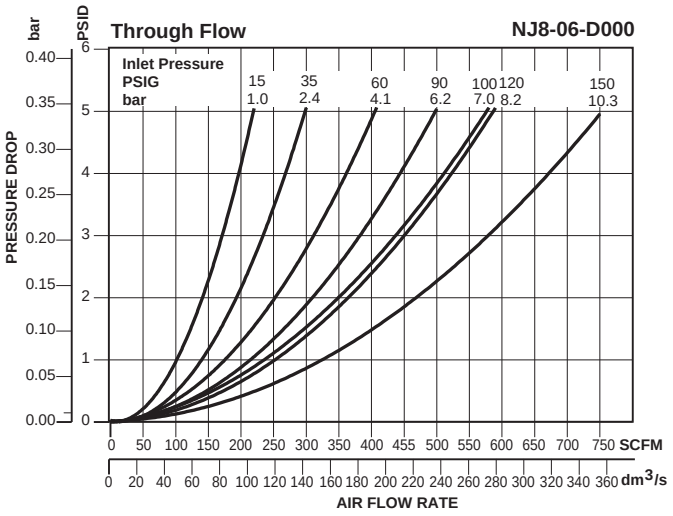
C

Additional Modular Products

Features

- Eliminates One Joiner Set
- Space-Saving Design.
- Can be Wall Mounted with T-Bracket
- Includes O-ring, One Pipe Plug and Joiner Clamp
- A000 Models Will Accept an Electronic Pressure Switch
- Can Assemble Multiple Units to Form a Manifold
- Auxiliary Ports Top and Bottom





Dimensions

Models	Inches (mm)	A	B	C	D	E
Standard Unit NJ8-X6-X000		1.88 (48)	1.75 (44)	0.17 (4)	0.80 (20)	0.85 (22)

Ordering Information

Model Type	Out Port Size	Auxiliary Port Size	Model
NJ8	3/4	1/4	NJ8-06-A000
		3/8	NJ8-06-C000
		1/2	NJ8-06-D000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Modular Manifold P3YMA



90 Series Manifolds provide up to 4 extra outlet ports. They may be assembled at any position in a combination e.g. before the lubricator to provide oil free take off or at the end of a combination to provide extra outlet ports.

Thread type	Part number
NPT	**P3YMA9V0N**
BSPP	**P3YMA1V0N**

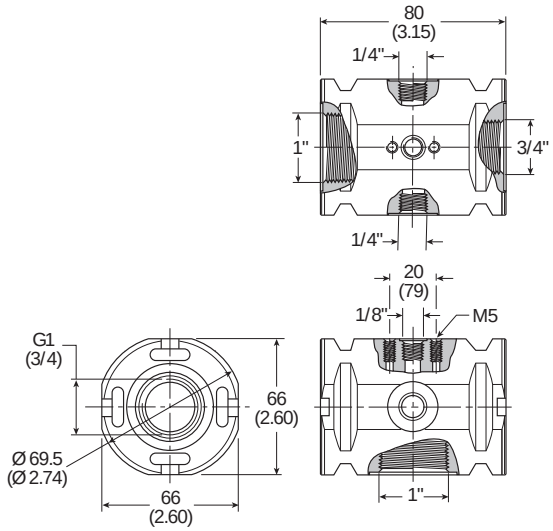
Port sizes

Inlet port	Top	Bottom	Front and Back
3/4"	1/8”	1”	1/4”
1"	1/8”	1”	1/4”

Material specifications

Body	Aluminum
Weight	0.7 kg (1.5 lb)

Dimensions mm (inches)



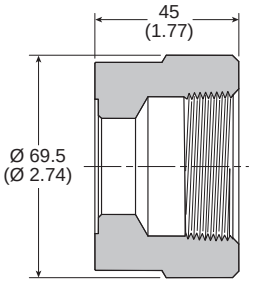
Optional Port Block Kits P3YKA



- To change port sizes Port Block Kits are available, they are attached to any unit utilizing the connecting kit.
- Allows assemblies to be removed from a hard piped system.

Material specifications

Body	Aluminum
Weight	0.65 kg (1.43 lb)



P3YKA **9** **B** **CP**

Basic series	
Port Blocks	P3YKA

Thread type	
BSPP	1
NPT	9

Port size	
1-1/2	B

Modular Accessories and Repair Kits

Filter Replacement Element Kits D2
Filter Replacement Bowl Kits.....D3
Accessories – Filters D4-D5
Accessories – Regulators D6-D7
Regulator Replacement Kits D8
Lubricator Replacement Kits D9
Accessories – Lubricators D10-D11
Filter / Regulator – Replacement Repair Kits.....D12
Accessories – Filter / Regulators.....D13-D15
Accessories – 08 Series D16
Accessories – 18 / 28 Series.....D17
Accessories – 16 / 26 Series.....D18
Accessories – 90 Series D19

Filter Replacement Element Kits







Model	Type A 5 Micron	Type B1 1 Micron	Type B 0.5 Micron	Type C 0.01 Micron	Type D Oil Vapor Removing
Particulate Filters					
F01	FRP-95-199	—	—	—	—
F03	PS403	—	—	—	—
F08	FRP-96-729	—	—	—	—
F16	FRP-95-160	—	—	—	—
F18	FRP-96-639	—	—	—	—
F26	FRP-95-115	—	—	—	—
F28	FRP-96-653	—	—	—	—
F30	FRP-95-209	—	—	—	—
F34	FRP-95-209	—	—	—	—
F35	FRP-95-505	—	—	—	—
F36	FRP-95-506	—	—	—	—
F37	FRP-95-507	—	—	—	—
F39	P3NKA00ESE	—	—	—	—
F43	FRP-95-508	—	—	—	—
F50	FRP-95-212	—	—	—	—
F51	FRP-95-213	—	—	—	—
F52	FRP-95-212 (3 kits)	—	—	—	—
F53	FRP-95-213 (3 kits)	—	—	—	—
Coalescing Filters					
M03	—	PS456	—	PS446	PS452
M08	—	—	MSP-96-732	MTP-96-649	MXP-96-222
M16	—	—	MSP-95-988	MTP-95-548	MXP-95-987
M18	—	—	MSP-96-647	MTP-96-646	MXP-96-650
M21	—	—	MSP-96-649	MTP-96-648	MXP-96-651
M26	—	—	MSP-95-989	MTP-95-549	MXP-95-540
M28	—	—	MSP-96-649	MTP-96-648	MXP-96-651
M30	—	—	MSP-95-992	MTP-95-551	MXP-95-532
M31	—	—	MSP-95-993	MTP-95-521	MXP-95-522
M32	—	MSP-95-873	—	MTP-95-559	MXP-95-558
M35	—	MSP-95-502	—	MTP-95-502	MXP-95-502
M36	—	MSP-95-503	—	MTP-95-503	MXP-95-503
M37	—	MSP-95-504	—	MTP-95-504	MXP-95-504
M39	—	—	P3NKA00ES9	P3NKA00ESC	—
M43	—	MSP-95-876	—	MTP-95-562	MXP-95-565
M45	—	MSP-95-500	—	MTP-95-500	MXP-95-500

* For F12 Series Filters.

Filter Replacement Bowl Kits



Model	Plastic Bowl / Bowl Guard / No Drain	Plastic Bowl / Manual Drain	Plastic Bowl / Bowl Guard / Manual Drain	Metal Bowl / Manual Drain	Metal Bowl / Sight Gauge / Manual Drain	Plastic Bowl / Bowl Guard / Automatic Drain	Metal Bowl / Automatic Drain	Metal Bowl / Sight Gauge / Automatic Drain
Particulate Filter / Coalescing Filter								
F03 / M03	—	PS404	—	PS447B	—	—	PS451B**	—
F08 / M08	—	—	GRP-96-712	GRP-96-714*	—	—	—	—
F18 / M18	GRP-96-638	—	GRP-96-634	—	GRP-96-636	GRP-96-635	—	GRP-96-637
F16 / M16	—	FRP-95-017	FRP-95-014	FRP-95-178	GRP-95-133	FRP-95-015	FRP-95-950	—
F28 / M28	GRP-96-652	—	GRP-96-642	—	GRP-96-644	GRP-96-643	—	GRP-96-645
F26 / M26	—	GRP-95-929	GRP-95-935	GRP-95-930	GRP-96-931	GRP-95-948	GRP-95-960	—
M21	—	MRP-96-415	FRP-95-722	—	—	—	—	—
F39 / M39	—	—	—	—	P3NKA00BSM	—	—	P3NKA00BSA
F30 / M30	—	FRP-96-315	FRP-95-832	FRP-95-593	GRP-95-676	FRP-95-77	GRP-95-970	—
F34	—	—	GRP-95-902	—	—	—	—	—
M31	—	MRP-95-940	MRP-95-938	MRP-95-939	—	MRP-95-941	—	—

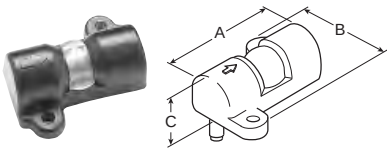
* Metal bowl does not have sight gauge.
** 12 Series has Piston Style Drain.

D

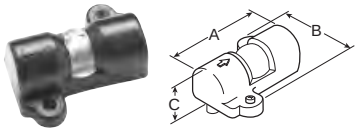
Accessories & Repair Kits

Model	Bowl O-ring (Nitrile)	Bowl O-ring (Fluorocarbon)	Filter Retainer Element Baffle	Manual Drain
Particulate Filter				
F08	GRP-96-710	GRP-96-711	—	—
F18	GRP-96-640	GRP-96-754	FRP-96-641	GRP-96-685
F28	GRP-96-654	GRP-96-755	FRP-96-283	GRP-96-685
F39	—	—	—	PS512
Coalescing Filter				
M08	GRP-96-710	GRP-96-711	—	—
M18	GRP-96-640	GRP-96-754	—	GRP-96-685
M28	GRP-96-654	GRP-96-755	—	GRP-96-685
M30	—	—	—	PS512

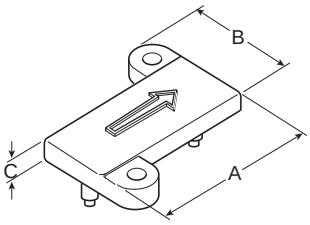
Accessories – Filters



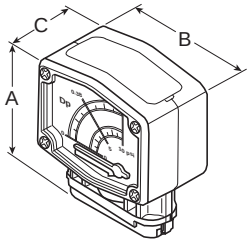
Differential Pressure Indicator
DP2-01-000, DP2-01-001



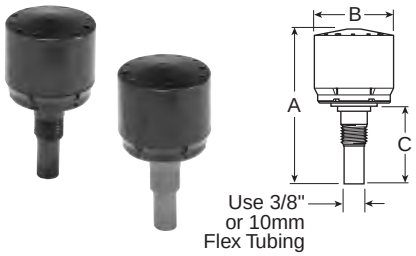
Differential Pressure Indicator
DP8-01-000



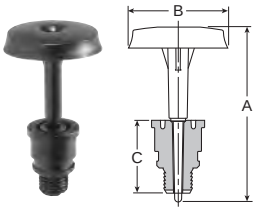
Cap, Differential Pressure Indicator
GRP-95-020, GRP-95-022



Differential Pressure Gauge
DP3-01-000



Automatic Drain
GRP-95-973, GRP-95-981



Piston Drain
GRP-96-716



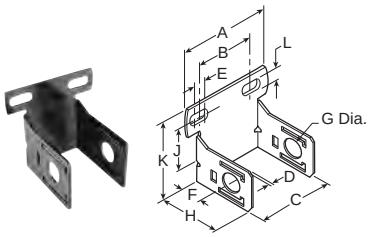
(Use with GRP-95-981 shown above. Order saperately)

Manual Override for Auto Float Drains
GRP-96-001

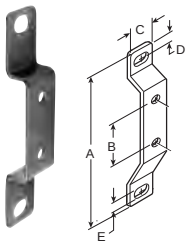
Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C
Differential Pressure Indicator	DP2-01-000	M16, M21, M26, M30, M31, M32	2.12 (54)	1.85 (47)	0.84 (21)
	DP2-01-001	F35, F36, F37, F43, M35, M36, M37, M43, M45			
	DP8-01-000	F18, F28, M18, M28	2.12 (54)	1.85 (47)	.84 (21)
Cap, Differential Pressure Indicator (Pressures over 150 PSIG, 10.3 bar)	GRP-95-020	M16, M21, M26, M30, M31, M32	2.12 (54)	1.85 (47)	0.25 (6.3)
	GRP-95-022	F35, F36, F37, F43, M35, M36, M37, M43, M45			
Differential Pressure Gauge	DP3-01-000	M32, M42	3.0 (75.9)	2.55 (65)	1.54 (39)
Automatic Drains, Nitrile	GRP-95-973	F18, M18, B18 F28, M28, B28 F16, F26, F30, F35, F36, F43	2.93 (74.4)	1.47 (37.3)	1.17 (29.7)
Automatic Drains, Fluorocarbon	GRP-95-981				
Manual Override for Auto Float Drains	GRP-96-001	GRP-95-981	—	—	—
Piston Drain	GRP-96-716	F08, M08, B08	1.70 (43)	.94 (24)	.68 (17)

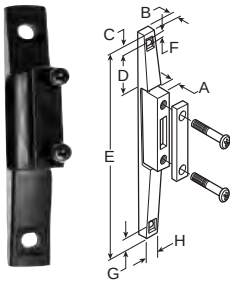
Accessories – Filters



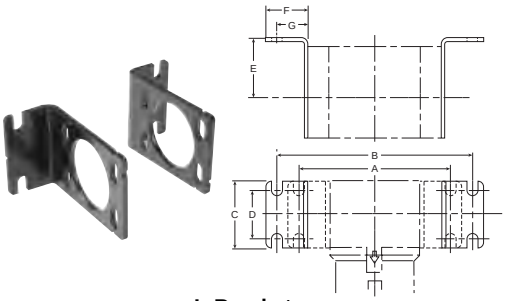
C-Bracket
GPA-97-010



T-Bracket
GPA-96-602

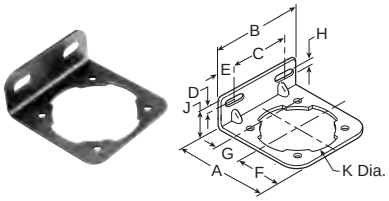


T-Bracket
GPA-96-737
w/ Joiner

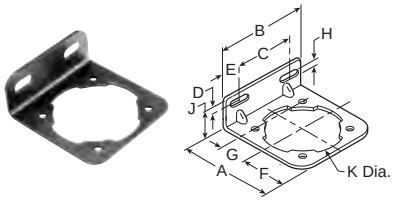


L-Bracket
P3NKA00MW

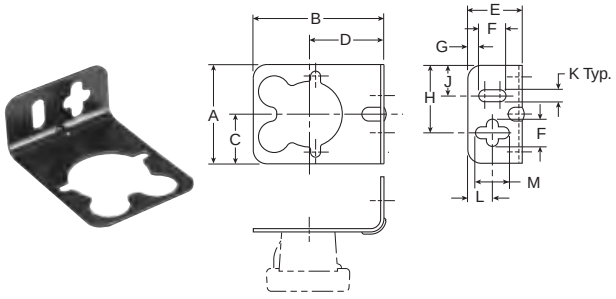
For 1-1/2" BSPP Port Block with E02 fitting application, use **Mounting Bracket Kit P3NKA0BMW**



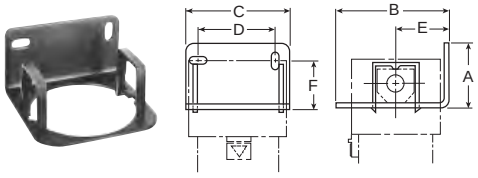
L-Bracket
GPA-96-604



L-Bracket
GPA-96-605



L-Bracket
PS417B

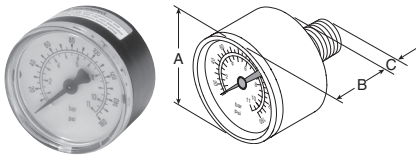


L-Bracket
GPA-95-016, GPA-95-946

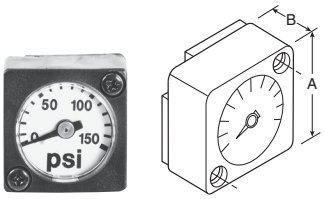
Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
C-Bracket	**GPA-97-010**	F08, M08, B08	2.67 (68)	1.73 (44)	1.57 (40)	.07 (1.8)	.39 (9.9)	1.57 (40)	.78 (20)	2.32 (59)	1.37 (35)	2.41 (61)	.26 (6.6)	—
L-Bracket	**GPA-95-016**	F16, M16	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	1.60 (41)	—	—	—	—	—	—
	GPA-95-946	F26, M26	2.12 (53)	3.62 (91)	3.80 (96)	2.93 (74)	1.88 (47)	1.60 (41)						
	GPA-96-604	F18, M18, B18	2.84 (72)	2.74 (69.5)	1.66 (42)	.38 (9.6)	.54 (14)	1.26 (32)	.88 (22)	.28 (7.1)	1.10 (28)	2.25 (57)	—	—
	GPA-96-605	F28, M28, B28	3.44 (87)	3.00 (76)	1.88 (48)	.38 (9.6)	.56 (14)	1.49 (38)	1.10 (28)	.28 (7.1)	1.10 (28)	2.66 (67.5)	—	—
	P3NKA00MW	F39, B39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	PS417B	F03, M03	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)
T-Bracket	**GPA-96-602**	F18, F28, M18, M28	3.75 (95)	1.25 (32)	.76 (19.3)	.25 (6.3)	.28 (7.1)	—	—	—	—	—	—	—
T-Bracket w/ Joiner	**GPA-96-737**	F08, M08	.45 (11)	.28 (7.1)	.40 (10)	.67 (17)	3.97 (100.8)	.22 (5.6)	.40 (10)	.64 (16)	—	—	—	—

Accessories – Regulators



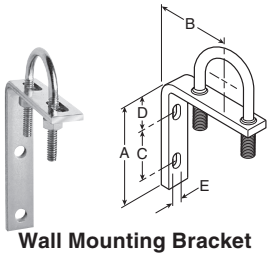
Gauges



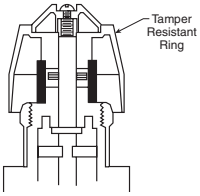
Flush Mount Gauge
08 Series



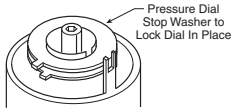
Digital Gauge



Wall Mounting Bracket
U-Bolt Pipe Clamp
GRP-95-734



RPA-95-006



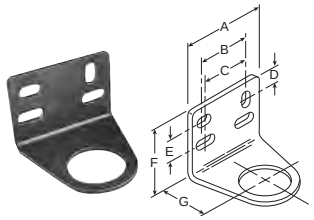
RRP-95-585

Tamper Resistant Kit

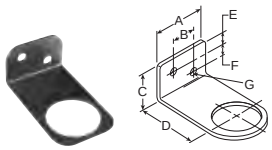
Dimensions Inches (mm)

Accessories		Used On	A	B	C	D	E
Gauges, 1/4 Port, CBM	**K4515N14030** (0 to 30 PSIG)	R18, R28	1.64 (41.6)	1.09 (27.6)	.80 (20)	—	—
	K4515N14060 (0 to 60 PSIG)						
	K4515N14160 (0 to 160 PSIG)						
	K4515N14300 (0 to 300 PSIG)						
	K4515G14030 (0 to 2.0 bar)						
	K4515G14060 (0 to 4.2 bar)						
	K4515G14160 (0 to 11 bar)						
	K4515G14290 (0 to 20 bar)						
Gauges, 1/8 Port, CBM	**K4515N18030** (0 to 30 PSIG)	R03	1.64 (41.6)	1.09 (27.6)	.80 (20)	—	—
	K4515N18060 (0 to 60 PSIG)	R03, RB3, R08					
	K4515N18160 (0 to 160 PSIG)						
Gauges, 5mm 2" Round 1/4" Center Back Mount	**K4520N18030** (0 to 30 PSIG)	P15, P16	1.97 (50.0)	0.94 (24)	.71 (18)	—	—
	K4520N14030 (0 to 30 PSIG)	R18, R28, R39					
	K4520N14060 (0 to 60 PSIG)	R18, R28, R31, R39, R41					
	K4520N14160 (0 to 160 PSIG)	R18, R28, R30, R31, R39, R40, R41					
	K4520N14300 (0 to 300 PSIG)	R18, R28, R30, R39, R40					
Gauges, 1/4 Port, CBM	**K4520N14060W** (0 to 60 PSIG)	R16, R26, P15, P16	1.96 (49.8)	1.08 (27)	.91 (23)	—	—
	K4520N14160W (0 to 160 PSIG)						
	K4520N14300W (0 to 300 PSIG)	R16, R26					
Flush Mount Series Gauges	**K4511SCR160** (0 to 160 PSIG)	R08	1.06 (26.9)	.63 (16)	—	—	—
	K4511SCR060 (0 to 60 PSIG)						
	K4511SCR11B (0 to 11 bar)						
Round Digital Gauge, 1/4 Port	**K4517N14160D** (0 to 160 PSIG)	R18, R28	1-3/4" Diameter				
Tamper Resistant Kit	**RPA-95-006**	R16, R26, P15, P16	—	—	—	—	—
	RRP-95-585	R11, R21, R31, R41					
Wall Mtg. Bracket U-Bolt Pipe Clamp	**GRP-95-734**	For All Non-Modular Units Up to 1" NPT	3.34 (85)	2.76 (70)	1.62 (41)	1.10 (28)	0.30 (7.6)

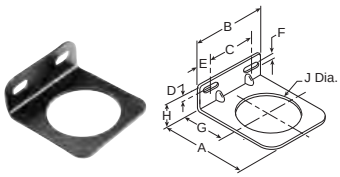
Accessories – Regulators



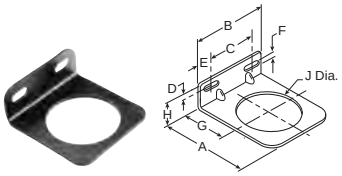
L-Bracket
GPA-95-011, GPA-95-012



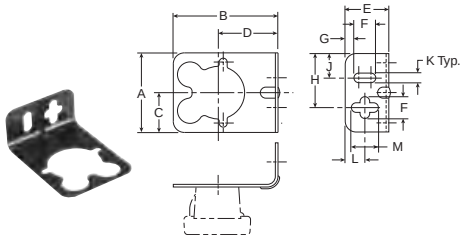
L-Bracket
GRP-95-147



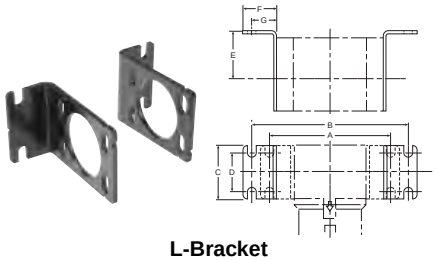
L-Bracket
GPA-96-606



L-Bracket
GPA-96-607

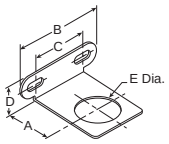


L-Bracket
PS417B
(Includes Panel Mount Nut)

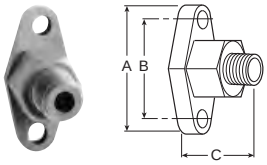


L-Bracket
P3NKA00MW

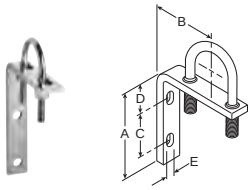
For 1-1/2" BSPP Port Block with E02 fitting application, use **Mounting Bracket Kit P3NKA0BMW**



L-Bracket
GRP-96-739



Wall Mounting Bracket –
Gauge Port Adapter
RRP-95-590, 1/4" Pipe Thread
RRP-95-591, 1/8" Pipe Thread



Wall Mounting Bracket U-Bolt Pipe Clamp
GRP-95-734

Dimensions Inches (mm)

Accessories		Used On	A	B	C	D	E	F	G	H	J	K	L	M
L-Bracket with Plastic Panel Nut	**GPA-95-011**	R16, P15, P16	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	GRP-95-747	RB3, RA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
L-Bracket	**GPA-95-012**	R16, P15, P16	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	GRP-95-147	RB3, RA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
	GPA-95-956	R26	3.00 (76.2)	2.06 (50.8)	—	0.55 (14.0)	3.50 (88.9)	4.05 (102.9)	1.88 (47.8)	—	—	—	—	—
	GRP-96-739	R08, R09	1.57 (40)	2.68 (68)	1.74 (44)	.97 (25)	1.19 (30)	—	—	—	—	—	—	—
	GPA-96-606	R18, R19	2.74 (69.5)	2.74 (69.5)	1.66 (42)	.43 (11)	.54 (14)	.28 (7.1)	1.57 (40)	1.00 (25)	2.0 (51)	—	—	—
	GPA-96-607	R28	3.33 (84.5)	3.00 (76)	1.88 (48)	.43 (11)	.56 (14)	2.40 (61)	1.94 (49)	1.00 (25)	2.40 (61)	—	—	—
	P3NKA00MW	R39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	PS417B	R03	1.80 (46)	2.37 (60)	0.90 (23)	1.35 (34)	1.00 (25)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)
Wall Mtg. Bracket Gauge Port Adapter	**RRP-95-590**	P15, P16, R16, R21, R26, R30, R31, R40, R41	1.87 (47.5)	1.38 (35)	1.25 (31.7)	—	—	—	—	—	—	—	—	—
	RRP-95-591	RB3, RA3, R03	1.87 (47.5)	1.38 (35)	1.09 (27.6)	—	—	—	—	—	—	—	—	—

Regulator Replacement Kits

Model	Self-relieving Diaphragm (Nitrile)	Non-relieving Diaphragm (Nitrile)	Valve Assembly Kit	Tamper Resistant Ring	Plastic Panel Nut	Aluminum Panel Nut
R08, R09	GRP-96-725	GRP-96-726	RRP-96-727	RPA-96-735	RPA-96-734	RPA-96-733
R18	RRP-96-656	RRP-96-657	RRP-96-658	RRP-96-671	RRP-96-675	RRP-96-673
R19	RRP-96-760	RRP-96-761	RRP-96-658	RRP-96-671	RRP-96-675	RRP-96-673
R28	RRP-96-986	RRP-96-987	RRP-96-049	RRP-96-672	RRP-96-676	RRP-96-674

Model	Main Regulating Spring 0-30 PSIG	Main Regulating Spring 0-60 PSIG	Main Regulating Spring 0-125 PSIG	Main Regulating Spring 0-250 PSIG
R08, R09	GRP-95-111	GRP-96-718	GRP-96-717	N/A
R18, R19	RRP-96-659	RRP-96-660	RRP-96-661	RRP-96-662
R28	RRP-96-163	RRP-96-164	RRP-96-165	RRP-96-166
R39	N/A	C10A1304	CA101308	CA101317

Model Regulator	Self-relieving Piston	Non-relieving Piston	Self-relieving Diaphragm	Non-relieving Diaphragm	Repair Kit Self-relieving	Repair Kit Non-relieving	Valve Assembly Kit
R03	—	—	—	—	PS423	PS422	PS424B
R16	—	—	RRP-96-213	RRP-96-216	RRP-95-130	RRP-95-129	RRP-96-215
R21	—	—	—	—	RRP-95-151	—	—
R26	—	—	RRP-96-238	RRP-96-332	RRP-95-951	RRP-95-950	RRP-96-294
R30	—	RRP-95-451	—	—	—	—	RRP-95-159
R31	RRP-95-192	—	—	—	RRP-95-152	—	RRP-96-935
R40	—	RRP-95-451	—	—	RRP-95-161	RRP-95-162	—
R41	RRP-95-192	—	—	—	—	—	RRP-96-935

Model	Self-relieving Diaphragm	Non-relieving Diaphragm	Repair Kit Self-relieving	Repair Kit Non-relieving	Valve Assembly Kit	Fluorocarbon Diaphragm Self-relieving	Fluorocarbon Valve Assembly
Precision Regulator P15 / P16	PRP-95-960	—	PRP-95-004	PRP-95-053	PRP-95-959	PRP-95-073	PPA-95-067

	Pressure Spring 0-15 PSIG	Pressure Spring 0-30 PSIG	Pressure Spring 0-40 PSIG	Pressure Spring 0-50 PSIG	Pressure Spring 0-60 PSIG	Pressure Spring 0-125 PSIG	Pressure Spring 0-160 PSIG	Pressure Spring 0-180 PSIG	Pressure Spring 0-250 PSIG
R16	—	—	—	RRP-95-222	—	RRP-95-224	—	—	RRP-95-218
R21	—	—	RRP-95-906	—	—	—	RRP-95-905	—	—
R26	—	—	—	—	RRP-95-962	GRP-95-225	—	—	RRP-95-219
R30	—	—	—	—	—	RRP-95-226	—	RRP-95-220	—
R31	—	—	RRP-95-906	—	—	—	RRP-95-905	—	—
R40	—	—	—	—	—	RRP-95-226	—	RRP-95-220	—
R41	—	—	RRP-95-906	—	—	—	RRP-95-905	—	—
P15 / P16	RRP-95-233	RRP-95-916	—	RRP-95-222	—	RRP-95-224	—	—	—

Lubricator Replacement Bowl Kits



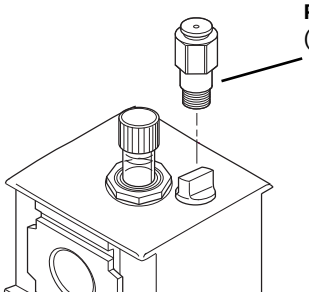


Model	Manual Drain Kit	Plastic Bowl No Drain Port	Plastic Bowl / Bowl Guard Manual Drain	Plastic Bowl Petcock Drain	Metal Bowl / Sight Gauge Manual Drain
L03	—	PS421	—	—	—
L16	—	LRP-96-937	—	LRP-96-543	GRP-95-133
L08	—	—	LRP-96-736	—	GRP-96-714*
L17	—	LRP-96-937	—	LRP-96-543	GRP-95-133
L18	GRP-96-685	—	LRP-96-701	—	GRP-96-636
L26	—	LRP-95-938	LRP-95-967	LRP-95-958	GRP-95-931
L27	—	LRP-95-938	LRP-95-967	LRP-95-958	GRP-95-931
L28	GRP-96-685	—	LRP-96-702	—	GRP-96-644
L30	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676
L34	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676
L39	PS512	—	—	—	P3NKA00BSM
L40	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676
L50	—	LRP-96-940	LRP-95-830	LRP-96-160	GRP-95-676

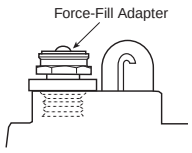
*Metal bowl does not have sight gauge. ** No Drain.

Lubricator Replacement Kits

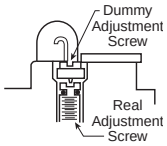
Model	Siphon Tube Assembly	Bowl O-ring (Nitrile)	Bowl O-ring (Fluorocarbon)	Force Fill Adapter	Fill Plug Kit (Fill Plug & O-ring)	Sight Dome Assembly
L08	LRP-96-731	GRP-96-710	GRP-96-711	N/A	LRP-96-730	LRP-96-301
L18	LRP-96-677	GRP-96-640	GRP-96-754	LRP-96-704	LRP-96-679	LRP-96-310
L28	LRP-96-781	GRP-96-654	GRP-96-755	LRP-96-704	LRP-96-679	LRP-96-310
L39	N/A	N/A	N/A	P3NKA00PK	P3NKA00PL	PS740



Accessories – Lubricators



Force Fill Adapter
GRP-96-394



Tamper Resistant Kit
LRP-95-587



F442 Oil
F442001 - 1 Quart Bottle
F442002 - 1 Gallon
F442005 - 4 Gallon Case

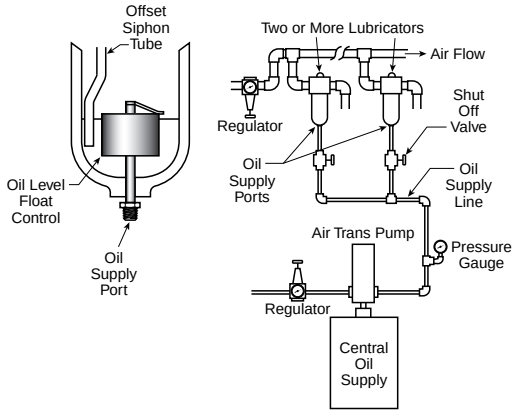
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Accessories & Repair Kits

Auto-Fill™ Adapter Kits

These adapters provide automatic oil replenishing to several lubricators from a central oil supply. See schematic for installation. Pump, regulators, shut-off valves not included. Oil supply pressure must be a least 5 PSIG (0.3 bar) above compressed air pressure at lubricators, but no higher than 50 PSIG (3.4 bar) above. Oil pressure must be turned off when air pressure is turned off.

Order Part No. LRP-95-965 to adapt L26, L27, and No. LRP-95-698 for L30 and L34 series.

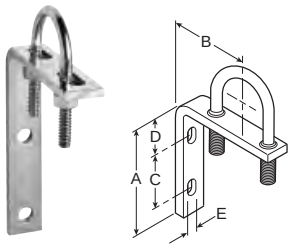


Dimensions

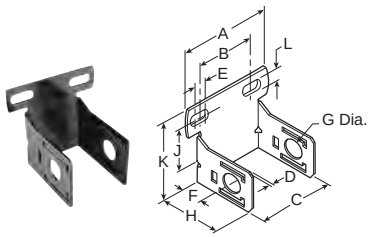
Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
Force-Fill Adapter	**GRP-96-394**	L16 / L17, L26 / L27, L30, L31, L32, L34, L50	—	—	—	—	—	—	—	—	—	—	—	—
Tamper Resistant Kit	**LRP-95-587**	L16 / L17, L26 / L27, L30, L31, L32, L34, L40, L41, L42, L50	—	—	—	—	—	—	—	—	—	—	—	—
Oil	**F442001** – 1 Quart Bottle		—	—	—	—	—	—	—	—	—	—	—	—
	F442002 – 1 Gallon													
	F442005 – 4 Gallon Case													

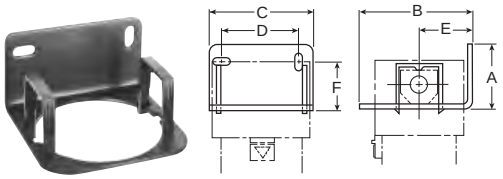
Accessories – Lubricators



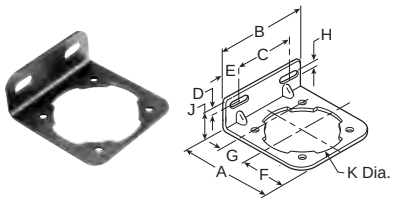
Wall Mounting Bracket
U-Bolt Pipe Clamp
GRP-95-734



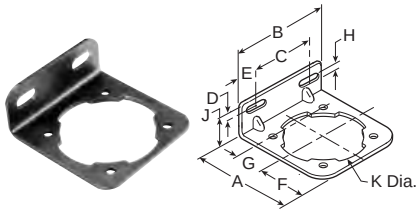
C-Bracket
GPA-97-010



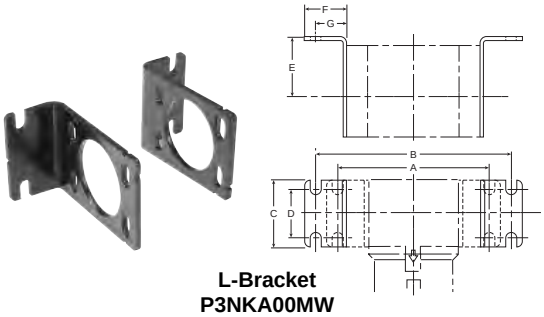
L-Bracket
GPA-95-016, GPA-95-946



L-Bracket
GPA-96-604

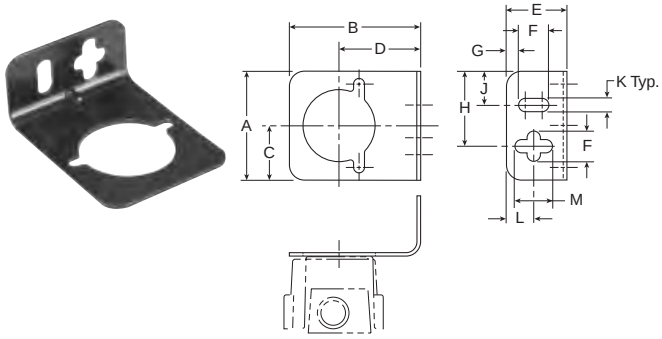


L-Bracket
GPA-96-605



L-Bracket
P3NKA00MW

For 1-1/2" BSPP Port Block with E02 fitting application, use **Mounting Bracket Kit P3NKA0BMW**



L-Bracket
PS419

Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
Wall Mounting Bracket	**GRP-95-734**	For All Non-Modular Units Up To 1" NPT	3.34 (85)	2.76 (70)	1.62 (41)	1.10 (28)	0.30 (7.6)	—	—	—	—	—	—	—
C-Bracket	**GPA-97-010**	L08	2.67 (68)	1.73 (44)	1.57 (40)	.07 (1.8)	.39 (9.9)	1.57 (40)	.78 (20)	2.32 (59)	1.37 (35)	2.41 (61)	.26 (6.6)	—
L-Bracket	**GPA-95-016**	L16 / L17	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	2.12 (54)	—	—	—	—	—	—
	GPA-95-946	L26 / L27	2.12 (53)	3.62 (91)	3.80 (96)	2.93 (74)	1.88 (47)	2.12 (54)	—	—	—	—	—	—
	GPA-96-604	L18	2.84 (72)	2.74 (69.5)	1.66 (42)	.38 (9.6)	.54 (14)	1.26 (32)	.88 (22)	.28 (7.1)	1.10 (28)	2.25 (57)	—	—
	GPA-96-605	L28	3.44 (87)	3.00 (76)	1.88 (48)	.38 (9.6)	.56 (14)	1.49 (38)	1.10 (28)	.28 (7.1)	1.10 (28)	2.66 (67.5)	—	—
	P3NKA00MW	L39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	PS419	L03	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)

Filter / Regulators Replacement Repair Kits







Model	Plastic Bowl / Bowl Guard Manual Drain	Metal Bowl / Sight Gauge Manual Drain	Plastic Bowl / Bowl Guard Automatic Drain	Metal Bowl / Sight Gauge Automatic Drain	Plastic Bowl / Bowl Guard Closed Bottom
B08	GRP-96-712	GRP-96-714*	N/A	N/A	N/A
B18	GRP-96-634	GRP-96-636	GRP-96-635	GRP-96-637	GRP-96-638
B28	GRP-96-642	GRP-96-644	GRP-96-643	GRP-96-645	GRP-96-652
B39	N/A	P3NKA00BSM	N/A	P3NKA00BSA	N/A

* Metal bowl does not have sight gauge.

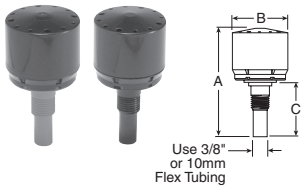
** 12 Series has Piston Style Drain.

Model	Filter Element 5 Micron	Bowl O-ring (Nitrile)	Bowl O-ring (Fluorocarbon)	Filter Retainer Element Baffle	Manual Drain
B08	FRP-96-729	GRP-96-710	GRP-96-711	N/A	N/A
B18	FRP-96-639	GRP-96-640	GRP-96-754	FRP-96-641	GRP-96-685
B28	FRP-96-653	GRP-96-654	GRP-96-755	FRP-96-283	GRP-96-685
B39	P3NKA00ESE	N/A	N/A	N/A	PS512
Model	**Self-relieving Diaphragm (Nitrile)**	**Non-relieving Diaphragm (Nitrile)**	**Valve Assembly Kit**	**Valve Spring**	**Service Kit (Relieving)**
B08	GRP-96-725	GRP-96-726	RRP-96-727	RRP-96-728	N/A
B18	RRP-96-656	RRP-96-657	RRP-96-658	N/A	N/A
B28	RRP-96-986	RRP-96-987	RRP-96-049	N/A	N/A

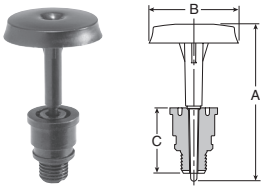
Model	Main Regulating Spring 0-30 PSIG	Main Regulating Spring 0-60 PSIG	Main Regulating Spring 0-125 PSIG	Main Regulating Spring 0-250 PSIG
B08	GRP-95-111	GRP-96-718	GRP-96-717	N/A
B18	RRP-96-659	RRP-96-660	RRP-96-661	RRP-96-662
B28	RRP-96-163	RRP-96-164	RRP-96-165	RRP-96-166
B39	N/A	C10A1304	CA101308	CA101317

Tamper Resistant Model	Aluminum Resistant Ring	Plastic Panel Nut	Manual Panel Nut
B08	RPA-95-735	RPA-96-733	RPA-96-734
B18	RRP-96-671	RRP-96-673	RRP-96-675
B28	RRP-96-672	RRP-96-674	RRP-96-676

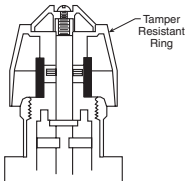
Accessories Filter / Regulators



Automatic Drain
GRP-95-973, GRP-95-981

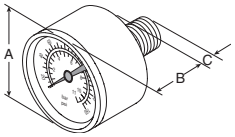


Piston Drain
GRP-96-716



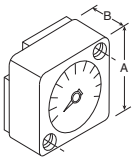
Tamper Resistant Kit
RPA-95-006





Gauges

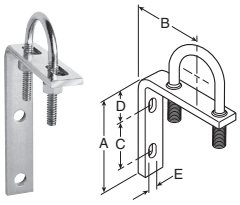




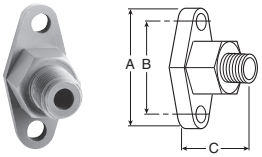
Flush Mount Gauge
08 Series



Digital Gauge



Wall Mounting Bracket
U-Bolt Pipe Clamp
GRP-95-734

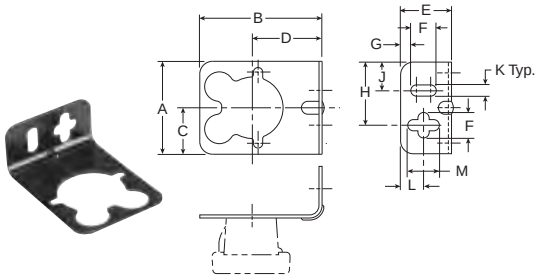


Wall Mounting Bracket –
Gauge Port Adapter
RRP-95-590

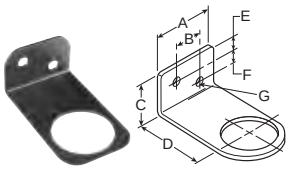
Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E
Automatic Drains, Nitrile	**GRP-95-973**	B18, B28, CB6	2.93 (74.4)	1.47 (37.3)	1.17 (29.7)	—	—
Automatic Drains, Fluorocarbon	**GRP-95-981**	B18, B28, CB6					
Piston Drain	**GRP-96-716**	B08	1.70 (43)	.94 (24)	.68 (17)	—	—
Gauges, 1/8 Port, CBM	**K4515N18030** (0 to 30 PSIG)	B03	1.64 (41.6)	1.09 (27.6)	.80 (20)	—	—
	K4515N18060 (0 to 60 PSIG)	B03, BB3, BA3					
	K4515N18160 (0 to 160 PSIG)						
Gauges, 1/4 Port, CBM	**K4520N18030W** (0 to 30 PSIG)	PC5, PC6	1.96 (49.8)	1.08 (27)	.91 (23)	—	—
	K4520N14060W (0 to 60 PSIG)	CB6, PC5, PC6					
	K4520N14160W (0 to 160 PSIG)						
	K4520N14300W (0 to 300 PSIG)	CB6					
Gauges, 5mm 2" Round 1/4 Center Back Mount	**K4520N14030** (0 to 30 PSIG)	B18, B28	1.67 (50)	.94 (24)	.71 (18)	—	—
	K4520N14060 (0 to 60 PSIG)						
	K4520N14160 (0 to 300 PSIG)						
	K4520N14300 (0 to 20 bar)						
Flush Mount Series Gauges	**K4511SCR150** (0 to 150 PSIG)	B08	1.06 (26.9)	.63 (16)	—	—	—
	K4511SCR060 (0 to 60 PSIG)						
	K4511SCR11B (0 to 11 bar)						
Round Digital Gauge, 1/4 Port	**K4517N14160D** (0 to 160 PSIG)	B18, B28	1-3/4" Diameter				
Tamper Resistant Kit	**RPA-95-006**	CB6, PC5, PC6	—	—	—	—	—
Wall Mtg. Bracket U-Bolt Pipe Clamp	**GRP-95-734**	For All Non-Modular Units Up to 1" NPT	3.34 (85)	2.76 (70)	1.62 (41)	1.10 (28)	0.30 (7.6)
Wall Mtg. Bracket Gauge Port Adapter	**RRP-95-590**	CB6, PC5, PC6	1.87 (47.5)	1.36 (34.5)	1.06 (27)	—	—

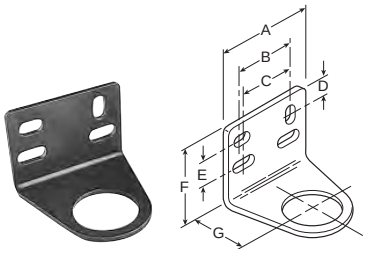
Accessories – Filter / Regulators



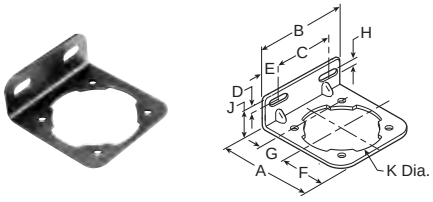
L-Bracket
PS417B
(Includes Panel Mount Nut)



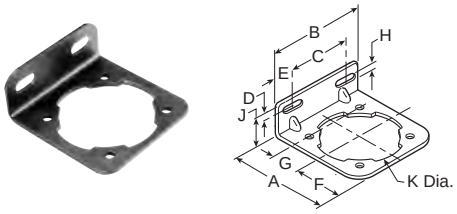
L-Bracket
GRP-95-147



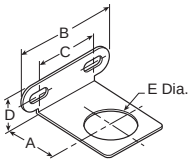
L-Bracket
GPA-95-011, GPA-95-012



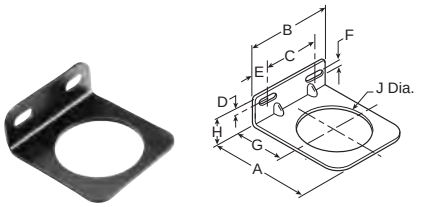
Body L-Bracket
GPA-96-604



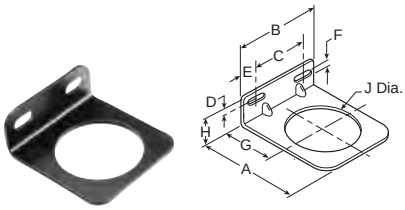
Body L-Bracket
GPA-96-605



L-Bracket
GRP-96-739

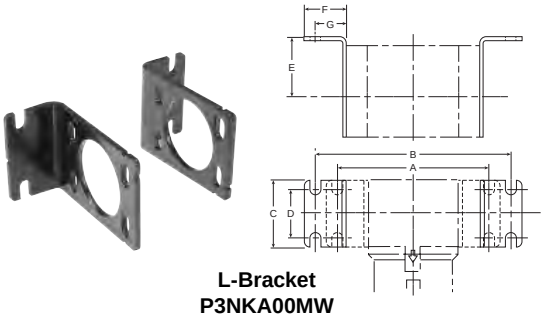


Bonnet L-Bracket
GPA-96-606



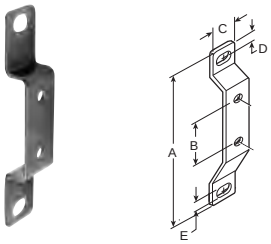
Bonnet L-Bracket
GPA-96-607

Accessories – Filter / Regulators

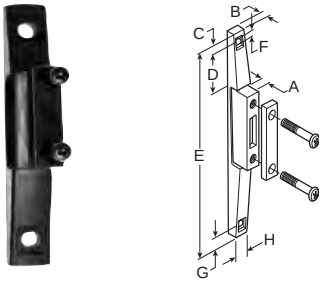


L-Bracket
P3NKA00MW

For 1-1/2" BSPP Port Block with E02 fitting application, use **Mounting Bracket Kit P3NKA0BMW**



T-Bracket
GPA-96-602

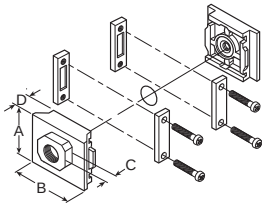


T-Bracket
GPA-96-737
w/ Joiner

Dimensions Inches (mm)

Accessories	Part Number	Used On	A	B	C	D	E	F	G	H	J	K	L	M
L-Bracket with Plastic Panel Nut	**GPA-95-011**	CB6, PC5, PC6	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	GRP-95-747	BB3, BA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
L-Bracket	**GPA-95-012**	CB6, PC5, PC6	2.50 (63.5)	1.60 (41)	1.50 (38)	0.46 (12)	0.62 (16)	1.88 (48)	1.62 (41)	—	—	—	—	—
	GRP-95-147	BB3, BA3	1.50 (38)	0.68 (17)	1.00 (25)	1.75 (44)	0.34 (8.6)	0.31 (7.9)	0.22 (5.6)	—	—	—	—	—
	GPA-96-606	B18	2.74 (69.5)	2.74 (69.5)	1.66 (42)	.43 (11)	.54 (14)	.28 (7.1)	1.57 (40)	1.00 (25)	2.0 (51)	—	—	—
	GPA-96-607	B28	3.33 (84.5)	3.00 (76)	1.88 (48)	.43 (11)	.56 (14)	2.40 (61)	1.94 (49)	1.00 (25)	2.40 (61)	—	—	—
	GRP-96-739	B08	1.57 (40)	2.68 (68)	1.74 (44)	.97 (25)	1.19 (30)	—	—	—	—	—	—	—
	P3NKA00MW	L39	6.22 (158)	8.19 (208)	2.75 (70)	1.97 (50)	2.36 (60)	1.77 (45)	1.30 (33)	—	—	—	—	—
	PS417B	B03	2.12 (53)	3.62 (91)	3.40 (83)	2.53 (64)	1.88 (47)	0.50 (13)	0.20 (5)	1.24 (31)	0.56 (14)	0.22 (6)	0.45 (11)	0.62 (16)
C-Bracket	**GPA-96-604**	B18	2.84 (72)	2.74 (69.5)	1.66 (42)	.38 (9.6)	.54 (14)	1.26 (32)	.88 (22)	.28 (7.1)	1.10 (28)	2.25 (57)	—	—
	GPA-96-605	B28	3.44 (87)	3.00 (76)	1.88 (48)	.38 (9.6)	.56 (14)	1.49 (38)	1.10 (28)	.28 (7.1)	1.10 (28)	2.66 (67.5)	—	—
	GPA-97-010	B08	2.67 (68)	1.73 (44)	1.57 (40)	.07 (1.8)	.39 (9.9)	1.57 (40)	.78 (20)	2.32 (59)	1.37 (35)	2.41 (61)	.26 (6.6)	—
T-Bracket	**GPA-96-602**	B18, B28	3.75 (95)	1.00 (25.4)	.76 (19.3)	.25 (6.3)	.28 (7.1)	—	—	—	—	—	—	—
T-Bracket w/ Joiner	**GPA-96-737**	B08	.45 (11)	.28 (7.1)	.40 (10)	.67 (17)	3.97 (100.8)	.22 (5.6)	.40 (10)	.64 (16)	—	—	—	—

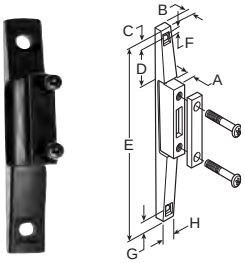
Modular Accessories – 08 Series



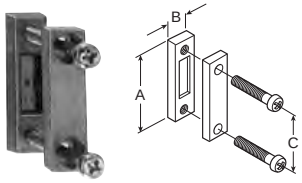
End Block Set



End Block Set w/ T-Bracket



T-Bracket GPA-96-737 w/ Joiner

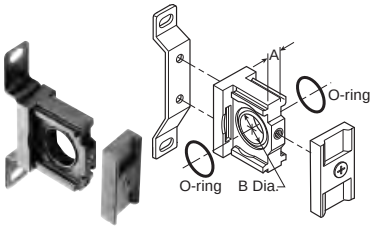


Joiner Set GPA-96-738 (O-ring not shown)

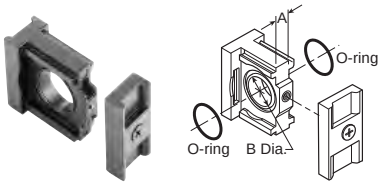
Dimensions Inches (mm)

Accessories	Part Number	Pipe Size	A	B	C	D	E	F	G	H	J	K
T-Bracket Joiner Set	GPA-96-737	—	.45 (11)	.28 (7.1)	.40 (10)	.67 (17)	3.97 (100.8)	.22 (5.6)	.40 (10)	.64 (16)	—	—
Joiner Set	GPA-96-738	—	1.42 (36)	.39 (9.9)	.98 (26)	—	—	—	—	—	—	—
End Block Set	GPA-97-018	1/8 NPT	1.42 (36)	1.57 (40)	.53 (13.5)	.31 (8)	—	—	—	—	—	—
	GPA-97-019	1/4 NPT										
	GPA-97-020	3/8 NPT										
	GPA-97-066	G 1/8										
	GPA-97-067	G 1/4										
	GPA-97-065	G 3/8										
End Block Set With T-Brackets	GPA-97-025	1/8 NPT	1.42 (36)	1.57 (40)	.53 (13.5)	.31 (8)	—	—	—	—	—	—
	GPA-97-026	1/4 NPT										
	GPA-97-027	3/8 NPT										
	GPA-97-068	G 1/8										
	GPA-97-069	G 1/4										
	GPA-97-070	G 3/8										

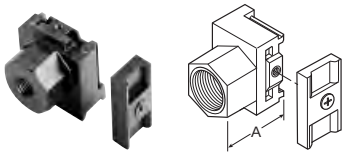
Modular Accessories – 18 / 28 Series



T-Bracket w/ Joiner Set GPA-96-603



Joiner Set GPA-96-601

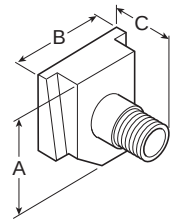


End Block

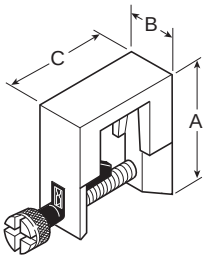
Dimensions Inches (mm)

Accessories	Part Number	Pipe Size	A	B	C	D	E	F	G	H	J	K
T-Bracket w/ Joiner Set	**GPA-96-603**	—	.35 (8.9)	.87 (22.1)	—	—	—	—	—	—	—	—
Joiner Set	**GPA-96-601**	—	.35 (8.9)	.87 (22.1)	—	—	—	—	—	—	—	—
End Block	**GPA-96-610**	1/4 NPT	1.59 (40)	—	—	—	—	—	—	—	—	—
	GPA-96-611	3/8 NPT										
	GPA-96-612	1/2 NPT										
	GPA-96-613	3/4 NPT										
	GPA-96-620	G 1/4										
	GPA-96-621	G 3/8										
	GPA-96-622	G 1/2										
	GPA-96-623	G 3/4										

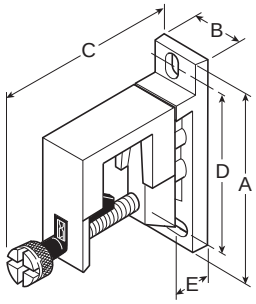
Modular Accessories – 16 / 26 Series



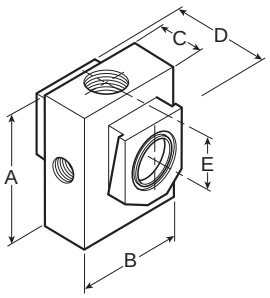
Modular Pipe Adapter
GPA-95-035,
GPA-95-036,
GPA-95-037



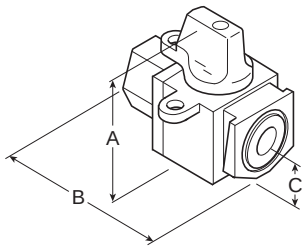
Modular Sleeve
GPA-95-292



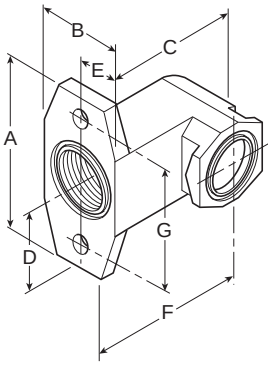
Modular Sleeve with T-Bracket
GPA-95-969



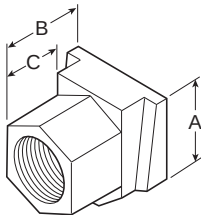
Modular Manifold Block
(3 Auxiliary Ports)
GPA-95-919



Modular 3-Way Shut-off Valve
GPA-95-096,
GPA-95-097,
GPA-95-098



Right-Angle Bracket
GPA-95-042

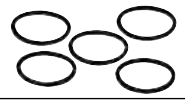


Modular Connecting
End Block Set
GPA-95-223, –224,
–225, –320, –321

Dimensions Inches (mm)

Accessories	Part Number	Pipe Size NPT	A	B	C	D	E	F	G
Modular Pipe Adapter	**GPA-95-035** **GPA-95-036** **GPA-95-037**	1/4 3/8 1/2	1.25 (31.7)	1.25 (31.7)	1.14 (28.9)	—	—	—	—
Modular Sleeve	**GPA-95-292**	—	2.15 (54.6)	0.82 (20.8)	1.92 (48.8)	—	—	—	—
Modular Sleeve With T-Bracket	**GPA-95-969**	—	3.60 (91.4)	.82 (20.8)	3.43 (87.1)	2.98 (75.7)	0.78 (19.8)	—	—
Modular Manifold Block (3 Auxiliary Ports)	**GPA-95-919**	1/4	2.30 (58.4)	2.00 (50.8)	0.72 (18.3)	1.57 (39.9)	0.98 (24.9)	—	—
Modular 3-Way Shut-off Valve	**GPA-95-096** **GPA-95-097** **GPA-95-098**	1/4 3/8 1/2	2.38 (60.4)	2.51 (63.7)	0.69 (17.5)	—	—	—	—
Modular Right Angle Bracket	**GPA-95-042**	—	2.75 (69.8)	1.25 (31.7)	2.38 (60.4)	1.00 (25.4)	0.63 (16.0)	1.75 (44.5)	2.00 (50.8)
Modular Connecting End Block Set	**GPA-95-223** **GPA-95-224** **GPA-95-225** **GPA-95-320** **GPA-95-321**	1/4 3/8 1/2 3/4 1	1.25 (31.7)	1.19 (30.2)	0.75 (19.0)	—	—	—	—

Modular Accessories – 90 Series

Description		Connection	Weight kg (lb)	Part number	
0.01 micron element kit				**P3YKA00ESC**	
5 micron element kit				**P3YKA00ESE**	
Adsorber element kit				**P3YKA00ESA**	
Angle bracket + metal lock ring				**P3YKA00MS**	
Bowl kit with combined manual / semi-auto drain				**P3YKA00BSC**	
Bowl kit with auto drain				**P3YKA00BSA**	
Bowl kit				**P3YKA00BSN**	
Connector o-ring kit	Qty: 5			**P3YKA08CY**	
Differential pressure indicator kit				**P3YKA00RQ**	
Diaphragm kit (relieving type)				**P3YKA00RR**	
Diaphragm kit (non-relieving type)				**P3YKA00RN**	
Key lock (replacement)				**P3XKA00AS**	
Lubricator oil	F442001 - 1 Qt.		0.92 (2.03)	**F442001**	
	F442002 - 1 Gal			**F442002**	
Neck mounting bracket kit			3.75 (8.27)	**P3YKA00MS**	
P3Y connecting kit			0.05 (0.11)	**P3YKA00CB**	
Panel mounting nut (Aluminum)			0.70 (1.54)	**P3YKA00MM**	
Pressure gauge	0 to 10 bar (0 to 160 psig)	1/4”	0.06 (0.13)	**K4520N14160**	
	0 to 20 bar (0 to 300 psig)	1/4”	0.06 (0.13)	**K4520N14300**	
Refill plug				**P3YKA00PL**	
Wall mounting brackets			0.2 (0.44)	**P3YKA00CW**	

Notes

Stainless Steel Compressed Air Treatment Products

E

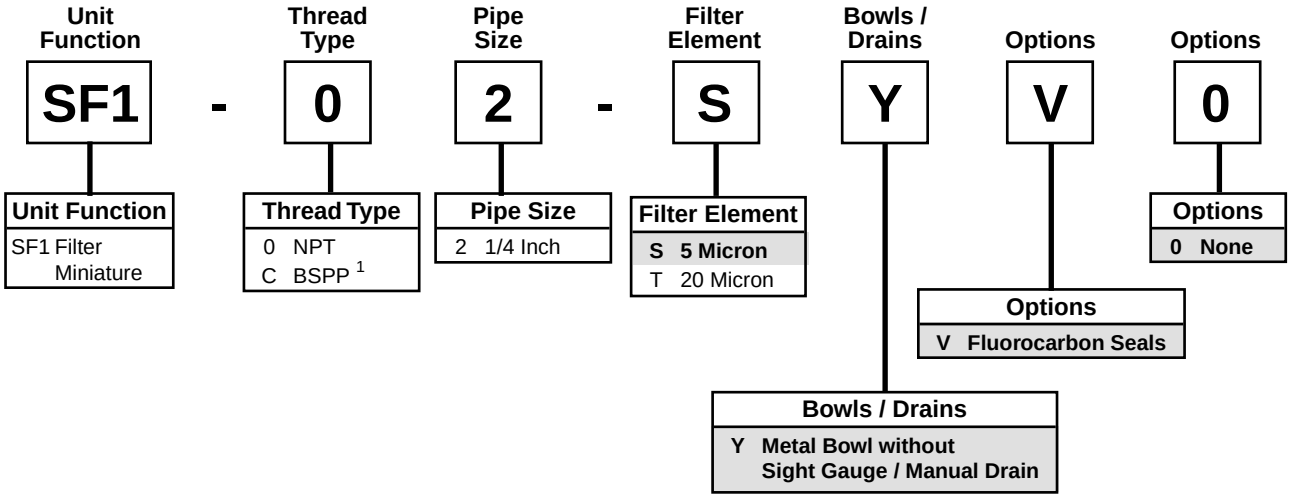
Stainless Steel Products

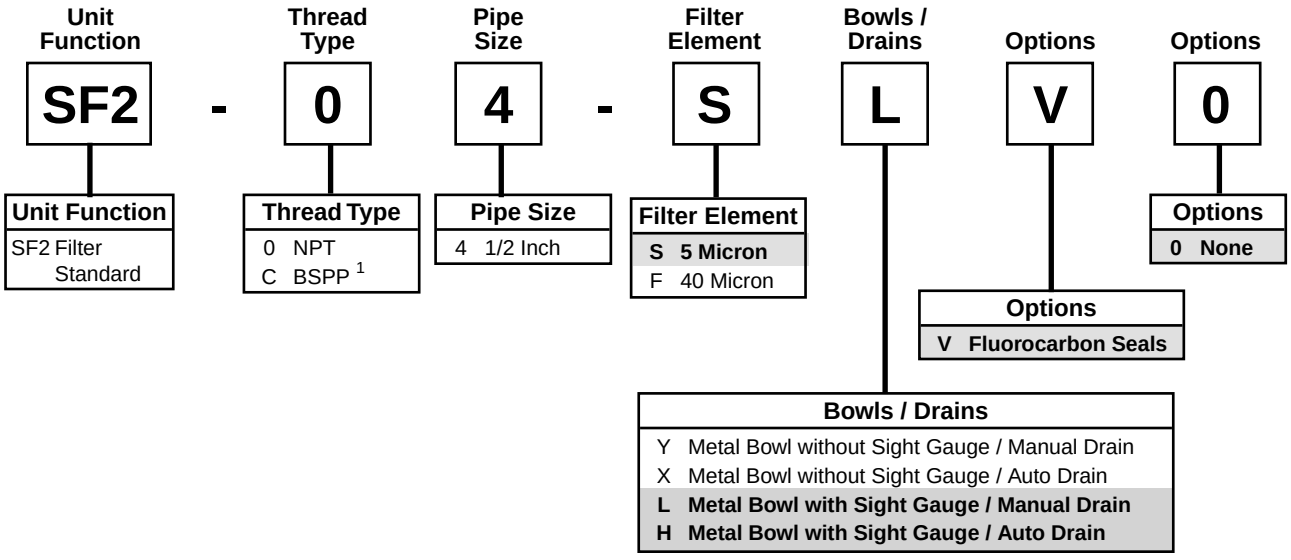
Particulate Filters E3
SF1 ..... E4
SF2 ..... E6
Coalescing Filters E9
SM1 ..... E10
SM2 ..... E12
Regulators E15
SR1 ..... E16
SR2 ..... E18
Filter / Regulators E21
SB1 ..... E22
SB2 ..... E24
Lubricators E27
SL2 ..... E28

Notes

Particulate Filter Numbering System

= "Most Popular"





[1] ISO, R228 (G Series)

"SF" Series Filters, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

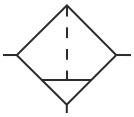
Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

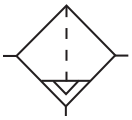
SF1 - 0 2 - S Y V 0

E

Stainless Steel Products

Filter – Miniature
SF1


Manual Drain


Auto Drain



SF1-02-SYV0

= **"Most Popular"**

Specifications

Flow Capacity*	Port Size 1/4	5 Micron 23 SCFM
Bowl Capacity		1.0 Ounce
Filter Rating		5 Micron
Port Threads		1/4 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain –		10 to 175 PSIG (0.7 to 12 bar) 32°F to 150°F (0°C to 66°C)
Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).		
Useful Retention**		0.4 Ounce
Weight		0.6 lb. (0.27 kg)

* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.
**Useful Retention refers to volume below the quiet zone baffle.

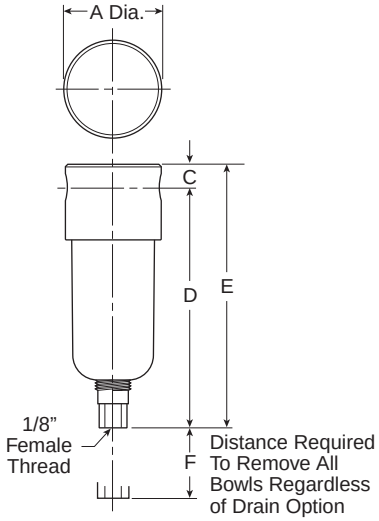
Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Deflector	Acetal
Drain	316 Stainless Steel
Element Holder	Acetal
Filter Element	Polyethylene
Seals	Fluorocarbon

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Fluorocarbon Seals Standard
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/4" - 23 SCFM§

§SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.



Dimensions

Models	Inches (mm)	A	C	D	E	F
Miniature Unit SF1-02-XXXX		1.57 (40)	0.31 (8)	3.69 (94)	4.00 (102)	1.58 (40)

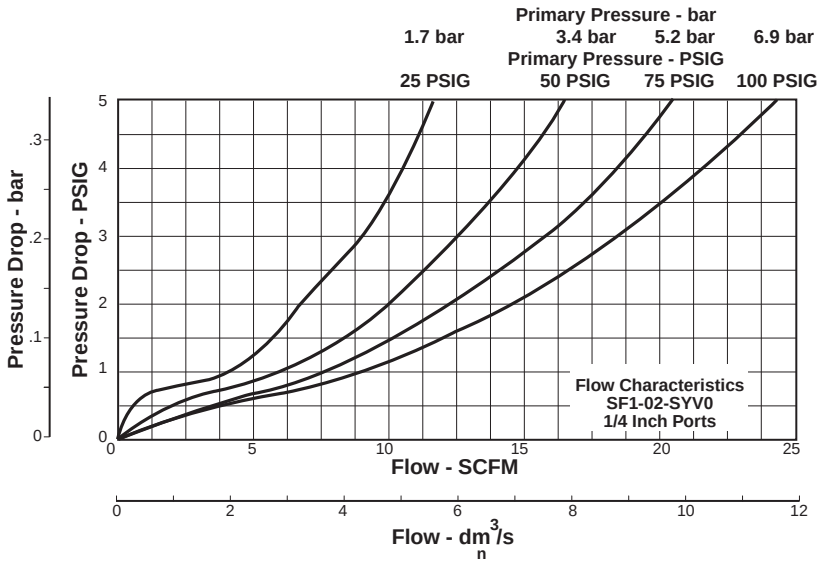
= "Most Popular"

SF1 Filter Kits & Accessories

Filter Element Kits –
- Particulate (5 Micron) SRP-96-001
- Particulate (20 Micron) SRP-96-002

Manual Drain –
- Small (Old) SRP-96-008
- Large (New) SAP05481

Pipe Nipple – 1/4" 316 Stainless Steel SRP-96-009

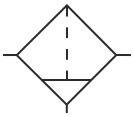


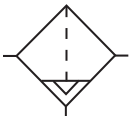
Ordering Information

Model Type	Port Size	Model Number
Manual Drain	1/4	SF1-02-SYV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Filter – Standard
SF2


Manual Drain


Auto Drain



SF2-04-SLV0

= **"Most Popular"**

Specifications

Flow Capacity*	Port Size 1/2	5 Micron 70 SCFM
Bowl Capacity		4.0 Ounces
Filter Rating		5 Micron
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Metal Bowl with Sight Gauge –		0 to 250 PSIG (0 to 17.2 bar) 0°F to 150°F (-18°C to 66°C)
Automatic Float Drain –		0 to 175 PSIG (0 to 12 bar) 32°F to 150°F (0°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention**	1.7 Ounce
Weight	1.9 lb. (0.85 kg)

* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.
**Useful Retention refers to volume below the quiet zone baffle.

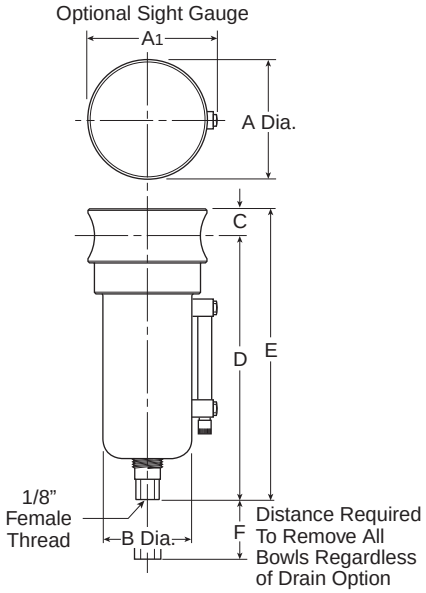
Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/2" - 70 SCFM§

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.

Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Deflector	Acetal
Drain	316 Stainless Steel
Element Holder	Acetal
Filter Element	Polyethylene
Seals	Fluorocarbon
Sight Gauge	Isoplast



Dimensions

Models	Inches (mm)	A	A_1	B	C	D	E	F
Miniature Unit SF2-04-XXXX		2.38 (60)	2.50 (64)	1.75 (44)	0.56 (14)	5.00 (127)	5.56 (141)	2.12 (54)

= "Most Popular"

SF2 Filter Kits & Accessories

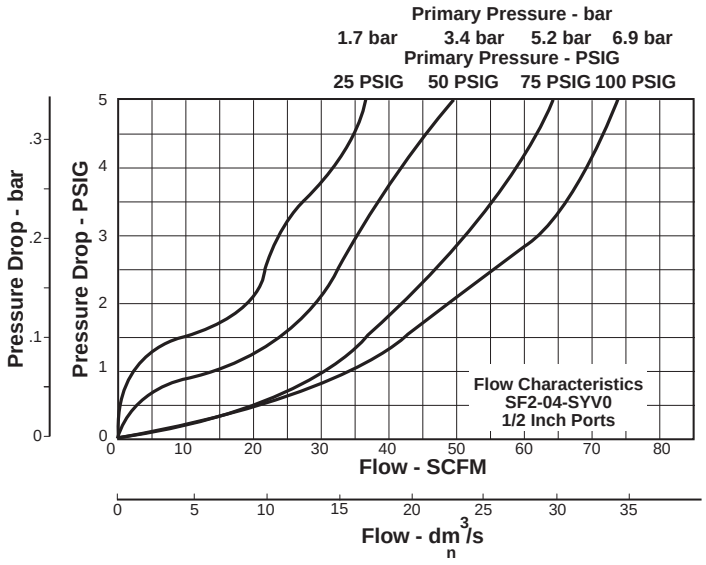
Drain Kit –
Automatic Drain SRP-96-027

Manual Drain –
Small (Old) SRP-96-008
Large (New) SAP05481

Filter Element Kits –
Particulate (40 Micron) SRP-96-024
Particulate (5 Micron) SRP-96-023

Liquid Level Sight Gauge Kit SRP-96-026

Pipe Nipple – 1/2" 316 Stainless Steel SRP-96-010



E

Stainless Steel Products

Ordering Information

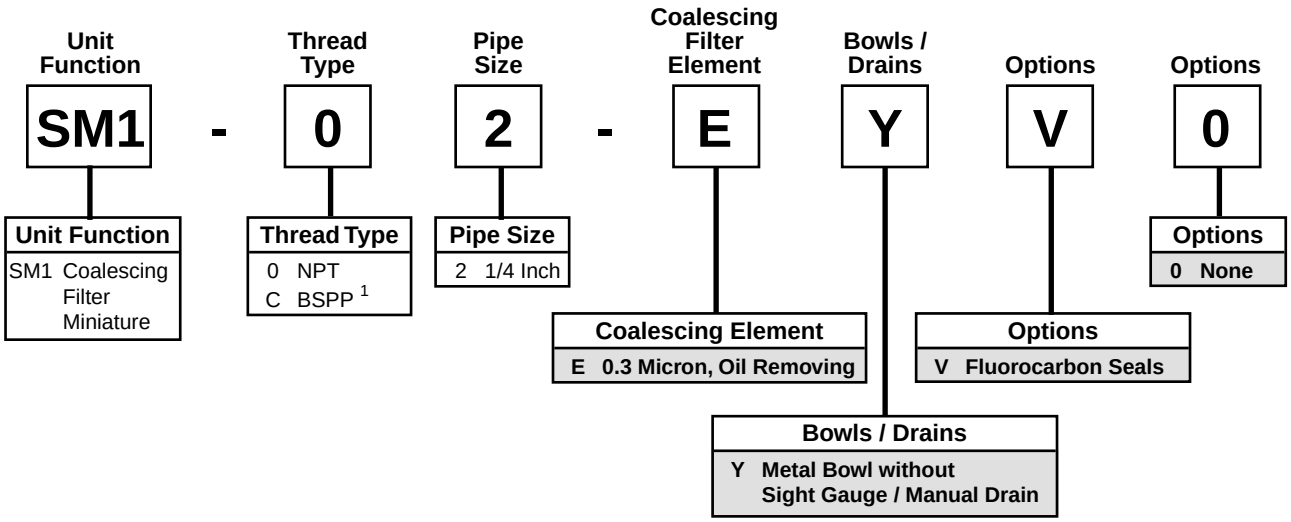
Model Type	Port Size	Model Number	Model Number
Manual Drain	1/2	SF2-04-SLV0	—
Automatic Drain	1/2	—	SF2-04-SHV0

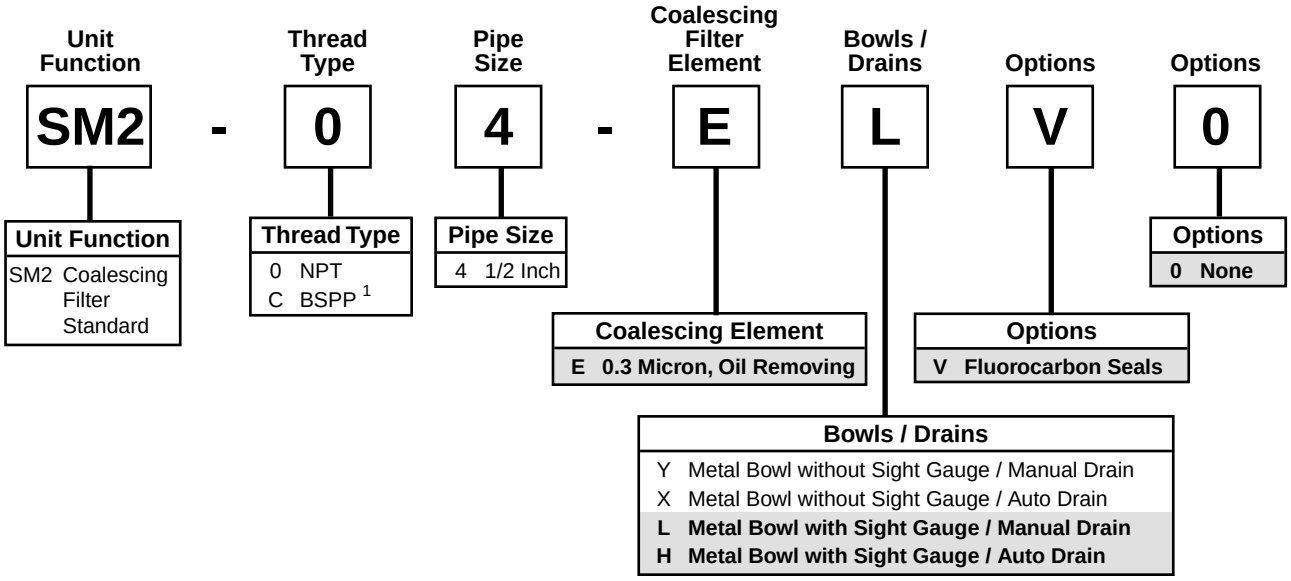
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Coalescing Filter Numbering System

= "Most Popular"





1 ISO, R228 (G Series)

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

SM1 - 0 2 - E Y V 0

E

Stainless Steel Products

Coalescing Filter – Miniature SM1

= "Most Popular"

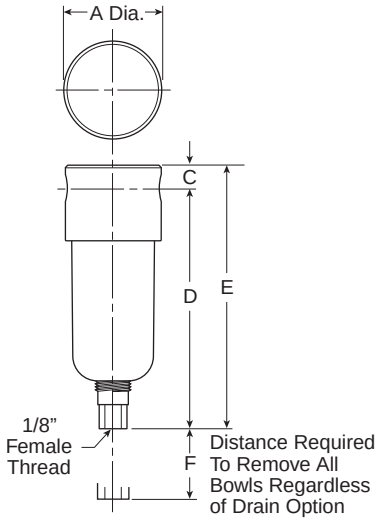


SM1-02-EYV0

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/4" - 16 SCFM§

§SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.



Specifications

Flow Capacity*	Port Size 1/4	0.3 Micron 16 SCFM
Bowl Capacity		1.0 Ounces
Filter Rating		0.3 Micron
Port Threads		1/4 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain –		10 to 175 PSIG (0.7 to 12 bar) 32°F to 150°F (0°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention**	0.4 Ounce
Weight	0.6 lb. (0.27 kg)

* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.

**Useful Retention refers to volume below the quiet zone baffle.

Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Drain (Manual)	316 Stainless Steel
Element Holder	Acetal
Filter Element	Borosilicate Fiber
Seals	Fluorocarbon

Dimensions

Models	Inches (mm)	A	C	D	E	F
Miniature Unit SM1-02-XXXX		1.57 (40)	0.31 (8)	3.69 (94)	4.00 (102)	1.58 (40)

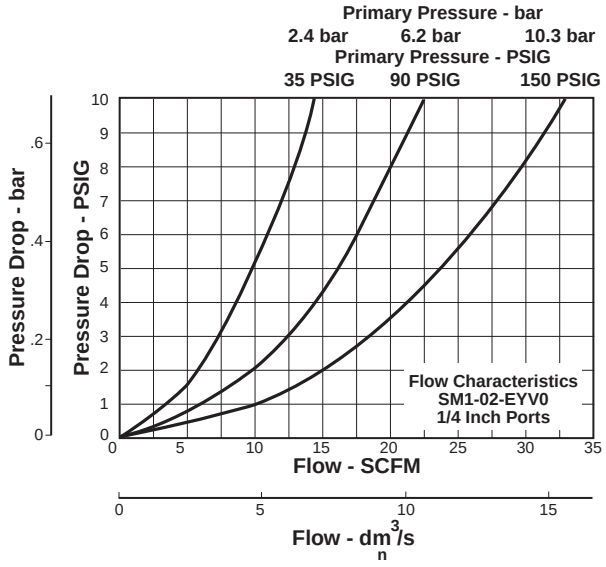
= "Most Popular"

SM1 Filter Kits & Accessories

Filter Element Kits – 0.3 Micron..... SRP-96-005

Manual Drain –
Small (Old) SRP-96-008
Large (New) SAP05481

Pipe Nipple – 1/4" 316 Stainless Steel SRP-96-009



E

Stainless Steel Products

Ordering Information

Model Type	Port Size	Model Number
Manual Drain	1/4	SM1-02-EYV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Coalescing Filter – Standard SM2

= "Most Popular"

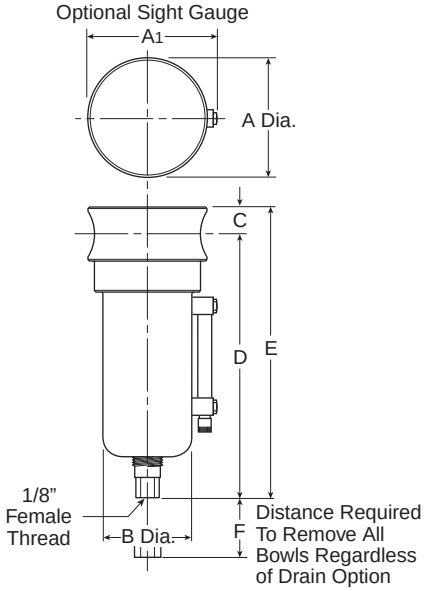


SM2-04-ELV0

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Meets NACE Specifications MR-01-75/ISO 15156
- 1/8" Female Threaded Drain
- High Flow: 1/2" - 45 SCFM§

§SCFM = Standard cubic feet per minute at 90 PSIG inlet and 5 PSIG pressure drop.



Specifications

Flow Capacity*	Port Size 1/2	0.3 Micron 46 SCFM
Bowl Capacity		4.0 Ounces
Filter Rating		0.01 Micron
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 180°F (-18°C to 82°C)
Metal Bowl with Sight Gauge –		0 to 250 PSIG (0 to 17.2 bar) 0°F to 150°F (-18°C to 66°C)
Automatic Float Drain –		0 to 175 PSIG (0 to 12 bar) 32°F to 150°F (0°C to 66°C)
Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).		
Useful Retention**		1.7 Ounce
Weight		1.9 lb. (0.85 kg)

* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.
**Useful Retention refers to volume below the quiet zone baffle.

Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Drain	316 Stainless Steel
Element Holder	Acetal
Filter Element	Borosilicate Fiber
Seals	Fluorocarbon
Sight Gauge	Isoplast

Dimensions

Models	Inches (mm)	A	A_1	B	C	D	E	F
Miniature Unit SM2-04-XXXX		2.38 (60)	2.50 (64)	1.75 (44)	0.56 (14)	5.00 (127)	5.56 (141)	2.12 (54)

= "Most Popular"

SM2 Filter Kits & Accessories

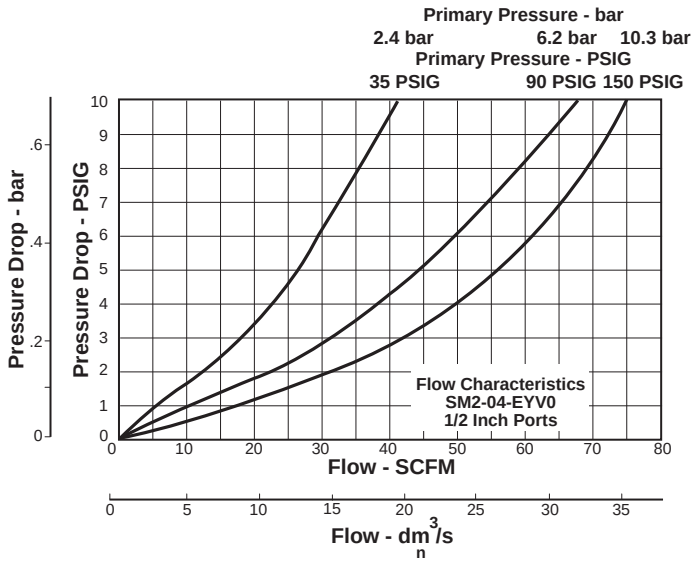
Drain Kit –
Automatic Drain SRP-96-007

Manual Drain –
Small (Old) SRP-96-008
Large (New) SAP05481

Filter Element Kits – 0.01 Micron SRP-96-006

Liquid Level Sight Gauge Kit SRP-96-026

Pipe Nipple – 1/2" 316 Stainless Steel SRP-96-010



E

Stainless Steel Products

Ordering Information

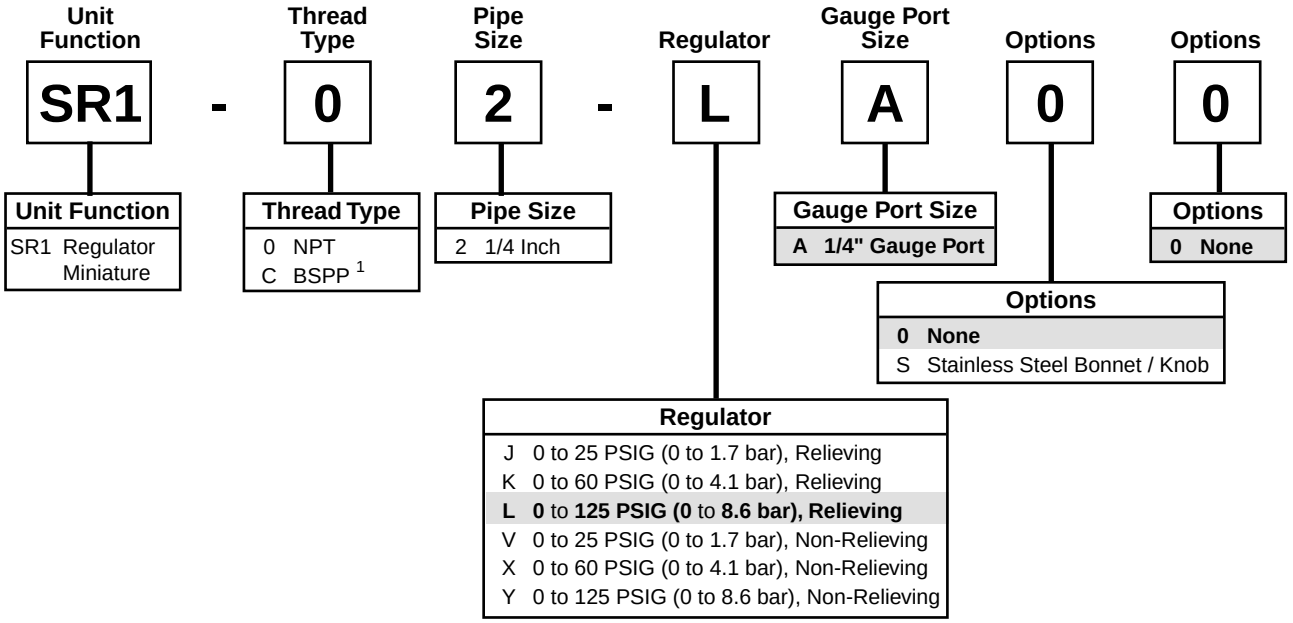
Model Type	Port Size	Model Number	Model Number
Manual Drain	1/2	SM2-04-ELV0	—
Automatic Drain	1/2	—	SM2-04-EHV0

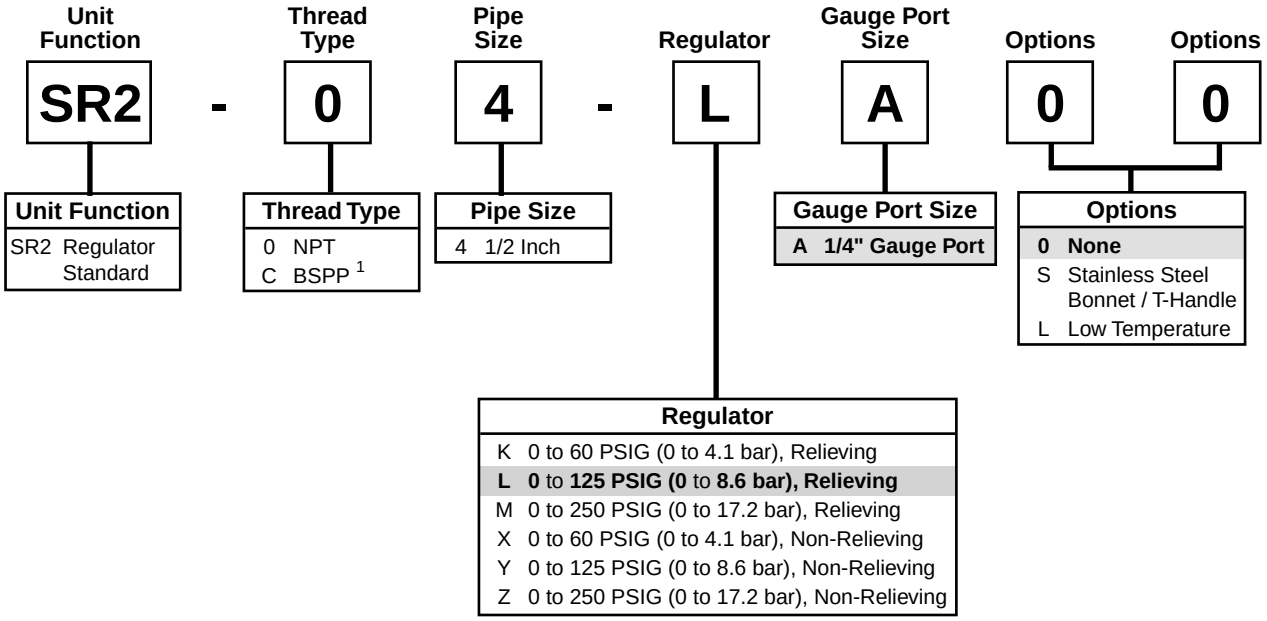
Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Regulator Numbering System

= "Most Popular"





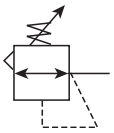
[1] ISO, R228 (G Series)

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

SR1 - 0 2 - L A 0 0

Regulator – Miniature

SR1





SR1-02-LA00



SR1-02-LAS0

= **"Most Popular"**

Specifications

Flow Capacity*	Port Size 1/4	12 SCFM
Gauge Port		1/4 Inch
Port Threads		1/4 Inch
Pressure & Temperature Ratings –		
SR1-02-LA00		300 PSIG Max (20.7 bar) 0°F to 150°F (-18°C to 66°C)
SR1-02-LAS0		300 PSIG Max (20.7 bar) 0°F to 180°F (-18°C to 82°C)
Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).		
Weight		0.5 lb. (0.23 kg)

* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Adjusting Knob (SR1-02-LAS0)	316 Stainless Steel
Adjusting Knob (SR1-02-LA00)	Polypropylene
Body	316 Stainless Steel
Bonnet (SR1-02-LAS0)	316 Stainless Steel
Bonnet (SR1-02-LA00)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/4" – 12 SCFM§

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.

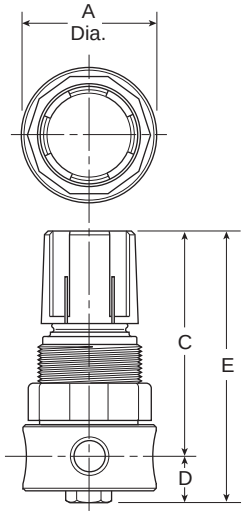
⚠ WARNING

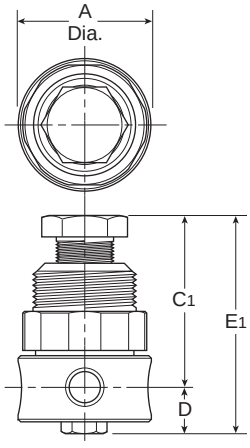
Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.





Dimensions

Models (Inches (mm))	A	C	C_1	D	E	E_1
Miniature Unit SR1-02-XXXX	1.56 (40)	2.56 (65)	2.17 (55)	0.50 (13)	3.06 (78)	2.67 (68)

= "Most Popular"

SR1 Regulator Kits & Accessories

Bonnet Kit SR1-02-LA00 (Knob Included) SRP-96-017

Bonnet Kit SR1-02-LAS0 .....CKR354YSS

Gauge (Stainless) –
160 PSIG (0 to 1100 kPa), 1-1/2" Face K4515N14160SS

Mounting Bracket (Stainless).....161X57-SS

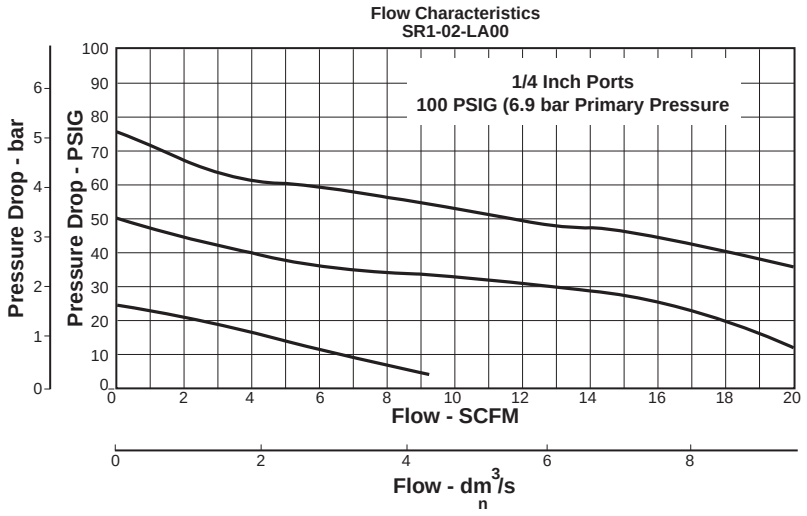
Panel Mount Nut –
Stainless SRP-96-019
Plastic R05X51-P

Pipe Nipple –
1/4" 316 Stainless Steel SRP-96-009

Service Kit –
Relieving.....SRP-96-013
Non-Relieving.....SRP-96-014

Springs –
0-25 PSIG Range SPR-375-2-SS
0-60 PSIG Range..... SPR-376-1-SS
0-125 PSIG Range SPR-377-1-SS

Note: Order pressure gauge and panel mount nut separately.
Note: 1.25" dia. (32mm) hole required for panel mounting (order panel nut separately).



Ordering Information

Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 25 PSIG (0 to 1.7 bar)	0 to 60 PSIG (0 to 4.1 bar)
Relieving	1/4	SR1-02-LA00	SR1-02-JA00	SR1-02-KA00
Non-Relieving	1/4	SR1-02-YA00	SR1-02-VA00	SR1-02-XA00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Regulator – Standard
SR2

= "Most Popular"



SR2-04-LA00

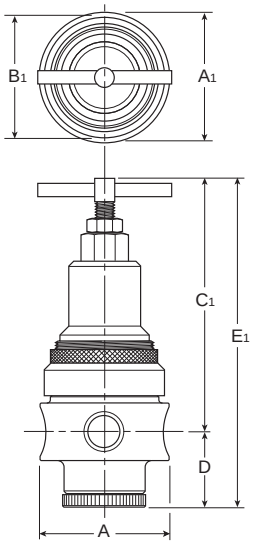


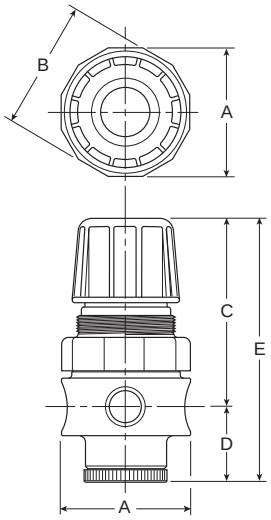
SR2-04-LAS0

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- Low Temperature Version Available
- High Flow: 1/2" – 80 SCFM§

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.





Specifications

Flow Capacity*	Port Size 1/2	80 SCFM
Gauge Port		1/4 Inch
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
SR2-04-LA00 –		300 PSIG Max (20.7 bar) 0°F to 150°F (-18°C to 66°C)
SR2-04-LAS0 –		300 PSIG Max (20.7 bar) 0°F to 180°F (-18°C to 82°C)

Option "L" Minimum Operating Temperature† – -40°F (-40°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Weight	1.79 lb. (0.81 kg)

* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

† **Note:** "Low Temperature" option is intended for applications where the ambient temperature may be down to -40° C/F. Air supply must be free of moisture to prevent ice formation and malfunction of units. These units contain EPDM seals. Make sure any oils in the airstream are compatible.

Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet / Tee Handle (SR2-04-LAS0)	316 Stainless Steel
Bonnet / Knob (SR2-04-LA00)	Acetal
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	A1	B	B1	C	C1	D	E	E1
Miniature Unit SR2-04-XXXX	2.36 (60)	3.36 (85)	2.43 (62)	2.35 (60)	3.59 (91)	4.70 (119)	1.38 (35)	4.97 (126)	6.08 (154)

= "Most Popular"

SR2 Regulator Kits & Accessories

Bonnet Kit SR2-04-LA00 (Knob) SRP-96-018

Bonnet Kit SR2-04-LAS0 (T-Handle) CKR11YSS

Gauge (Stainless) –
160 PSIG (0 to 1100 kPa), 2" Face K4520N14160SS

Mounting Bracket (Stainless)..... R10Y57-SS

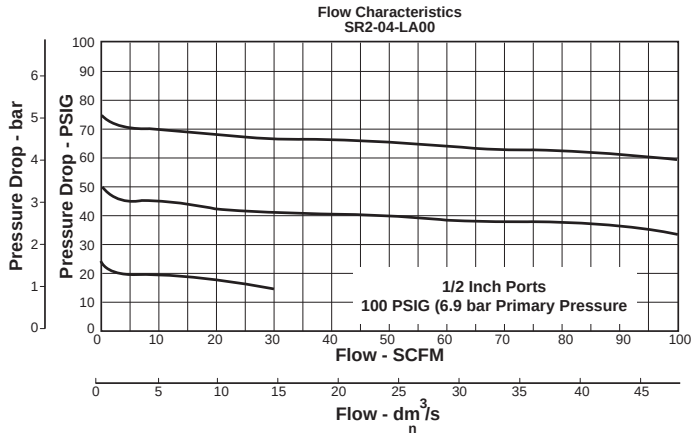
Panel Mount Nut –
Stainless SRP-96-020
Plastic R10X51-P

Pipe Nipple –
1/2" 316 Stainless Steel SRP-96-010

Service Kit –
Relieving.....SRP-96-011
Non-Relieving.....SRP-96-012

Springs –
0-60 PSIG Range.....SPR-388-1-SS
0-125 PSIG Range SPR-389-1-SS
0-250 PSIG Range.....SPR-390-1-SS

Note: Order pressure gauge and panel mount nut separately.
Note: 1.75" dia. (44.5 mm) hole required for panel mounting (order panel nut separately).



E

Stainless Steel Products

Ordering Information

Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 250 PSIG (0 to 17.2 bar)
Relieving	1/2	SR2-04-LA00	SR2-04-KA00	SR2-04-MA00
Non-Relieving	1/2	SR2-04-YA00	SR2-04-XA00	SR2-04-ZA00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Filter / Regulator Numbering System

= "Most Popular"

Unit Function	Thread Type	Pipe Size	Filter / Regulator	Bowls / Drains	Options	Options
SB1	**0**	**2**	**L**	**Y**	**S**	**0**

Unit Function

SB1 Filter / Regulator Miniature

Thread Type

0 NPT
C BSPP [1]

Pipe Size

2 1/4 Inch

Filter / Regulator

J 0 to 25 PSIG (0 to 1.7 bar), Relieving
K 0 to 60 PSIG (0 to 4.1 bar), Relieving
L 0 to 125 PSIG (0 to 8.6 bar), Relieving
V 0 to 25 PSIG (0 to 1.7 bar), Non-Relieving
X 0 to 60 PSIG (0 to 4.1 bar), Non-Relieving
Y 0 to 125 PSIG (0 to 8.6 bar), Non-Relieving

Bowls / Drains

Y Metal Bowl without Sight Gauge / Manual Drain

Options

S 5 Micron
T 20 Micron

Options

0 None
S Stainless Steel Bonnet / Knob

Unit Function	Thread Type	Pipe Size	Filter / Regulator	Bowls / Drains	Options	Options
SB2	**0**	**4**	**L**	**L**	**S**	**0**

Unit Function

SB2 Filter / Regulator Standard

Thread Type

0 NPT
C BSPP [1]

Pipe Size

4 1/2 Inch

Filter / Regulator

K 0 to 60 PSIG (0 to 4.1 bar), Relieving
L 0 to 125 PSIG (0 to 8.6 bar), Relieving
M 0 to 250 PSIG (0 to 17.2 bar), Relieving
X 0 to 60 PSIG (0 to 4.1 bar), Non-Relieving
Y 0 to 125 PSIG (0 to 8.6 bar), Non-Relieving
Z 0 to 250 PSIG (0 to 17.2 bar), Non-Relieving

Bowls / Drains

Y Metal Bowl without Sight Gauge / Manual Drain
X Metal Bowl without Sight Gauge / Auto Drain
L Metal Bowl with Sight Gauge / Manual Drain
H Metal Bowl with Sight Gauge / Auto Drain

Options

S 5 Micron
F 40 Micron

Options

0 None
S Stainless Steel Bonnet / T-Handle
L Low Temperature

E

Stainless Steel Products

[1] ISO, R228 (G Series)

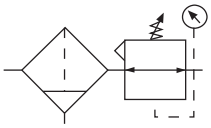
"SB" Series Filters / Regulators, Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1, pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

SB1 - 0 2 - L Y S 0

Filter / Regulator – Miniature
SB1







SB1-02-LYS0 **SB1-02-LYSS**

= **"Most Popular"**

Specifications

Flow Capacity*	Port Size	5 Micron
	1/4	12 SCFM
Bowl Capacity		1.0 Ounces
Filter Rating		5 Micron
Gauge Port		1/4 Inch
Port Threads		1/4 Inch
Pressure & Temperature Ratings –		
SB1-02-LYS0 –		300 PSIG Max (20.7 bar) 0°F to 150°F (-18°C to 66°C)
SB1-02-LYSS –		300 PSIG Max (20.7 bar) 0°F to 180°F (-18°C to 82°C)
Auto Pulse Drain –		10 to 175 PSIG (0.7 to 12 bar) 32°F to 150°F (0°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention **	0.4 Ounce
Weight	0.8 lb. (0.36 kg)

* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

**Useful Retention refers to volume below the quiet zone baffle.

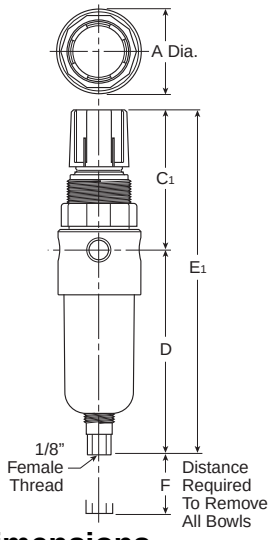
Features

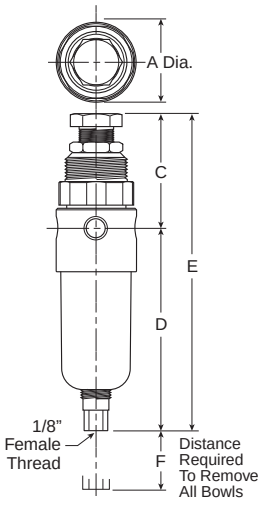
- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- 1/8" Female Threaded Drain
- Meets NACE Specifications MR-01-75/ISO 15156.
- High Flow: 1/4" – 12 SCFM§

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.

Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet (SB1-02-LYS0)	Acetal
Bonnet (SB1-02-LYSS)	316 Stainless Steel
Bottom Plug	316 Stainless Steel
Knob (SB1-02-LYS0)	Polypropylene
Knob (SB1-02-LYSS)	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon





⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models (Inches (mm))	A	C	C_1	D	E	E_1	F
Miniature Unit SB1-02-XXXX	1.56 (40)	2.17 (55)	2.63 (67)	3.63 (92)	5.80 (147)	6.26 (159)	1.58 (40)

E

Stainless Steel Products

= "Most Popular"

SB1 Regulator Kits & Accessories

Bonnet Kit SB1-02-LYS0 (Knob Included) SRP-96-017

Bonnet Kit SB1-02-LYSS (Knob Included) CKR354YSS

Filter Element Kits –
- Particulate (5 Micron) SRP-96-001
- Particulate (20 Micron) SRP-96-002

Gauge (Stainless) –
- 160 PSIG (0 to 1100 kPa), 1-1/2" Face K4515N14160SS

Manual Twist Drain (New) SAP0581

Manual Twist Drain (Old) SRP-96-008

Mounting Bracket (Stainless) 161X57-SS

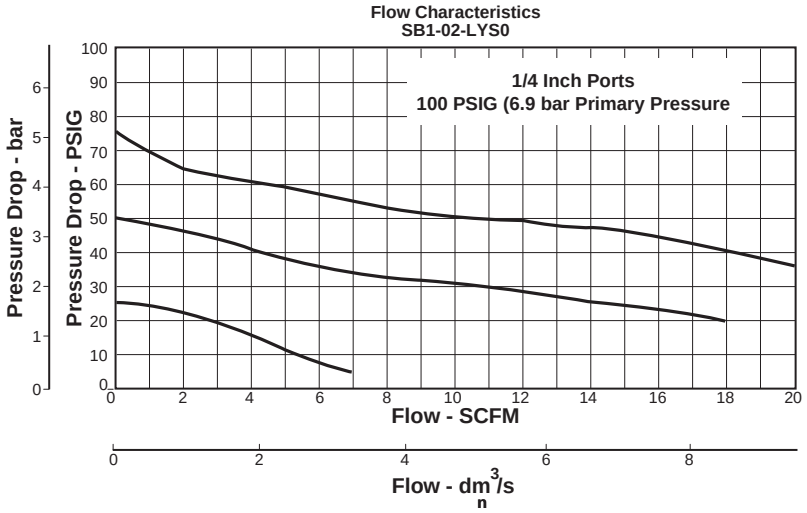
Panel Mount Nut –
- Stainless SRP-96-019
- Plastic R05X51-P

Pipe Nipple –
- 1/4" 316 Stainless Steel SRP-96-009

Service Kit –
Relieving SRP-96-015
- Non-Relieving SRP-96-016

Springs –
- 0-25 PSIG Range SPR-375-2-SS
- 0-60 PSIG Range SPR-376-1-SS
- 0-125 PSIG Range SPR-377-1-SS

Note: Order pressure gauge and panel mount nut separately.
Note: 1.25" dia. (32mm) hole required for panel mounting (order panel nut separately).



Ordering Information

Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 25 PSIG (0 to 1.7 bar)	0 to 60 PSIG (0 to 4.1 bar)
Relieving	1/4	SB1-02-LYS0	SB1-02-JYS0	SB1-02-KYS0
Non-Relieving	1/4	SB1-02-YYS0	SB1-02-VYS0	SB1-02-XYS0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Filter / Regulator – Standard
SB2

= "Most Popular"





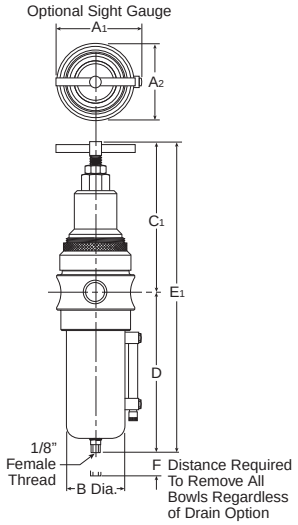
SB2-04-LLS0

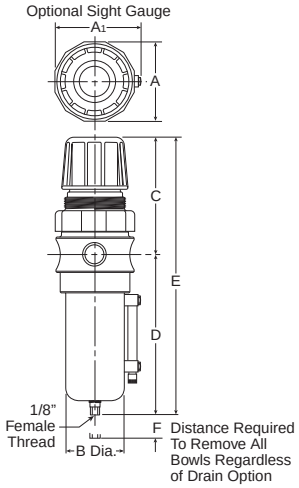
SB2-04-LLSS

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- 1/8" Female Threaded Drain
- Meets NACE Specifications MR-01-75/ISO-15156
- Low Temperature Version Available
- High Flow: 1/2" – 72 SCFM§

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting and 15 PSIG pressure drop.





Specifications

Flow Capacity*	Port Size	5 Micron
	1/2	72 SCFM
Bowl Capacity		4.0 Ounces
Filter Rating		5 Micron
Gauge Port		1/4 Inch
Port Threads		1/2 Inch

Pressure & Temperature Ratings –

SB2-04-LLS0 (Metal Bowl with or without Sight Gauge)– 300 PSIG Max. (20.7 bar) 0°F to 150°F (-18°C to 66°C)

SB2-04-LLSS (Metal Bowl without Sight Gauge)– 300 PSIG Max. (20.7 bar) 0°F to 180°F (-18°C to 82°C)

SB2-04-LLSS (Metal Bowl with Sight Gauge)– 300 PSIG Max. (20.7 bar) 0°F to 150°F (-18°C to 66°C)

Automatic Float Drain – 15 to 175 PSIG (1 to 12 bar) 32°F to 150°F (0°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention **	1.7 Ounce
Weight	2.42 lb. (1.09 kg)

* Inlet pressure 100 PSIG (6.9 bar) and 75 PSIG (5.2 bar) no flow secondary setting and 25% pressure drop.

** Useful Retention refers to volume below the quiet zone baffle.

Materials of Construction

Adjustment Mechanism / Springs	316 Stainless Steel
Body	316 Stainless Steel
Bonnet / Knob (SB2-04-LYS0)	Acetal
Bonnet / Tee Handle (SB2-04-LLSS)	316 Stainless Steel
Bottom Plug	316 Stainless Steel
Poppet	316 Stainless Steel
Seals	Fluorocarbon
Sight Gauge	Isoplast

⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

Dimensions

Models	Inches (mm)	A	A_1	A_2	B	C	C_1	D	E	E_1	F
Miniature Unit SB2-04-XXXX		2.34 (60)	2.50 (64)	3.36 (85)	1.75 (44)	3.59 (91)	4.70 (119)	5.00 (127)	8.59 (218)	9.70 (246)	2.12 (54)

= **"Most Popular"**

SB2 Regulator Kits & Accessories

Bonnet Kit SB2-04-LLS0 (Knob) SRP-96-018

Bonnet Kit SB2-04-LLSS (T-Handle).....CKR11YSS

Drain Kit –
- Automatic Float Drain (New).....SRP-96-27
- Automatic Float Drain (Old) SRP-96-007
- Manual Twist Drain (New)..... SAP05481
- Manual Twist Drain (Old)..... SRP-96-008

Filter Element Kits –
- Particulate (5 Micron)..... SRP-96-003
- Particulate (40 Micron)..... SRP-96-004

Gauge (Stainless) –
- 160 PSIG (0 to 1100 kPa), 2" Face..... K4520N14160SS

Liquid Level Sight Gauge Kit SRP-96-026

Mounting Bracket (Stainless)..... R10Y57-SS

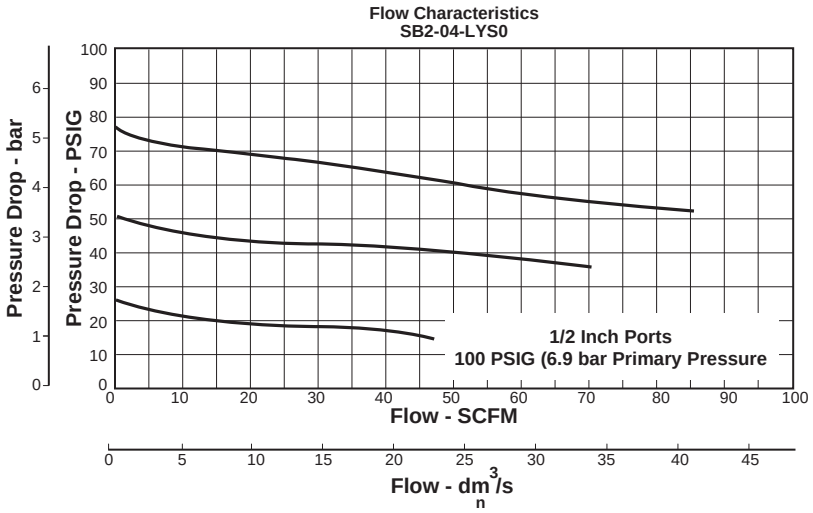
Panel Mount Nut –
- Stainless SRP-96-020
- Plastic R10X51-P

Pipe Nipple –
- 1/2" 316 Stainless Steel SRP-96-010

Service Kit –
- Relieving.....SRP-96-011
- Non-Relieving.....SRP-96-012

Springs –
- 0-60 PSIG Range.....SPR-388-1-SS
- 0-125 PSIG Range SPR-389-1-SS
- 0-250 PSIG Range.....SPR-390-1-SS

Note: Order pressure gauge and panel mount nut separately.
Note: 1.75" dia. (44.5 mm) hole required for panel mounting (order panel nut separately).



Ordering Information

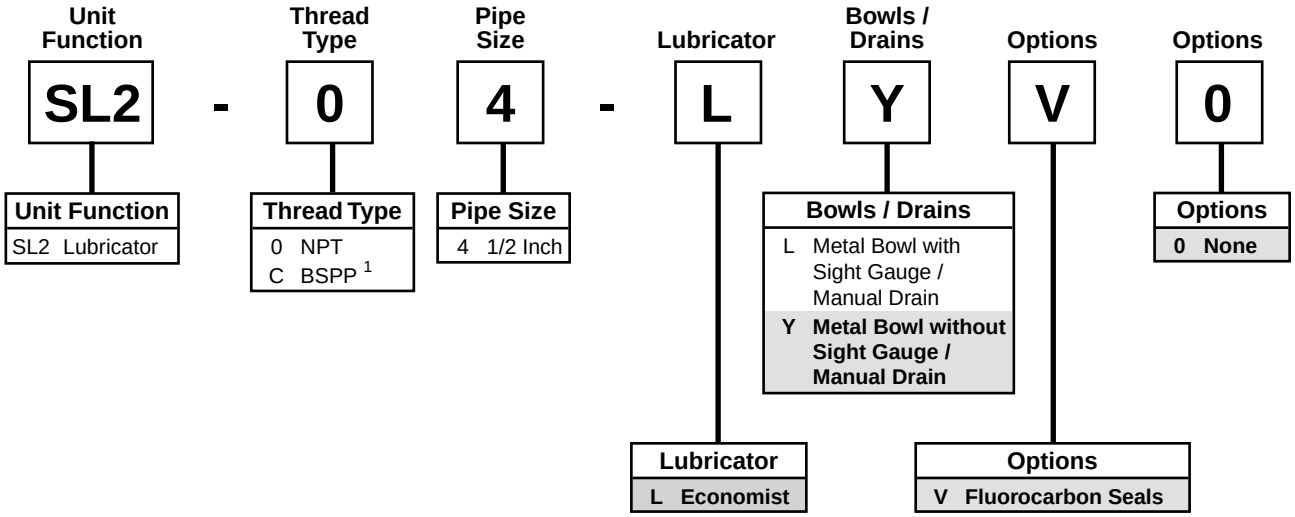
Model Type	Port Size	0 to 125 PSIG (0 to 8.6 bar)	0 to 60 PSIG (0 to 4.1 bar)	0 to 250 PSIG (0 to 17.2 bar)
Relieving	1/2	SB2-04-LLS0	SB2-04-KYS0	SB2-04-MYS0
Non-Relieving	1/2	SB2-04-YYS0	SB2-04-XYS0	SB2-04-ZYS0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes

Lubricator Numbering System

= "Most Popular"



E

Stainless Steel Products

1 ISO, R228 (G Series)

Note: When selecting from the options columns, please enter letters in alphabetical order for positions 7, 8, and 9. For example:

SL2 - 0 2 - L L V 0

Lubricator – Standard
SL2



SL2-04-LYV0

= **"Most Popular"**

Specifications

Flow Capacity*	Port Size 1/2	100 SCFM
Bowl Capacity		4.0 Ounces
Port Threads		1/2 Inch
Pressure & Temperature Ratings –		
Metal Bowl –		0 to 300 PSIG (0 to 20.7 bar) 0°F to 150°F (-18°C to 66°C)
Metal Bowl with Sight Gauge –		0 to 250 PSIG (0 to 17.2 bar) 0°F to 150°F (-18°C to 66°C)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C).

Useful Retention **	4 Ounces
Weight	1.9 lb. (0.85 kg)

* Inlet pressure 90 PSIG (6.2 bar) and 5 PSID (0.3 bar) pressure drop.
**Useful Retention refers to volume below the quiet zone baffle.

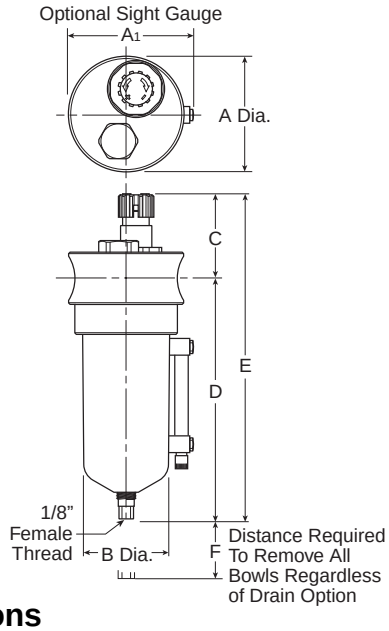
Materials of Construction

Body	316 Stainless Steel
Bowl	316 Stainless Steel
Dip Tube	316 Stainless Steel
Drain	316 Stainless Steel
Fill Plug	316 Stainless Steel
Seals	Fluorocarbon
Sight Dome	Nylon
Sight Gauge	Isoplast

Features

- Stainless Steel Construction Handles Most Corrosive Environments
- 1/8" Female Threaded Drain
- Fillable Under Pressure
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/2" - 100 SCFM§

§ SCFM = Standard cubic feet per minute at 90 PSIG inlet, and 5 PSIG pressure drop.



Dimensions

Models	Inches (mm)	A	A1	B	C	D	E	F
Miniature Unit SL2-04-XXXX		2.36 (60)	2.52 (64)	1.73 (44)	2.17 (55)	5.46 (139)	7.62 (194)	3.50 (89)

= "Most Popular"

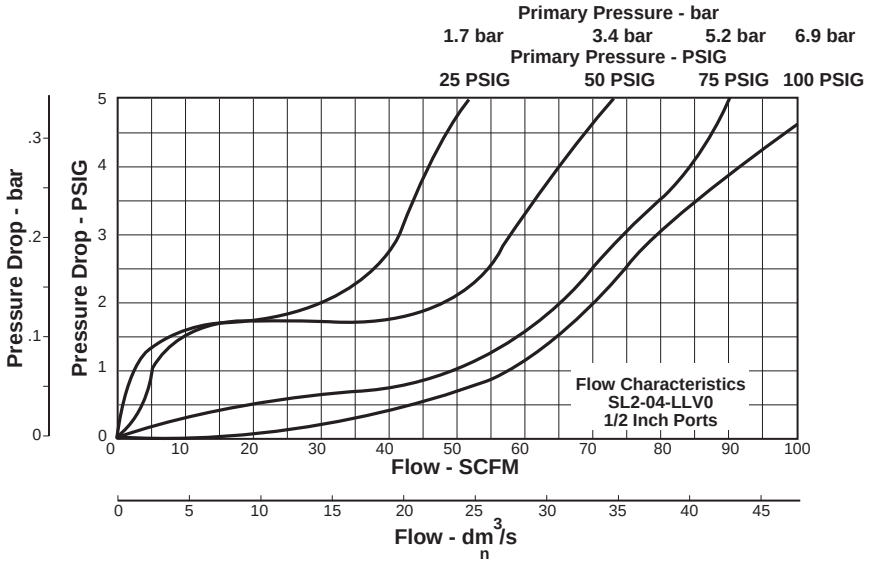
SL2 Filter Kits & Accessories

Drain Kit –
- Manual Twist Drain (New) SAP05481
- Manual Twist Drain (Old)..... SRP-96-008

Liquid Level Sight and Gauge Kit SRP-96-026

Pipe Nipple – 1/2" 316 Stainless Steel.....SRP-96-010

Sight Dome / Metering Screw Kit –
- Old SRP-96-025
- New Style Nylon..... LRP-96-720



E

Stainless Steel Products

Ordering Information

Model Type	Port Size	Model Number
Manual Drain	1/2	SL2-04-LYV0

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Notes



Dryers

Sources of Contamination **F2-F4**
Purification Technologies **F5**
Quality Standards **F6**
Purity Levels **F7**
Refrigeration Air Dryers – PRD / PNC / DRD **F8-F12**
Mini Disposable Inline Desiccant Dryer – DD10 ..... **F13**
Manual Desiccant Dryers **F15**
X06 ..... F16-F17
X03 / X04 ..... F18-F19
X25 ..... F20
X08 ..... F21
Regenerative Desiccant Dryers – WDAS (Discontinued) **F22-F26**
Heatless Desiccant Air Dryers – TW **F27-F30**
Modular Membrane Dryer – MSD (Discontinued) **F31-F33**
Automatic Electrical Drain Valve – WDV3-G **F34**
Zero Air Loss Condensate Drain – ED **F35**

Compressed air and its purification from generation to application

Compressed air is an essential power source that is widely used throughout industry. This safe, powerful and reliable utility can be the most important part of your production process. However, your compressed air will contain water, dirt, wear particles and even degraded lubricating oil which all mix together to form an unwanted condensate. This condensate often acidic, rapidly wears tools and pneumatic machinery, blocks valves and orifices causing high maintenance and costly air leaks. It also corrodes piping systems and can bring your production process to an extremely expensive standstill!

The quality of air required throughout a typical compressed air system can vary.

It is highly recommended that the compressed air is treated prior to entry into the distribution system as well as at each usage point or application.

This approach to system design provides the most cost effective solution to system purification as it not only removes the contamination already in the distribution system, it ensures that only the most critical areas receive air treated to the highest level.

In many instances the compressed air system will be supplying air to more than one application and although the purification equipment specified in the compressor room would remain unchanged, the point of use protection will vary depending upon the air quality requirements of each application.

In many cases this action alone is not enough, as modern production systems and processes demand an even higher level of air quality. Where required, “point of use” filtration, refrigeration or desiccant air dryers can provide the correct air quality, without the need for drying the complete compressed air installation, which can be both costly and totally unnecessary.

Sources of contamination found in a compressed air system

Contaminants in a compressed air system can generally be attributed to the following:

The quality of air being drawn into the compressor
Air compressors draw in a large volume of air from the surrounding atmosphere containing large numbers of airborne contaminants.

The type and operation of the air compressor
The air compressor itself can also add contamination, from wear particles to coolants and lubricants.

Compressed air storage devices and distribution systems
The air receiver and system piping are designed to store and distribute the compressed air. As a consequence, they will also store the large amounts of contaminants drawn into the system. Additionally, piping and air receivers will also cool the moist compressed air forming condensate which causes damage and corrosion.

Types of contamination found in a compressed air system

Atmospheric Dirt

Atmospheric air in an industrial environment typically contains 183 million per yd^3 (140 million per m^3) of dirt particles. 80% of these particles are less than 2 microns in size and are too small to be captured by the compressor intake filter, therefore passing directly into the compressed air system.

Water Vapor, Condensed Water And Water Aerosols

Atmospheric air contains water vapor (water in a gaseous form). The ability of compressed air to hold water vapor is dependent upon it's temperature. The higher the temperature, the more water vapor that can be held by the air. During compression, the air temperature is increased significantly, which allows it to easily retain the incoming moisture. After the compression stage, air is normally cooled to a usable temperature. This reduces the airs ability to retain water vapor, resulting in a proportion of the water vapor being condensed into liquid water which is removed by a condensate drain fitted to the compressor after-cooler. The air leaving the after-cooler is now 100% saturated with water vapor and any further cooling of the air will result in more water vapor condensing into liquid water. Condensation occurs at various stages throughout the system as the air is cooled further by the air receiver, piping and the expansion of valves, cylinders, tools and machinery. The condensed water and water aerosols cause corrosion to the storage and distribution system, damage production equipment and the end product. It also reduces production efficiency and increases maintenance costs. Water in any form must be removed to enable the system to run correctly and efficiently.

Rust and Pipescale

Rust and pipescale can be found in air receivers and the piping of “wet systems” (systems without adequate purification equipment) or systems which were operated “wet” prior to purification being installed. Over time, this contamination breaks away to cause damage or blockage in production which can also contaminate final product and processes.

Micro-Organisms

Bacteria and viruses will also be drawn into the compressed air system through the compressor intake and warm, moist air provides an ideal environment for the growth of micro-organisms. If only a few micro-organisms were to enter a clean environment, a sterile process or production system, enormous damage could be caused that not only diminishes product quality, but may even render a product entirely unfit for use and subject to recall.

Liquid Oil And Oil Aerosols

Most air compressors use oil in the compression stage for sealing, lubrication and cooling. During operation, lubricating oil is carried over into the compressed air system as liquid oil and aerosols. This oil mixes with water vapor in the air and is often very acidic, causing damage to the compressed air storage and distribution system, production equipment and final product.

Oil Vapor

In addition to dirt and water vapor, atmospheric air also contains oil in the form of unburned hydrocarbons. The unburned hydrocarbons drawn into the compressor intake as well as vaporized oil from the compression stage of a lubricated compressor will carry over into a compressed air system where it can cool and condense, causing the same contamination issues as liquid oil.

Up to 99% of the total liquid contamination found in a compressed air system is water.

Oil is perceived to cause the most problems as it is seen emanating from open drain points and exhausting valves, however, in the majority of instances, it is actually oily condensate (oil mixed with water) that is being observed.

How much water can be found in a typical compressed air system?

The amount of water in a compressed air system is staggering. A small 100 SCFM (2.8m^3/min) compressor and refrigeration dryer combination, operating for 4,000 hours in typical climatic conditions can produce approximately 2,200 gallons (8,328 liters) of liquid condensate per year.

If the compressor is oil lubricated with a typical 2ppm (2 mg/m^3) oil carryover, then although the resulting condensate would visually resemble oil, oil would in fact account for less than 0.1% of the overall volume and it is this resemblance to oil to which a false association is made.

The example above assumes uses a small compressor to highlight the large volume of condensate produced. If a compressed air system was operated in warmer, more humid climates, or with larger compressors installed, running for longer periods, the volume of condensate would increase significantly.

Contamination and types of compressors

It is often believed that the level of compressed air purification equipment required in a system is dependent upon the type of compressor used. Contamination in a compressed air system originates from many sources and is not related solely to the compressor or it's lubricants. No matter what compressor type is selected, adequate filtration and separation products will be required to remove the large volume of dirty contaminated water as well as the dirt, rust, pipescale and microbiological contamination in the system.

Preventative maintenance provides you with the following benefits:

- Lowest operating costs
- Superior compressed air quality
- Continued protection of downstream equipment and processes
- Peace of mind

Compressed air and it's purification

Having identified the different types of contamination that can be found within a compressed air system, we can now examine the purification technologies available for it's removal.

Particle and coalescing filters

Coalescing filters are probably the most important items of purification equipment in any compressed air system. They are designed to remove oil and water aerosols using mechanical filtration techniques and have the additional benefit of removing solid particulate to very low levels (as small as 0.01micron in size). Installed in pairs, most users believe one to be an oil removal filter and the other to be a particulate filter, when in fact, the pair of filters both perform the same function. The first filter, a general purpose filter is used to protect the high efficiency filter against bulk contamination. This "dual filter" installation ensures a continuous supply of high quality compressed air with low operational costs and minimal maintenance time.

Bulk liquid removal high efficiency water separators

Used to protect filters in systems where excessive cooling takes place in distribution piping. Water Separators will remove in excess of 98% of bulk liquid contamination through centrifugal separation techniques.

Refrigeration dryers

Refrigeration dryers work by cooling the air, so are limited to positive pressure dewpoint ratings to prevent freezing of the condensed liquid. Ideal for general purpose applications, they typically provide pressure dewpoints of 38°F (3°C), 45°F (7°C) or 50°F (10°C) pdp. Air is reheated before it re-enters the system to prevent piping from “sweating” in humid conditions. Refrigeration dryers are not suitable for installations where piping is installed in ambient temperatures below the dryer dewpoint i.e. systems with external piping.

Adsorption (desiccant) dryers

Water vapor is water in a gaseous form and is removed from compressed air using a dryer, with dryer performance being measured as pressure dewpoint. Adsorption or desiccant dryers remove moisture by passing air over a regenerative adsorbent material which strips the moisture from the air. This type of dryer is extremely efficient and typical pressure dewpoint ratings are -40°F (-40°C) or -100°F (-70°C) pdp. This means that for water vapor to condense into a liquid, the air temperature would have to drop below -40°F (-40°C) to -100°F (-70°C) respectively (the actual air temperature after an adsorption dryer is not the same as it's dewpoint).

Beneficially, a pressure dewpoint of -15°F (-26°C) or better will not only prevent corrosion, but will also inhibit the growth of microorganisms within the compressed air system.

Important note regarding compressed air dryers

As adsorption and refrigeration dryers are designed to remove only water vapor and not water in a liquid form, they require the use of particulate and coalescing filters, and possibly a bulk liquid separator to work efficiently.

Compressed air quality standards – ISO 8573

ISO 8573 is the group of International standards relating to the quality of compressed air and consists of nine separate parts. Part 1 specifies the quality requirements of the compressed air and parts 2 - 9 specify the methods of testing for a range of contaminants.

ISO 8573.1 : 2010 is the primary document used from the ISO 8573 series and it is this document which allows the user to specify the air quality or purity required at key points in a compressed air system.

ISO8573-1 lists the main contaminants as Solid Particulate, Water and oil. The purity levels for each contaminant are shown in separate tables, however for ease of use, this document combines all three contaminants into one easy to use table.

	Solid Particulate				Water		Oil
	Maximum number of particles per m^3			Concentration	Vapor	Liquid	Total oil (aerosol, liquid and vapor)
ISO8573-1:2010 Class	0.1 - 0.5 micron	0.5 - 1 micron	1 - 5 micron	mg/m^3	Pressure Dewpoint	g/m^3	ppm (mg/m^3)
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20,000	≤ 400	≤ 10	—	≤ -94°F (-70°C)	—	0.008 (0.01)
2	≤ 400,000	≤ 6,000	≤ 100	—	≤ -40°F (-40°C)	—	0.08 (0.1)
3	—	≤ 90,000	≤ 1,000	—	≤ -4°F (-20°C)	—	0.83 (1)
4	—	—	≤ 10,000	—	≤ 37°F (3°C)	—	4.2 (5)
5	—	—	≤ 100,000	—	≤ 45°F (7°C)	—	—
6	—	—	—	≤ 5	≤ 50F (10°C)	—	—
7	—	—	—	5 - 10	—	≤ 0.5	—
8	—	—	—	—	—	0.5 - 5	—
9	—	—	—	—	—	5 - 10	—
X	—	—	—	≤ 10	—	≤ 10	≤ 10

Specifying Air Purity In Accordance With ISO 8573-1:2010

When specifying the purity of air required, the standard must always be referenced, followed by the purity class selected for each contaminant (a different purity class can be selected for each contaminant if required). An example of how to write an air quality specification is shown below:

Example:

ISO 8573-1:2010 Class 1.2.1

ISO8573-1:2010 refers to the standard document and its revision, the three digits refer to the purity classifications selected for solid particulate, water and total oil. Selecting an air purity class of 1.2.1 would specify the following air quality when operating at the standard's reference conditions:

Class 1, Particulate
In each cubic meter of compressed air, the particulate count should not exceed 20,000 particles in the 0.1 - 0.5 micron size range, 400 particles in the 0.5 - 1 micron size range and 10 particles in the 1 - 5 micron size range.

Class 2, Water
A pressure dewpoint (PDP) of -40°F (-40°C) or better is required and no liquid water is allowed.

Class 1, Oil
In each cubic meter of compressed air, not more than 0.01mg of oil is allowed. This is a total level for liquid oil, oil aerosol and oil vapor.

Cost Effective System Design

To achieve the stringent air quality levels required for today's modern production facilities, a careful approach to system design, commissioning and operation must be employed.

Treatment at one point alone is not enough and it is highly recommended that the compressed air is treated in the compressor room to a level that will provide general purpose air to the site and also protect the distribution piping.

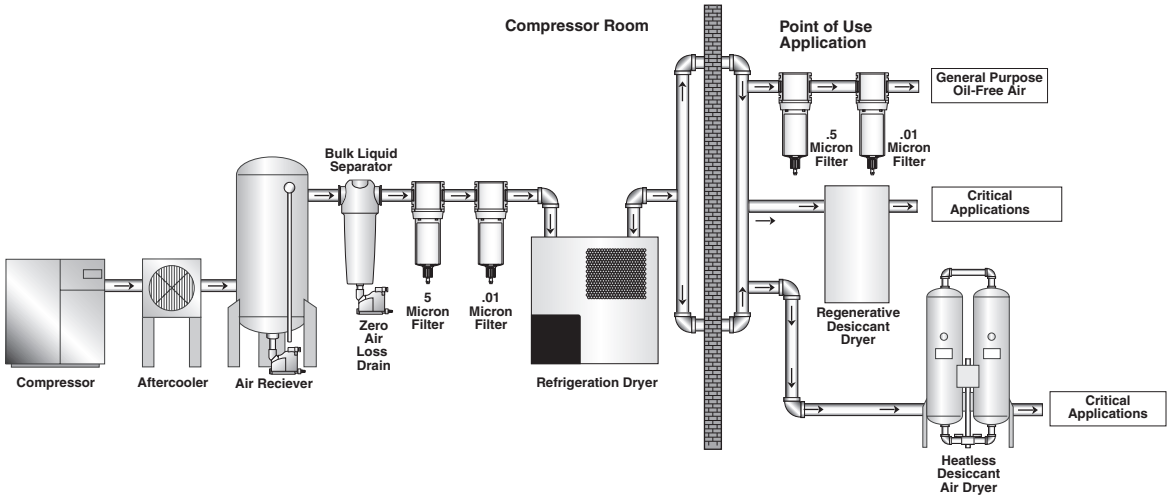
Point of use purification should also be employed,not only to remove any contamination remaining in the distribution system, but also with specific attention on the quality of air required by each application. This approach to system design ensures that air is not "over treated" and provides the most cost effective solution to high quality compressed air.

General purpose oil free air

Bulk contamination is removed to an adequate level prior to the air entering the distribution system.
Point of use particulate filter(s) are used for removal of contamination within the distribution system.
Point of use adsorption dryer installed where lower dewpoints are required.

Typical Applications

- Plant Automation
- Air Logistics
- Pneumatic Tools
- General Instrumentation
- Air Conveying
- Air Motors
- Temperature Control Systems
- Blow Guns
- Gauging Equipment
- Raw Material Mixing
- Sand / Bead Blasting

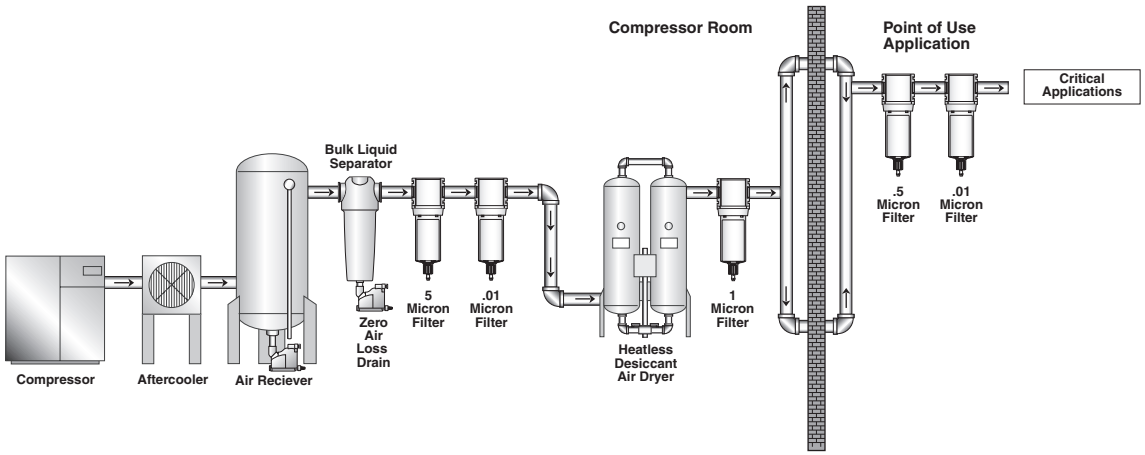


High quality oil free air

Bulk contamination is removed to an adequate level prior to the air entering the distribution system.
Point of use particulate filter(s) are used for removal of contamination within the distribution system.
Adsorbtion dryers are used for critical applications where lower dewpoints are required.

Typical Applications

- Blow Molding of Plastics e.g.. P.E.T. Bottles
- Film Processing
- Critical Instrumentation
- Advanced Pneumatics
- Air Blast Circuit Breakers
- Decompression Chambers
- Cosmetic Production
- Medical Air
- Dental Air
- Lasers and Optics
- Robotics
- Spray Painting
- Air Bearings
- Pipeline Purging
- Measuring Equipment



What is refrigeration drying?

The use of refrigeration drying for compressed air treatment is tested and proven for many industrial applications. Dewpoints of 35°F (1.7°C) to 50°F (10°C) are suitable for many indoor applications where a general removal of bulk water and some vapor is sufficient for the end user's process.

Refrigeration dryers use a set of heat exchangers or a single heat exchanger (with chambers) first to pre-cool the air; second, to refrigerate the air to condense out moisture vapor; and last, to re-heat the air to prevent pipe sweating downstream. Direct Expansion dryers are a type of dryer where the compressed air and the refrigerant come into direct contact via the heat exchanger. While reliable and simple to use, they generally require that the unit continue to run regardless of actual compressed air flow through the dryer. Cycling dryers utilize a thermal mass as the means to absorb the heat from the compressed air. By chilling a thermal mass, a refrigerant compressor may turn off in times of low demand thereby saving energy by shutting off the refrigerant compressor. There is, however, an additional heat transfer (the thermal mass), so a small amount of additional cost may or may not offset the amount of money saved by shutting off the compressor.

The use of refrigeration dryers is preferred:

- In the Capacity Range of 10 SCFM (17 Nm3/hr) to 2,400 SCFM (4078 Nm3/hr)
- Inlet Temperatures to 120°F (48.9°C)
- Wide Ranges of Operating Pressures
- Indoor Applications
- System with Fluctuating Conditions and Demand

WDRD10 - WDRD250



- "Plug & Play" Design for Easy Installation and Operation (WDRD10 - WDRD125)
- Small Space Saving Design
- Oversized Demister Separator Resulting in Excellent Liquid Removal Over All Operating Conditions
- Low Pressure Differential Across the Dryer (1.45 PSIG average)
- Environmentally Friendly Refrigerant
- Oversized Condenser to Operate in Ambients To 122°F (50°C)
- All Models Incorporate a Dewpoint Indicator

WDRD325 - WDRD2400



- Optimum Dewpoint Levels for Highest System Performance
- Advanced Patented Design Solutions
- Environmentally Friendly Refrigerant
- High Reliability, Easy To Use and Maintain
- Unique 4-in-1 SmartPack Heat Exchanger
- Integral Drain
- Extremely Low Pressure Drop Design
- Smartcontrol Energy Saving Function
- Excellent Dewpoint Performances
- Advanced Compliant Scroll Compressor

WDRD Series

Capacity SCFM @ 100 PSIG (m^3/min @ 6.9 bar)	Primary Voltage	Part Number	Pipe Size	Recommended Filtration		
				Bulk Separator	Pre-filter (5µ Particulate)	Post-filter (.01µ Coalescing)
10 (17)	115V /1ph/60Hz	**WDRD10-115160**	1/2" NPT-F	**WSA-04-FM0**	**F18-04-SH00**	**M18-04-CG00**
15 (26)	115V/1ph/60Hz	**WDRD15-115160**	1/2" NPT-F	**WSA-04-FM0**	**F18-04-SH00**	**M18-04-CG00**
25 (43)	115V/1ph/60Hz	**WDRD25-115160**	1/2" NPT-F	**WSA-04-FM0**	**F18-04-SH00**	**M18-04-CG00**
35 (60)	115V/1ph/60Hz	**WDRD35-115160**	1/2" NPT-F	**WSA-04-FM0**	**F18-04-SH00**	**M18-04-CG00**
50 (85)	115V/1ph/60Hz	**WDRD50-115160**	3/4" NPT-F	**WSA-06-FM0**	**F28-06-SH00**	**M28-06-CH00**
75 (127)	115V/1ph/60Hz	**WDRD75-115160**	3/4" NPT-F	**WSA-06-FM0**	**F28-06-SH00**	**M28-06-CH00**
100 (170)	115V/1ph/60Hz	**WDRD100-115160**	3/4" NPT-F	**WSA-06-FM0**	**F28-06-SH00**	**M28-06-CH00**
125 (212)	115V/1ph/60Hz & 230V/1ph/60Hz	**WDRD125-115160 WDRD125-230160**	1-1/2" NPT-F	**WS0-0B-000B**	**F35-0B-F00**	**M35-0B-F00**
150 (255)	115V/1ph/60Hz & 230V/1ph/60Hz	**WDRD150-115160 WDRD150-230160**	1-1/2" NPT-F	**WS0-0B-000B**	**F35-0B-F00**	**M35-0B-F00**
175 (297)	230V/1ph/60Hz	**WDRD175-230160**	1-1/2" NPT-F	**WS0-0B-000B**	**F35-0B-F00**	**M35-0B-F00**
200 (425)	230V/1ph/60Hz	**WDRD200-230160**	1-1/2" NPT-F	**WS0-0B-000B**	**F35-0B-F00**	**M35-0B-F00**
250 (425)	230V/3ph/60Hz & 460V/3ph/60Hz	**WDRD250-230360 WDRD250-460360**	1-1/2" NPT-F	**WS0-0B-000B**	**F35-0B-F00**	**M35-0B-F00**
325 (552)	230V/3ph/60Hz & 460V/3ph/60Hz	**WDRD325-230360 WDRD325-460360**	2" NPT-F	**WS0-0C-000B**	**F35-0C-F00**	**M35-0C-F00**
400 (680)	230V/3ph/60Hz & 460V/3ph/60Hz	**WDRD400-230360 WDRD400-460360**	2" NPT-F	**WS0-0C-000B**	**F35-0C-F00**	**M35-0C-F00**
500 (849)	230V/3ph/60Hz & 460V/3ph/60Hz	**WDRD500-230360 WDRD500-460360**	2" NPT-F	**WS0-0C-000B**	**F35-0C-F00**	**M35-0C-F00**
700 (1189)	230V/3ph/60Hz & 460V/3ph/60Hz	**WDRD700-230360 WDRD700-460360**	3" NPT-M	**WS0-0E-000B**	**F43-0E-F00**	**M43-0E-F00**
800 (1359)	230V/3ph/60Hz & 460V/3ph/60Hz	**WDRD800-230360 WDRD800-460360**	3" NPT-M	**WS0-0E-000B**	**F43-0E-F00**	**M43-0E-F00**
1000 (1700)	460V/3ph/60Hz	**WDRD1000-460360**	3" NPT-M	**WS0-0E-000B**	**F43-0E-F00**	**M43-0E-F00**
1200 (2039)	460V/3ph/60Hz	**WDRD1200-460360**	3" NPT-M	**WS0-0E-000B**	**F43-0E-F00**	**M43-0E-F00**
1600 (2718)	460V/3ph/60Hz	**WDRD1600-460360**	4" Flg.	**WWSA1000F**	**M55-0F-F00***	**M55-0F-FS0**
2000 (3400)	460V/3ph/60Hz	**WDRD2000-460360**	6" Flg.	**WWSA1800F**	**M55-0H-F00***	**M55-0H-FS0**
2400 (4078)	460V/3ph/60Hz	**WDRD2400-460360**	6" Flg.	**WWSA1800F**	**M55-0H-F00***	**M55-0H-FS0**

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* 1µ coalescing

F

Dryers

PlusPack Heat Exchanger (patent pending)

The revolutionary PlusPack features a 3-in-1 aluminum design with integral air connections. All models include an air-to-air freecooler, while the unique “slowflow” demister ensures perfect dewpoints whatever the operating conditions.

Demister Separator

A high capacity demister separator is employed for the removal of condensed liquids. This lowers the air velocity which maximizes the condensate separation from the air, even when the dryer is not operating at maximum flow. This design also ensures the differential pressure across the dryer is kept to a minimum.

Refrigerant Condenser

Oversized high efficiency air cooled condenser. Re-positioned to improve reliability and reduce the risk of dirt contamination.

Condensate Drain Niche

The WDRD Refrigeration Dryer range comes standard with a level sensing automatic float drain. Other drains are available upon request. The positioning of the drain niche allows for easy access to the drain without the requirement of removing panels.

Refrigerant Compressor

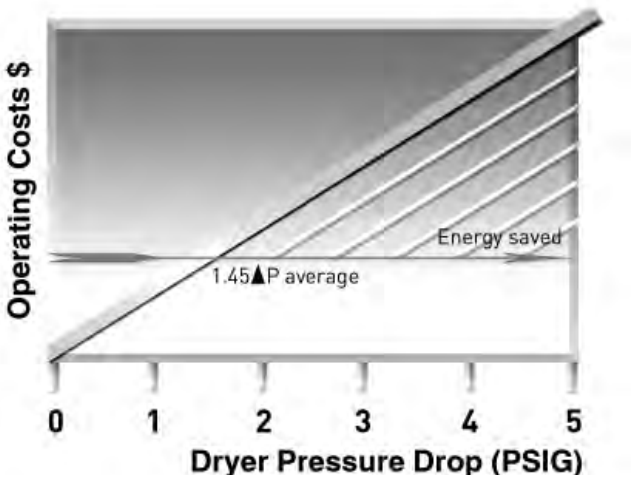
Maintenance free hermetically sealed refrigerant compressor. Low refrigerant charge eliminates the requirement for pre-heating on start up & prevents any liquid refrigerant returns.



Assured Quality & Performance

Every dryer undergoes sophisticated testing, including dewpoint tests with compressed air flow. Multiple helium leak testing, again on every dryer, ensures years of trouble-free operation.

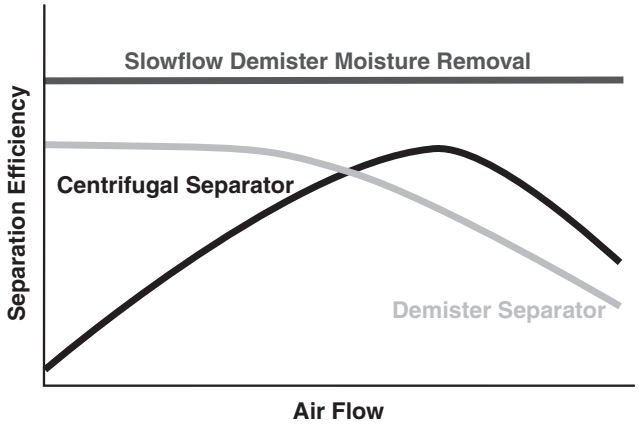
Energy Efficiency



Poorly constructed heat exchangers and liquid separators create a high pressure differential across the dryer which leads to high operational costs and poor dewpoint performance.

The WDRD dryer range utilizes advanced heat exchanger and demister separation technology and delivers uncompromising performance at the lowest cost of ownership.

Moisture Separation Technology



The oversized “slowflow” demister is non-velocity sensitive and therefore offers excellent liquid separation whatever the airflow.

The importance of compressed air as a provider of energy for modern industrial processes is widely known. What is often overlooked however is the need to provide quality treatment for this air.

In fact, the air entering the system contains condensate which, when cooled, will turn into liquid water, causing extensive damage not only to the compressed air network, but also to the finished product.

WDRD refrigeration dryers actively remove this condensate to achieve extremely dry compressed air.

Our SmartPack heat exchanger offers minimal pressure drops and class leading performance, and significantly increases the efficiency of the whole compressed air treatment process. The innovative SmartControl function automatically and continuously adjusts dryer operation to the effective working conditions, minimizing operating costs and maximizing performances.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.



Smart Technology: The Benefits

SmartPack Heat Exchanger Provides Less Than 2 PSI Pressure Drop

The SmartPack (patent pending) heat exchanger features an extremely robust, all-in-one aluminum design, with no interconnecting tubing.

The geometry of the heat exchanger has been designed in order to optimize its performances. In particular, large volumes allow low air velocity through the heat exchanger section, resulting in high exchange efficiency and low pressure drops. Pressure drops are further improved thanks to the absence of interconnecting pipes through the different sections of the heat exchanger and to a straight forward path of the compressed air flow with smooth and minimum changes of flow directions.

Smart BMS Interface

Simple BMS interface includes:

- RS485 serial card provides direct communication to Modbus. Requires no gateway or A.N.I.
- Provides visualization of dewpoint, alarm conditions and service indication.
- Provides remote control of the dryer including on/off and alarm reset (depending on actual alarm)

SmartDrain - Dual Mode Zero Air Loss Drain

The drainage chamber is integrated into the heat exchanger while the valve mechanism is fitted in an easily accessible drain niche. The SmartDrain continuously adjusts itself to the actual working conditions, ensuring zero air loss and a notable reduction in system power consumption.

An innovative control system continuously monitors for fault situations. If a fault does occur, an alarm is signaled and the drain switches to conventional timed solenoid drain operation. The dual mode circuitry ensures maximum reliability.

Smart Control With SmartSave Cycling

The multifunction SmartControl provides a versatile platform for user interface and SmartSave Cycling (if enabled). The innovative SmartSave (patent pending)

Cycling Control continuously monitors the demand placed on the dryer. At conditions of low demand the refrigerant compressor is cycled off to save energy. A sophisticated algorithm continuously adapts the operation of the dryer for optimum energy efficiency while minimizing the dewpoint spikes common to traditional thermal mass dryers.

Compliant Scroll Compressors

These units feature Compliant Scroll compressors, offering energy savings of 20 -30% when compared with piston compressors. The ability to tolerate liquid returns coupled with 50% less moving parts render them nearly indestructible and highly reliable. Low vibration levels increase overall refrigeration circuit

Operating information

= "Most Popular"

	WDRD10-WDRD175	WDRD200-WDRD250	WDRD325-WDRD2400
Temperature			
Ambient (maximum)	122°F (50°C)	122°F (50°C)	122°F (50°C)
Ambient (minimum)	41°F (5°C)	41°F (5°C)	41°F (5°C)
Inlet (maximum)	149°F (65°C)	140°F (60°C)	140°F (60°C)
Pressure (maximum)	232 PSIG (16 bar)	203 PSIG (14 bar)	203 PSIG (14 bar)
Refrigerant	R134a	R407C	R407C

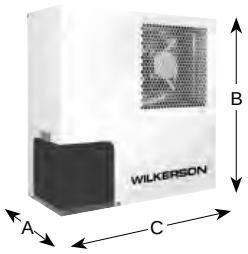
Flow correction factors

Capacities are based upon:
Ambient Temperature - 100°F (38°C); Inlet Temperature - 100°F (38°C);
and Working Pressure - 100 PSIG (7 bar g).

To obtain dryer capacity at new conditions, multiply nominal capacity x C1 x C2 x C3

	WDRD10 - WDRD175								WDRD200 - WDRD250							WDRD325 - WDRD2400						
Ambient Temperature (C1)																						
°F	60	70	80	89	100	110	120		70	80	90	100	110	120	122	90	100	110	120	122		
°C	16	21	27	32	38	43	49		21	27	32	38	43	49	50	32	38	43	49	50		
Factor	1.34	1.26	1.17	1.09	1.00	0.91	0.82		1.22	1.12	1.08	1.00	0.90	0.79	0.71	1.05	1.00	0.94	0.79	0.71		
Inlet Temperature (C2)																						
°F	90	100	110	120	140	149			90	100	110	120	130	140		90	100	110	120	130	140	
°C	32	38	43	49	60	65			32	38	43	49	54	60		32	38	43	49	54	60	
Factor	1.24	1.00	0.81	0.67	0.45	0.44			1.24	1.00	0.82	0.68	0.56	0.40		1.22	1.00	0.82	0.68	0.56	0.46	
Inlet Pressure (C3)																						
PSIG	60	80	100	125	150	175	200	230	50	80	100	125	150	174	203	50	80	100	125	150	174	203
bar	4	6	7	9	10	12	14	16	3	6	7	9	10	12	14	3	6	7	9	10	12	14
Factor	0.83	0.93	1.00	1.07	1.12	1.16	1.19	1.22	0.77	0.93	1.00	1.07	1.12	1.15	1.18	0.77	0.93	1.00	1.07	1.12	1.15	1.18

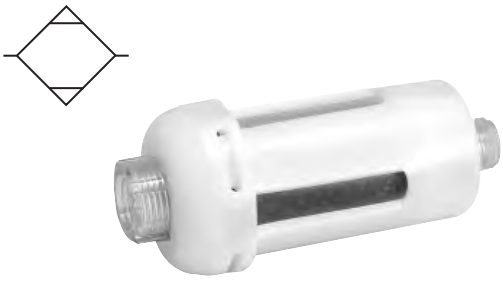
Dimensions

	Model Number	A	B	C	Weight (kg)
WDRD10-WDRD175	**WDRD10**	8.3 (210)	17 (430)	17.7 (450)	42 (19)
	**WDRD15**	8.3 (210)	17 (430)	17.7 (450)	42 (19)
	WDRD25	8.3 (210)	19.9 (505)	19.7 (500)	52 (24)
	WDRD35	8.3 (210)	19.9 (505)	19.7 (500)	52 (24)
	WDRD50	8.9 (225)	22.3 (565)	20.5 (520)	58 (27)
	WDRD75	8.9 (225)	22.3 (565)	20.5 (520)	68 (31)
	WDRD100	8.9 (225)	22.3 (565)	20.5 (520)	77 (35)
	WDRD125	16.7 (425)	23.8 (605)	21.8 (555)	115 (52)
	WDRD150	16.7 (425)	23.8 (605)	21.8 (555)	128 (58)
	WDRD175	16.7 (425)	23.8 (605)	21.8 (555)	132 (60)
WDRD200-WDRD2400	**WDRD200**	28.0 (711)	37.0 (940)	22.0 (559)	183 (83)
	**WDRD250**	28.0 (711)	42.0 (1067)	41.0 (1041)	287 (130)
	WDRD325	28.0 (711)	42.0 (1067)	41.0 (1041)	320 (145)
	WDRD400	28.0 (711)	42.0 (1067)	41.0 (1041)	320 (145)
	WDRD500	28.0 (711)	42.0 (1067)	41.0 (1041)	342 (155)
	WDRD700	32.0 (813)	52.0 (1321)	46.0 (1168)	529 (240)
	WDRD800	32.0 (813)	52.0 (1321)	46.0 (1168)	529 (240)
	WDRD1000	32.0 (813)	52.0 (1321)	46.0 (1168)	551 (250)
	WDRD1200	40.0 (1016)	67.0 (1702)	43.0 (1092)	816 (370)
	WDRD1600	40.0 (1016)	68.0 (1727)	71.0 (1803)	1279 (580)
	WDRD2000	40.0 (1016)	68.0 (1727)	71.0 (1803)	1477 (670)
	WDRD2400	40.0 (1016)	68.0 (1727)	71.0 (1803)	1521 (690)

Inches (mm)

Mini Disposable Inline Desiccant Dryer DD10

= "Most Popular"



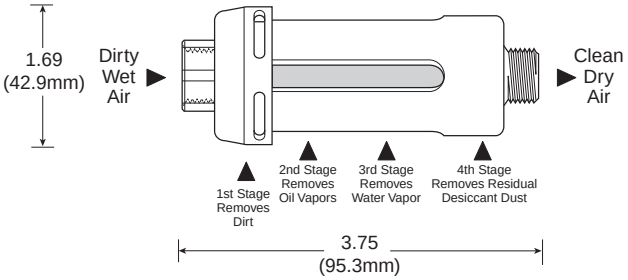
Used at the point-of-use, this disposable, mini inline desiccant dryer removes all traces of water vapor, oil vapor and dirt. It is often used directly upstream of blow guns or spray guns as final protection for critical parts blow off and paint spraying. Install in either direction; it functions in both directions.
A 40 micron, porous bronze element removes fine dirt particles, an oil removing media removes oil vapor, and desiccant beads adsorb water vapor. The see-through housing shows desiccant color change from the original orange to a green color in the desiccant beads, which indicates that the dryer needs to be replaced.

Features

- Polycarbonate Material Allows Clear Desiccant Visibility
- Disposable
- Used for Parts Blow Off
- Protection for Paint Guns Below the Filter / Dryer
- Non-toxic Desiccant Standard

Non-metalic material is highly resistant to chemicals.

See through housing shows color change when dryer needs replacement.



Specifications

Maximum Pressure Rating		125 PSIG (0 to 8.6 bar)
Maximum Temperature Rating		130°F (54°C)
Maximum Flow Capacity		15 SCFM
Port Size	NPT	1/4
Weight	lb. (g)	2.8 oz. (79.4)

Materials of Construction

Housing	Polycarbonate

Installation

The DD10 is equipped with a 1/4" NPT (F) and (M) ports and can be installed in either direction. When installing the filter / dryer hand tighten to a leak proof seal. Do not use any mechanical means to hold the filter / dryer and do not over torque the threads.

Operation

1. The unque feature of the filter / dryer design allows you to visually see when it is time to install a new DD10 by observing the color change from the original dark color to a complete light transparent color in the desiccant beads.
2. Do not attempt to clean the filter / dryer as the use of solvents, ketones, etc., will adversely affect the plastic housing.
3. Keep the hose free of snags. Extra tension on the filter / dryer assembly could break the unit at the connecting ports. To clear stuck hoses, grasp hose below the filter / dryer.

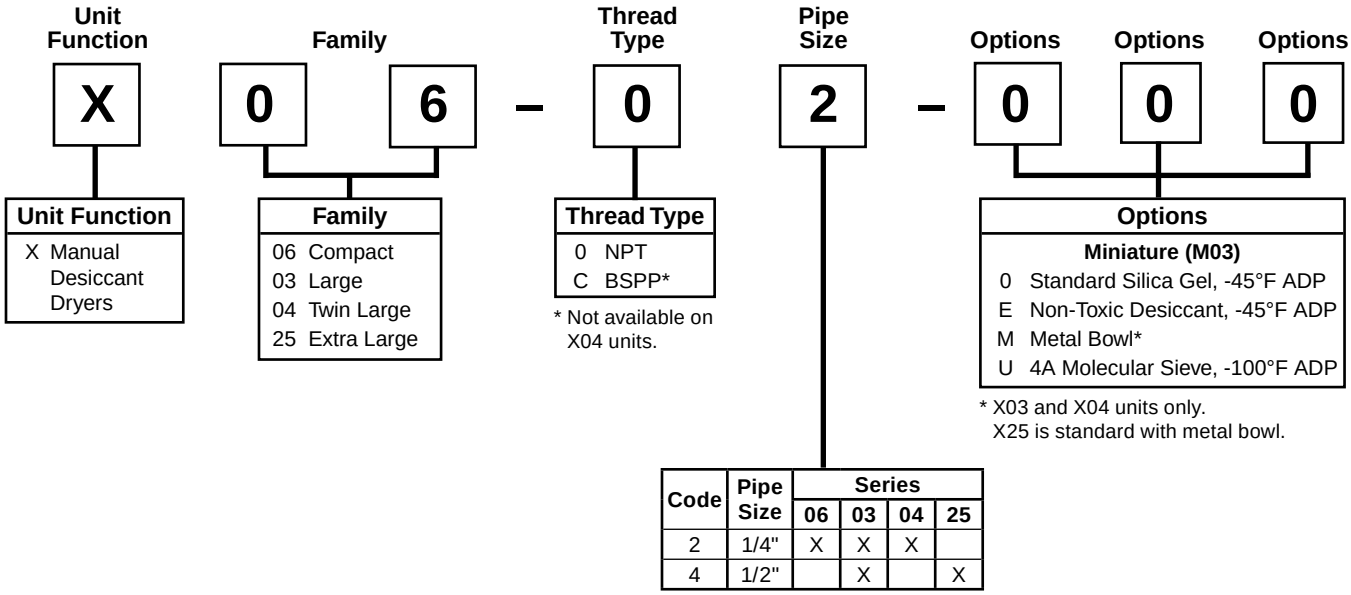
Ordering Information

Model Type	Port Size	Model Number
DD10	1/4	DD10-02

Notes

Manual Desiccant Dryer Numbering System

= "Most Popular"



Code	Pipe Size	Series			
		06	03	04	25
2	1/4"	X	X	X	
4	1/2"		X		X

If more than one option is desired, arrange them in alphabetical order in positions 6, 7, and 8.

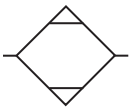
NOTE: 000 in position 6, 7, and 8 signifies standard product.

F

Dryers

Desiccant Dryer X06

= "Most Popular"





X06-02-000

Features and Benefits

- Atmospheric Dew Points as Low as -100°F
- No Electrical Connection Necessary
- Color change of the Desiccant Provides an Instant Status of the Compressed Air System

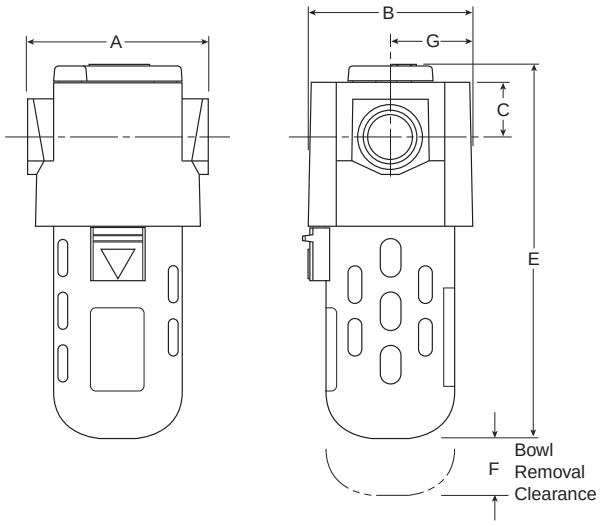
Specifications

Atmospheric Dew Point*–		
Model 000	Silica Gel	-45°F (-43°C)
Model E00	Silica Gel (Non-toxic)	-45°F (-43°C)
Model U00	4A Molecular Sieve	-100°F (-52°C)
Maximum Continuous Air Flow*		5 SCFM (2.3 dm^3/s)
Maximum Pressure		150 PSIG (10.3 bar)
Maximum Temperature		125°F (52°C)
Port Size	NPT / BSPP-G	1/4
Total Air Flow*	1/4	600 SCF (16.6 m^3)
Total Minutes of Operation @ Continuous Air Flow		120 Minutes
Weight (with Desiccant)	lb. (kg)	1.13 (0.51)
Weight Desiccant Alone	lb. (kg)	0.25 (0.11)

* With dry desiccant at 100 PSIG (7 bar) and 70°F 21°C), saturated inlet (100% RH).

Materials of Construction

Body		Zinc
Bowls	Plastic	Polycarbonate
Bowl Guard		Steel
Seals		Fluorocarbon



Dimensions

Models	Inches (mm)	A	B	C	E	F	G
Standard Unit X06-02-000		2.99 (75.9)	2.72 (69)	.90 (22.8)	6.41 (162.8)	1.50 (38)	1.36 (34.5)

= **"Most Popular"**

Replacement Parts

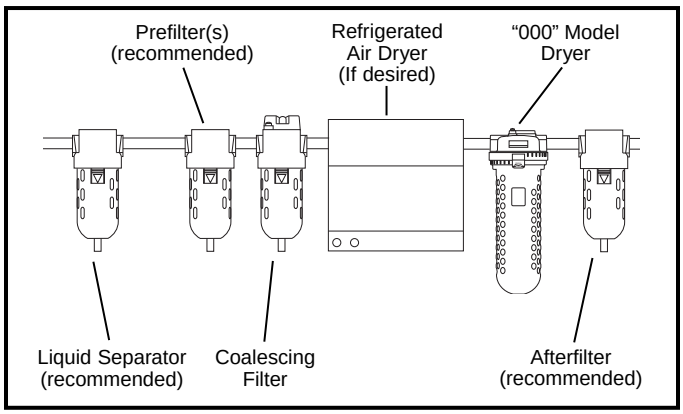
Bowl Guard GRP-95-013
Bowl O-ring GRP-95-259
Transparent Bowl DRP-96-459

Replacement Desiccant Kits

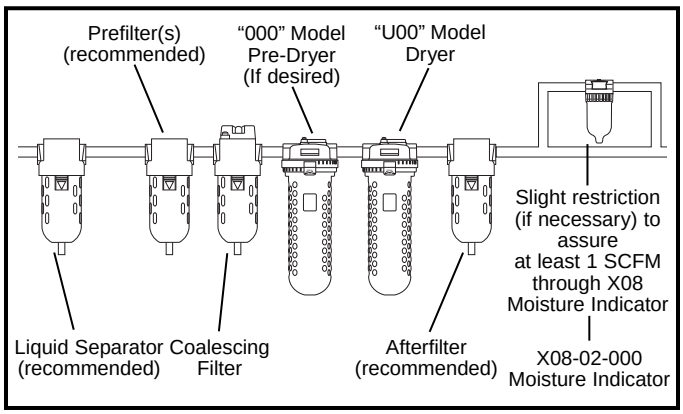
Silica Gel (000) -40°F ADP		
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges for X06
DRP-95-303	DRP-04-10B/001	1
	DRP-04-10B/005	5
Non Toxic Desiccant (E00) -40°F ADP		
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X06
	DRP-04-447/001	1
	DRP-04-447/005	5
4A Molecular Sieve (U00) -100°F ADP		
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X06
DRP-95-304	DRP-04-514/001	1
	DRP-04-514/005	5

Typical Installation Arrangement

-45°F ADP Models:



-100°F ADP Models:



Ordering Information

Model Type	Port Size	Polycarbonate Bowl
X06	1/4	X06-02-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Desiccant Dryer X03 / X04

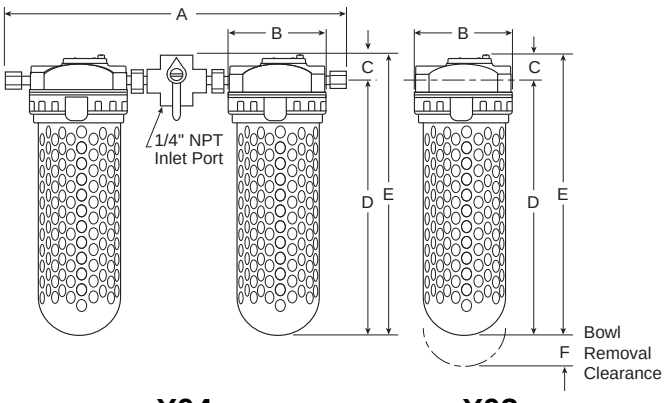
= "Most Popular"



X03-02-000

Features and Benefits

- Atmospheric Dew Points as Low as -100°F
- No Electrical Connection Necessary
- Twin Units Available for Double Service Life
- Color change of the Desiccant Provides an Instant Status of the Compressed Air System



X04 **X03**

Specifications

Atmospheric Dew Point*–		
Model 000	Silica Gel	-45°F (-43°C)
Model E00	Silica Gel (Non-toxic)	-45°F (-43°C)
Model U00	4A Molecular Sieve	-100°F (-52°C)
Maximum Continuous Air Flow*		10 SCFM (4.7 dm^3/s)
Maximum Pressure		150 PSIG (10.3 bar)
Maximum Temperature –		
X03 Transparent Bowl		125°F (52°C)
X03 Metal Bowl		150°F (66°C)
X04 Transparent Bowl		125°F (52°C)
Port Size –		
X03	NPT / BSPP-G	1/4, 1/2
X04	NPT	1/4
Total Air Flow*	1/4	4,400 SCF (311 m^3)
Total Minutes of Operation @ Continuous Air Flow	X03	440 Minutes
	X04	880 Minutes
Weight (with Desiccant) lb. (kg) –		
X03 Transparent Bowl		7.4 (3.4)
X03 Metal Bowl		6.8 (3.1)
X04 Transparent Bowl		15.0 (6.8)
Weight Desiccant Alone lb. (kg) –		
X03 Transparent Bowl		1.8 (0.8)
X03 Metal Bowl		1.3 (0.6)
X04 Transparent Bowl		3.6 (1.6)

* With dry desiccant at 100 PSIG (7 bar) and 70°F 21°C), saturated inlet (100% RH).

Materials of Construction

Body		Zinc
Bowls	Plastic	Polycarbonate
	Metal Bowl	Aluminum
Bowl Guard		Steel
Seals		Fluorocarbon

Dimensions

Models (Inches (mm))	A	B	C	D	E	F
Standard Unit X03-02-000	—	4.79 (121.6)	1.23 (31)	12.60 (320)	13.83 (351)	2.00 (50.8)
Metal Bowl X03-02-M00	—	4.79 (121.6)	1.23 (31)	12.60 (320)	13.83 (351)	2.00 (50.8)
Standard Twin Unit X04-02-000	14.42 (366)	4.79 (121.6)	1.23 (31)	11.71 (297.4)	12.65 (322)	2.00 (50.8)

= **"Most Popular"**

Replacement Parts

Bowl Guard –
X03 / X04 Transparent Bowl..... GRP-95-810
Bowl O-ring GRP-95-256
Clamp Ring GRP-96-404
Moisture Indicator* –
X03 Metal Bowl..... DRP-95-623
Replacement Cap for Moisture Removal..... GRP-95-020
Screen Assembly DRP-96-434
Transparent Bowl –
X03 / X04 ..... GRP-95-089
Tube Assembly with Screen –
X03 / X04 Transparent Bowl..... DRP-96-435
X03 Metal Bowl..... DRP-96-451

* The Moisture Indicator contains a weep orifice to provide an air sample to the moisture indicating paper. Air bleed from this indicator is necessary and normal.

Replacement Desiccant Kits

Silica Gel (000) -40°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges for X03
DRP-85-059	DRP-14-10B/002	1
	DRP-14-10B/008	4

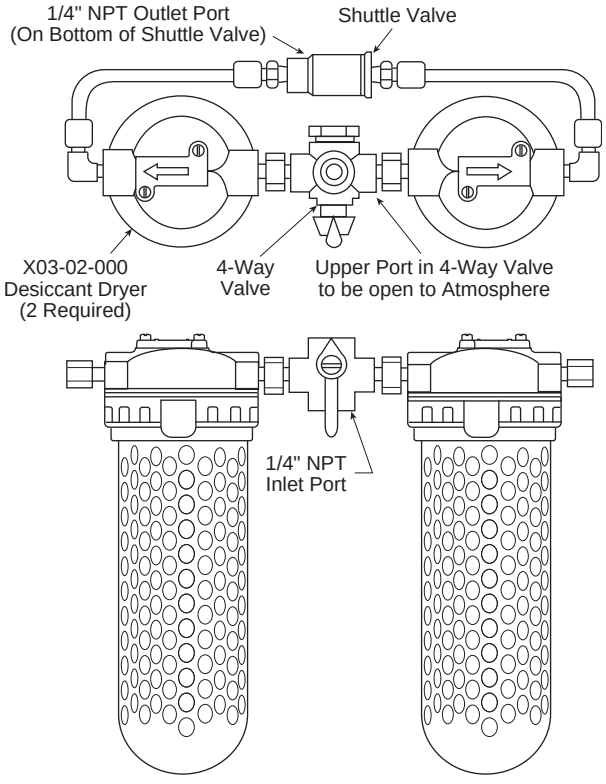
Non Toxic Desiccant (E00) -40°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X03
	DRP-14-447/002	1
	DRP-14-447/008	4

4A Molecular Sieve (U00) -100°F ADP

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X03
DRP-85-060	DRP-14-514/002	1
	DRP-14-514/008	4

Note: Since X04 consists of two X03 dryers assembled together the amount of desiccant required for a total recharge is twice the amount listed above.





X04-02-000

F

Dryers

Ordering Information

Model Type	Port Size	Polycarbonate Bowl	Metal Bowl
X03	1/4	X03-02-000	X03-02-M00
X04	1/4	X04-02-000	X04-02-M00

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.

Desiccant Dryer X25

= "Most Popular"



X25-04-000

Features and Benefits

- Atmospheric Dew Points as Low as -100°F
- No Electrical Connection Necessary
- Color change of the Desiccant Provides an Instant Status of the Compressed Air System

Specifications

Atmospheric Dew Point*–		
Model 000	Silica Gel	-45°F (-43°C)
Model E00	Silica Gel (Non-toxic)	-45°F (-43°C)
Model U00	4A Molecular Sieve	-100°F (-52°C)
Maximum Continuous Air Flow*		25 SCFM (11.8 dm^3/s)
Maximum Pressure		150 PSIG (10.3 bar)
Maximum Temperature		150°F (66°C)
Port Size	NPT / BSPP-G	1/2
Total Air Flow*		11,000 SCF (311 m^3)
Total Minutes of Operation @ Continuous Air Flow		440 min.
Weight (with Desiccant)	lb. (kg)	11.23 (5.1)
Weight Desiccant Alone	lb. (kg)	4.4 (2.0)

* With dry desiccant at 100 PSIG (7 bar) and 70°F 21°C), saturated inlet (100% RH).

Materials of Construction

Body		Zinc
Bowls	Metal Bowl	Aluminum
Bowl Guard		Aluminum
Seals		Fluorocarbon

Replacement Parts

Bowl O-ring GRP-95-256

Clamp Ring ..... GRP-96-404Moisture Indicator* DRP-95-623

Replacement Cap for Moisture Removal..... GRP-95-020

Screen Assembly DRP-96-434

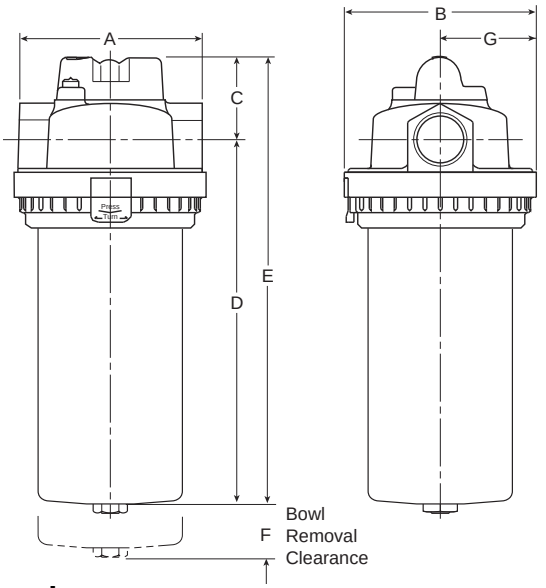
Tube Assembly with Screen DRP-95-622

* The Moisture Indicator contains a weep orifice to provide an air sample to the moisture indicating paper. Air bleed from this indicator is necessary and normal.

Ordering Information

Model Type	Port Size	Metal Bowl
X25	1/2	X25-04-000

Options - To order an option supplied with the unit model, add the appropriate coded suffix letter in the designated position of the model number.



Replacement Desiccant Kits

Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges for X25
Silica Gel (000) -40°F ADP		
DRP-85-280	DRP-14-10B/005	1
	DRP-14-10B/015	3
Non Toxic Desiccant (E00) -40°F ADP		
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X25
	DRP-14-447/005	1
	DRP-14-447/015	3
4A Molecular Sieve (U00) -1000F ADP		
Old Replacement Kit Number	New Replacement Kit Number	# of Replacement Charges For X25
DRP-85-281	DRP-14-514/005	1
	DRP-14-514/015	3

Dimensions

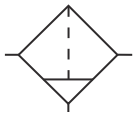
Models	Inches (mm)	A	B	C	D	E	F	G
Standard Unit X25-04-000		4.61 (117)	4.79 (121.6)	1.70 (43)	19.58 (497)	21.28 (540.5)	2.00 (50.8)	2.39 (60.8)

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Dryers

Moisture Indicator X08

= "Most Popular"



Manual Drain



X08-02-000

Specifications

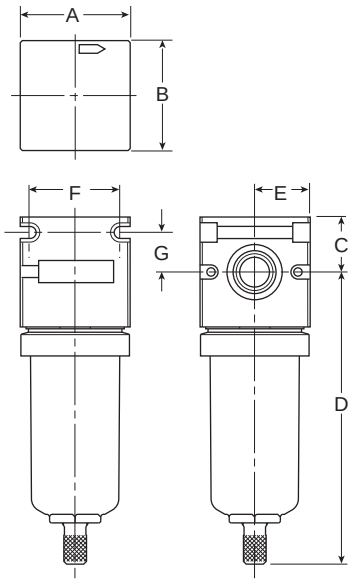
Maximum Supply Pressure		150 PSIG (10.3 bar)
Operating Temperature		32° to 120°F (0° to 49°C)
Port Size	NPT / BSPT-Rc	1/4
Weight	lb. (kg)	0.34 (0.15)

Materials of Construction

Body		Zinc
Bowls	Plastic Bowl	Polyurethane
Seals		Nitrile

Features

- Transparent Plastic Bowl Standard
- Silica Gel Changes Color For Moisture Indication



Dimensions

Models	Inches (mm)	A	B	C	D	E	F	G	H
Standard Unit X08-02-000		1.59 (40.5)	1.59 (40.5)	0.81 (20.6)	4.25 (107.9)	5.06 (128.5)	0.80 (20.2)	0.58 (14.7)	1.31 (33.3)

What is adsorption drying?

Drying compressed air through adsorption represents a purely physical process in which water vapor (adsorbate) is bound to the drying medium (adsorbent) through binding forces of molecular adhesion. Adsorbents are solids in spherical and granular form which are permeated by an array of pores. The water vapor is deposited onto the internal and external surface of the adsorption medium, without the formation of chemical compounds taking place, therefore the adsorption medium does not have to be replenished but only periodically regenerated.

Heatless

The layout of adsorption dryers with heatless regeneration is clear and simple. Compared with other adsorption dryer systems, pressure dewpoints down to -100°F (-73°C) can be achieved without additional effort.

Use in the higher pressure ranges and at low inlet temperatures causes the quantity of air needed for desorption to be reduced to an economical value.

At low operating pressure the demand for already dried compressed air for purposes of regeneration is increased. This increase causes a large proportion of the prepared compressed air to be no longer available for productive purposes.

Depending on the cycle, the quantity of air enclosed in the adsorber expands upon release at regular intervals with an emission noise level of about 90-95dB(A). Given suitable noise attenuation measures, a reduction of the noise emission level to the region of 10-15 dB(A) can be accomplished.

The use of adsorption dryers with heatless regeneration is preferred in the following applications:

- Capacity Range of Up to 800 SCFM
- Higher Pressure Ranges
- High Inlet Temperatures
- Installation in Explosion Proof Areas
- Use Under Ground Portable Applications
- Hazardous Locations (Pneumatic Controls)

Regenerative Desiccant Dryer

= "Most Popular"



Features

- Point of use application bringing clean dry air just where you need it.
- Approved to International Standards designed in accordance with ASME VIII Div.1, approved to CSA/UL/CRN and fully CE Marked (PED, EMC, LVD) as standard.
- Simple to Install - flexible installation utilising the multiple in-line inlet & outlet connection ports.
- Compact and Lightweight - can be floor, bench or wall / canopy mounted.
- Very Quiet Operation - noise level less than 70dB(A).
- Can be Installed Almost Anywhere, IP66 / NEMA 4 protection as standard.
- Audible Alarm - indicating service interval for optimal performance.
- Simple & Easy to Maintain - due to the quick release top cap arrangement, which does NOT require the inlet / outlet ports to be disconnected as with traditional systems, maintenance can be achieved in under 5 minutes.

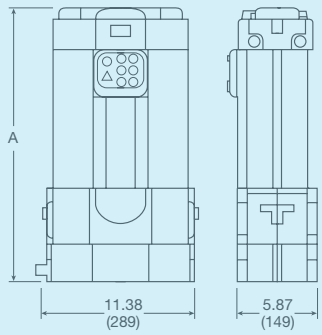
The WDAS is the reliable, cost effective and flexible way to provide clean dry air exactly where needed.

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Specifications

Operating Temperature	35°F (1.5°C) Min
Inlet Temperature	122°F (50°C) Max
Operating Pressure	58 to 175 PSIG (4 to 12 bar)
Flow Range	3 SCFM to 20 SCFM @ 100 PSIG (85 L/min to 567 L/min @ 7 bar)
Noise Level (Average)	70dB(A)
Pressure Dewpoint - standard	-40°F (-40°C) pdp (ISO 8573-1:2010) Class 2
Standard Electrical Supply	115/1ph/60Hz (Tolerance +/- 10%)
Controls	Electronic Control Timer
Connections	3/8 NPT

Dimensions & Ordering Information



A	Weight (Kg)	SCFM	Part Number	Maintenance Kit
16.6 (422)	24.2 (11)	3	WDAS1	WDASMK1
19.7 (500)	28.7 (13)	5	WDAS2	WDASMK2
24.2 (616)	35.3 (16)	8	WDAS3	WDASMK3
27.2 (692)	39.7 (18)	10	WDAS4	WDASMK4
33.3 (847)	44.1 (20)	13	WDAS5	WDASMK5
35.7 (906)	50.7 (23)	15	WDAS6	WDASMK6
43.2 (1098)	61.7 (28)	20	WDAS7	WDASMK7



Service Kits

Description	Part Number
Mounting Bracket	
Fixed Wall	WDASMB1
45° Tilt Wall	WDASMB2

Sizing Chart (correction factor)

minimum drying capacity = compressed air flow rate x CFT x CFP x CFD

Temperature Correction Factor (CFT)							
Maximum Inlet Temperature	°F	77	86	95	104	113	122
	°C	25	30	35	40	45	50
	CFT	1.00	1.00	1.00	1.04	1.14	1.37

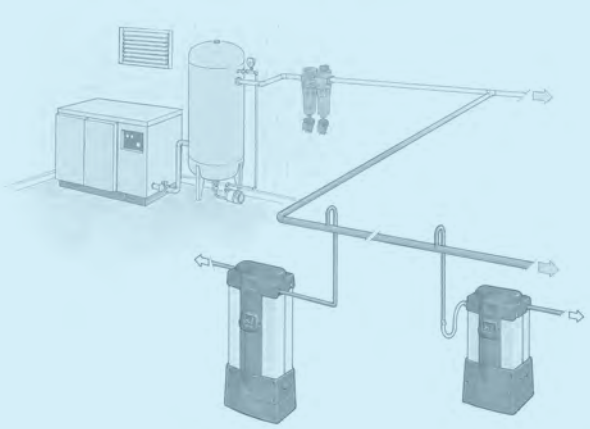
Pressure Correction Factor (CFP)										
Minimum Inlet Pressure	PSIG	58	73	87	102	116	131	145	160	174
	bar g	4	5	6	7	8	9	10	11	12
	CFP	1.60	1.33	1.14	1.00	1.03	0.93	0.85	0.78	0.71

Dewpoint Correction Factor (CFD)		Standard
Required Dewpoint	PDP °F	-40
	PDP °C	-40
	CFD	1.00

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Dryers

Product Applications

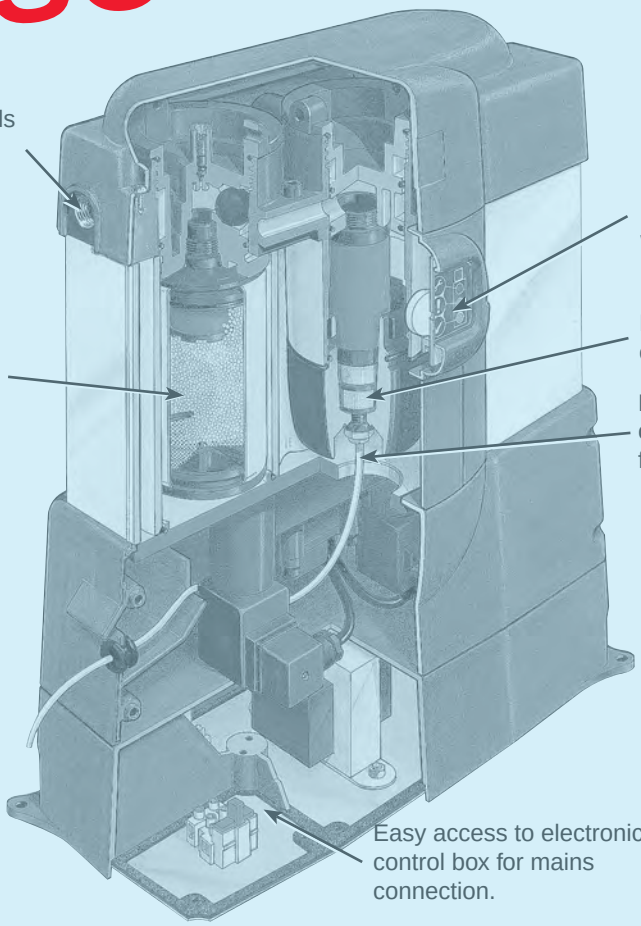


The Regenerative Desiccant Dryers will benefit users who have a specific need for Clean Dry Air (CDA) directly after a compressor, or for a particular application where the air is critical to the operating process or end product.

Typical applications:

- Computer Numerical Control (CNC) Machines
- Coordinate Measuring Machines
- Laboratories
- Lasers
- Packaging Machines
- Instrumentation
- Processing Equipment
- Conveying Machines

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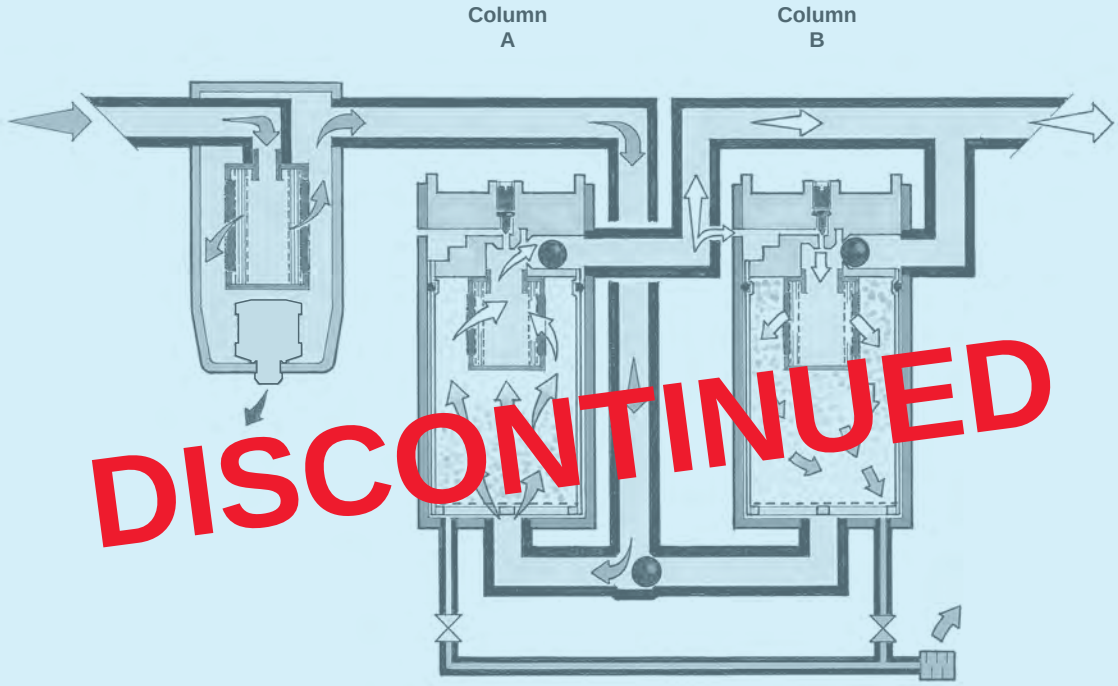


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Dryers

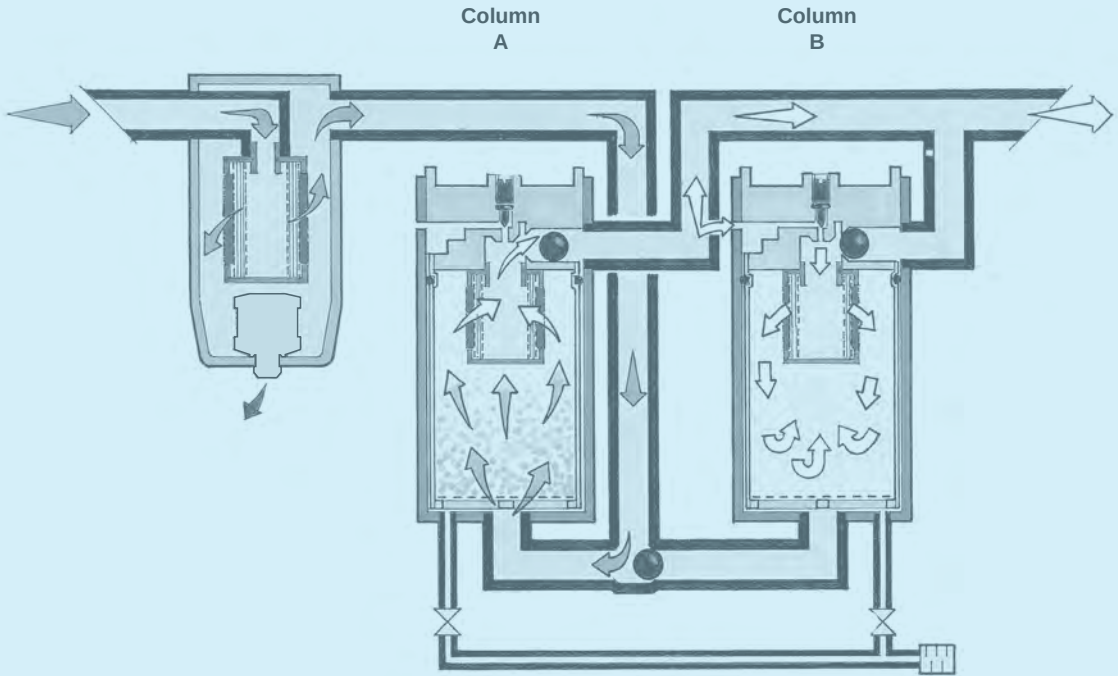
1 Compressed air enters the integral pre-filter and passes into the left hand chamber (Column A) where the air is dried before passing to the application.

A small amount of dry purge air is used to regenerate the right hand chamber (Column B) which is wet, using the PSA (Pressure Swing Adsorption) method of regeneration, venting the saturated air to atmosphere under pressure. The same regeneration air is also used to "back flush" the integral filter to prolong its working life.



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2 Prior to changeover, the right hand chamber (Column B) enters repressurization where the exhaust valve is closed to allow pressure to increase. This process ensures a smooth uninterrupted changeover, preventing the loss of any system pressure, before the process repeats itself.



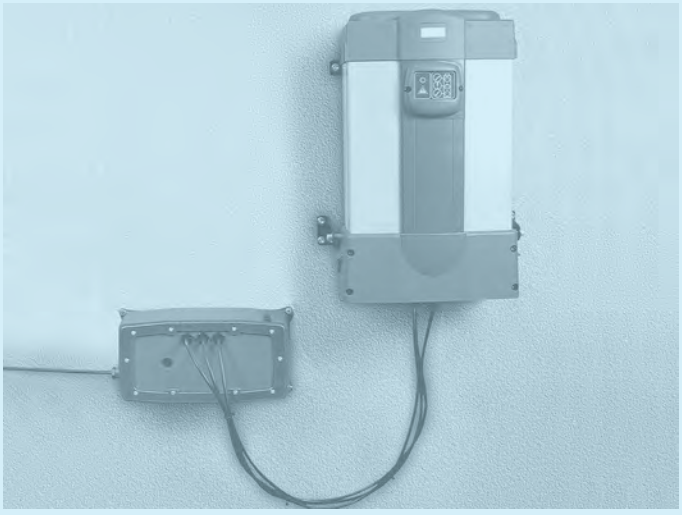
Optional features

- For totally quiet operation, the regeneration exhaust air can be positively piped away.
- Remote indication provides a warning of the dryers need for servicing. (Audible alarm not included)
- Wall mounting kit for vertically securing the dryer to a wall or canopy.



A 45° tilt, wall mounting kit is also available for vertically securing the dryer to a wall, canopy or inside a customers product where access to the top of the dryer is restricted.

- In conditions of limited access, the electronic control box (base) can be detached and relocated remotely from the dryer.

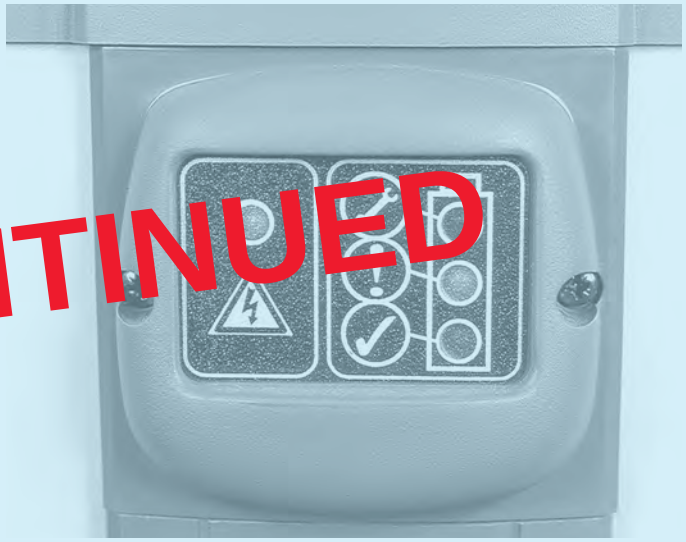


Electronic control box can be remotely located

Service indication sequence & alarm

During operation, The Regenerative Desiccant Dryers Power On (yellow) LED and Check (Green) LED indicators will illuminate, remaining in this configuration for 11500 hours. At this time, the Warning (Yellow) LED will illuminate and cancel the Check (Green) LED. This signals the user to order service replacement components at the optimum time.

500 hours later (a total of 12000 hours from initial start up) the Service (Red) LED will illuminate and cancel the Warning (Yellow) LED, the Audible Alarm housed inside the display will sound intermittently (every 6 seconds) drawing attention to the need for a service.



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Dryers

Heatless Desiccant Air Dryers WTW Series

= "Most Popular"



Parker WTW Series Heatless Desiccant Air Dryers remove water vapor from compressed air through a process known as pressure swing adsorption. Pressure dewpoints ranging from -40°F (-40°C) standard to -100°F (-70°C) optional are attained by directing the flow of saturated compressed air over a bed of desiccant.

Features

- Pre-Filter and After Filters Included with Dryers
- Solid State Controller
- CycleLoc™ Demand Control
- Variable Cyle Control (Models WTW75 - WTW800 SCFM)
- Purge Flow Indicator
- Purge Flow Regulator (Models WTW75 - WTW800 SCFM)
- Repressurization Circuit (Models WTW75 - WTW800 SCFM)
- Control Air Filter (Models WTW75 - WTW800 SCFM)
- Safety Valves
- Pressure Equalization
- 150 PSIG Design Standard
- Moisture Indicator (Models WTW75 - WTW800 SCFM)

Specifications

Inlet or Ambient Air Temperature	120°F (49°C) maximum
Operating Pressure	80 PSIG (5.5 bar) minimum
Working Pressure	150 PSIG (10.5 bar) maximum
Pressure Drop At Rated Flow	Less than 5 PSI (0.34 bar)

Options

- DDS Light / DDS (Dewpoint Dependent Switching)

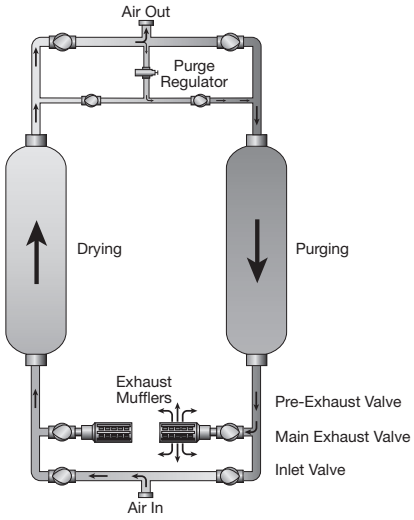
Heatless Desiccant Air Dryers

Capacity SCFM @ 100 PSIG (m^3/min @ 6.9 bar)	Approximate Purge SCFM (Nm^3/min)	Primary Voltage	Part Number	Port Size	Filtration Package Included With Dryer		
					Pre-filter (5µ)	Pre-filter (.01µ)	After-filter (0.5µ)
25 (.70)	4 (.11)	120V/1ph/60Hz	**WTW25***	1/2	**F18-04-SH00**	**M18-04-CG00**	**M18-04-BG00**
42 (1.19)	6 (.19)	120V/1ph/60Hz	**WTW40***	1/2	**F28-04-SH00**	**M28-04-CG00**	**M28-04-BG00**
60 (1.70)	9 (.25)	120V/1ph/60Hz	**WTW55***	3/4	**F28-06-SH00**	**M28-06-CH00**	**M28-06-BH00**
75 (2.13)	11 (.31)	120V/1ph/60Hz	**WTW75***	3/4	**F39-06-SH00**	**M39-06-CH00**	**M39-06-BH00**
107 (3.03)	16 (.45)	120V/1ph/60Hz	**WTW100***	1	**F39-08-SH00**	**M39-08-CH00**	**M39-08-BH00**
135 (3.82)	20 (.56)	120V/1ph/60Hz	**WTW130***	1	**F39-08-SH00**	**M39-08-CH00**	**M39-08-BH00**
200 (5.66)	30 (.84)	120V/1ph/60Hz	**WTW200***	1-1/2	**F35-0B-F00**	**M35-0B-F00**	**M35-0B-FS0**
250 (7.07)	38 (1.07)	120V/1ph/60Hz	**WTW250***	1/1/2	**F35-0B-F00**	**M35-0B-F00**	**M35-0B-FS0**
300 (8.49)	45 (1.27)	120V/1ph/60Hz	**WTW300***	1-1/2	**F35-0B-F00**	**M35-0B-F00**	**M35-0B-FS0**
400 (11.32)	60 (1.69)	120V/1ph/60Hz	**WTW400***	2	**F35-0C-F00**	**M35-0C-F00**	**M35-0C-FS0**
500 (14.44)	77 (2.18)	120V/1ph/60Hz	**WTW500***	2	**F35-0C-F00**	**M35-0C-F00**	**M35-0C-FS0**
600 (18.40)	98 (2.77)	120V/1ph/60Hz	**WTW600***	2	**F35-0C-F00**	**M35-0C-F00**	**M35-0C-FS0**
800 (22.65)	120 (3.39)	120V/1ph/60Hz	**WTW800***	2	**F35-0C-F00**	**M35-0C-F00**	**M35-0C-FS0**

* Options: Dewpoint dependent switching (DDS).
DDS Light includes: energy saving purge cycle control with high humidity alarm and indicator light. When ordering use -DL as suffix.
DDS includes: energy saving purge cycle control with high humidity alarm and digital dewpoint display. When ordering use -DS as suffix.

Parker WTW Series Heatless Desiccant Air Dryers remove water vapor from compressed air through a process known as Pressure Swing Adsorption. Pressure dewpoints ranging from -40°F (-40°C) standard to -100°F (-70°C) optional are attained by directing the flow of saturated compressed air over a bed of desiccant.

This physically tough and chemically inert material is contained in two separate but identical pressure vessels commonly referred to as “dual” or “twin” towers.



As the saturated compressed air flows up through the “on line” tower, its moisture content adheres to the surface of the desiccant. The dry compressed air is then discharged from the chamber into the distribution system.

A solid state controller automatically cycles the flow of compressed air between the towers, while the “on line” tower is drying, the “off line” tower is regenerating. Regeneration, sometimes referred to as purging, is the process by which moisture accumulated during the “on line” cycle is stripped away during the “off line” cycle. As low pressure dry purge air flows gently through the regenerating bed, it attracts the moisture that had accumulated on the surface of the desiccant during the drying cycle and exhausts it to the atmosphere.

To protect the desiccant bed from excess liquid, all Wilkerson WTW Series Heatless Air Dryers are designed to work with the natural pull of gravity. By directing the saturated air into the bottom of the “on line” tower and flowing up through the bed, liquid condensate caused by system upset, is kept away from the desiccant and remains at the bottom of the tower where it can be easily exhausted during the regeneration cycle. Counter flow purging ensures optimum performance by keeping the driest desiccant at the discharge end of the dryer.

Moisture load, velocity, cycle time and contact time determine tower size and the amount of desiccant. To ensure design dewpoint, each tower is carefully sized to allow a minimum of 5.5 seconds of contact. To prevent desiccant dusting and bed fluidization, air flow velocities are kept below 50 feet per minute. The dryer can cycle for years without changing the desiccant.

Heatless dryers in general are the most reliable and least expensive of all desiccant type dryers. Wilkerson WTW Series Heatless Desiccant Air Dryers are the most energy efficient thanks to standard features like, “Variable Cycle control”, Dewpoint Dependent Switching (DDS) and purge flow regulator.

Standard equipment

- Electric 120V/1PH/60Hz
- Solid State Controller
- Centrifugal Compressor Surge Protection (Models WTW75 - WTW800 SCFM)
- System Sequence Annunciator
- CycleLoc™ Demand Control
- Variable Cycle Control (Models WTW75 - WTW800 SCFM)
- Purge Flow Indicator
- Purge Flow Regulator (Models WTW75 - WTW800 SCFM)
- Repressurization Circuit (Models WTW75 - WTW800 SCFM)
- ASME Coded Pressure Vessels (Models WTW100 - WTW800 SCFM)
- Separate Tower Pressure Gauges
- Separate Fill / Drain Ports
- NEMA 4 Controls
- Stainless Steel Diffuser Screen
- Pressure Equalization
- 150 PSIG Design Standard
- Structural Steel Base
- Moisture Indicator (WTW25 - WTW800 SCFM)
- Pre and Post Filtration

Optional equipment

- Dewpoint Dependent Switching (DDS)
- 4-20 mA Output
- All NEMA Classifications
- Pressure to 1,000 PSIG (69 bar)
- High Humidity Alarm
- Fail to Switch Alarm
- Electronic Drain Systems
- -80°F (-62 °C) to -100°F (-70 °C) Dewpoints
- Contacts for Remote Alarms

Variable Cycle Control

Additional energy savings can be achieved by adjusting the amount of purge to the actual moisture load. When demand is expected to be less than maximum, Wilkerson's Variable Cycle Control provides a means to adjust the purge cycle time to reduce the total amount of purge used for regeneration. As a result of less frequent cycling, the desiccant will last longer and the switching valves will require less maintenance. The Variable Cycle Control incorporates a short cycle position that can be employed to provide dewpoints as low as -80°F (-60°C).

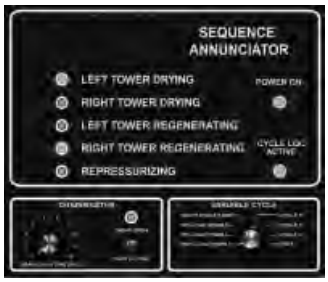
Surge Protection

To accommodate the unique requirements of centrifugal compressors, all Wilkerson desiccant dryers are now programmed with a special anti-surge control. A sequenced timing circuit eliminates potential compressor surge by preventing momentary flow restrictions from occurring at tower switch over.

Total dryer operation is managed by a NEMA 4 automatic control center. The solid state module controls all dryer functions including the Sequence Annunciator.

Sequence Annunciator

Wilkerson's Sequence Annunciator is a solid state visual display panel that shows exactly what is happening in the dryer. The panel lights signal which tower is "on line" drying, and whether the "off line" tower is purging, repressurizing or in Dewpoint Dependent Switching mode. It will also annunciate optional equipment operation and function alarms. The panel is integral with the NEMA 4 Master Control and is conveniently mounted for easy monitoring.



Dewpoint Dependent Switching (Optional)

Compressed air systems are rarely constant and the dryer regeneration cycle frequency is dependent upon the actual inlet flow, pressure and temperature. Operation under inlet conditions where there is lower than design flow and temperature and or higher pressure, will result in less regeneration cycles and a maximum in the cost of utilities.

Dewpoint Dependent Switching (DDS) provides a precision demand cycle control which terminates the adsorption (drying). This results in the full adsorptive capacity of the desiccant bed being utilized prior to switch over and regeneration.

DDS is built into the dryer control system, with a precision hygrometer producing a continuous display of the outlet dewpoint. The preset contacts of the instruments are utilized to initiate tower changeover.

Dewpoint Dependent Switching (DDS)

An Overview

The adsorption capacity of the desiccant within the dryer is essentially constant whereas the moisture loading and the air flow through the dryer are continuously varying as ambient and plant conditions change. In order to maintain the specified air quality downstream of the dryer, it has to be sized for the worst case conditions, namely the lowest pressure, highest flow and highest inlet temperature. These conditions may only occur for a small part of the service life of the dryer, for example, the highest inlet temperatures may only be present during the summer months. This means that the moisture loading on the desiccant beds is below the dryer's capacity for much of its service life (ie quiet periods in between shifts usually have lower air supply requirements). To gain access to this dynamic adsorption capacity, a moisture sensor is fitted which continually monitors the downstream dewpoint. DDS interrupts the normal sequence of the controller, which is only permitted to change over when the desiccant has adsorbed moisture to its capacity, effectively elongating the drying cycle. However, as regeneration has been optimized for a fully laden desiccant bed, this remains of constant duration resulting in a period of zero energy consumption (i.e. purging is discontinued).
In this way, energy savings are obtained while maintaining a constant supply of clean dry air to your plant.



DDS



DDS Light

F

Dryers

= **"Most Popular"**

Flow correction factors

Capacities are based upon:

- Pressure Drop At Rated Flow Less Than 5 PSI (0.34 bar)
- Maxium Inlet Air or Ambient Air Temperature 120°F (49°C)
- Maximum Working Pressure: 150 PSIG (10.5 bar) Standard Units for High Maximum Working Pressure are Available
- Minimum Operating Pressure: 80 PSIG (5.5 bar)

Sizing Chart (correction factor)

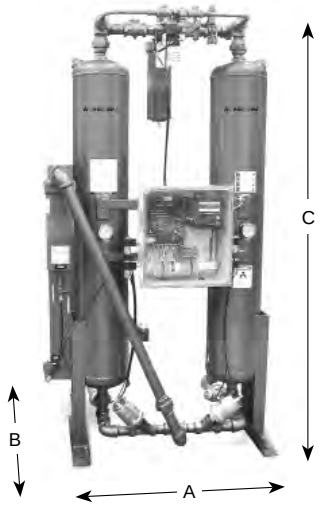
minimum drying capacity = compressed air flow rate x CFT x CFP x CFD

Temperature Correction Factor (CFT)										
Maximum Inlet Temperature (C1)	°F	80	85	90	95	100	105	110	115	120
	°C	27	29	32	35	38	41	43	46	49
	CFT	1.17	1.17	1.17	1.15	1.00	0.87	0.76	0.66	0.58

Pressure Correction Factor (CFP)													
Minimum Inlet Pressure (C2)	PSIG	80	85	90	95	100	105	110	115	120	125	130	135
	bar g	5.51	5.86	6.21	6.55	6.89	7.24	7.58	7.93	8.27	8.62	8.96	9.31
	CFP	0.83	0.87	0.91	0.96	1.00	1.04	1.09	1.13	1.17	1.22	1.26	1.31

Dewpoint Correction Factor (CFD)		Standard	Option
Required Dewpoint (C3)	PDP °F	-40	-100
	PDP °C	-40	-70
	CFD	1.00	1.43

Heatless Desiccant Air Dryers

	Part Number	A (length)	B (width)	C (height)	Weight lbs. (kg)
WTW Series 	**WTW25**	19 (483)	16 (406)	64 (1626)	156 (71)
	WTW40	21 (533)	17 (432)	48 (1219)	190 (86)
	WTW55	21 (533)	20 (508)	67 (1702)	230 (104)
	WTW75	35 (889)	27 (686)	80 (2032)	384 (174)
	WTW100	35 (889)	27 (686)	80 (2032)	468 (212)
	WTW130	35 (899)	21 (533)	70 (1778)	496 (225)
	WTW200	44 (1118)	28 (711)	78 (1981)	692 (314)
	WTW250	44 (1118)	30 (762)	78 (1981)	776 (352)
	WTW300	44 (1118)	30 (762)	78 (1981)	796 (361)
	WTW400	74 (1880)	41 (1041)	84 (2134)	1626 (738)
	WTW500	74 (1880)	41 (1041)	85 (2159)	1735 (787)
	WTW600	74 (1880)	41 (1041)	86 (2184)	1740 (789)
	WTW800	74 (1880)	41 (1041)	91 (2311)	2120 (962)

Inch (mm)

Service Kits

Element Kits			
Series	**5µ**	**0.01µ**	**0.5µ**
18	**FRP-96-639**	**MTP-96-646**	**MSP-96-647**
28	**FRP-96-653**	**MTP-96-648**	**MSP-96-649**
39	**P3NKA00ESE**	**P3NKA00ESCB**	**P3KNA00ES9**
35	**FRP-95-505**	**MTP-95-502**	**MSP-95-502**

Modular Membrane Dryer MSD

= "Most Popular"



Specifications

Max Pressure Drop	KA1E	PSI (bar)	1.45 (0.099 bar)
	KA2E		1.45 (0.099 bar)
	KB1E		3.90 (0.269 bar)
	KB2E		4.35 (0.299 bar)
Port Size	NPT/BSPP-G		3/8
Weight	KA1E	lbs. (kg)	3.1 (1.4 kg)
	KA2E		3.5 (1.6 kg)
	KB1E		4.2 (1.9 kg)
	KB2E		5.3 (2.4 kg)

* Inlet pressure 100 PSIG (6.9 bar), inlet air temperature 77°F (25°C), tested according to ANSI / CAGI Standard ADF 700

Materials of Construction

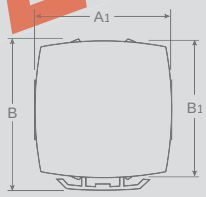
Body	Zinc
Bowl	Aluminum

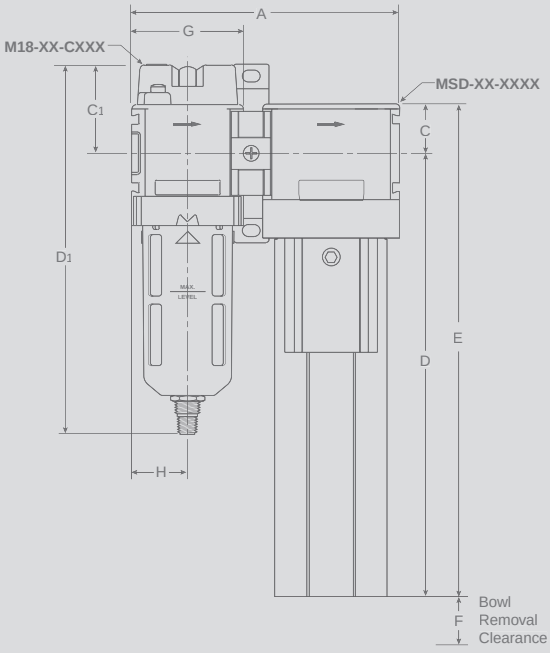
OBSOLETE

Features

- Available in 3/8, 1/2 NPT or BSPP-G Port Sizes
- Dried Compressed Air is Immediate
- Compact Modular Design
- Simple and Space-Saving Installation
- Low Pressure Drop
- Suitable for Hazardous Areas
- No Moving Parts
- No Electrical Connection Necessary
- No User Purge Adjustment
- Compatible with 18 / 28 Series Modular Product Line

EXAMPLE:
MSD-XX-CXXX
M18 Coalescing Filter,
0.01 Micron with Membrane Dryer





NOTE: For optimum system design and maximum element life, Wilkerson suggests using an F18 Series 5 micron particulate prefilter in front of the M18 Coalescer.

Dimensions

Models (Inches (mm))	A	A1	B	B1	C	C1	D	D1	E	F	G	H
MSD-XX-KA1X	5.60 (142)	2.90 (74)	— —	2.90 (74)	1.00 (26)	1.90 (48)	6.60 (167.6)	8.23 (209)	7.60 (193)	1.70 (42)	2.36 (59.9)	1.18 (30)
MSD-XX-KA2X	5.60 (142)	2.90 (74)	— —	2.90 (74)	1.00 (26)	1.90 (48)	9.40 (238.8)	8.23 (209)	10.40 (264)	1.70 (42)	2.36 (59.9)	1.18 (30)
MSD-XX-KB1X	5.60 (142)	2.90 (74)	3.10 (79)	2.90 (74)	1.00 (26)	1.90 (48)	10.90 (276.9)	8.23 (209)	11.90 (302)	2.30 (57)	2.36 (59.9)	1.18 (30)
MSD-XX-KB2X	5.60 (142)	2.90 (74)	3.10 (79)	2.90 (74)	1.00 (26)	1.90 (48)	13.70 (347.9)	8.23 (209)	14.70 (373)	2.30 (57)	2.36 (59.9)	1.18 (30)

F
Dryers

How to select your membrane dryer

= "Most Popular"

M S D – 0 3 – K A 1 E

Model Number
MSD Membrane Super Dryer

Thread Type
0 NPT
C BSPP-G

Port Size
3 3/8
4 1/2

Options
K No Prefilter
C With Prefilter Plastic Bowl / Bowl Guard, Auto Drain

Refer to Table A for Dew Point and Flow Capacity Selection. Last three positions of Model numbers are determined by selection of dryer in table A

TO SELECT A DRYER FOR YOUR APPLICATION

The outlet flows in Table A are based on 100 PSIG (6.9 bar) inlet pressure, and 77°F (25°C) inlet air temperature. For proper model selection in your specific application, you must adjust the outlet air flow requirement for the actual inlet air temperature and pressure where the dryer will be installed. This is accomplished by using the correction factors found in Tables B and C (above).

FOR EXAMPLE: If an application which requires a -4°F atmospheric dew point, 8 SCFM (226L/min) of air (this would be dryer outlet flow), system pressure (dryer inlet pressure) at 140 PSIG (9.6 bar), and inlet air temperature of 95°F (35°C). *TO ADJUST FOR PRESSURE:* Take the 8 SCFM (226L/min) air flow, and from Table B, *MULTIPLY* by 1.35, which equals 10.8 SCFM (306L/min). *THEN, TO ADJUST FOR TEMPERATURE:* Take the 10.8 SCFM (306L/min) and from Table C, *MULTIPLY* by 0.85, which equals 9.18 SCFM (275 L/min), which is the *ADJUSTED OUTLET AIR FLOW REQUIREMENT FOR THE APPLICATION.* From Table A, the model which would be best suited for this application is the MSD-03-KB2E, which has an outlet air flow of 10.6 SCFM (300L/min). On the same line, you will see the purge at rated flow is 1.6 SCFM (44L/min), and the TOTAL INLET FLOW REQUIRED (outlet + purge) is 12.2 SCFM (344L/min) for this model.

Please contact Applications Engineering if your application cannot be adjusted using these tables.

Dew Point Conversion Chart

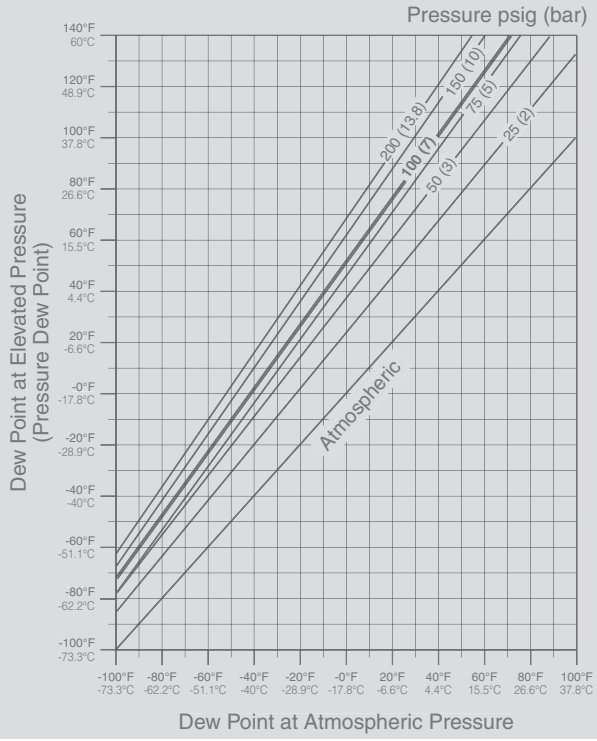


Table A: Membrane Dryer Flow Capacities

Model Number	ADP[1] °F (°C)	Maximum Outlet Air Flow[2] SCFM (L/min)	Purge Flow SCFM (L/min)	Inlet Flow[3] SCFM (L/min)
MSD-03-KA1E	-4 (-20)	1.8 (50)	0.3 (8)	2.1 (58)
MSD-03-KA2E	-4 (-20)	3.5 (100)	0.5 (14)	4.0 (114)
MSD-03-KB1E	-4 (-20)	7.1 (200)	1.1 (30)	8.8 (230)
MSD-03-KB2E	-4 (-20)	10.6 (300)	1.6 (44)	12.2 (344)
MSD-03-KA1D	-4 (-20)	3.5 (100)	0.9 (25)	4.4 (125)
MSD-03-KA2D	-4 (-20)	7.1 (200)	1.8 (50)	8.9 (250)
MSD-03-KB1D	-4 (-20)	14.1 (400)	3.5 (100)	17.6 (500)
MSD-03-KB2D	-4 (-20)	21.2 (600)	5.3 (150)	26.5 (750)
MSD-03-KA1D	-40 (-40)	1.4 (40)	0.9 (25)	2.3 (65)
MSD-03-KA2D	-40 (-40)	2.8 (80)	1.8 (50)	4.6 (130)
MSD-03-KB1D	-40 (-40)	5.7 (160)	3.5 (100)	9.2 (260)
MSD-03-KB2D	-40 (-40)	8.5 (240)	5.3 (150)	13.8 (390)

OBSOLETE

[1] Atmospheric Dew Point

[2] Flow rates based on: 100 PSIG (6.9 bar) inlet, 77°F (25°C) inlet air temperature, and 77°F (25°C) ambient temperature. Tested according to ANSI / CAGI Standard ADF 700

[3] Required inlet flow is combined outlet flow plus purge flow

Table B:

Pressure Correction Factors (all models)	
Inlet Pressure PSIG (bar)	Multiply Outlet Flow by:
60 (4.1)	0.55
80 (5.5)	0.75
100 (6.9)	1.00
120 (8.3)	1.20
140 (9.6)	1.35
160 (11.0)	1.50

Table C:

Inlet Air Temperature Correction Factors		
Inlet Temp °F (°C)	-40°F (-40°C) ADP	-4°F (-20°C) ADP
	Multiply Outlet Flow by:	
41 (5)	1.28	—
59 (15)	1.10	—
77 (25)	1.00	1.00
95 (35)	0.90	0.85
113 (45)	0.81	0.75
122 (50)	0.80	0.70

F

Dryers

Membrane dryer dewpoints at various flow rates



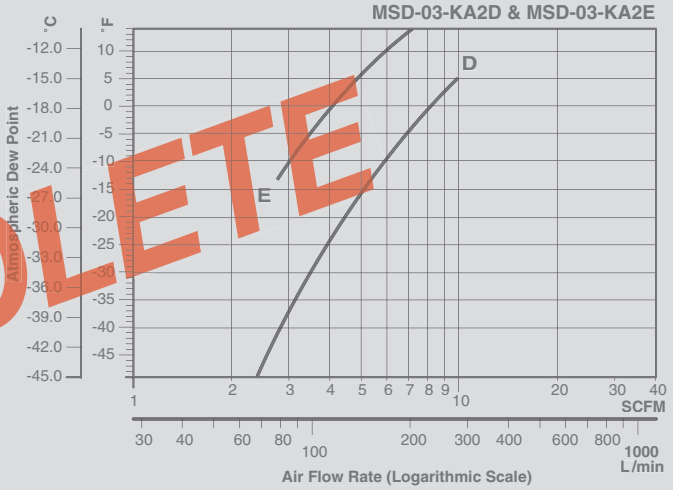
MSD-03-KA1D & MSD-03-KA1E



OBSOLETE

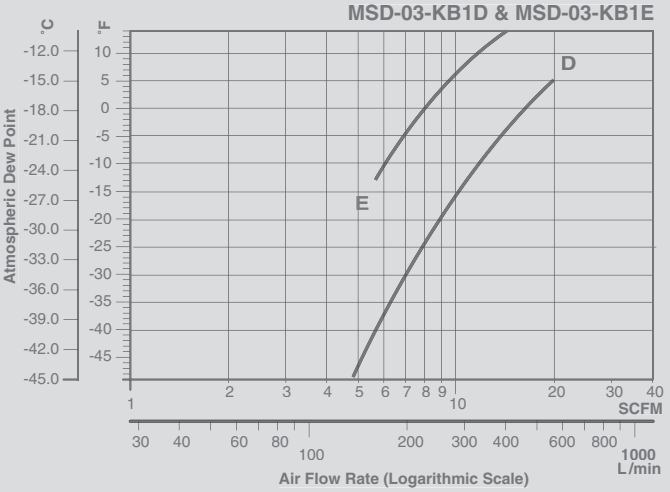


MSD-03-KA2D & MSD-03-KA2E



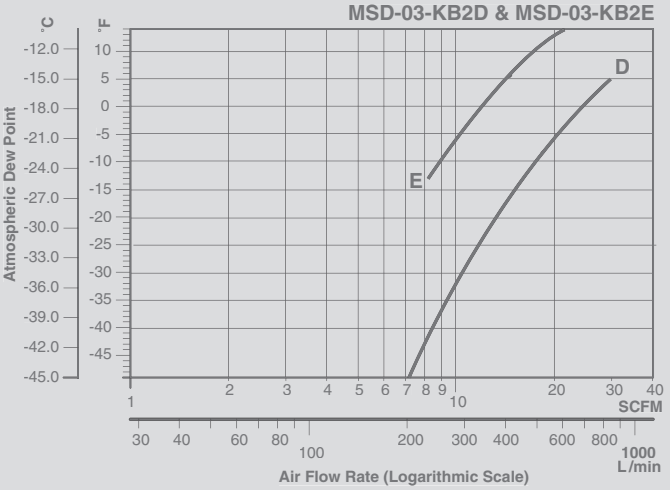


MSD-03-KB1D & MSD-03-KB1E





MSD-03-KB2D & MSD-03-KB2E



F

Dryers

Automatic Electrical Drain Valve WDV3



The WDV3 Electrical Drain is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

The WDV3 offers true installation simplicity and it is recognized as the most reliable and best performing condensate drain worldwide. The large orifice in the direct acting valve, combined with its sophisticated timer module ensure many years of trouble-free draining of condensate.

Benefits

- Does Not Air-Lock During Operation
- Compressed Air Systems up to Any Size
- The Direct Acting Valve is Serviceable
- Suitable for All Types of Compressors
- TEST (Micro-Switch) Feature
- High Time Cycle Accuracy
- Large (4.5mm) Valve Orifice

Ordering Information

	Family	Voltage	Pipe Size	Valve Material	Pressure
WDV3 –	G	1	2	B	L

Family
G General

Voltage
1 120V AC
2 230V AC
3* 24VDC
* Available in 1/2" Only

Pipe Size
2 1/4" General
3 3/8" General
4 1/2" General

Valve Material
B Brass

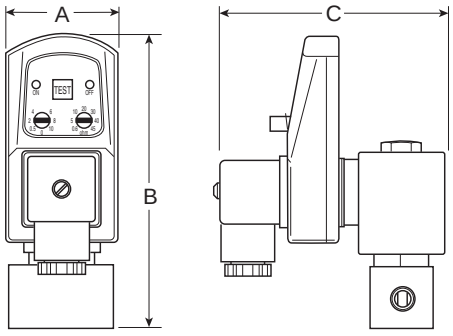
Pressure
L 230 PSIG (16 bar)

Specifications

Operating Pressure		230 PSIG (15,9 bar)
Ambient Operating Range Temperature:		34° to 130°F (1.1° to 54°C)
Coil Insulation	Class H	340°F (171.1°C)
Voltages	AC	115, 230/50-60
Timer:	Open Time Cycle Time	.5 to 10 sec., Adjustable .5 sec. to 45 min., Adjustable
Maximum Current Rating		4mA Max.
Port Size		1/4, 3/8, 1/2 NPT
Weight		1.8 lb. (0.8 kg)

Materials of Construction

Valve Body	Brass / Stainless Steel
Enclosure (NEMA 4)	ABS Plastic
Internal Parts	Brass / Stainless Steel
Sealing Material	FPM (Fluorocarbon)



Model Selection and Dimensions

Model Number	A	B	C
WDV3-G**BL	1.73 (44)	4.53 (115)	3.46 (88)

F

Dryers

Zero Air Loss Condensate Drain ED



Zero air loss condensate drains are designed for economical removal of unwanted water, oil emulsions, and other liquids. These drains will only open when liquid is present and will not allow any compressed air to escape from the system.

Specifications

Operating Pressure	232 PSIG (16 bar)
Ambient Operating Range Temperature:	35° to 140°F (1.6° to 60°C)
Voltages	
NPT	115/50-60Hz Standard
BSPP	230/50-60Hz & 24VDC Optional

Zero Air Loss Condensate Drains

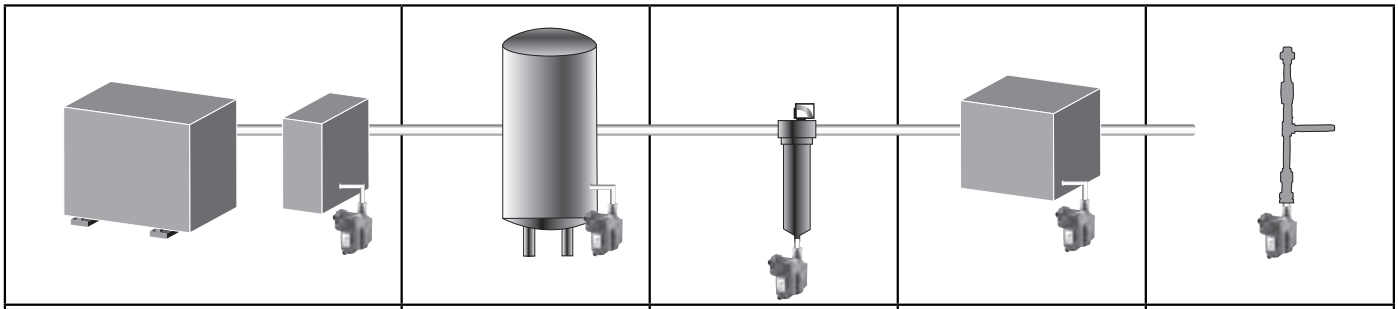
Port size (NPT)	Compressor Aftercooler (SCFM)*	Capacity Refrigeration Dryer (SCFM)**	Filter (SCFM)	Drain Capacity per Day (gal/liter)	Model Number	Service Kit
1 @ 3/8 (in), 1 @ 3/8 (out)	—	—	424	6 (22.7)	**ED3002N115-K**	**SKED3000N115**
1 @ 1/2 (in), 1 @ 3/8 (out)	141	282	1,413	13 (49.2)	**ED3004N115-K**	**SKED3000N115**
2 @ 1/2 (in), 1 @ 3/8 (out)	247	494	2,472	23 (87.1)	**ED3007N115-K**	**SKED3000N115**
2 @ 1/2 (in), 1 @ 3/8 (out)	1,059	2,119	10,594	100 (378.5)	**ED3030N115-K**	**SKED3000N115**
2 @ 1/2 (in), 1 @ 3/8 (out)	3,532	7,063	35,315	330 (1,249.2)	**ED3100N115-K**	**SKED3000N115**

* Based on 100 PSI working pressure, air compressor inlet at 77°F (25°C) at 60% RH, air discharge temperature od 95°F (35°C) following the aftercooler, pressure dewpoint of 37°F (2.8°C) after the refrigerated dryer.

** Condensate from aftercooler or refrigerated dryer to be drained upstream – only for residual oil content or small quantities of condensate.

Note: A 6 ft. line cord will be included with each drain.

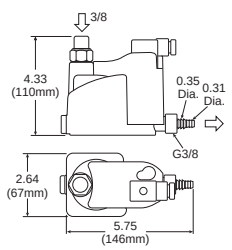
Where are Condensate Drains Used?



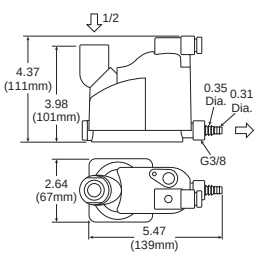
Compressor with Aftercooler	Receiver Tank	Filter	Air Dryer	Drip Leg
Removes the condensate that is collected after the air cools in the aftercooler	Removes the condensate that is collected when the air cools inside of the receiver tank	Removes the condensate that is collected in the filter bowl	Removes the condensate that is collected in the air dryer	Point-of-use applications: removes the condensate from compressed air pipes in a plant

Dimensions

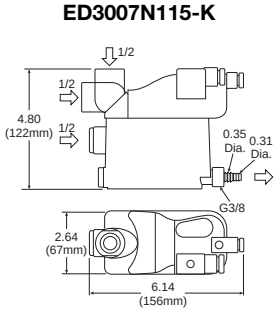
ED3002N115-K



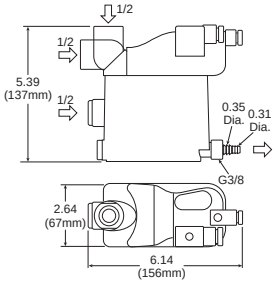
ED3004N115-K



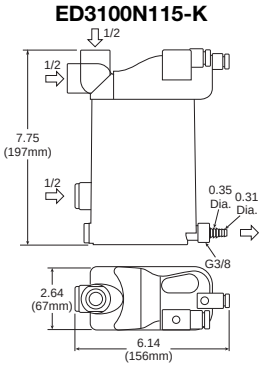
ED3007N115-K



ED3030N115-K



ED3100N115-K



F

Dryers

Notes



Airline Accessories

Control Panel Products (Human / Machine Dialog) G3
Sensing (Pneumatic Control Components) G17
LV / EZ (Lockout Valves) G35
Integrated Fittings G45
Accessories G53

Notes

Control Panel Products

Basic Features G4-G5
Push Button, Selector Switches with Bodies G6
Push Buttons G7
Selector Switches G8
Valve Bodies & Accessories G9
Dimensions & Assembly G10
Legend Plates, Specifications G11
Mounting G12
Visual Indicators 22mm (7/8") G13
Foot Pedal Operated Switches G14
Two-Hand Controls G15-G16

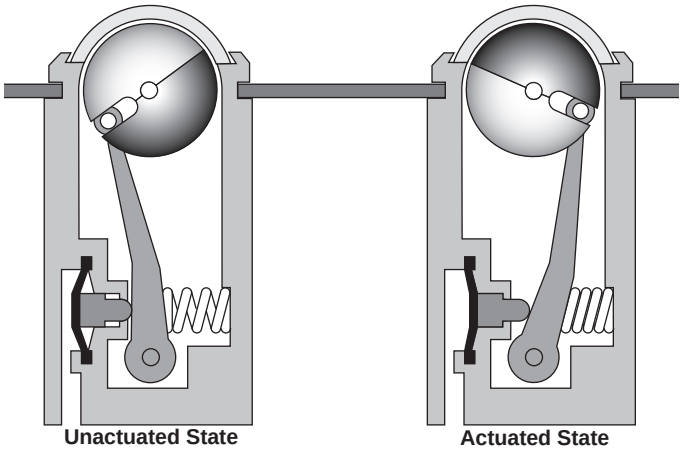
BOLD ITEMS ARE MOST POPULAR.

HUMAN-MACHINE DIALOG requires devices such as push buttons and selector switches to provide command inputs. A wide variety of these devices is available to meet most application needs. Both pneumatic and electrical switch bodies are available to match system technology. All of these devices use the 22 mm (7/8") mounting standard.



Pneumatic Visual Indicators

An indicator ball is rotated by a pneumatic input, changing the visible color. The ball sits behind a clear plastic window, providing a wide field of view. The visual indicators are available in five brightly colored Day-Glow paints for increased visibility. Like push buttons and selector switches, visual indicators use the 22mm (7/8") mounting standard.



Foot Pedal Switches

When the application requires the use of foot pedals, these devices can be used to initiate a cycle or a step within a cycle. A metal foot pedal is available with protective guard.



Metal Model



Plastic Model

Modular Pneumatic / Electric Push Buttons

As with electrical contact switches, pneumatic valve modules can be mounted on a number of different operating heads.

- Pneumatic normally non passing (NNP) is equivalent to electrical normally open (N.O.).
- Pneumatic normally passing (NP) is equivalent to electrical normally closed (N.C.).

Note: Electrical switches can be stacked, but the rear connection on pneumatic switches prevents stacking. Therefore, when mixing electrical and pneumatic switch bodies on the same operator, the pneumatic switch must be mounted last.



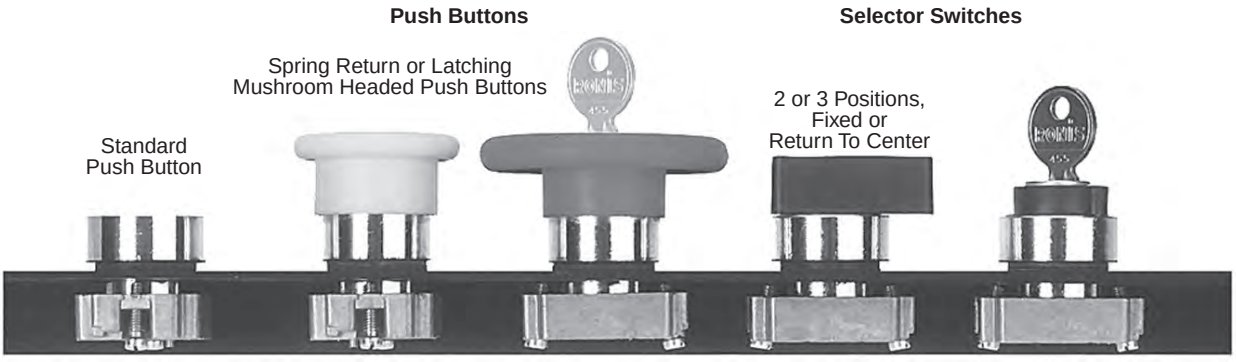
PXBB3911



PXBB4932



PXBB4931



G

Airline Accessories

With 3/2 Valve Bodies 5/32" Instant Straight Connections

Flush Push Buttons



PXBB3111BA2



PXBB4131BA2

Part Number	Color	Function	Type of Switching*
PXBB3111BA2	Black	Spring Return	NNP
PXBB3111BA3	Green		
PXBB3111BA4	Red		
PXBB3251BA2	Black	Spring Return	NNP+NP
PXBB4131BA2	Black	Spring Return	Single Universal 3-Way
PXBB4131BA3	Green		
PXBB4131BA4	Red		
PXBB4231BA2	Black	Spring Return	Dual Universal 3-Way

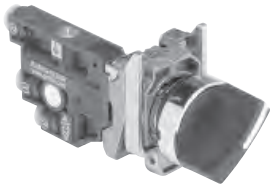
* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Note: Mount up to three valves on mounting ring.

Selector Switches



PXBB3111BD2



PXBB4131BD2

Part Number	Color	Function	Type of Switching*
PXBB3111BD2	Black	2 Maintained	NNP
PXBB3211BD2	Black	Positions with	NNP+NNP
PXBB3251BD2	Black	Std. Handle	NNP+NP
PXBB3211BD3	Black	3 Maintained Positions with Std. Handle	NNP+NNP
PXBB3251BD3	Black		NNP+NP
PXBB3211BJ5	Black	3 Positions, Spring Return to Center with Long Handle	NNP+NNP
PXBB4131BD2	Black	2 Maintained Positions with Std. Handle	Single Universal 3-Way
PXBB4231BD2	Black	2 Maintained Positions with Std. Handle	Dual Universal 3-Way
PXBB4231BD3	Black	3 Maintained Positions with Std. Handle	Dual Universal 3-Way
PXBB4231BJ5	Black	3 Maintained Positions with Long Handle	Dual Universal 3-Way

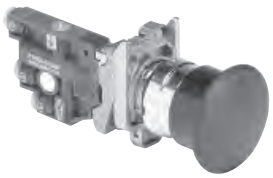
* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Mushroom Head Push Buttons

(40mm Diameter)



PXBB3111BC2



PXBB4131BC2

Part Number	Color	Function	Type of Switching*
PXBB3111BC2	Black	Spring Return	NNP
PXBB3111BT4	Red	Push-Pul	
PXBB3121BT4	Red	Push-Pull	NP
PXBB4131BC2	Black	Spring Return	Single Universal 3-Way
PXBB4131BT4	Red	Push-Pull	

* Type of switching: Universal 3-way: valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

Note: Mount up to three valves on mounting ring.

BOLD ITEMS ARE MOST POPULAR

For Use With PXBB Valve Bodies and ZBE Electrical Switch Bodies

Push Buttons



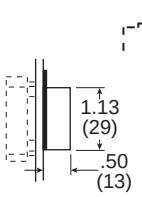
ZB4BA4



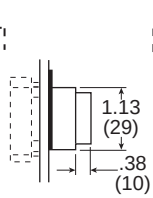
ZB4BL2



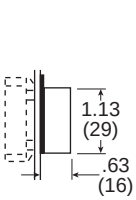
ZB4BP2



Flush



Extended



Booted

Plastic Head ZB5**	Metal Head ZB4*			
Part Number	**Part Number**	**Color**	**Function**	**Description**
ZB5AA2	**ZB4BA2**	Black	Spring Return	Flush
ZB5AA3	**ZB4BA3**	Green		
ZB5AA4	**ZB4BA4**	Red		
—	ZB4BA5	Yellow		
—	ZB4BA6	Blue		
ZB5AL2	**ZB4BL2**	Black	Spring Return	Extended
ZB5AL3	**ZB4BL3**	Green		
ZB5AL4	**ZB4BL4**	Red		
—	ZB4BL5	Yellow		
—	ZB4BP2	Black	Spring Return	Booted
—	ZB4BP3	Green		
—	ZB4BP4	Red		

* ZB4*** Model Numbers are Metal Head Operators

** ZB5*** Model Numbers are Plasticl Head Operators

Push / Push Buttons



ZB4BH02

Part Number*	Color	Function	Description
ZB4BH02	Black	Detent 2-Position	Flush
ZB4BH03	Green		
ZB4BH04	Red		

* ZB4**** Model Numbers are Metal Head Operators

Mushroom Head Push Buttons



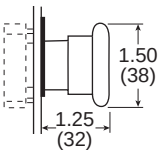
ZB4BC2

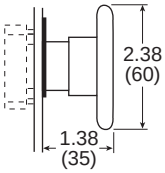


ZB4BR2



Spring Return







Push / Pull

Part Number*	Color	Function	Description
ZB4BC2	Black	Spring Return	Ø 40mm Head
ZB4BC3	Green		
ZB4BC4	Red		
ZB4BT2	Black	Latching Push-Pull	
ZB4BT3	Green		
ZB4BT84	Red		
ZB4BR2	Black	Spring Return	Ø 60mm Head
ZB4BR3	Green		
ZB4BR4	Red		

* ZB4*** Model Numbers are Metal Head Operators

Mounting Accessories



ZB5AZ905

Part Number	Color	Description
ZB5AZ905	—	Plastic Head (ZB5) Mounting Nut Tightening Tool

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For Use With PXBB Variable Composition Switch Bodies

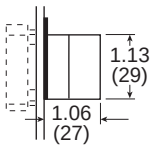
Selector Switches

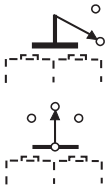


ZB4BD3

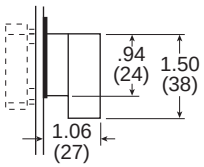


ZB4BJ3





Standard Selector



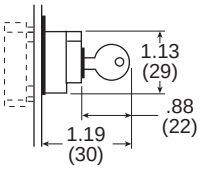
Knob Lever

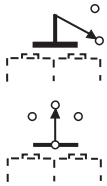
Standard Black Handle		
Part Number*	**Description**	**Function**
ZB4BD2	Maintained	2-Positions
ZB4BD4	Spring Return from Right to Left	
ZB4BD3	Maintained	3-Positions
ZB4BD5	Spring Return to Center from Left and Right	
ZB4BD7	Maintained Right Spring Return from Left to Center	3-Positions
ZB4BD8	Maintained Left Spring Return from Right to Center	3-Positions
Long Black Handle		
ZB4BJ2	Maintained	2-Positions
ZB4BJ4	Spring Return from Right to Left	
ZB4BJ3	Maintained	3-Positions
ZB4BJ5	Spring Return to Center from Left and Right	

* ZB4*** Model Numbers are Metal Head Operators

Key Operated Selectors





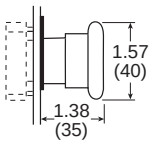


ZB4BG2

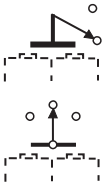
Key Operated		
Part Number*	**Key Withdrawal**	**Function**
ZB4BG2	Left	2 Maintained
ZB4BG4	Left and Right	Positions
ZB4BG3	Center	3 Maintained
ZB4BG5	Left and Right	Positions
ZB4BG7	Center	3 Positions 2 Spring Return to Center

* ZB4*** Model Numbers are Metal Head Operators

Mushroom Head Push Buttons with Key Select







ZB4BS944

Part Number*	Color	Function	Description
ZB4BS844	Red	Latching Turn to Release	Ø 40mm Head
ZB4BS944	Red	Key Latching	

* ZB4**** Model Numbers are Metal Head Operators

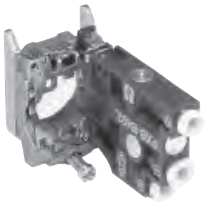
BOLD ITEMS ARE MOST POPULAR

For Use With 22mm (7/8") Metal Operating Heads 5/32" Instant Connections

3/2 Valve Bodies with Mounting Ring



PXBB3111B



PXBB4131B

Part Number	Connections	Function	Type of Switching*
PXBB3111B	5/32" Instant	3/2	NNP
PXBB3121B	5/32" Instant	3/2	NP
PXBB4131B	5/32" Instant	3/2	Universal 3-Way

Note: • Mount up to 3 valves on mounting ring for push buttons.
• Mount up to 2 valves on mounting ring for selector switches, Valves **cannot** be mounted in center position.

Specifications

Air Quality –	
Standard Shop Air, Lubricated or Dry	40 µm Filtration
Flow –	
PXBB3•	Cv=.08
PXBB4•	Cv=.18
Materials –	
Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Operating Positions	All Positions
Operating Pressure –	
PXBB3•	15 to 115 PSIG (1 to 9 bar)
PXBB4•	15 to 145 PSIG (1 to 10 bar)
Ports	5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube
Temperature –	
Operating	5°F to 140°F (-15°C to + 60°C)

Additional Valve Bodies



PXBB3911



PXBB4932



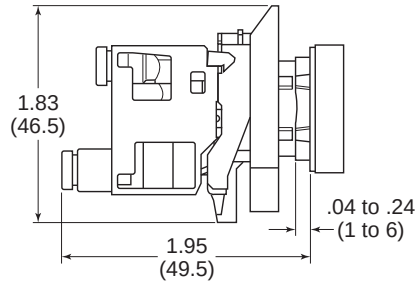
PXBB4931

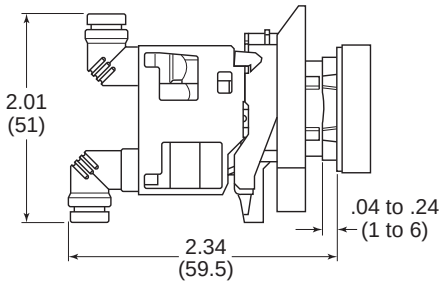
Part Number	Connections	Function	Type of Switching*
PXBB3911	5/32" Instant Straight	3/2	NNP
PXBB3912	5/32" Instant Swivel		
PXBB3921	5/32" Instant Straight	3/2	NP
PXBB3922	5/32" Instant Swivel		
PXBB4931	5/32" Instant Straight	3/2	Universal 3-Way
PXBB4932	5/32" Instant Swivel		

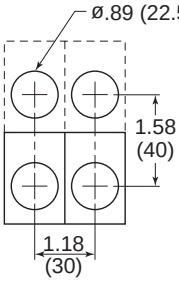
BOLD ITEMS ARE MOST POPULAR

Dimensions

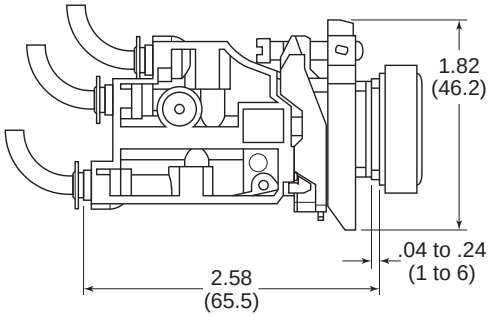
PXB-B3 Dimensions





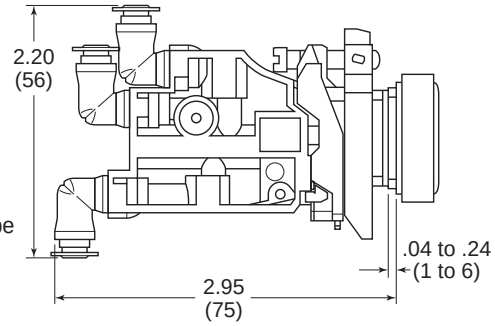


PXB-B4 Dimensions



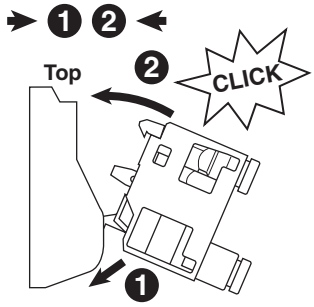
Tube Bending Radius For PXBB3 and PXBB4

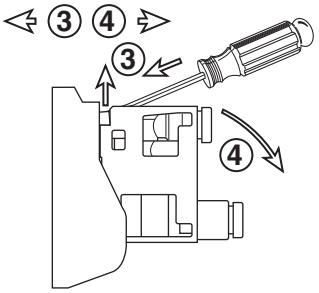
- 4 mm O.D. x 2 mm I.D. Tube = Minimum 0.39 (10) Radius
- 4 mm O.D. x 2.7 mm I.D. Tube = Minimum 0.59 (15) Radius



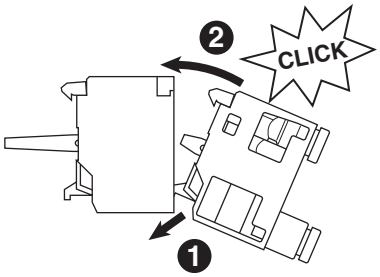
Assembly

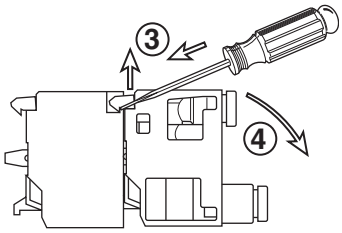
Assembling PXB Valves On Mounting Block





Assembling PXB Valves On the Back of the Electrical Contact





G

Airline Accessories

For Push Buttons and Visual Indicators

Legend Plates

for PXBB Devices (22mm)



ZBY••••

Part Number	Description		
Without Text For Customer Engraving			
ZBY2101	Black / Red Background (White Letters)		
ZBY4101	Yellow / White Background (Black Letters)		
With Text For Push Buttons			
ZBY2303	Start		
ZBY2304	Stop		
ZBY2305	Forward		
ZBY2306	Reverse		
ZBY2307	Up		
ZBY2308	Down		
ZBY2309	Right		
ZBY2310	Left		
ZBY2311	On		
ZBY2312	Off		
ZBY2313	Open		
ZBY2314	Close		
ZBY2321	Inch		
ZBY2323	Reset		
ZBY2326	Power On		
ZBY2327	Slow		
ZBY2328	Fast		
ZBY2330	Emergency Stop		
ZBY2334	Run		
With Text For 2-Position Selectors			
ZBY2367	Off		On
With Text For 3-Position Selectors			
ZBY2387	Hand	Off	Auto

Blank Legend Plates for Inscription

For PXBB Devices *(2 lines of 11 characters maximum)*

Please indicate the required text when ordering.
(Allow 3 weeks for delivery)

Part Number	Description
ZBY2002	Black Background / White Letters

For 22mm Visual Indicators Only

2 lines of 11 characters maximum

Please indicate the required text when ordering.
(Allow 3 weeks for delivery)

Part Number	Description
ZB2BY2002	Black Background / White Letters

Accessories



ZBE101

Electrical Switch Bodies

When combined with pneumatic valves ,these contact blocks allow different forms of power to be provided from a single push button. Can be mounted with both types of valves PXBB3 / PXBB4.

Electrical Specification: 240V, 10Amp

Part Number	Type of Contact
ZBE101	Normally Open (NO)
ZBE102	Normally Closed (NC)

Note: Plastic Mounting Ring ZB5AZ009 to be used with ZB5 Plastic Operating Heads.

Metal Mounting Ring ZB4BZ009 to be used with ZB4 Metal Operating Heads.



Metal: ZB4BZ009



Plastic: ZB5AZ009

Mounting Ring for Valve Bodies, Switch Bodies and Operating Heads

To make up a complete push button with one to three switching elements with 5/32" instant connections, use this mounting block and select the operating heads and bodies in this Section.

Part Number	Description
ZB4BZ009	Metal Mounting Ring
ZB5AZ009	Plastic Mounting Ring

To make up a complete selector switch with one or two switching elements with 5/32" instant connections, use this mounting block and select the operating heads and bodies in this Section.

Part Number	Description
ZB4BZ009	Metal Mounting Ring
ZB5AZ009	Plastic Mounting Ring

Note: To release push button from mounting ring, pull lever on top of mounting ring up and remove push button operator. To assemble push button operator to mounting ring, align arrows and snap into place.

BOLD ITEMS ARE MOST POPULAR

G

Airline Accessories

Functionality Explanation

Fluid Power			Universal Description	Electrical	
Function	Symbol			Function	Symbol
Normally Closed (N.C.)	2-Way	3-Way	Normally Non-Passing (NNP)	Normally Open (N.O.)	
Normally Open (N.O.)	2-Way	3-Way	Normally Passing (NP)	Normally Closed (N.C.)	

Type of Switching: Universal 3-Way: Valve can be connected either as NP or NNP as required by connecting the primary air supply to port 1 or port 3.

NP 3 2 NNP 1 2

NNP: Normally Non-Passing.

NP: Normally Passing.

NNP + NNP: Double Switch Body, Both Normally Non-Passing.

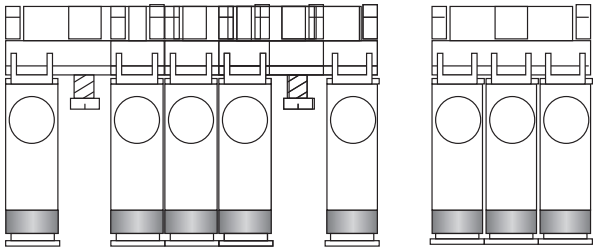
NNP + NP: Normally Non passing and Normally-Passing.

NP + NP: Both Normally Passing.

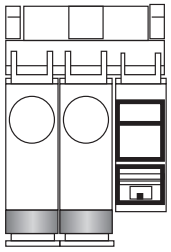
Combination of Output Devices On a Single Mounting Block

Up to 3 output devices (valves or electrical contacts) can be mounted side by side on 1 mounting block.

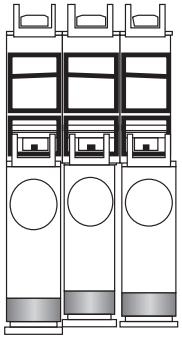
Note: The central position can only be activated by push button heads.



Electrical Contacts and Valves can be Combined Either Side by Side, or by Mounting the Valve on the Back of the Electrical Contact.

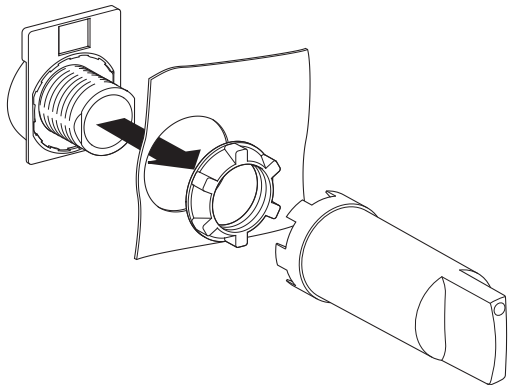


Side by Side Combination

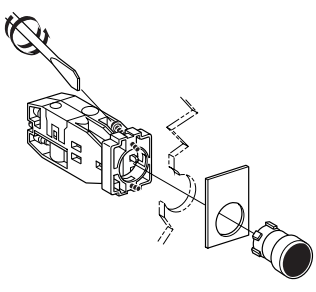


Combination by Mounting Valves On the Back of the Electrical Contact

Assembling Output Devices and Heads On ZB5 Series Mounting Block



Mounting



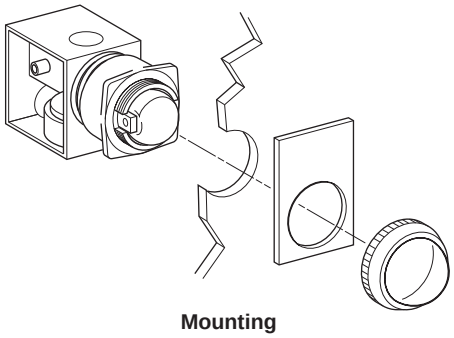
With 5/32" Instant Connections

22mm Visual Indicators





PXVF131



Mounting

Specifications

Air Quality –
Standard Shop Air, Lubricated or Dry, 40µm Filtration

Materials –	
Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) - Frequency 1 Hz	1 million Operations
Mushroom Head	300,000 Operations
Operating Positions	All Positions
Operating Pressure	15 to 115 PSIG (1 to 8 bar)
Ports –	
Standard	5/32" Instant for Semi- Rigid Nylon or Polyurethane Tube
10-32 UNF Available	
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to +60°C)

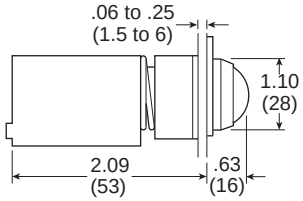
Black Plastic Bezel		
Part Number "ON" Indicator	**Part Number "OFF" Indicator**	**Color**
PXVF131	**PXVF1213**	Green
PXVF141	**PXVF1214**	Red
PXVF151	**PXVF1215**	Yellow
PXVF161	**PXVF1216**	Blue
PXVF111	**PXVF1211**	White

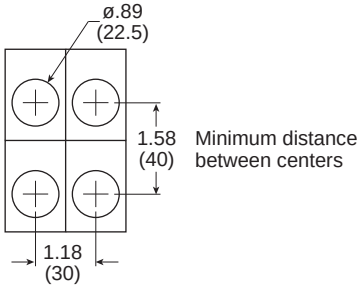
Notes:

- The Pneumatic Indicators are black in one position and colored in the other. The colored position corresponds either to the presence of a pressure ("ON" Indicator) or the absence of pressure ("OFF" Indicator).
- For Legend Plates, see page G11.

Dimensions

PXVF1• •





Standard Duty 1/6" I.D. Valves with 5/32" Instant Connections

Protective Guard

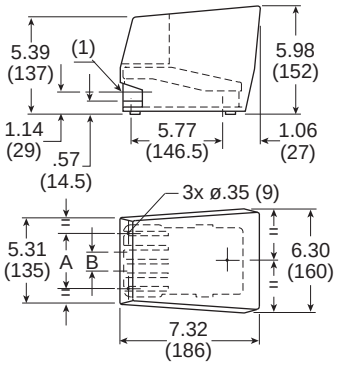


PXPEM510

Part Number	Function	Material	Type of Switching*
PXPEM510	High resistance protective guard, with interlock mechanism to prevent accidental operation by a falling object.	Metal	NNP

Dimensions

PXPEM510



(1) 2 mounting ports for adaptors for conduit fittings

(2) 7° operating angle

	inch	mm
a	3.53	940
b	1.22	31

Notes: These Foot Pedal Operators come assembled with switch PXBB1921 (Normally Passing). With the pedal in the unoperated position, the switch is in the actuated non-passing position. With the pedal actuated, the switch is in the unactuated Normally Passing position.

Units will accept all switch bodies shown earlier in this Section, but care must be taken in selecting switch type.

Foot Switches Without Protective Guard



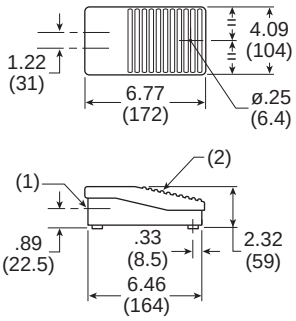
PXPEA110

Part Number	Function	Material	Type of Switching*
PXPEA110	Spring Return	Plastic	NNP
PXPEM110	Spring Return	Metal	NNP

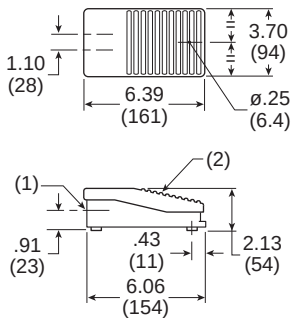
⚠ **CAUTION:**
This valve shall not be used to actuate a punch press. Do not use this valve on punch presses or press brakes. See OSHA 1910.217.

Dimensions

PXPEM110



PXPEA110



(1) .825" diameter thru hole

(2) 6° operating angle

Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow at 90 PSI (6 bar) in SCFM (l/mn ANR)	1.8 (50)
Materials –	
Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Nominal Bore Ø in Inches (mm)	1/16" (1.5)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) - Frequency 1 Hz	1 million Operations
Operating Positions	All Positions
Operating Pressure	15 to 115 PSIG (1 to 8 bar)
Ports – 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to + 60°C)

* NNP: Normally Non-Passing.

Two-Hand Control Enclosure

Features

- The Pre-assembled Two-Hand Control Enclosure Occupies Both Hands of an Operator by Requiring Nearly Simultaneous Operation of Two Push buttons
- Poppet – Snap-acting (No Spools)
- Same Air as in Cylinders – Filtration: 40 Micron
- No Lubrication Required

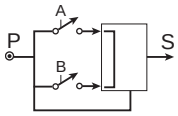


PXP-C111-A

Part Number	Connections
PXP-C111-A	5/32" Instant

Operation

CE



- Output “S” will appear only if “A” and “B” are simultaneously operated (within .5 seconds or less of each other).
- If the operator actuates only one push button, either “A” or “B”, or if both “A” and “B” are actuated but at an interval greater than .5 seconds, output “S” will not appear.
- Output “S” is regenerated by supply “P”. Output “S” will therefore disappear if supply “P” is cut off.
- Output “S” will disappear if either “A” or “B” is released.
- If output “S” disappears for any reason, “A” and “B” must be nearly simultaneously actuated to again provide output “S”.
- Since output “S” is regenerated it appears sharply, at full force (snap-acting), and is quickly exhausted upon deactivation. In addition the module is not affected by the length or diameter of tubing used for output “S”.

Specifications

Operating Pressure	40 to 120 PSI (3 to 8 bar)
Permissible Fluids – Air or neutral gas 40 micron filtration, lubricated or dry	
Flow at 90 PSI (6 bar)	7 SCFM (200 l/mn ANR)
Operating Temperature	-5°F to 140°F (-15°C to 60°C) Below 40°F (5°C), an air dryer is required
Storage Temperature	-40°F to 160°F (-40°C to 70°C)
Number of operations with dry air at 90 PSI (6 bar), 68°F (20°C), frequency 1 Hz	1 Million Operations
Vibration resistance – Conforms to section 19-2 of bureau Véritas regulations (November 1987)	
Materials –	
Body	Glass Filled Nylon
Operating Head	Zinc Alloy and Plastic
Connections	5/32" instant

Mounting

Approvals:

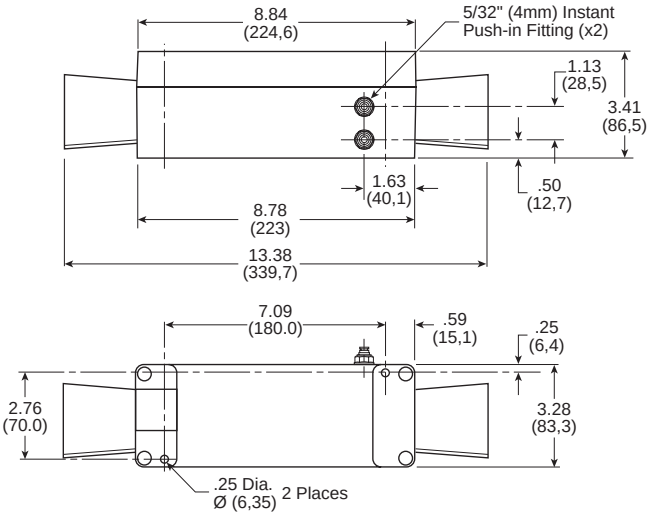
- In accordance with European Standard EN 574 - September 1996
- Conforms to the model that has obtained CE Type Test Certificate No. 02526 520 4631 0397

⚠ WARNING

These devices should NOT be used in any application involving rotary clutch presses. Two hand control modules do not of themselves insure the safety of any machine. Users and original equipment manufacturers are responsible for making sure that installations meet all relevant safety regulations.

Dimensions

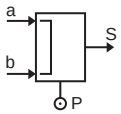
Inches (mm)



G

Airline Accessories

Two-Hand Control Module





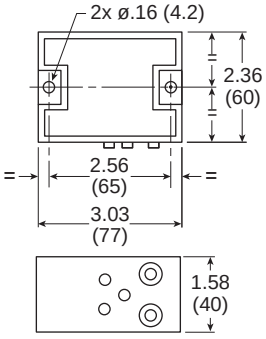
PXPA11

Part Number	Connections
PXPA11	5/32" Instant

Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow at 90 PSI (6 bar) in SCFM (l/mn ANR)	7 (200)
Materials –	
Body	Polyamide
Operating Head	Zinc Alloy & Plastic
Nominal Bore Ø in Inches (mm)	7/64" (2.5)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) - Frequency 1 Hz	1 million Operations
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports – 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
Temperature –	
Operating	32°F to 122°F (0°C to 50°C)
Storage	-22°F to 140°F (-30°C to 60°C)
Vibration resistance – Conforms to section 19-2 of bureau Véritas regulations (November 1987)	

Dimensions



PXPA11

⚠ WARNING

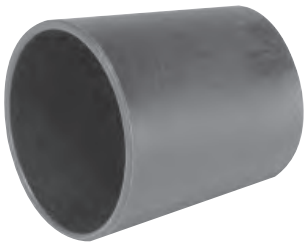
These devices should NOT be used in any application involving rotary clutch presses. Two hand control modules do not of themselves insure the safety of any machine. Users and original equipment manufacturers are responsible for making sure that installations meet all relevant safety regulations.

Notes: These two-hand control modules provide an output signal upon nearly concurrent operation of two push buttons.

G

Airline Accessories

Two-Hand Control Module Guard



PPRL15

Part Number	Base Component
PPRL15	PXPC111

Two Hand Repair Parts

Part Number	Quantity Required	Description
PXPA11	1	Control Module
PXBB3111B	2	Valve Body & Mounting Ring
ZB4BR*	2	Push Button
PPRL15	2	Control Module Guard

* 2 = Black, 3 = Green, 4 = Red



Sensing

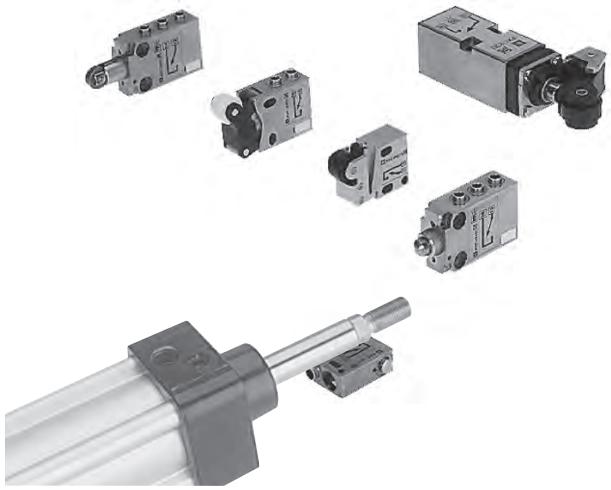
Basic Features – Pneumatic Sensors G18
Limit Switches
3/2 Miniature Limit Switches..... G19-G20
3/2 Compact Limit Switches G21-G22
K Series – Standard Duty Limit Switches..... G23-G26
J Series – Heavy Duty Limit Switches..... G27-G29
PWBA Blocking Valves G30-G31
Threshold Sensors G32-G34

Pneumatic Sensors

To achieve the sensing or feedback function, pneumatic sensors can be:

- Limit Switches in a Variety of Sizes and Configurations
- Pressure Switches with Many Adjustable Ranges
- Components Designed Specifically for Pneumatic Technology using Pressure Variation, Air Bleed or Blocking for Detection.

A wide variety of pneumatic sensor are available to suit any application requirement.



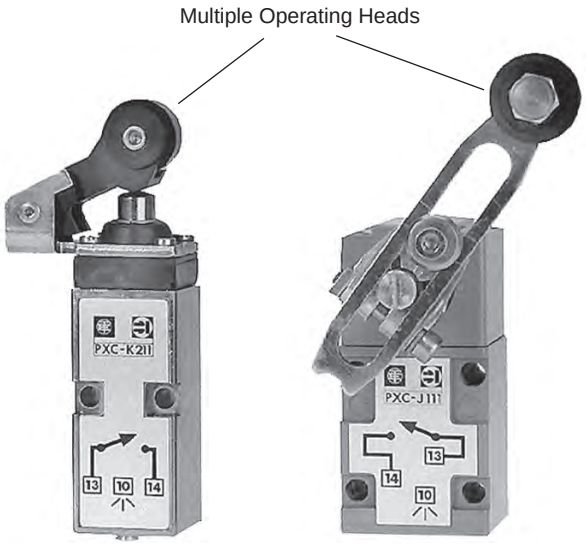
Pneumatic Limit Switches

Pneumatic limit switches are non-passing (NNP) or passing (NP) when actuated by a moving part. The various operating levers, bore dimensions and functions are given below.



1/16" Bore 1/16" Bore 7/64" Bore

Normally Non-Passing (NNP) Models



1/8" Bore Connectable Exhaust 1/8" Bore Connectable Exhaust

or

NNP or NP, as Required

Direct Acting Limit Switches

1/16" I.D. Internal Orifice



PXCM111



PXCM121

Part Number	Connection	Actuator	Type of Switching*
PXCM111	5/32" Instant	Steel Plunger Operating Levers Available (See Below)	NNP
PXCM115	10-32 UNF		
PXCM121	5/32" Instant	Plastic Roller	NNP
PXCM125	10-32 UNF		

7/64" I.D. Internal Orifice



PXCM521

Part Number	Connection	Actuator	Type of Switching*
PXCM521	5/32" Instant	Plastic Roller	NNP

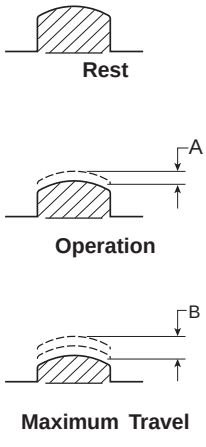
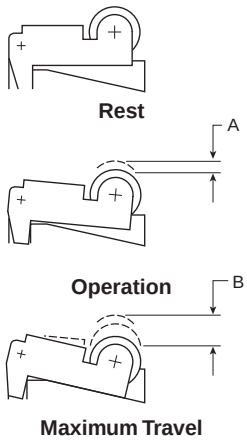
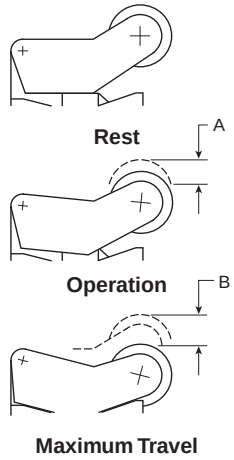
Specifications

Air Quality –	
Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow SCFM (Nl/min) –	
PXCM111	2.2 (60)
PXCM121	3.0 (85)
PXCM521	8.8 (250)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximum Operating Frequency	5 Hz
Nominal Bore Ø –	
PXCM111, PXCM121	1/16" (1.5 mm)
PXCM521	7/64" (2.5 mm)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1 Hz	10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports –	
5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
10-32 UNF Available	
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to + 60°C)

G

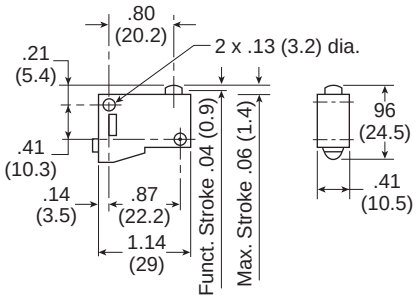
Airline Accessories

Operator Specifications

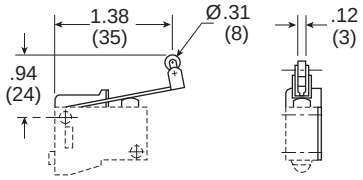
	PXCM111	PXCM121	PXCM521
Differential Travel at 90 PSI (6 bar)	.006" (0.15 mm)	.012" (0.3 mm)	.020" (0.5 mm)
Maximum Travel (B) at 90 PSIG (6 bar)	.055" (1.4 mm)	.126" (3.2 mm)	.228" (5.8 mm)
Minimum Pre-Travel (A) at 90 PSIG (6 bar)	.035" (0.9 mm)	.079" (2 mm)	.087" (2.2 mm)
Minimum Operating Force at 90 PSI (6 bar)	2.5 lb (11 N)	1.0 lb (4.5 N)	1.6 lb (7 N)
Operating Diagram			

Dimensions

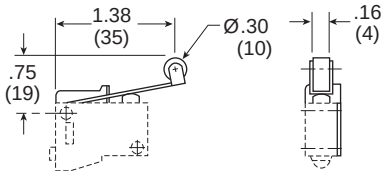
PXCM111



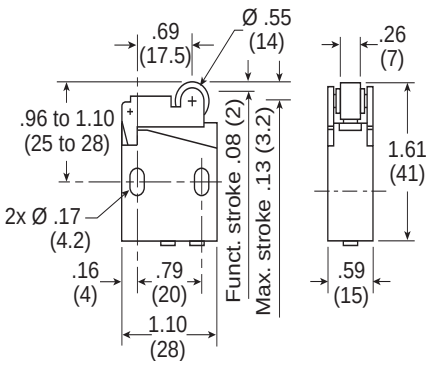
PXCZ12



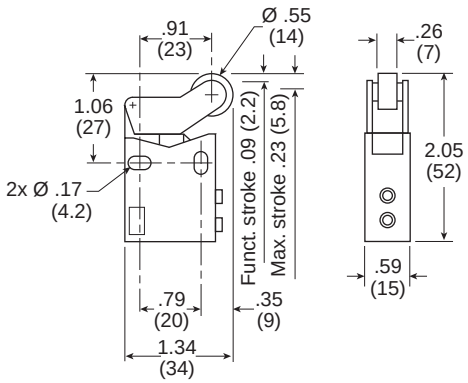
PXCZ11



PXCM121, PXCM131



PXCM521



Pilot Operated Compact Limit Switches

5/32" Instant Connections

Pipeable Exhaust Port

7/64" I.D. Internal Orifice



PXCM601A110



PXCM601A102



PXCM601A103

Part Number	Actuator	Type of Switching*
PXCM601A110	Steel Plunger Operating Levers Available (See Below)	NNP
PXCM601A102	Steel Roller Plunger	
PXCM601A103	90° Steel Roller Plunger	

Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow SCFM (Nl/min)	8.8 (250)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximal Operating Frequency	5 Hz
Nominal Bore Ø	7/64" (2.5 mm)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1	Hz10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports – 5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube	
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to + 60°C)

Actuators For Steel Plunger



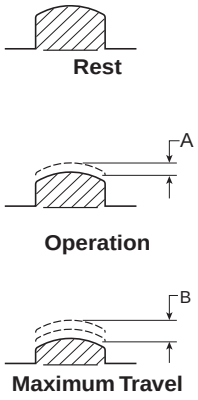
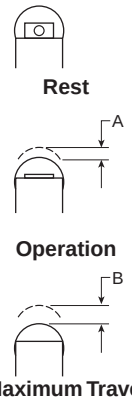
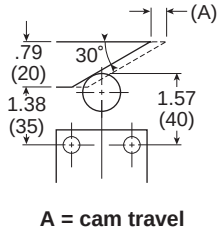
XCMZ24

Use with PXCM601A110

Part Number	Actuator
XCMZ24	90° Stainless Steel Roller Lever, One Way Trip

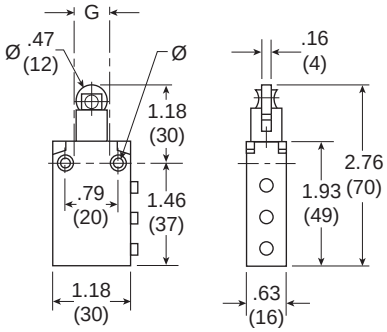
*NNP: Normally Non-Passing.

Operator Specifications

	PXCM601A110	PXCM601A102	PXCM601A103	PXCM601A110 + XCMZ24
Differential Travel at 90 PSI (6 bar)	.012" (0.3 mm)	.008" (0.2 mm)	.020" (0.5 mm)	.047" (1.2 mm) (A)
Maximum Travel (B) at 90 PSIG (6 bar)	.197" (5 mm)	.197" (5 mm)	.197" (5 mm)	—
Minimum Pre-Travel (A) at 90 PSIG (6 bar)	.066" (1.7 mm)	.066" (1.7 mm)	.066" (1.7 mm)	.370" (9.4 mm) (A)
Minimum Operating Force at 90 PSI (6 bar)	5.4 lbf (24 N)	5.2 lbf (23 N)	5.2 lbf (23)	4.3 lbf (19)
Operating Diagram				

Dimensions

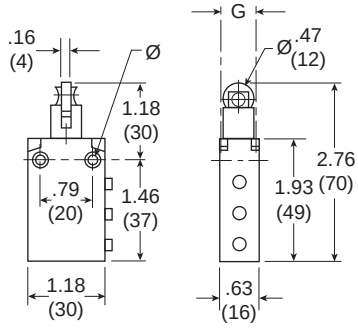
PXCM601A102



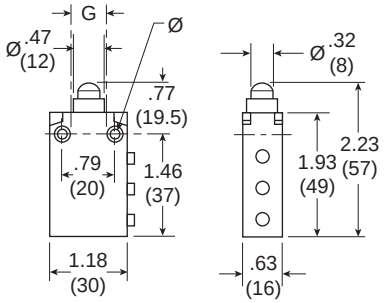
Ø:
2 mounting holes Ø .17" (4.3)
2 countersunk Ø .32" (8.2)
depth 4 mm

G:
top mounting holes, 2 x M5
.71" (18 mm) centers

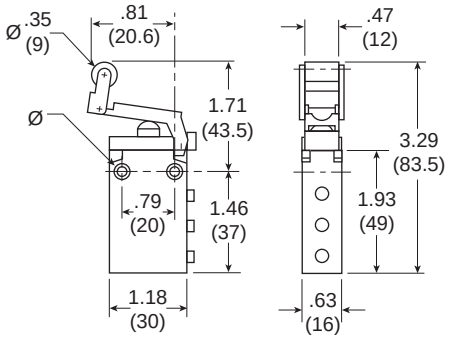
PXCM601A103



PXCM601A110



PXCM601A110 + XCMZ24



Limit Switches

Plunger Operated

5/32" Instant Connections
Pipeable Exhaust Port
1/8" I.D. Internal Orifice



PXCK21101 **PXCK21102** **PXCK21121** **PXCK21106**

Complete Assemblies		
Part Number	**Actuator**	**Type of Switching***
PXCK21101	Steel Plunger	NNP
PXCK22101		NP
PXCK21102	Steel Roller Plunger	NNP
PXCK22102		NP
PXCK21121	Plastic Roller Plunger	NNP
PXCK22121		NP
PXCK21106	Cats Whisker	NNP
PXCK22106		NP

Roller Operated

5/32" Instant Connections
Pipeable Exhaust Port
1/8" I.D. Internal Orifice



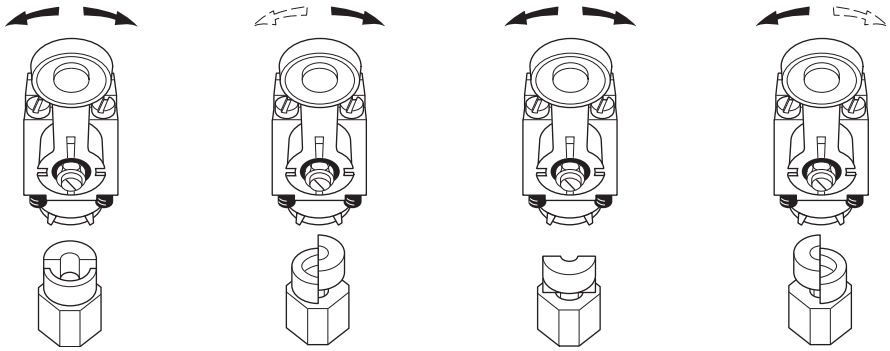
PXCK2110031 **PXCK2110041**

With Die Cast Rotary Operating Head and Operating Lever - Complete Assemblies		
Part Number	**Actuator**	**Type of Switching***
PXCK2110031	Fixed Delrin Roller Lever Multi-Function Head Actuates: - From Right and Left - From Right - From Left	NNP
PXCK2210031		NP
PXCK2110041	Adjustable Delrin Roller Lever Multi-Function Head Actuates: - From Right and Left - From Right - From Left	NNP
PXCK2210041		NP

NNP: Normally Non-Passing 

NP: Normally Passing

Field Conversion of Rotary Operating Head



Separate Pneumatic Switch Bodies



PXCK211

Part Number	Actuator	Type of Switching*
PXCK211	For Use with ZCK Series Operating Heads	NNP
PXCK221		NP

Operating Heads

For Use With PXCK Switch Bodies



ZCKG00

Part Number	Actuator	Description
Rotary Operated		
ZCKG00	—	Die Cast Zinc
Plunger Operated		
ZCKD02	Roller Plunger	Plunger Operated
ZCKD06	Whisker	
ZCKD10	Rod Plunger	
ZCKD21	Delrin Roller Lever On Plunger	
ZCKD23	Steel Roller Lever On Plunger	

Pneumatic Switch Bodies with Rotary Heads



PXCK21100

Part Number	Actuator	Type of Switching*
PXCK21100	Multi-Function Head Actuates: - From Right and Left - From Right - From Left	NNP
PXCK22100		NP

Operating Levers for Rotary Heads



ZCKY81



ZCKY91

For Use With Rotary Head ZCKG00		
Part Number	**Actuator**	**Description**
ZCKY51	Steel 1/8" Square	Rod Levers
ZCKY52	Fiberglass 1/8" Dia. Round	
ZCKY81	Plastic Spring Rod Lever	
ZCKY91	Metal Spring Rod Lever	
ZCKY11	Delrin Roller Lever	Roller Levers
ZCKY13	Steel Roller Lever	
ZCKY41	Adjust. Delrin Roller Lever	
ZCKY43	Adjust. Steel Roller Lever	

G

Airline Accessories

Specifications

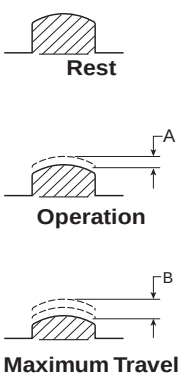
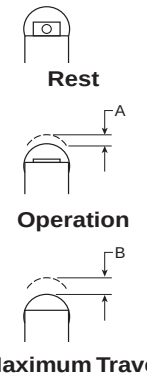
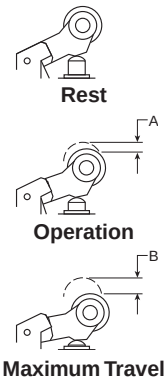
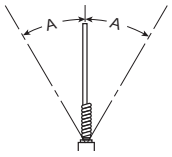
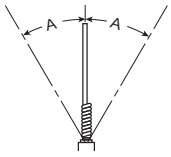
Air Quality –
Standard Shop Air, Lubricated or Dry, 40µm Filtration

Flow SCFM (Nl/min)	7.4 (210)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximal Operating Frequency	5 Hz
Nominal Bore Ø	1/8" (3 mm)
Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1 Hz	10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)

Ports –
5/32" Instant for Semi-Rigid Nylon or Polyurethane Tube

Temperature	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to +60°C)

Operator Specifications

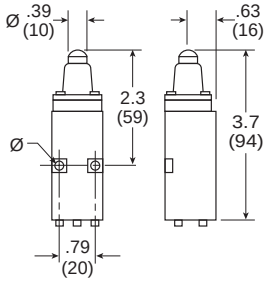
	PXCK2••01	PXCK2••02	PXCK2••03	PXCK2••06	PXCK2••00 + Actuator
Differential Angle	—	—	—	12°	3°
Differential Travel	.008" (0.2 mm)	.008" (0.2 mm)	.008" (0.2 mm)		
Maximum Angle of Travel	—	—	—	—	80°
Maximum Travel (B) at 90 PSIG (6 bar)	.020" (0.5 mm)	.020" (0.5 mm)	.020" (0.5 mm)	—	—
Minimum Pre-Travel (A) at 90 PSIG (6 bar)	.087" (2.2 mm)	.087" (2.2 mm)	.102" (2.6 mm)	—	—
Minimum Operating Force at 90 PSI (6 bar)	3.6 lbf (16N)	4.5 lbf (20N)	3.4 lbf (15N)	—	—
Minimum Operating Torque at 90 PSI (6 bar)	—	—	—	17.0 oz in (120mNm	29.8 oz in (210mNm)
Operating Angle	—	—	—	35°	31° (Minimum Lever Travel Including Pre-Travel Required For Operation)
Operating Diagram					

G

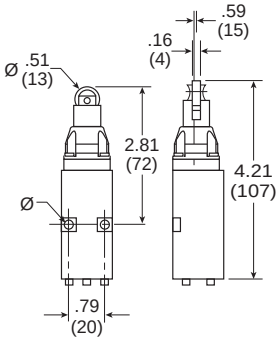
Airline Accessories

Dimensions

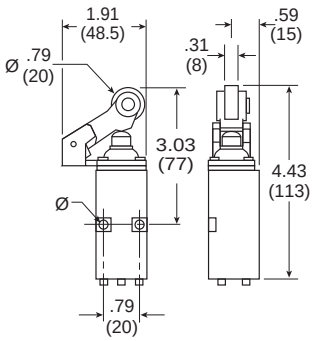
PXCK21101, PXCK22101



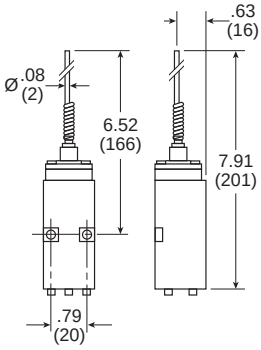
PXCK21102, PXCK22102



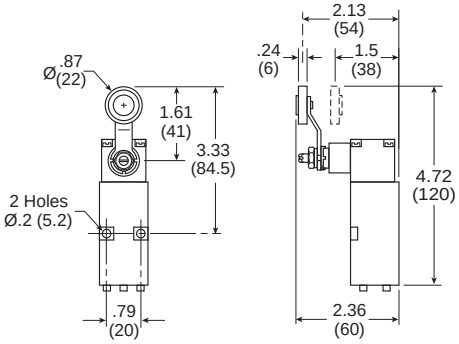
PXCK21121, PXCK22121



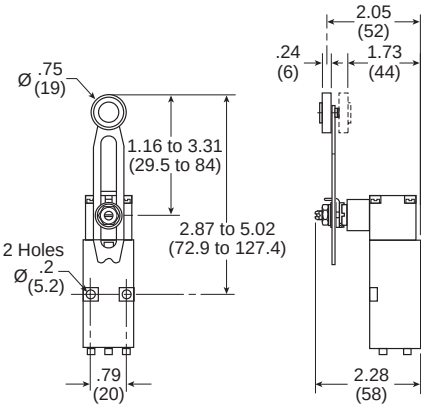
PXCK21106, PXCK22106



PXCK2110531, PXCK2210531

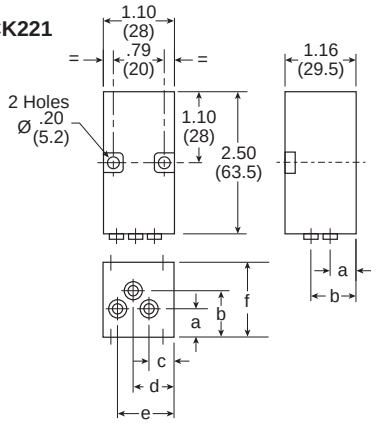


PXCK2110541, PXCK2210541



Pneumatic Switch Bodies

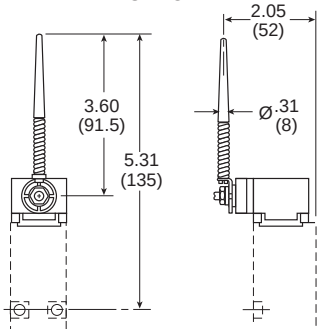
PXCK211, PXCK221



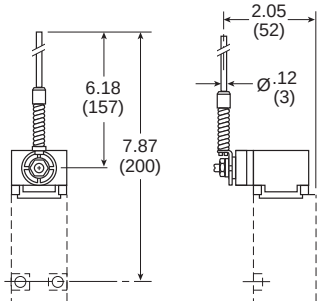
	inch	mm
a	.39	10
b	.77	19.5
c	.35	9
d	.61	15.5
e	.87	22
r	1.66	29.5

Rotary Heads with Operating Levers

ZCKY81



ZCKY91



Switch Bodies Only



PXCJ117

Part Number	Type of Switching*
PXCJ117	NNP
PXCJ127	NP

Switch Bodies with Rotary Head



PXCJ11701

Part Number	Direction of Actuation	Type of Switching*
PXCJ11701	Right & Left, Spring Return	NNP
PXCJ11705	Right or Left, Spring Return	
PXCJ12701	Right & Left, Spring Return	NP
PXCJ12705	Right or Left, Spring Return	

Operating Levers for Rotary Heads



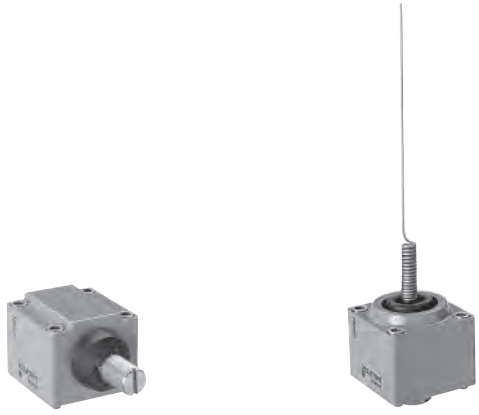
ZC2JY11 ZC2JY31 ZC2JY81 ZC2JY91

Die Cast Zinc. For Use With PXCJ Switch Bodies		
Part Number	**Operator**	**Description**
ZC2JY11	Delrin Roller	Spring Return
ZC2JY13	Steel Roller	
ZC2JY21	Offset Delrin Roller	
ZC2JY81	Plastic Spring Rod	
ZC2JY91	Metal Spring Rod	
ZC2JY31	Delrin Roller	Adjustable Roller
ZC2JY41	Offset Delrin Roller	
ZC2JY51		Rod Lever
ZC2JY71	Single Track, Delrin Roller	Fork Lever
ZC2JY61	Double Track, Delrin Rollers	

NNP: Normally Non-Passing

NP: Normally Passing

Top Plunger & Rotary Operating Heads



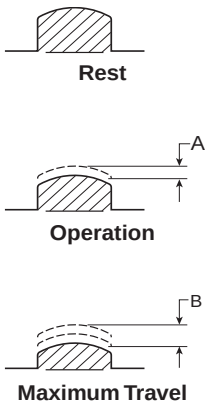
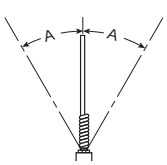
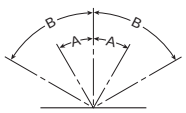
ZC2JE70 ZC2JE01

Die Cast Zinc. For Use With PXCJ Switch Bodies		
Top Plunger Type		
Part Number	**Operation**	**Description**
ZC2JE61	Top Push	Spring Return
ZC2JE62	Top Roller Push	
ZC2JE63	Side Push	
ZC2JE70	Cat's Whisker	
Rotary Type		
ZC2JE01	From Left & Right	Spring Return
ZC2JE02	Counterclockwise From Right	
ZC2JE03	Clockwise From Left	
ZC2JE05	From Left or Right	
ZC2JE09	Maintained Positions	

Specifications

Air Quality – Standard Shop Air, Lubricated or Dry, 40µm Filtration	
Flow SCFM (Nl/min)	7.4 (210)
Materials –	
Body	Zinc Alloy
Poppets	Polyurethane
Seals	Nitrile (Buna N)
Maximal Operating Frequency	5 Hz
Nominal Bore Ø	1/8" (3 mm)

Number of Operations with Dry Air at 90 PSI (6 bar) and 68°F (20°C) – Frequency 1 Hz	10 Million
Operating Positions	All Positions
Operating Pressure	40 to 115 PSIG (3 to 8 bar)
Ports	1/8" NPT
Temperature –	
Operating	32°F to 122°F (0°C to + 50°C)
Storage	-22°F to 140°F (-30°C to +60°C)

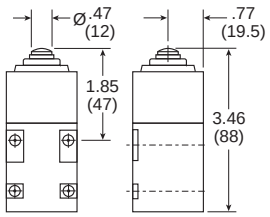
	ZC2JE61	ZC2JE62	ZC2JE70	ZC2JE01	ZC2JE05
Differential Angle	—	5°	5°	2°	2°
Differential Travel at 90 PSI (6 bar)	.008" (0.2 mm)	—	—	—	—
Maximum Angle of Travel	—	—	—	75°	75°
Maximum Travel (B) at 90 PSIG (6 bar)	228" (5.8 mm)	—	—	—	—
Minimum Pre-Travel (A) at 90 PSIG (6 bar)	.059" (1.5 mm)	—	—	—	—
Minimum Operating Force at 90 PSI (6 bar)	3.6 lbf (16N)	—	—	—	—
Minimum Operating Torque at 90 PSI (6 bar)	7.1 oz in (50Nm)	35.4 oz in (250Nm)	35.4 oz in (250Nm)	35.4 oz in (250Nm)	—
Operating Angle (Minimum Lever Travel Including Pre-Travel Required For Operation)	—	23°	23°	12°	12°
Operating Diagram					

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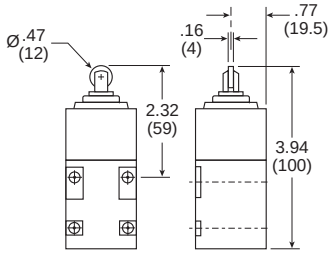
Airline Accessories

Switch Body With Plunger Heads

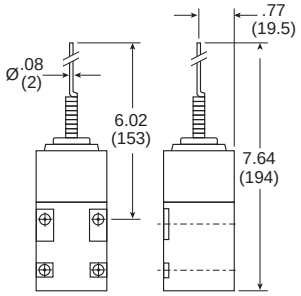
With ZC2JE61



With ZC2JE62

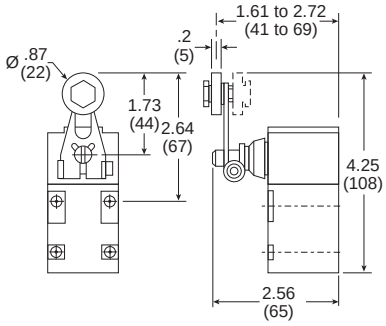


With ZC2JE70

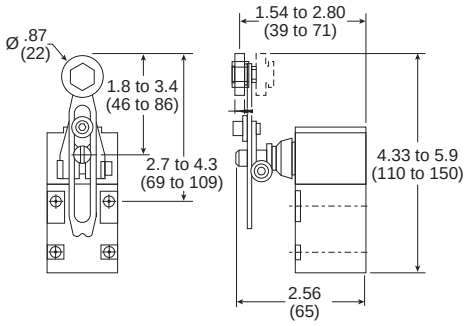


Switch Body With Rotary Heads and Operating Levers

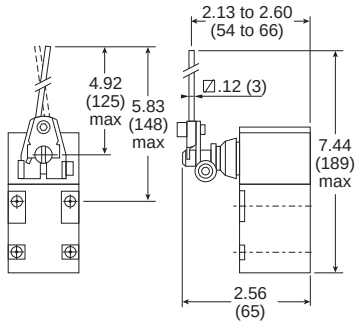
With ZC2JY11



With ZC2JY31

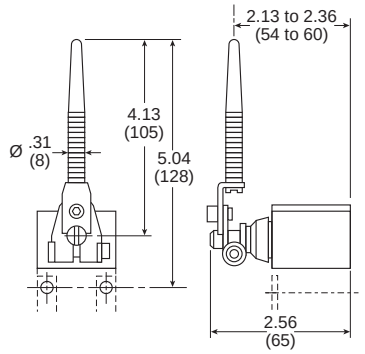


With ZC2JY51

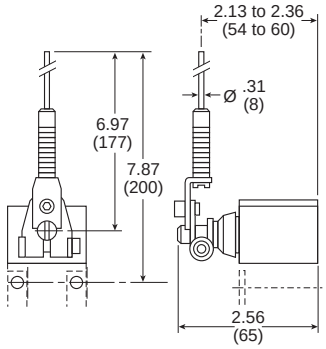


Rotary Heads With Operating Levers

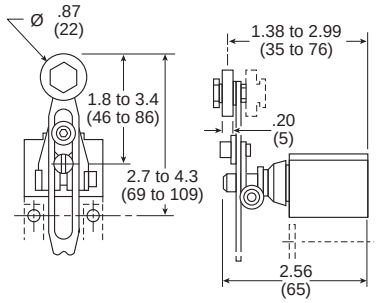
ZC2JY81



ZC2JY91

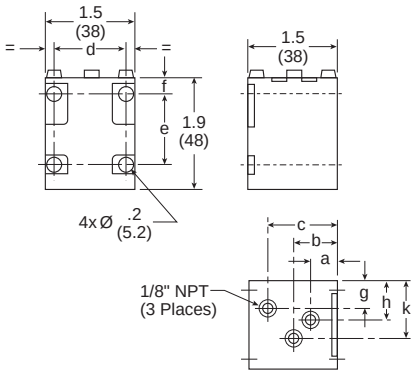


ZC2JY41



Pneumatic Switch Bodies

PXCJ117, PXCJ127



	inch	mm
a	.47	12
b	.75	19
c	1.16	29.5
d	1.14 to 1.18	29 to 30
e	1.18	30
f	.28	7
g	.43	11
h	.51	13
k	.94	24

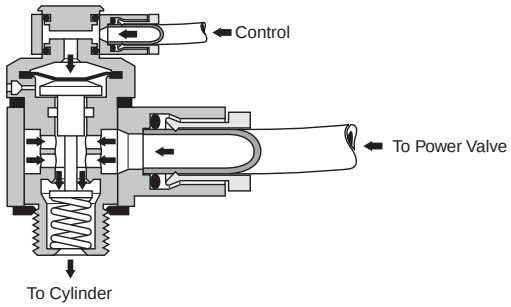
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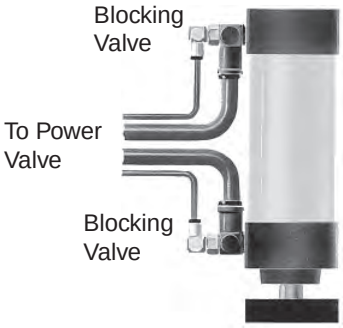
Airline Accessories

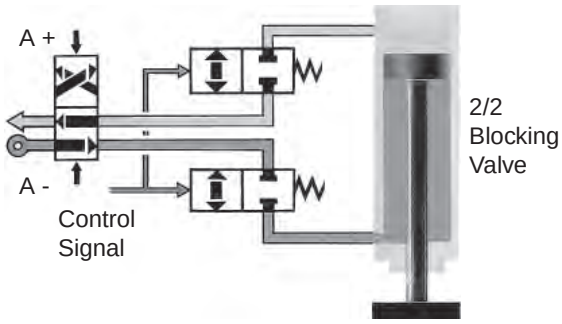
Blocking Valves

The blocking valve is a single acting spring return 2/2 valve in a fitting format. The device requires a pneumatic pilot signal to open, which allows free flow of air, gas or liquid to pass. As long as a pilot signal is present, the device will remain open. When the pilot signal is removed, the internal spring will close the blocking valve, bubble tight. The blocking valve is oil serviceable and rated to 150 PSI.

These devices have two primary design uses: (1) to prevent unwanted gravity induced motion in cylinders during shut down procedures or during periods of lost supply pressure and (2) freezing the cylinder position by using a blocking valve at each end of the cylinder. Application needs such as tool or work piece protection, horizontal indexing or inspection stops are often satisfied by these devices.







PWBA General Characteristics

Operating Pressure	0 to 150 PSI
Permissible Fluids	Air or neutral gas, 50 µm filtration, lubricated or not
Operating Temperature	5° to 140°F (-15° to 60°C)
Storage Temperature	-40° to 160°F (-40° to 70°C)
Flow	See page G31
Mechanical Life	10 Million
Maximum Operating Frequency	10Hz
Material: Body	Zinc alloy
Mounting Screw	Brass
Maximum Mounting Torque: 10-32 UNF and M5	88 inch pounds
1/8"	70 inch pounds
1/4"	105 inch pounds
3/8"	265 inch pounds
1/2"	310 inch pounds
Adjustment	N/A
Adjustment Locking	N/A

Piloting and De-Piloting Pressure

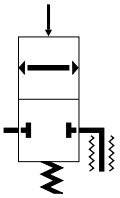
Blocking Valve Sizes	**Pilot with Operating Pressure of:**			
	30 PSI	**60 PSI**	**90 PSI**	**120 PSI**
1/8" BSP or NPT	33 PSI	40 PSI	45 PSI	50 PSI
1/4" BSP or NPT	33 PSI	40 PSI	45 PSI	50 PSI
3/8" BSP or NPT	35 PSI	40 PSI	45 PSI	50 PSI
1/2" BSP or NPT	45 PSI	50 PSI	55 PSI	60 PSI
Blocking Valve Sizes	**Depilot with Operating Pressure of:**			
	30 PSI	**60 PSI**	**90 PSI**	**120 PSI**
1/8" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
1/4" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
3/8" BSP or NPT	20 PSI	25 PSI	30 PSI	34 PSI
1/2" BSP or NPT	25 PSI	30 PSI	34 PSI	40 PSI

For Cylinder Mounting
(Can also be mounted in Threshold Sensor Banjo)

With Instant Tube Fittings



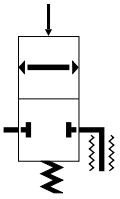
PWBA3469

BSP					NPT			
Symbol	Connection for Pilot	Cylinder Port Thread (Male)	Connection for Tube	Catalog Number	Connection for Pilot	Cylinder Port Thread (Male)	Connection for Tube	Catalog Number
	4mm Tube	1/8"	6mm	PWBA1468	5/32" Tube	1/8"	1/4"	PWBA3468
		1/4"	6mm	PWBA1469		1/4"	1/4"	PWBA3469
		1/4"	8mm	PWBA1489				
		3/8"	8mm	PWBA1483		3/8"	3/8"	PWBA3493
		3/8"	10mm	PWBA1493				
		1/2"	12mm	PWBA1412		1/2"	1/2"	PWBA3412

With Threaded Connections and Tube Pilot Port



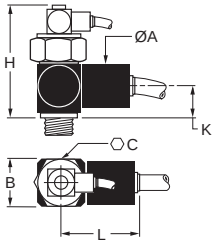
PWBA3833

BSP					NPT			
Symbol	Connection for Pilot	Cylinder Port Thread (Male)	Connection from Valve (Female)	Catalog Number	Connection for Pilot	Cylinder Port Thread (Male)	Connection from Valve (Female)	Catalog Number
	4mm Tube	1/8"	1/4"	PWBA1898	5/32" * Tube	1/8"	1/8"	PWBA3888
		1/4"	1/4"	PWBA1899		1/4"	1/4"	PWBA3899
	M5 Female	3/8"	3/8"	PWBA1833	5/32" * Tube	3/8"	3/8"	PWBA3833
		1/2"	1/2"	PWBA1822		1/2"	1/2"	PWBA3822

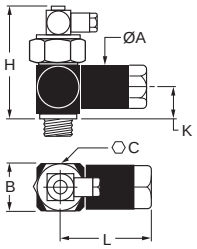
* Instant fitting

With Threaded Connections and Threaded Pilot Port

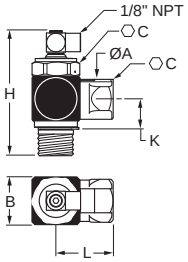
PWBA14/34



PWBA18/38



PWBA38



NPT			
Connection for Pilot	Cylinder Port Thread (Male)	Connection from Valve	Catalog Number
1/8" pipe	1/8"	1/8"	PWBA38887
	1/4"	1/4"	PWBA38997
	3/8"	3/8"	PWBA38337
	1/2"	1/2"	PWBA38227

Dimensions: Inches (mm)

	Flow*	ØA	B	C	K	H	L
PWBA1468/3468	14.8	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.32" (59)	1.54" (39)
PWBA1469/3469 PWBA1489	19.4	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.09" (53)	1.54" (39)
PWBA1483 PWBA1493/3493	45.9	1.06""(27)	1.10" (28)	0.94" (24)	0.55" (14)	2.09" (53)	1.98" (50)
PWBA1412/3412	81.2	1.22" (31)	1.30" (33)	1.30" (33)	0.94" (24)	2.59" (66)	2.59" (66)
PWBA1898/3888	14.8	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.32" (59)	1.71" (43.5)
PWBA1899/3899	19.4	0.86" (22)	0.82" (21)	0.94" (24)	0.53" (13.5)	2.09" (53)	1.71" (43.5)
PWBA1833/3833	45.9	1.06" (27)	1.10" (28)	0.94" (24)	0.55" (14)	2.09" (53)	2.18" (55)
PWBA1822/3822	81.2	1.22" (31)	1.30" (33)	1.30" (33)	0.94" (24)	2.59" (66)	2.47" (63)
PWBA38887	14.8	0.75" (19)	0.87" (22)	0.83" (21)	0.67" (17)	2.20" (56)	1.73" (44)
PWBA38997	19.4	0.75" (19)	0.87" (22)	0.83" (21)	0.67" (17)	2.20" (56)	1.73" (44)
PWBA38337	45.9	1.06" (27)	1.18" (30)	1.06" (27)	0.91" (23)	2.64" (67)	1.42" (36)
PWBA38227	81.2	1.06" (27)	1.18" (30)	1.06" (27)	0.91" (23)	2.64" (67)	1.42" (36)

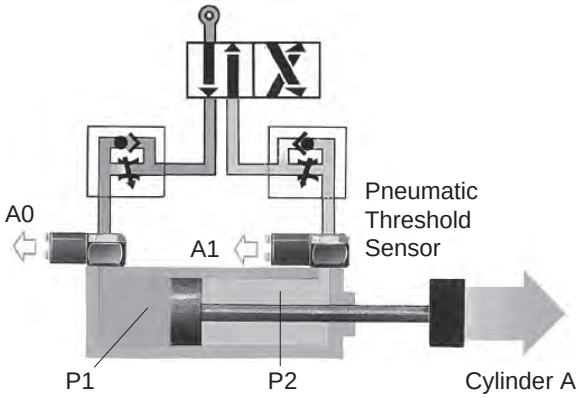
*SCFM at 90 PSI

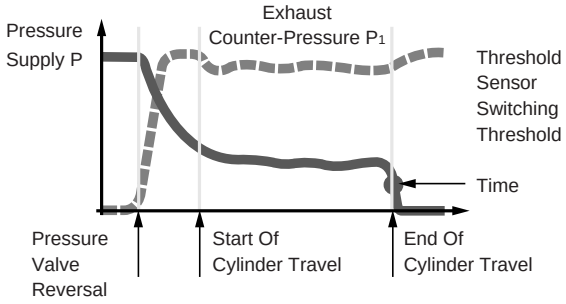
Threshold Sensors – PWS

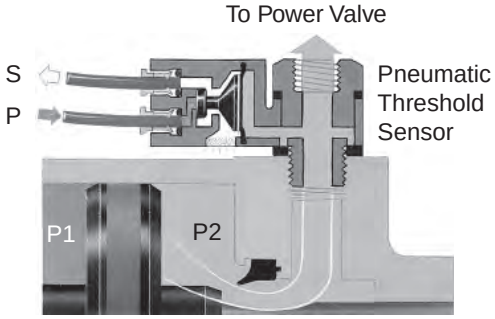
General Description

The plug-in threshold sensors provide feedback information on pneumatic cylinder status in one of three possible outputs . . . pneumatic, electric, or electronic. Mounted into the cylinder port, these devices monitor the back pressure of the cylinder's exhaust. When the cylinder's piston stops, the back pressure rapidly drops and the threshold sensor provides the desired output. Ideal for variable stroke applications such as robotics where other sensor type devices such as limit switches are impractical, these devices provide a signal whenever the cylinder stops motion.

The threshold sensor consists of two complementary sub assemblies (1) the banjo fitting and (2) the plug-in sensor element. In all cases, the sensor is easily plugged into the banjo fitting and locked in place with a spring clip. The banjo fitting is designed to accept (piggy backed) other functional fittings such as flow controls or blocking valves. Simply select the sensor based on the type feedback signal that best fits the application.







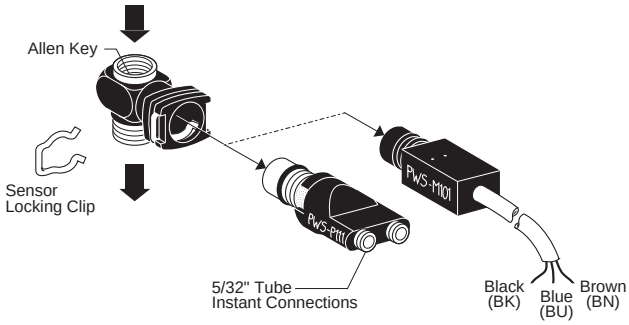
PWS General Characteristics

Operating Pressure	0 to 150 PSI
Permissible Fluids	Air or neutral gas, 50 µm filtration, lubricated or not
Operating Temperature	5° to 140°F (-15° to 60°C)
Storage Temperature	-40° to 160°F (-40° to 70°C)
Flow	N/A
Mechanical Life	10 Million
Maximum Operating Frequency	10Hz
Material: Body	Thermoplastic
Mounting Screw	Brass
Maximum Mounting Torque: 10-32 UNF and M5	88 inch pounds
1/8"	70 inch pounds
1/4"	105 inch pounds
3/8"	265 inch pounds
1/2"	310 inch pounds
Adjustment	N/A
Adjustment Locking	N/A

Piloting and De-Piloting Pressure

Threshold Sensors	Pilot with Operating Pressure of 90 PSI	Depilot with Operating Pressure of 90 PSI
PWSP111	64 PSI	6 PSI
PWSM1012	15 PSI	9 PSI
PWSE101 and PWSE111	10 PSI	7 PSI





Model Selection

Banjo Sockets (with Sensor Clip)		
Port Size	**Model Number**	**Wrench**
10-32	**PWSB1557**	5/16" Hex
1/8"	**PWSB1887**	3/16" Allen
1/4"	**PWSB1997**	5/16" Allen
3/8"	**PWSB1337**	3/8" Allen
1/2"	**PWSB1227**	1/2" Allen

Plug-in Sensors		
Output	**Model Number**	**Connection**
Pneumatic	**PWSP111**	5/32" push-in
Electrical	**PWSM1012**	3-wire cable (6 ft)

Application

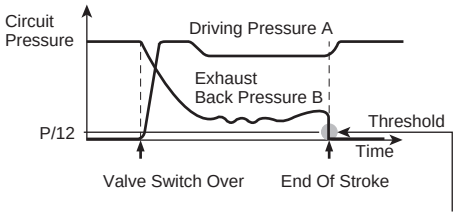
The threshold sensor provides electrical or pneumatic feedback information on pneumatic (air) cylinder status. These devices monitor the back pressure of the cylinder's exhausting chamber. When the cylinder stops, the back pressure drops and the threshold sensor provides the desired output. Ideal for variable stroke applications. The banjo fitting and the feedback element are two separate subassemblies, giving the user flexibility between electrical and pneumatic outputs as feedback.

Mounting

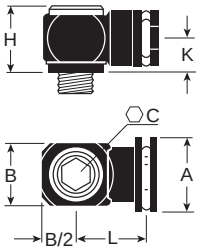
Banjo fittings in 10-32 to 1/2" pipe sizes are designed to be installed directly into actuator ports (up to 5" bore cylinders). The banjo fitting can accommodate other functional fittings and components such as right angle flow control valves or blocking valves. Banjo fittings screw into actuators using an Allen wrench or 5/16" hex head wrench for 10-32 size. Electrical or pneumatic feedback element snaps into place using a locking clip.

Operation

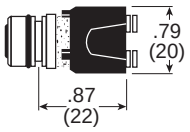
Pneumatic sensors have a continuous pressure signal applied to the sensor device. Electrical sensors have a continuous electrical signal applied to the sensor device. The threshold sensor assembly mounted directly into the cylinder Port provides an output signal S, which can be pneumatic or electrical, when the falling back pressure in the exhausting chamber of the cylinder reaches the operating threshold (approximately 6-9 PSIG). (The device is a normally passing device. The output is only on when there is nearly zero pressure at the cylinder.)



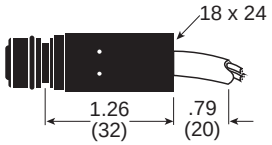
Dimensions



Banjo Socket



PWSP111



PWSM1012

Specifications

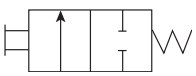
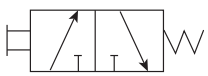
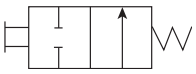
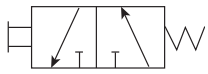
Operating Pressure	0 to 150 PSIG (0 to 10 bar)
Temperature Range	5°F to 140°F (-15°C to 60°C)

⚠ ***CAUTION:*** If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior.

Maximum Operating Frequency	10 Hz
Pilot Pressure (PWSP111)	>64 PSIG (4.4 bar)
Threshold Pressure	6 to 9 PSIG (.4 to .6 bar)
Output Flow Rate (PWSP111)	3 SCFM at 90 PSIG
Current Rating (PWSM1012) – 5 VA, 250 VAC 5W, 48 VAC	
Materials –	
Body	Thermoplastic
Mounting Screw & Threads	Brass
Life Expectancy – 10 million cycles with dry air at 90 PSIG, 68°F, and 1 Hz operating frequency	
Voltage Range (PWSM1012) – 12 - 240 VAC 12 - 48 VDC	

Model	A	B	C	H	K	L
PWSB1557	.98 (25)	.43 (11)	5/16" Hex	.79 (20)	.40 (10)	.67 (17)
PWSB1887	.98" (25)	.63 (16)	3/16" Allen	.71 (18)	.40 (10)	.79 (20)
PWSB1997	.98 (25)	.83 (21)	5/16" Allen	.71 (18)	.40 (10)	.87 (22)
PWSB1337	.98 (25)	1.10 (28)	3/8" Allen	.79 (20)	.47 (12)	.98 (25)
PWSB1227	.98 (25)	1.30 (33)	1/2" Allen	.93 (24)	.55 (14)	1.02 (26)

inches
(mm)

Universal Description	Electrical		Fluid Power		
	Function	Symbol	Function	Symbol	
Normally Non-Passing (NNP)	Normally Open (N.O.)		Normally Closed (N.C.)	2-Way 	3-Way 
Normally Passing (NP)	Normally Closed (N.C.)		Normally Open (N.O.)		

LV & EZ Series

"LV" & "EZ" Series G36

"LV" Series
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"EZ" Series
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Flow G43

"LV" & "EZ" Series Accessories G43

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Standard 190.147

- This applies to the servicing and maintenance of a machine or equipment.
- Any new, replacement, repair, or renovation to a machine must include an energy isolation device that can accept a lock out device.
- Lock out devices should not be used for any other purposes
- Verification of energy isolation is required

ANSI

Standard Z244

- This applies to all machines
- Lockout / tagout is the primary method of hazardous energy control
- Machines shall be designed, manufactured, supplied, and installed with energy isolating devices

ANSI B11.0
B11.TR6

PMMI B155.1

- B11.0 applies to a broad range of machines, B11.TR6 is specific to machine tools, and B155.1 is specific to packaging and converting machines
- Energy isolating device shall:
  - Be capable of being locked in the OFF position only
  - Be easy to operate
  - Have an exhaust port equal or greater than its supply port
  - Have a pressure indicator that is visible to an operator to verify line is relieved of pressure

…By offering the best in pneumatic safety for machine maintenance:





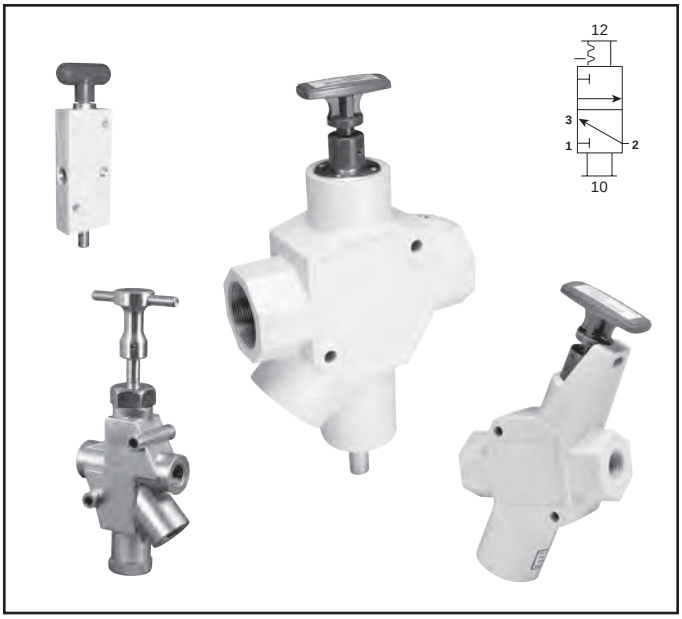
Traditional Ball Valve		Wilkerson Solution
Not a dedicated energy isolation device	✖	✔ **Dedicated energy isolation device**
Not a full exhaust port	✖	✔ Full exhaust port
No verification of line exhaust	✖	✔ Verification of line exhaust
Can be locked ON	✖	✔ Only lockable in OFF position
Not easily identifiable	✖	✔ Easily identifiable

LV Series

Features

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines. In accordance with OSHA procedures, lockout valves are used during maintenance and service procedures of pneumatically (air) operated equipment.

- Used for compliance with OSHA 29 CFR part 1910
- 1/4" to 2" pipe sizes. NPT or BSPP
- Yellow cast aluminum body with red handle or stainless steel (NACE MR0175 / ISO 15156)
- Inline or surface mountable
- Built in port for pressure verification to meet ANSI B11 and PMMI B155 requirements
- Fluorcarbon slipper seals for easy shifting, even after long periods of inactivity



Material Specifications

Description	LV	LVSS
Body:	Cast aluminum alloy	Stainless steel
Handle:	Plastic	Stainless steel
Spool:	Aluminum	Stainless steel
Seals:	Carboxylated nitrile	Fluorocarbon
Detent spring:	Stainless steel	316 Stainless steel
Grease:	Magnalube G †	Magnalube G †

† Trademark Magnalube

Operating Information

Operating pressure:	LV	LVSS
Compact	15 to 145 PSIG	–
Standard	15 to 300 PSIG	15 to 300 PSIG
High flow	15 to 300 PSIG	–
Operating temperature:	40°F to 175°F	30°F to 175°F

Operating media: Clean, dry, compressed air (5 micron)

Applications

Lockout valves are installed in pneumatic drop legs, or individual pneumatic control lines (see Figure 1).
In accordance with OSHA procedures, lockout valves are used during maintenance and service procedures of pneumatically (air) operated equipment. Prior to servicing, the red handle is pressed inward, blocking pressure and relieving all downstream air pressure. A padlock is installed through the locking hasp, Preventing accidental actuation during the maintenance procedure. Following maintenance, the padlock is removed and the red handle is pulled outward, returning air pressure to the system.
(For complete Lockout / Tagout procedures, consult OSHA Standard 29 CFR Part 1910 in U.S. Federal Register/Vol. 54 No. 169, Friday, September 1, 1989 / Page 36644.)

Mounting

Valves can be inline mounted or surface mounted using the two mounting holes provided in the valve body. Mount valves in plain view with the handle oriented for accessibility.

Placement of Lockout Device

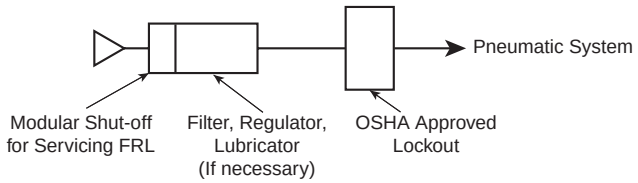


Figure 1.

Compact



Port in / out	Port exhaust	Wt (lb)	Part number *
1/4	3/8	0.9	**LV2N3B**
3/8	3/8	0.9	**LV3N3B**

Standard



Port in / out	Port exhaust	Wt (lb)	Part number *
3/8	3/4	2.0	**LV3N6B**
1/2	3/4	2.0	**LV4N6B**
3/4	3/4	2.0	**LV6N6B**
3/4	1-1/4	3.2	**LV6NAB**
1	1-1/4	3.2	**LV8NAB**
1-1/4	1-1/4	3.2	**LVANAB**

High Flow



Port in / out	Port exhaust	Wt (lb)	Part number *
1-1/2	2	8.2	**LVBNCB**
2	2	8.2	**LVCNCB**

Stainless Steel

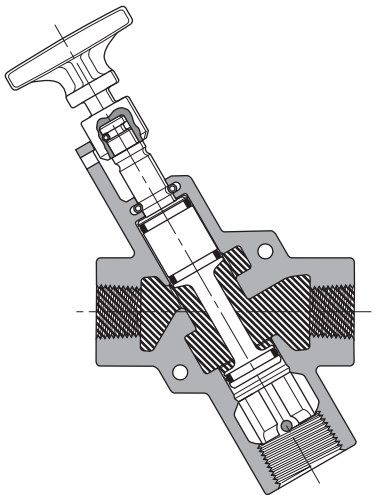


Port in / out	Port exhaust	Wt (lb)	Part number *
1/4	1/4	3.8	**LV2N2BSS**
3/8	1/2	6.0	**LV3N4BSS**
1/2	1/2	6.0	**LV4N4BSS**
3/4	1	13	**LV6N8BSS**
1	1	13	**LV8N8BSS**
1-1/2	2	35	**LVBNCBSS**
2	2	35	**LVCNCBSS**

* For BSPP ports, change 4th digit from “N” to “B”

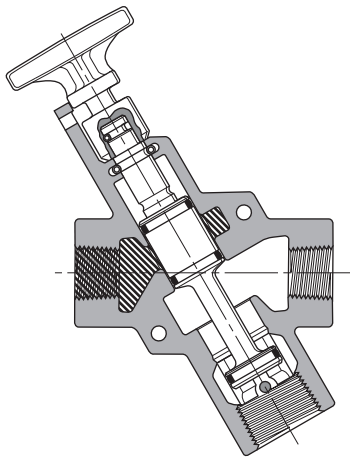
Operation

Normal Machine Operation – Valve Open
With the handle pulled outward. Inlet Port 1 is open to outlet Port 2. Exhaust Port 3 is blocked.



LV Series Shown Open

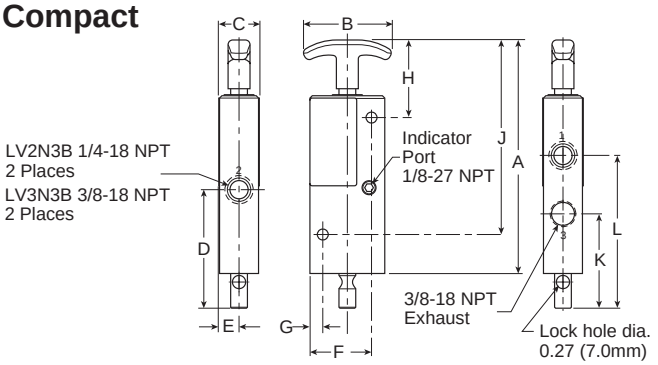
Lockout Operation – Valve Closed
With the handle pushed inward. Inlet Port 1 is blocked. Outlet Port 2 is open to Exhaust Port 3.



LV Series Shown Closed

LV Dimensions

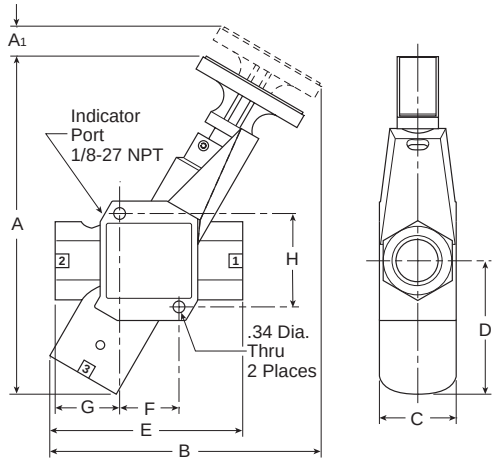
Compact



Compact LV Series, 3/8" Exhaust Ports Inches (mm)

A	B	C	D	E	F
6.50 (165)	2.25 (57)	1.05 (27)	3.04 (77)	.51 (13)	1.58 (40)
G	**H**	**J**	**K**	**L**	
.33 (8)	1.99 (51)	4.99 (127)	2.42 (62)	3.92 (100)	

Standard



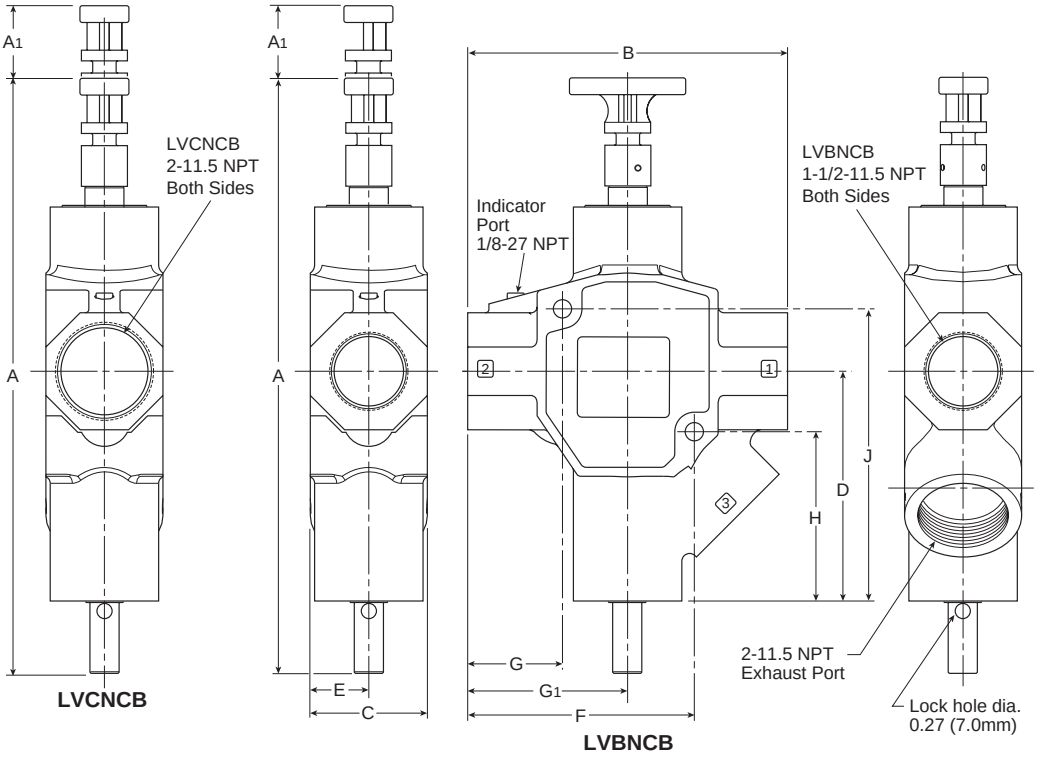
Standard LV Series, 3/4" Exhaust Port Inches (mm)

A	A1	B	C	D	E
8.32 (211)	0.64 (16)	6.60 (168)	2.00 (51)	3.06 (78)	4.24 (108)
F	**G**	**H**			
1.32 (111)	1.56 (40)	2.21 (56)			

Standard LV Series, 1-1/4" Exhaust Port Inches (mm)

A	A1	B	C	D	E
9.91 (252)	0.85 (22)	7.95 (202)	2.25 (57)	3.91 (99)	5.65 (144)
F	**G**	**H**			
1.74 (44)	1.89 (48)	2.74 (70)			

High Flow



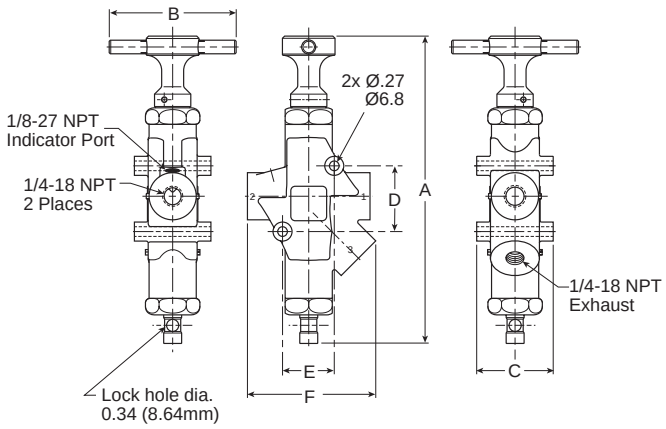
High Flow LV Series, 2" Exhaust Ports Inches (mm)

A	A1
14.82 (376)	1.87 (47)
B	**C**
8.20 (208)	3.00 (76)
D	**E**
5.89 (150)	1.50 (38)
F	**G**
5.81 (148)	2.43 (62)
G1	**H**
4.10 (104)	4.34 (110)
J	
7.49 (190)	

G

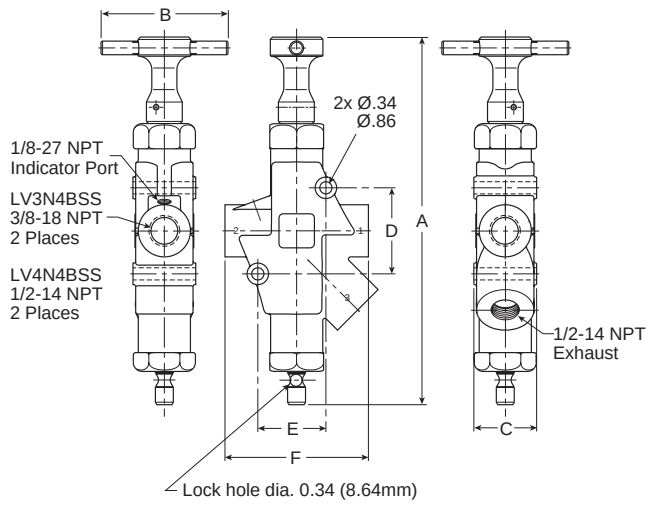
Airline Accessories

Stainless Steel Dimensions



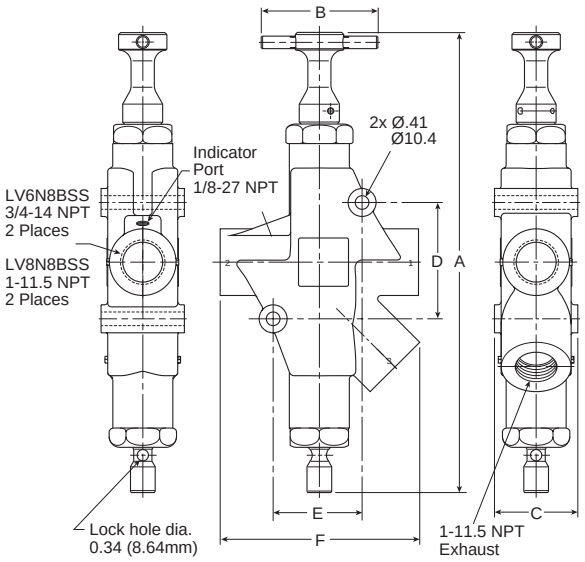
Stainless Steel LV Series, 1/4" Exhaust Port
inches (mm)

A	B	C	D	E	F
8.47 (215)	3.50 (89)	2.11 (54)	1.81 (46)	1.43 (36)	3.54 (90)



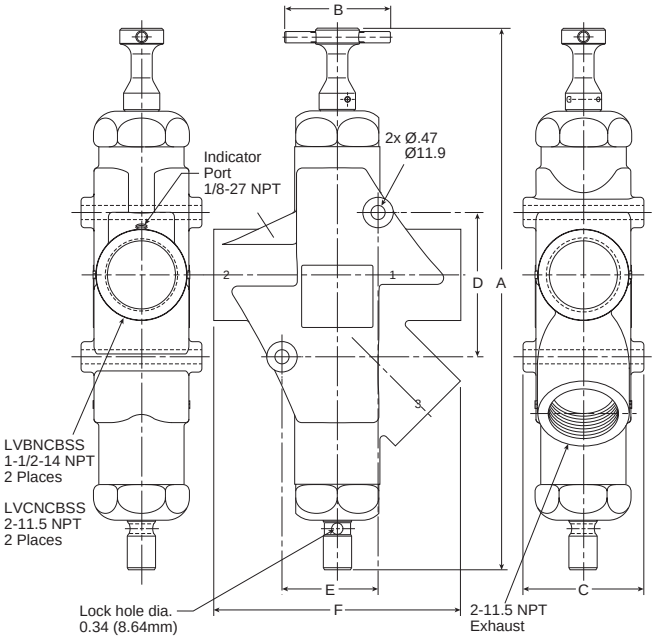
Stainless Steel LV Series, 1/2" Exhaust Port
inches (mm)

A	B	C	D	E	F
10.24 (260)	3.50 (89)	1.75 (45)	2.40 (61)	190 (48)	4.00 (102)



Stainless Steel LV Series, 1" Exhaust Port
inches (mm)

A	B	C	D	E	F
13.80 (351)	3.50 (89)	2.50 (64)	3.49 (89)	2.67 (68)	5.99 (152)



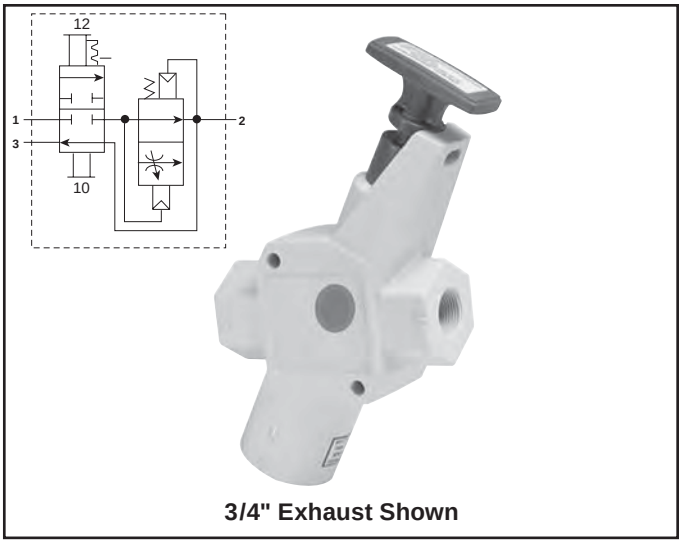
Stainless Steel LV Series, 2" Exhaust Port
inches (mm)

A	B	C	D	E	F
17.92 (455)	3.50 (89)	4.00 (102)	4.77 (121)	3.18 (81)	8.16 (207)

EZ Series

Features

- Combines lockout and soft-start functions in a single unit
- Used in systems for compliance with OSHA standard 29 CFR part 1910
- 3/8 Inch to 1-1/4 inch pipe sizes
- Cv's from 3.7 To 13.7
- 3/4 and 1-1/4 inch: exhaust ports available
- Exhaust port threaded for installation of silencer or line for remote exhausting
- Inline or surface mountable
- Yellow cast aluminum body with red handle. Blue dot on body indicates EZ Series valve
- Fluorcarbon slipper seals for easy shifting, even after long periods of inactivity



3/4" Exhaust Shown

Material Specifications

Description	EZ
Body:	Cast aluminum alloy
Handle:	Plastic
Spool:	Aluminum
Seals:	Carboxylated nitrile
Detent spring:	Stainless steel
Grease:	Magnalube G †

† Trademark Magnalube

Operating Information

Operating pressure: 15 to 300 PSIG
Operating temperature: 40°F to 175°F
Operating media: Clean, dry, compressed air (5 micron)

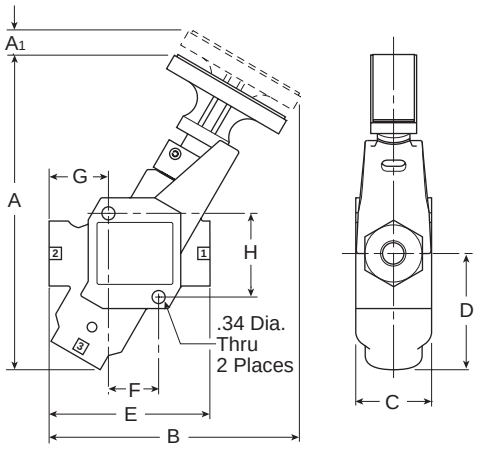
Applications

EZ valves are installed in pneumatic drop legs, or individual pneumatic control lines (see Figure 1). In accordance with OSHA procedures, EZ valves are used during maintenance and service procedures of pneumatically (air) operated equipment. Prior to servicing, the red handle is pressed inward, blocking pressure and relieving all downstream air pressure. A padlock is installed through the locking hasp, preventing accidental actuation during the
maintenance procedure. Following maintenance, the padlock is removed and the red handle is pulled outward, gradually returning air pressure to the
system. (For complete Lockout / Tagout procedures, consult OSHA Standard 29 CFR Part 1910 in U.S. Federal Register/Vol. 54 No. 169, Friday, September 1, 1989 / Page 36644.)

Mounting

Valves can be inline mounted or surface mounted using the two 11/32" mounting holes provided in the valve body. Mount valves in plain view with the handle oriented for accessibility.

EZ Dimensions



EZ Series, 3/4" Exhaust Port Inches (mm)

A	A1	B	C	D	E
8.32 (211)	0.64 (16)	6.60 (168)	2.00 (51)	3.06 (78)	4.24 (108)
F	**G**	**H**			
1.32 (111)	1.56 (40)	2.21 (56)			

EZ Series, 1-1/4" Exhaust Port Inches (mm)

A	A1	B	C	D	E
9.91 (252)	0.85 (22)	7.95 (202)	2.25 (57)	3.91 (99)	5.65 (144)
F	**G**	**H**			
1.74 (44)	1.89 (48)	2.74 (70)			

EZ Series



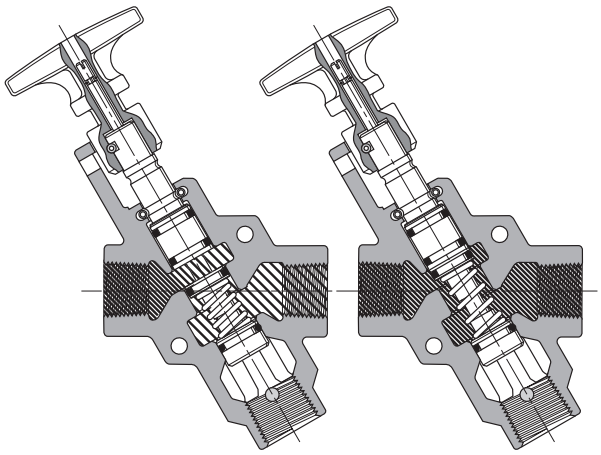
Port in / out	Port exhaust	Wt (lb)	Part Number *
3/8	3/4	2.1	**EZ03NB6**
1/2	3/4	2.1	**EZ04NB6**
3/4	3/4	2.1	**EZ06NB6**
3/4	1-1/4	3.2	**EZ06NBA**
1	1-1/4	3.2	**EZ08NBA**
1-1/4	1-1/4	3.2	**EZ0ANBA**

* For BSPP ports, change 5th digit from “N” to “B”

Operation

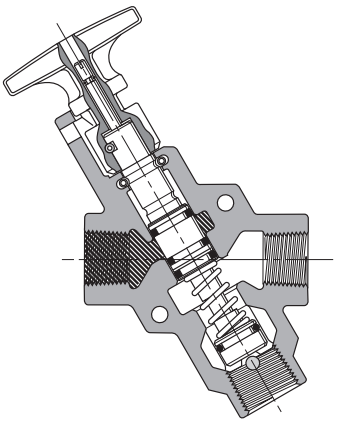
Normal Machine Operation – Valve Open
When the red handle is pulled outward, the adjustable needle valve (accessed through the top of the handle) setting determines the rate of pressure buildup. When downstream pressure reaches the full flow described in the specifications below, Inlet Port 1 is open to outlet Port 2. Exhaust Port 3 is blocked.

Lockout Operation – Valve Closed
When the red handle is pushed inward, the Inlet Port 1 is blocked. Downstream air is exhausted through Exhaust Port 3.



Open
Pressure Building Up

Open
Full Flow



Closed

G

Airline Accessories

Flow

Compact LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LV2N3B	1/4	41.8	3/8	40.7
LV3N3B	3/8	60.7	3/8	60.7

Standard LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LV3N6B	3/8	107.7	3/4	81.1
LV4N6B	1/2	161.4	3/4	90.9
LV6N6B	3/4	187.7	3/4	93.2
LV6NAB	3/4	297.7	1-1/4	204
LV8NAB	1	375	1-1/4	216
LVANAB	1-1/4	436.4	1-1/4	221

High FLow LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LVBNCB	1-1/2	761.4	2	1156
LVCNCB	2	918.2	2	1186

EZ Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
EZ03NB6	3/8	136.4	3/4	181
EZ04NB6	1/2	161.4	3/4	189
EZ06NB6	3/4	181.9	3/4	216
EZ06NBA	3/4	272.7	1-1/4	248
EZ08NBA	1	311.4	1-1/4	273
EZ0ANBA	1-1/4	368.2	1-1/4	291

Stainless LV Series Part Number	Port In / Out	scfm In / Out	Port Exh	scfm Exh
LV2N2BSS	1/4	48.6	1/4	47.2
LV3N4BSS	3/8	131.6	1/2	142
LV4N4BSS	1/2	124.8	1/2	142
LV6N8BSS	3/4	325	1	386
LV8N8BSS	1	325	1	386
LVBNCBSS	1-1/2	889	2	1023
LVCNCBSS	2	889	2	1023

NOTE: Exhaust flow rates calculated using inlet pressure 100 psig (6.7 bar), pressure drop 5 psi (0.34 bar), air temp 68°F (20°C), and 36% relative humidity.

LV / EZ Accessories

Corrosion resistant mufflers for harsh environments



Port Size	Construction	Threads*	Dimensions In. (mm) Width	Length	Part Number
1/4	Stainless steel	Male	0.56 (14.2)	1.75 (44.5)	**5500A2004**
1/2	Stainless steel	Male	0.87 (22.1)	2.75 (69.7)	**5500A4004**
1	Stainless steel	Male	1.31 (33.3)	3.87 (98.3)	**5500A6004**
2	Nickel plated	Male	2.37 (60.2)	5.50 (139.7)	**5500A9004**

* NPT threads only

High Flow Silencers



Part Number *	ES25MC	ES37MC	ES50MC	ES75MC	ES100MC	ES125MC	ES150MC	ES200MC
Pipe size	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2
Flow (scfm)	129	219	549	893	1013	1486	1580	1580
Hex In. (mm)	0.63 (16)	1.00 (25)	1.00 (25)	1.62 (41)	1.62 (41)	—	—	2.99 (76)
Length In. (mm)	1.85 (47)	3.31 (84)	3.31 (84)	4.56 (116)	4.56 (116)	5.69 (145)	5.69 (145)	7.68 (195)

* NPT ports standard, for BSPT ports, add a “B” after the “S”

Pop-up Pressure Indicator



Brass – Part # 988A30 – Can be used on all LV or EZ series to provide visual verification of line exhaust



Stainless – Part# 1155H30 – Can be used on SS LV series to provide visual verification of line exhaust

Pressure Switch



- Part # PPS1-2C3-RHM (DIN 9.4mm connector)
- Part # PPS1-2C3-RWL (18" leads)
- Signal verification of line exhaust
- Field adjustable set point

Notes



Integrated Fittings

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Miniature Flow Control Valves G48
In-line Flow Control Valves G49-G50
Compact Metal Flow Control Valves G51
Check Valves G52

Compact Flow Control Valves	**FCC731** Meter Out  Page G47	**FCCB731** Bi-Directional Flow Control  Page G47	**FCKC731** Knobless Meter Out Flow Control  Page G47	**Miniature Flow Control Valves**	**FCM731** Meter Out Flow Control  Page G48
In-Line Flow Control Valves	**FC832** Flow Control  Page G49	**FCB832** Bi-directional Flow Control  Page G49	**337 Series** Micrometer Flow Control Valves  Page G50	**337 Series** Micrometer Flow Control Valves - BSPP  Page G50	**338 Series** Bi-directional Flow Control Valves  Page G50
338 Series Bi-directional Flow Control Valves - BSPP  Page G50	**3250 Series** Flow Control Valves  Page G50	**3250 Series** Flow Control Valves - BSPP  Page G50	**3250 Series** Flow Control Valves  Page G50	**3250 Series** Flow Control Valves - BSPP  Page G50	
Compact Metal Flow Control Valves	**3251 Series** Right Angle Flow Control Valves  Page G51	**Check Valves**	**339 Series** Check Valve  Page G52	**339 Series** Check Valve - BSPP  Page G52	**3047 Series** Check Valve  Page G52

Compact Flow Control Valves



Compact flow control regulators ensure excellent performance of flow and are perfectly suited for reduced spaces due to their small size. The sensitivity of the adjustment screw provides very precise air flow control and regulation. A locking nut guarantees stability of adjustment against vibration tampering of the flow setting.

Materials Of Construction

Body (Depending upon the Model):	• Glass reinforced nylon 6.6 • Brass
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Base:	Nickel-plated brass

Nomenclature

Example: FCC731-4-2	Attribute:
FC	Flow control
C	Compact
7	Right angle
3	Nylon body
1	Tube x Pipe
4	1/4 Tube O.D.
2	1/8 Pipe thread

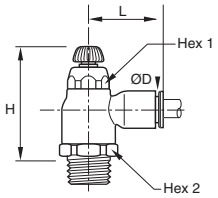
Applicable Tube

Tube O.D.	1/8, 5/32, 1/4, 3/8
Tube O.D. (mm)	4, 6, 8, 10, 12

Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air

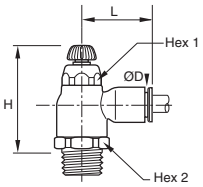




FCC731 Compact Meter Out

Part No.	Tube Size (In)	NPT	Hex 1 (In)	Hex 2 (In)	H Open	H Closed	L
FCC731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCC731-5/32-4	5/32	1/4	0.63	0.39	1.67	1.44	0.85
FCC731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCC731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85
FCC731-6-4	3/8	1/4	0.91	0.67	2.03	1.71	1.22
FCC731-6-6	3/8	3/8	0.91	0.67	2.03	1.71	1.22

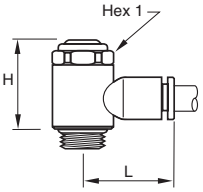




FCCB731 Compact Bi-Directional Flow Control

Part No.	Tube Size (In)	NPT	Hex 1 (In)	Hex 2 (In)	H Open	H Closed	L
FCCB731-5/32-2	5/32	1/8	0.63	0.39	1.67	1.44	0.85
FCCB731-4-2	1/4	1/8	0.63	0.39	1.67	1.44	0.85
FCCB731-4-4	1/4	1/4	0.63	0.39	1.67	1.44	0.85





FCKC731 Knobless Meter Out Flow Control

Part No.	Tube Size (In)	NPT / UNF	Hex 1 (mm)	H	L
FCKC731-2-0	1/8	10-32		0.69	0.65
FCKC731-2-2	1/8	1/8	13	0.79	0.75
FCKC731-5/32-0	5/32	10-32		0.69	0.65
FCKC731-5/32-2	5/32	1/8	13	0.79	0.75
FCKC731-4-0	1/4	10-32		0.69	0.77
FCKC731-4-2	1/4	1/8	13	0.79	0.85
FCKC731-4-4	1/4	1/4	17	1.04	0.89
FCKC731-5-2	5/16	1/8	13	0.79	1.02
FCKC731-5-4	5/16	1/4	17	1.04	1.06
FCKC731-6-4	3/8	1/4	17	1.04	1.14
FCKC731-6-6	3/8	3/8	20	1.14	1.36

Miniature Flow Control Valves



The miniature flow control regulator is especially adapted for all very small sized pneumatic applications (micro-pneumatic in particular). They are specifically designed for use with small bore cylinders (pancake / flat cylinders). Miniature flow control regulators are available in meter out, meter in and bi-directional versions.

Materials of Construction

Body (Depending upon the Model):	• Glass reinforced nylon 6.6 • Brass
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Base:	Nickel-plated brass

Nomenclature

Example: FCM731-4-2	Attribute:
FC	Flow control
M	Miniature
7	Right angle
3	Nylon body
1	Tube x pipe
4	1/4 Tube O.D.
2	1/8 Pipe thread

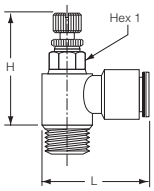
Applicable Tube

Tube O.D.	1/8, 5/32, 1/4
Tube O.D. (mm)	3, 4, 6, 8

Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air





FCM731 Miniature Meter Out Flow Control

Part No.	Tube Size (In)	NPT	Hex 1 mm	H Open	H Closed	L
FCM731-2-0	1/8	10-32	6	1.14	0.91	0.67
FCM731-2-2	1/8	1/8	7	1.41	1.26	0.69
FCM731-5/32-0	5/32	10-32	6	1.02	0.93	0.67
FCM731-5/32-2	5/32	1/8	7	1.16	1.06	0.71
FCM731-4-0	1/4	10-32	6	1.02	0.93	0.73
FCM731-4-2	1/4	1/8	7	1.16	1.06	0.75
FCM731-4-4	1/4	1/4	8	1.28	1.18	0.77

In-Line Flow Control Valves



In-line flow controls are unidirectional flow control valves. Intake air flows freely through the flow control; exhaust air is metered out through a specially designed adjustment screw. An arrow on the body of the valve indicates the direction of controlled flow. They can be easily added to existing circuitry. Simply splice it into the cylinder port line.

They can be used individually or they may be stacked together using two joining clips.

Materials of Construction

Body:	Glass reinforced nylon 6.6
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Tailpiece:	Nickel-plated brass

Nomenclature

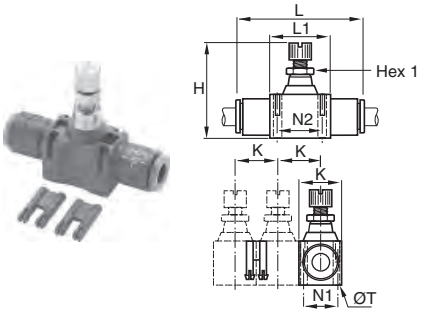
Example: FCMS731-5/32-2	Attribute:
FC	Flow control
M	Miniature
8	In-line
3	Nylon body
2	Tube x pipe
4	1/4 Tube O.D.

Applicable Tube

Tube O.D.	5/32, 1/4, 5/16, 3/8, 1/2
Tube O.D. (mm)	4, 6, 8, 10, 12

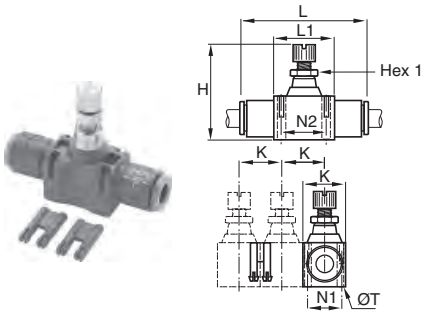
Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air



FC832 In-Line Flow Control

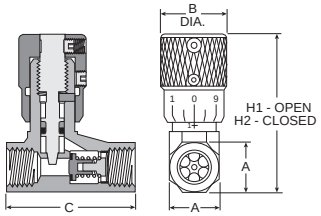
Part No.	Tube Size (In)	Hex 1 mm	H Closed	H Open	K	L	L1	N1	N2	T
FC832-5/32	5/32	5	1.15	1.31	0.47	1.52	0.59	0.31	0.43	0.09
FC832-4	1/4	8	1.54	1.74	0.66	2.00	0.90	0.43	0.66	0.12
FC832-5	5/16	11	1.73	1.97	0.73	2.38	1.02	0.49	0.79	0.13
FC832-6	3/8	14	2.03	2.38	0.94	2.87	1.29	0.62	1.01	1.60
FC832-8	1/2	14	2.24	2.63	1.09	3.35	1.37	0.78	1.07	0.16



FCB832 In-Line Bi-directional Flow Control

Part No.	Tube Size (In)	Hex 1 mm	H Closed	H Open	K	L	L1	N1	N2	T
FCB832-5/32	5/32	5	1.15	1.31	0.47	1.52	0.59	0.31	0.43	0.09
FCB832-4	1/4	8	1.54	1.74	0.66	2.00	0.90	0.43	0.66	0.12
FCB832-5	5/16	11	1.73	1.97	0.73	2.38	1.02	0.49	0.79	0.13

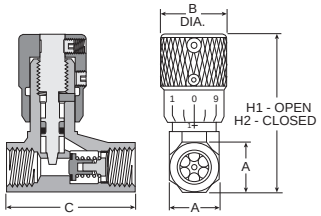




337 Micrometer Flow Control Valves

Part No.	Port Size	A	B	C	H1	H2
00337 1000	1/8"	9/16"	0.75	1.47	2.03	1.81
00337 1001	1/4"	11/16"	0.75	1.47	2.28	2.03
00337 1002	3/8"	7/8"	0.88	2.31	2.84	2.53
00337 1003	1/2"	1-3/16"	1.06	3.25	3.62	3.22
00337 1004	3/4"	1-3/8"	1.06	3.25	3.72	3.31

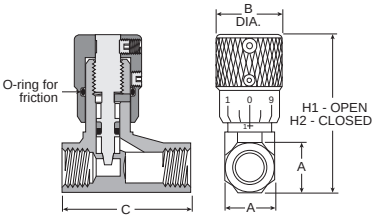




337 Micrometer Flow Control Valves - BSPP

Part No.	Port Size	A	B	C	H1	H2
00337G1000	1/8"	9/16"	0.75	1.47	2.03	1.81
00337G1001	1/4"	11/16"	0.75	1.47	2.28	2.03

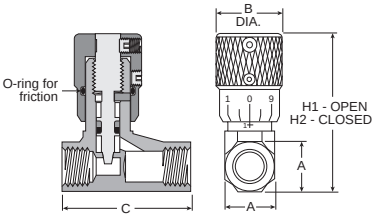




338 Bi-directional Flow Control Valves

Part No.	Port Size	A	B	C	H1	H2
00338 1100	1/8"	9/16"	0.75	1.47	2.03	1.81
00338 1101	1/4"	11/16"	0.75	1.47	2.28	2.03
00338 1102	3/8"	7/8"	0.88	2.31	2.84	2.53
00338 1103	1/2"	1-3/16"	1.06	3.25	3.62	3.22
00338 1104	3/4"	1-3/8"	1.06	3.25	3.72	3.31

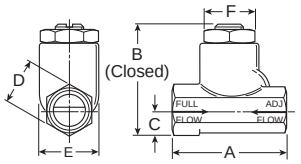




338 Bi-directional Flow Control Valves - BSPP

Part No.	Port Size	A	B	C	H1	H2
00338G1100	1/8"	9/16"	0.75	1.47	2.03	1.81
00338G1101	1/4"	11/16"	0.75	1.47	2.28	2.03

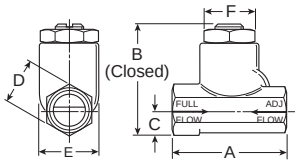




3250 Flow Control Valves

Part No.	Port Size	A	B	C	D	E	F
03250 0119	1/8"	1.75	1.56	0.37	0.62	0.81	0.68
03250 0219	1/4"	2.33	1.97	0.44	0.75	1.09	0.94
03250 0319	3/8"	2.66	2.44	0.56	1.00	1.38	1.19
03250 0419	1/2"	3.11	3.06	0.75	1.25	1.63	1.38
03250 0519	3/4"	3.56	3.69	0.88	1.50	2.00	1.75

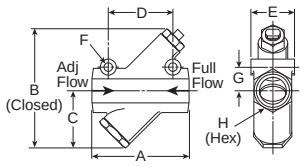




3250 Flow Control Valves - BSPP

Part No.	Port Size	A	B	C	D	E	F
3250G0119	1/8"	1.75	1.56	0.37	0.62	0.81	0.68
3250G0219	1/4"	2.33	1.97	0.44	0.75	1.09	0.94
3250G0319	3/8"	2.66	2.44	0.56	1.00	1.38	1.19
3250G0419	1/2"	3.11	3.06	0.75	1.25	1.63	1.38
3250G0519	3/4"	3.56	3.69	0.88	1.50	2.00	1.75

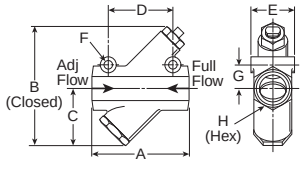




3250 Flow Control Valves

Part No.	Port Size	A	B	C	D	E	F	G	H
3250G1000	1"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
3250G1250	1-1/4"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
3250G1500	1-1/2"	5.88	8.00	3.75	3.50	2.50	.39	1.50	2.38





3250 Flow Control Valves - BSPP

Part No.	Port Size	A	B	C	D	E	F	G	H
03250 1000	1"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
03250 1250	1-1/4"	5.00	6.50	3.00	3.25	2.25	.39	1.31	2.13
03250 1500	1-1/2"	5.88	8.00	3.75	3.50	2.50	.39	1.50	2.38

Compact Metal Flow Control Valves



Metal flow control regulators are suited for use in severe conditions (temperatures, sparks, abrasion, etc). The screw and locking nut have been designed for easy manipulation, by hand. Adjustment can be made with a screwdriver and locking by use of a wrench.

Materials of Construction

Body:	Treated Brass
Gripping Ring:	Stainless Steel
Adjustment Screws	Nickel-plated brass
Locking Nut:	Nickel-plated brass
Tailpiece:	Nickel-plated brass

Nomenclature

Example: FCMS731-5/32-2	Attribute:
FC	Flow control
7	Right angle
0	Brass body
1	Tube x pipe
4	1/4 Tube O.D.
2	1/8 Pipe thread

Applicable Tube

Tube O.D.	1/8, 5/32, 1/4, 3/8
Tube O.D. (mm)	4, 6, 8, 10, 12, 14

Specifications

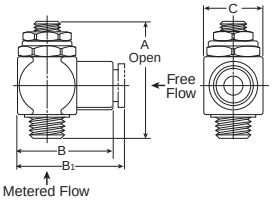
Pressure Range:	15 to 145 PSI
Temperature Ranges:	30° to 160°F
Working Fluid:	Compressed air



Shown with Threaded Inlet



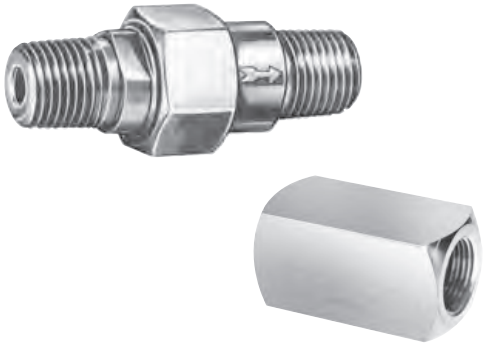
Shown with Prestolok Inlet Fitting



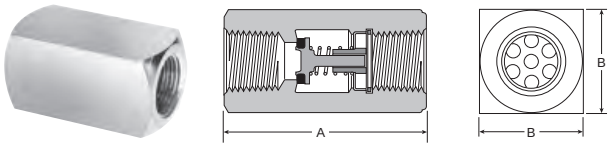
Model Number	Thread (NPT) Male	Thread (NPT) Female	A mm	B mm	C mm	Weight kg.	Cv Adjusted Flow	Cv Free Flow
03251 0125	1/8	1/8	44	30	17	0.9	0.26	0.20
03251 0250	1/4	1/4	51	36	23	2.0	0.75	0.68
03251 0375	3/8	3/8	58	43	27	3.2	0.84	0.72
03251 0500	1/2	1/2	68	53	32	5.0	1.64	1.41
With Prestolok Fittings								
03251 1215	1/8	5/32	44	30	17	0.9	0.19	0.16
03251 1225	1/8	1/4	44	30	17	0.9	0.28	0.22
03251 2525	1/4	1/4	51	36	23	2.0	0.51	0.44
03251 2538	1/4	3/8	51	36	23	2.0	0.62	0.53
03251 3838	3/8	3/8	58	43	27	3.2	0.78	0.65

CAUTION: If it is possible that the ambient temperature may fall below freezing, the medium must be moisture-free to prevent internal damage or unpredictable behavior.

Check Valves

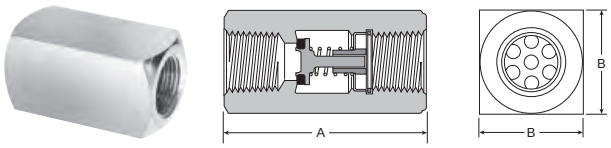


These in-line check valves allows air to pass in one direction while blocking flow in the other direction. Their extreme compactness and light weight make them suitable as a safety item in compressed air circuits. The body of the fitting contains an arrow to indicate the direction of flow.



339 Check Valve

Part No.	Port Size	A	B
00339 3000	1/8"	1.22	0.56
00339 3001	1/4"	1.34	0.69
00339 3002	3/8"	2.00	0.88
00339 3003	1/2"	2.56	1.19
00339 3004	3/4"	2.66	1.38



339 Check Valve - BSPP

Part No.	Port Size	A	B
00339G3000	1/8"	1.22	0.56
00339G3001	1/4"	1.34	0.69
00339G3002	3/8"	2.00	0.88
00339G3003	1/2"	2.56	1.19
00339G3004	3/4"	2.66	1.38

Materials of Construction

Body:	• 32PLCK: Nylon/nickel plated brass • 68PLCK: Nylon body with nickel-plated brass base • VC: Acetal
Gripping Ring:	Stainless Steel
O-Ring:	• Nitrile (32PLCK & 68PLCK) • EPDM (VC)

Nomenclature

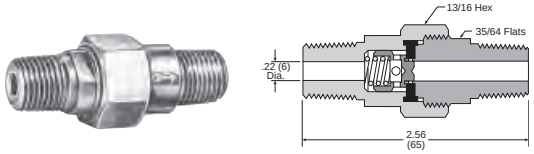
Example: W68PLCK-4-2	Attribute:	Example: A4VC4-MG	Attribute:
W	White thread sealant	**A**	Acetal
68	Tube x Pipe	**4**	1/4 Tube O.D.
PL	Prestolok	**VC**	Valve, Check
CK	Check Valve	**4**	1/4 Tube O.D.
4	1/4 Tube O.D.	**MG**	Metal gripping ring
2	1/8 Pipe thread		

Applicable Tube

Tube O.D.	• PLCK: 5/32, 1/4, 5/16, 3/8 • VC: 1/4, 5/16, 3/8
Tube O.D. (mm)	PLCK: 4, 6, 8, 10, 12

Specifications

Pressure Range:	15 to 145 PSI
Temperature Ranges:	34°F to 150°F
Cracking Pressure:	• PLCK: 7 PSI • VC: 1/3 PSI
Working Fluid:	Compressed air



3047 Check Valve

Model Number	Pipe Thread
03047 0099	1/4"



Accessories

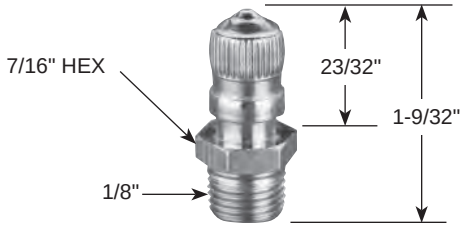
Tank Valves & Air Chucks....G54
EM Series Exhaust Mufflers....G55
Muffler / Flow Controls....G55
Breather Vents....G56
ES Series Silencer....G56
ASN Air Line Silencer....G57
P6M Air Line Silencer....G58
Muffler-Reclassifier ECS....G59
Automatic Drip Leg Drain & Relief Valve....G60
Relief Valves - Diaphragm Type....G61
Shuttle Valves & Quick Exhaust....G62-G64
AirGuard Protection System....G65-G66
Drain Valves....G67-G68
Safety Blow Guns....G69-G71

Tank Valves

For tanks, steel barrels, compressors and other pneumatic containers where a dependable automatic air valve is needed. Equipped with standard valve core and sealing cap. Maximum operating pressure is 185 PSIG. Temperature range is -40°F to 220°F.

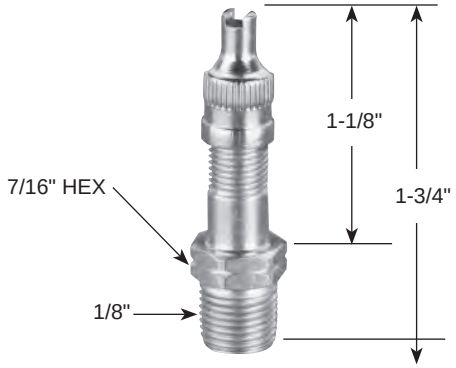
Model No. 09166 0060

Has a 1/8" pipe thread at bottom for minimum protrusion. N/P finish, dome shaped cap.
Packed 25 to a box.



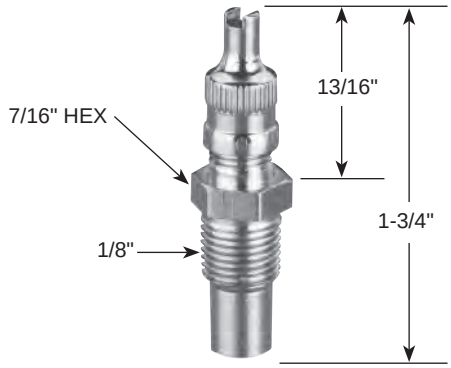
Model No. 00645 0060

A 1/8" pipe thread at bottom permits maximum protrusion. N/P finish, screwdriver type cap.
Packed 25 to a box.



Model No. 01468 0006

Has a 1/8" pipe thread part way up the stem which allows for minimum protrusion. N/P finish, has screwdriver type cap.
Packed 25 to a box.



Air Chucks

For regular airlines.

Model No. 05499 0000

Ball-foot air chuck, 1/4" female port.
Packed 10 to a box.



Model No. 06739 0000

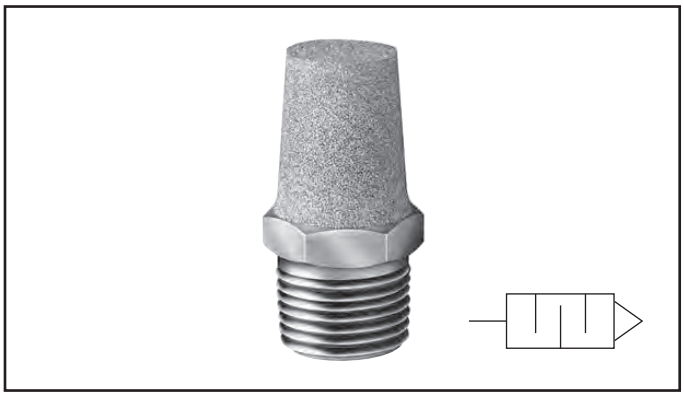
Ball-foot air chuck with clip. Fits standard valve mouth. Saves holding on by hand. Has 1/4" port for connecting to hose.
Packed 10 to a box.



G

Airline Accessories

EM Series – Sintered Bronze Muffler / Filters



General Description

Muffler / filters effectively reduce air exhaust noises to an industry accepted level with minimum flow restriction. They protect valves, impact wrenches, screw drivers and other air tools by preventing dirt and other foreign matter from entering the system. Non-corrosive. Can be cleaned with many common solvents.

Specifications

Maximum Operating Pressure ..... 250 PSIG (Air)

Operating Temperature ..... 0° to 300°F*

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Number	Pipe Thread	Overall Length	Hex Size
EM12	1/8"	1.00	7/16"
EM25	1/4"	1.32	9/16"
EM37	3/8"	1.54	11/16"
EM50	1/2"	1.85	7/8"
EM75	3/4"	2.29	1-1/6"
EM100	1"	2.91	1-5/16"
EM125	1-1/4"	3.25	1-11/16"
EM150	1-1/2"	3.69	2"

Muffler / Flow Controls



General Description

Muffler / flow controls provide an acceptable exhaust noise level and effectively meter exhaust. Installed in valve exhaust ports, they control cylinder piston speeds throughout a wide range. The adjusting screw cannot be accidently blown out, can be locked to maintain setting. Brass and bronze construction. Clean with commonly used solvents.

Specifications

Maximum Operating Pressure ..... 250 PSIG (Air)

Operating Temperature ..... 0° to 300°F*

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Number	Pipe Thread	Overall Length	Hex Size
04502 0002	1/8"	1.15	9/16"
04504 0004	1/4"	1.42	1/2"
04506 0060	3/8"	1.49	11/16"
04508 0080	1/2"	1.77	7/8"
04512 0012	3/4"	1.98	1-1/16"
04516 0016	1"	2.15	1-5/16"

Breather Vents



NOTE: Breather vents should not be used as exhaust mufflers.

General Description

These low silhouette versions of the muffler / filter are useful where space is a problem and / or to prevent contamination. Use for vacuum relief or pressure equalization in gear boxes, oil tanks, reservoirs, etc. Non-corrosive.

Specifications

Maximum Operating Pressure.....150 PSIG (Air)

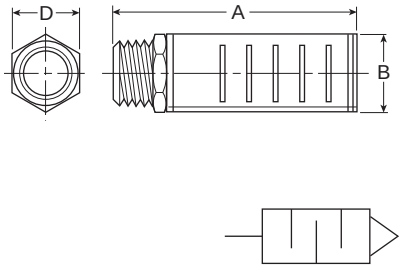
Operating Temperature ..... 0° to 300°F*

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Number	Pipe Thread	Overall Length	Hex Size
04702 0002	1/8"	0.44	7/16"
04704 0004	1/4"	0.63	9/16"
04706 0006	3/8"	0.75	11/16"
04708 0008	1/2"	0.88	7/8"
04712 0012	3/4"	1.00	1-1/6"
04716 0016	1"	1.31	1-5/16"
04720 0020	1-1/4"	1.41	1-11/16"
04724 0024	1-1/2"	1.50	2"

ES Series – Silencer





General Description

The silencer is designed to give superior performance in noise control with a minimum effect on air efficiency. “Trimline” design allows location in the tightest places without extra plumbing and fittings. Fits directly into the exhaust port of more than 90% of present commercial valves. Slotted body permits rapid discharge of air without undesirable back pressure. Unique nylon screen element resists dirt buildup or clogging.

Specifications

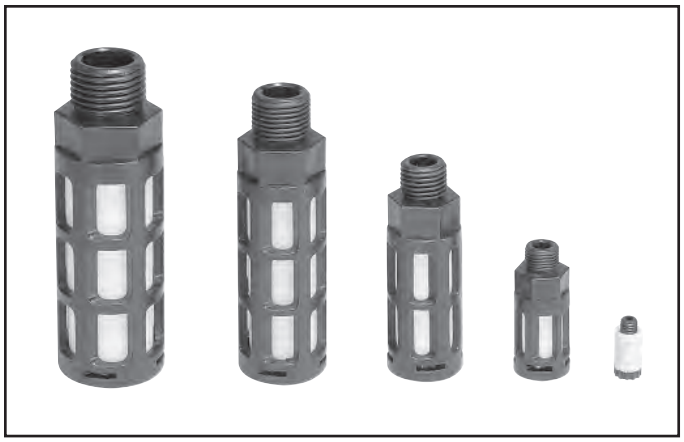
Maximum Operating Pressure..... 250 PSIG (Air)

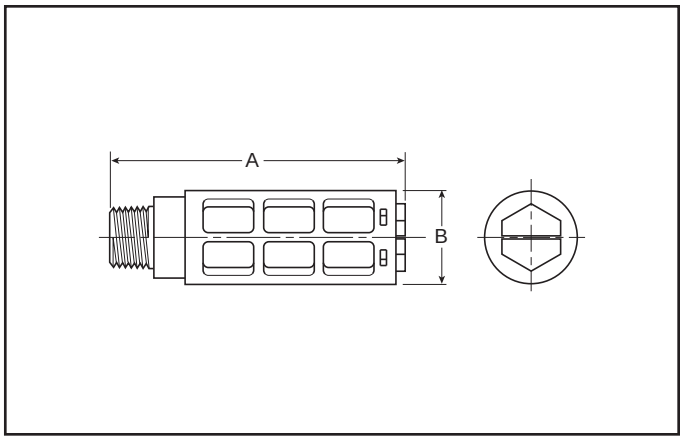
Operating Temperature .....0° to 300°F*

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Model Numbers		Pipe Thread	Flow SCFM @ 100 PSIG Inlet	Dimensions		
NPTF	BSPT (R)			A	B	D
ES12MC	**ESB12MC**	1/8"	115	1.85	0.81	0.63
ES25MC	**ESB25MC**	1/4"	129	1.85	0.81	0.63
ES37MC	**ESB37MC**	3/8"	219	3.31	1.26	1.00
ES50MC	**ESB50MC**	1/2"	549	3.31	1.26	1.00
ES75MC	**ESB75MC**	3/4"	893	4.56	2.01	1.62
ES100MC	**ESB100MC**	1"	1,013	4.56	2.01	1.62
ES125MC	**ESB125MC**	1-1/4"	1,486	5.69	2.88	—
ES150MC	**ESB150MC**	1-1/2"	1,580	5.69	2.88	—

ASN Series – Air Line Silencer





Features

- Compact
- Lightweight
- Easy to Install
- Excellent Noise Reduction
- Protects Components from Contamination
- NPT and BSPT Threads Available

Part Number		Thread Size	A (mm)	B (mm)	Maximum Flow (SCFM) 100 PSIG Inlet	Sound Pressure Level (dBA)	
NPT	BSPT					20 PSIG Inlet	100 PSIG Inlet
AS-5		M5	0.43 (11)	0.32 (8)	15	69	79
ASN-6	**AS-6**	1/8"	1.57 (40)	0.63 (16)	51	69	81
ASN-8	**AS-8**	1/4"	2.56 (65)	0.83 (21)	124	67	84
ASN-10	**AS-10**	3/8"	3.35 (85)	0.98 (25)	247	83	98
ASN-15	**AS-15**	1/2"	3.74 (95)	1.18 (30)	370	69	96

Application

The plastic silencer is designed to give excellent noise reduction with a minimum effect on air efficiency. The “Trimline” design allows for locating the silencer in the tightest places without extra plumbing or fittings. Fits directly into the exhaust port of most commercial valves. Open surface area of element allows for rapid discharge of air without undesirable back pressure.

Specifications

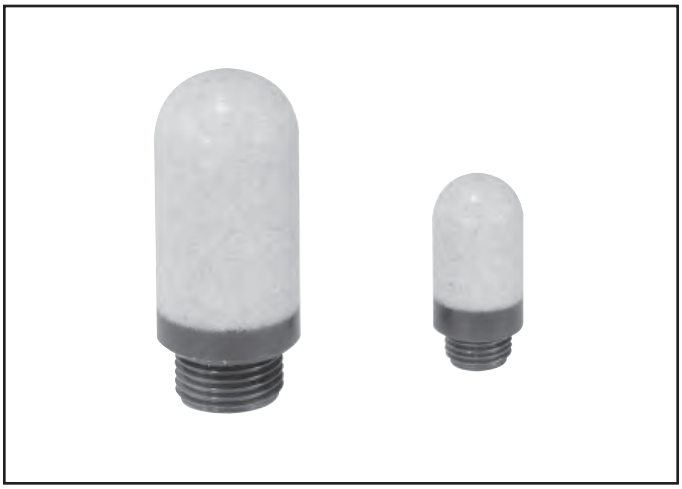
Pressure Rating.....0 to 150 PSIG (0 to 10 bar, 0 to 1034 kPa)

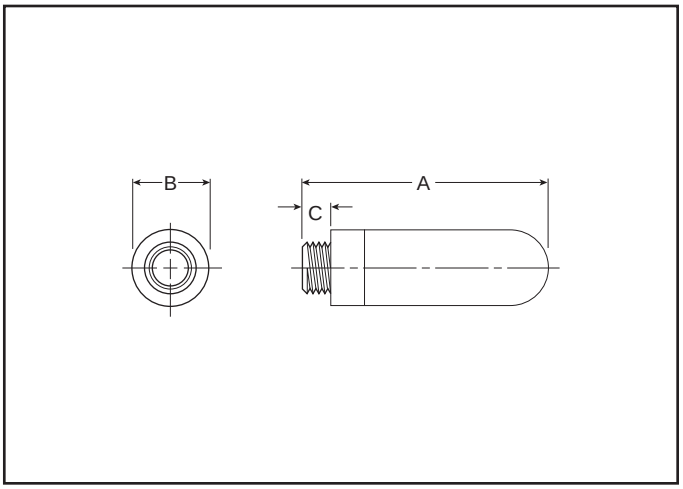
Temperature Rating .....14°F to 140°F (-10°C to 60°C)

Body .....Acetal (Plastic)

Element .....Polyethylene

P6M Series – Air Line Silencer





Features

- All Plastic Ultra Light Weight Versions
- High Noise Level Reduction
- Low Back Pressure Generation

Application

The plastic silencer is designed to give excellent noise reduction with a minimum effect on air efficiency. The “Trimline” design allows for locating the silencer in the tightest places without extra plumbing or fittings. Fits directly into the exhaust port of most commercial valves. Open surface area of element allows for rapid discharge of air without undesirable back pressure.

Part Number	Port Thread	A	Diameter B	C	Weight (grams)
P6M-PAC5	M5	0.91 (23)	0.26 (6,5)	0.16 (4)	0.01
P6M-PAB1	G1/8	1.14 (29)	0.55 (14)	0.24 (6)	0.02
P6M-PAB2	G1/4	1.34 (34)	0.67 (17)	0.24 (6)	0.04
P6M-PAB3	G3/8	2.36 (60)	0.98 (25)	0.35 (9)	0.06
P6M-PAB4	G1/2	2.52 (64)	0.98 (25)	0.43 (11)	0.10
P6M-PAB6	G3/4	5.51 (140)	1.50 (38)	0.55 (14)	0.50
P6M-PAB8	G1	6.30 (160)	1.89 (48)	0.79 (20)	0.62

Specifications

Pressure Rating.....0 to 246 PSIG
(0 to 17 bar, 0 to 1700 kPa)

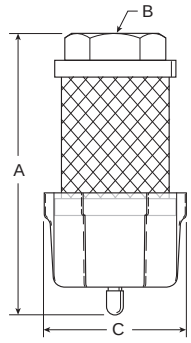
Temperature Rating

Plastic .....14°F to 176 °F (-10°C to 80°C)
Metal.....14°F to 165 °F (-10°C to 74°C)

Efficiency 92%

ECS Series – Air Line Muffler / Reclassifier

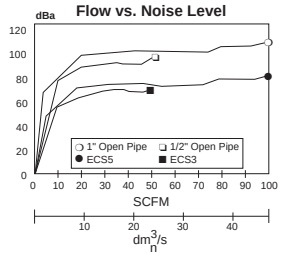


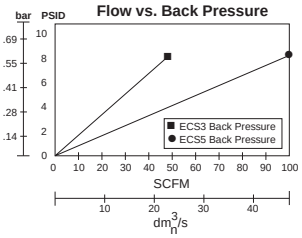


Dimensions:

Model	A	B	C
ECS3	5.30 (135 mm)	1/2" NPT	2.57 (65 mm)
ECS5	7.30 (185mm)	1" NPT	2.57 (65mm)

Performance Characteristics





Features

The ECS (Muffler-Reclassifier) eliminates unwanted oil mist and reduces exhaust noise from pneumatic valves, cylinders and air motors.

- 99.97% Oil Removal Efficiencies
- 25 dBA Noise Attenuation
- 1/2" NPT and 1" NPT
- Disposable Units
- Continuous or Plugged Drain Option
- Metal Retained Construction
- Fast Exhaust Time

Improve Overall Plant Environment

Exhaust oil mist and noise pollution have a direct impact on worker productivity.

Oil aerosol mist from lubricators and compressors is pervasive and enters the industrial plant environment through the exhaust ports of valves, cylinders and air motors. This rapidly expanding exhaust also produces sudden and excessive noise.

The ECS (Muffler-Reclassifier) is 99.97% efficient at removing the oil aerosols. The ECS also acts as a silencer to lower the dBA levels below O.S.H.A. requirements.

The result is a cleaner, quieter environment which equates to greater work productivity and safety.

Operation

Compressor oils and lubricating oils are exhausted from valves, cylinders and air motors into the ECS. Oil aerosols are “coalesced” into larger droplets and gravity pulls them into the attached drain sump. The sump can then be drained manually or by using a 1/4" ID plastic tube drain. The air flowing into the ECS is also muffled or silenced as it enters the inside of the ECS and passes through the filter media into the atmosphere.

Proven Technology

The ECS units are constructed from the same materials that go into our oil removal coalescing filter elements.

The seamless design insures media uniformity and strength. This proven technology provides high coalescing efficiency with low pressure drop.

The filter media is supported by cylindrical perforated steel retainers both inside and out. These retainers, fully plated for excellent corrosion resistance, give the ECS units high rupture strength in either flow direction. These filters can also be used as high efficiency inlet or bypass filters for vacuum pumps, or breather elements to protect the air above critical process liquids.

ECS3 / ECS5

The ECS solves two problems inherent in compressed air exhaust from valves, cylinders and air motors - oil mist removal and noise abatement.

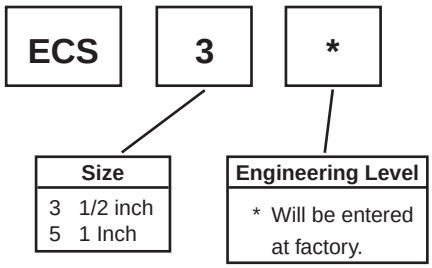
The ECS will improve your industrial plant environment, thereby improving worker productivity.

Specifications

Maximum Operating Temperature .....125°F (52°C)

Maximum Line Pressure..... 100 PSIG (6.8 bar)

Ordering Information

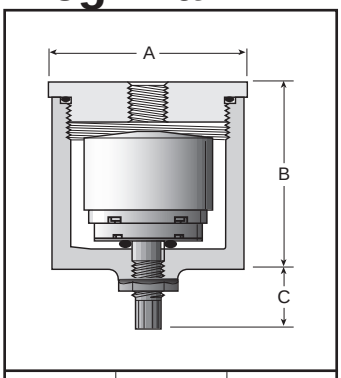


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Airline Accessories

Automatic Drip Leg Drain





A	B	C
2.50	2.37	0.87
64 mm	60 mm	22 mm

Features

- Auto Drain Ported 1/8" to Pipe Away Liquid.
- Drain has Manual Override
- Easily Serviced without Tool
- 20-250 PSIG Range
- Compact Size

Specifications

Housing & Cap..... Aluminum

Port Threads.....1/4" - 1/2" Top
1/8" Drain

Pressure and Temperature Ratings:

Metal Bowl.....20 to 250 PSIG (0 to 17.2 bar)
32°F to 175°F (0°C to 80°C)

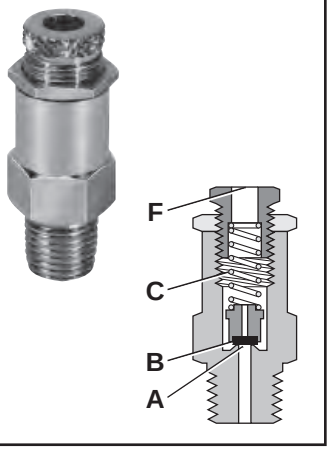
Seals.....Buna N

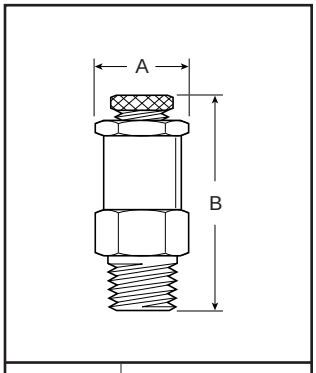
Ordering Information

Consists of Drip Leg Drain Housing WITH Auto Drain.

Model No.	Size
06D1NA	1/4"
06D3NA	1/2"

Relief Valve





A	B
0.75 Hex	1.88 - 2.25
19 mm	47.8 - 57.2 mm

Features

- Large Relief Capacity (70.39 SCFM @ 150 PSI when fully opened) in a Compact Size
- Lightweight Aluminum Construction with Resilient Seat

Application

The RV01A1N Pop Off Relief Valve is designed to protect against excessive pressure buildup in a pneumatic circuit or system.

Operation*

With the relief valve mounted in a reservoir or system, the force of system pressure at **(A)** is offset by the force of spring **(C)** acting on poppet seat **(B)**. At pressures lower than the setting, the poppet seat **(B)** is held against the body at **(A)** effecting a seal. As pressure approaches set point, the poppet begins to vent until set point is reached, at which time the poppet seat **(B)** lifts off the body at **(A)** allowing the excess pressure to vent to atmosphere at **(F)**. When the excess pressure has been vented, the spring **(C)** acts on the poppet seat **(B)** forcing it to seat on the body at **(A)**, sealing off the flow of air.

Specification

Body & Adjusting Screw ..... Aluminum

Locking Nut ..... Steel

Seat..... Nitrile

Spring ..... Steel

Poppet .....Plastic

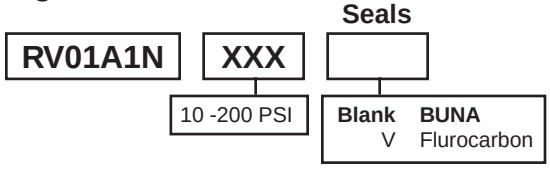
Operating Temperature ..... 32°F to 200°F (0°C to 93°C)

Port Threads.....1/4 Inch Male

Relief Range .....10 to 200 PSIG (.7 to 14 bar)
with standard spring.

* Ref: 1RV100B Installation & Service Instructions

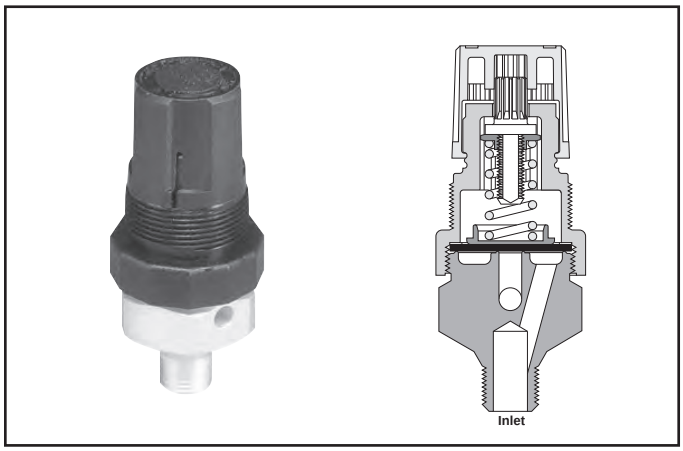
Ordering Information



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Airline Accessories

130 Relief Valve



Features

- Compact, Sensitive Diaphragm-type Relief Valve
- Push-pull, Locking Knob
- Knob and Top Work the Same as a Miniature Regulator
- 130 has Lightweight Aluminum Construction
- 134 has a brass body, captured exhaust and is an Inline Type with 3 Inlet Ports and 1 Outlet Port

Applications

- Designed to Protect Against Excessive Pressure Buildup in a Pneumatic Circuit or System
- For Use where Gradual Proportional Relief is Required

Operation

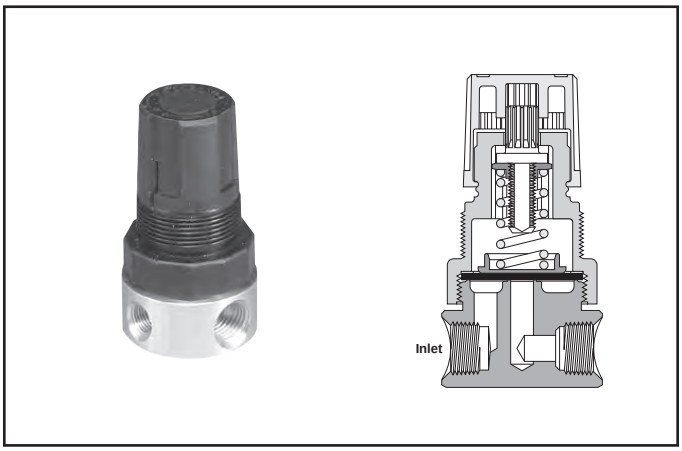
- Turn relief valve knob clockwise for maximum pressure.
- Set pressure going into relief valve at desired pressure.
- Turn relief valve knob counter-clockwise until exhaust starts to bleed.
- Turn relief valve knob clockwise until exhaust stops bleeding. Push to lock knob.

Ordering Information

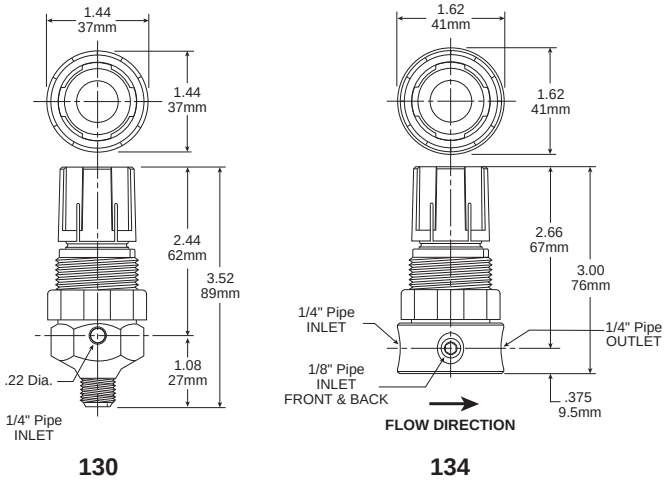
Relief Valve	Spring Range			
	0-15 PSIG	0-25 PSIG	0-50 PSIG	0-100 PSIG
130	130-02AA 130-02AAP*	130-02A 130-02AP*	130-02B 130-02BP*	130-02C 130-02CP*
134	134-02AA 134-02AAP*	134-02A 134-02AP*	134-02B 134-02BP*	134-02C 134-02CP*

* Panel mount nut included.

134 Relief Valve



Dimensions



Relief Valve Kits

Bonnet Assembly Kit PCKR364Y
Panel Mount Nut PR05X51

Specifications

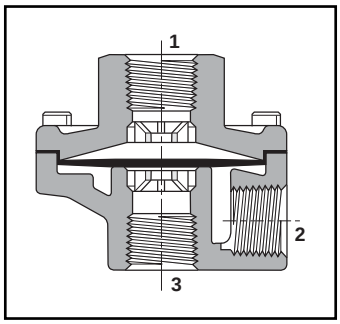
Relief Range ..... 0 to 100 PSIG (0 to 6.9 bar)
Maximum Inlet Pressure ..... 300 PSIG (20.7 bar)
Operating Temperature .....40°F to 120°F (4°C to 49°C)
Port Threads:
130.....1/4" Pipe Male Only
134..... Inlet Port – Two 1/8" & One 1/4" Pipe
Outlet Port – 1/4" Pipe

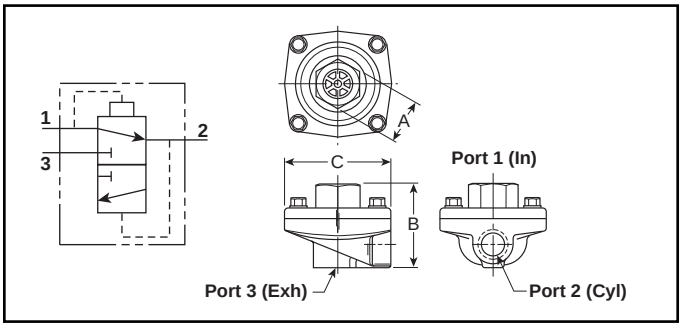
Materials of Construction

Adjusting Knob .....Polypropylene
Adjusting Screw ..... Zinc-plated Steel
Body .....Aluminum (130); Brass (134)
Diaphragm / Disc ..... Buna-N
Nut ..... Chromated Steel
Spring Cage.....Acetal
Spring..... Zinc-plated Steel

Quick Exhaust & Shuttle Valves







General Information

Quick exhaust valves provide rapid exhaust of control air when placed between control valve and actuator. They can also be used as shuttle valves. Diaphragm materials are available in urethane, Nitrile, Fluorocarbon, and PTFE to meet a wide variety of operating conditions.

Valve Specifications

Operating Pressure (Air)

Maximum:

150 PSIG

200 PSIG for Model No. 0R37TB (PTFE diaphragm)

Minimum:

3 PSIG

50 PSIG for Model No. 0R37TB (PTFE diaphragm)

Operating Temperature:

Urethane: 0°F to 180°F* (-18°C to 80°C)

Nitrile: 0°F to 180°F* (-18°C to 80°C)

Fluorocarbon: 0°F to 400°F* (-18°C to 205°C)

PTFE: 0°F to 500°F* (-18°C to 260°C)

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Component Materials

Body Material.....Die cast aluminum

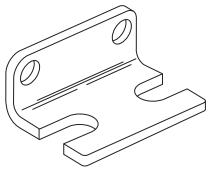
Static Seals..... Nitrile standard with urethane (Others see below)

Diaphragm .....Standard – Urethane
Optional – Fluorocarbon, PTFE, or Nitrile (Depending on size)

Mounting Bracket Kit – No. 036408100

(Including body screws)

For “0R12” and “0R25” sizes with 7/8" “A” Dimension.

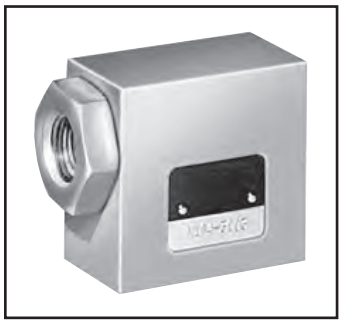


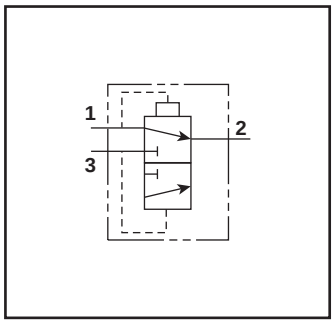
Model Selection, Performance Data and Dimensions

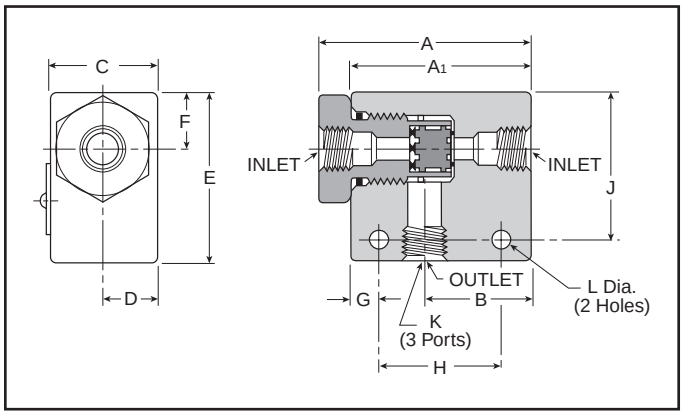
Port			Flow	Model Number		A	B	C	Service
1	2	3	(SCFM†)	NPTF	BSPP “G”				Kit No.
STANDARD URETHANE DIAPHRAGMS (Nitrile static seals)									
1/4"	1/4"	3/8"	150	**0R25NB**	0RB25NB	1" Hex	2.06	2.44	033400105
	3/8"	3/8"	240	**0R25PB**	—	1" Hex	2.06	2.44	033400105
3/8"	3/8"	3/8"	240	**0R37B**	0RB37B	1" Hex	2.06	2.44	033400105
1/2"	1/2"	1/2"	450	**0R50B**	0RB50B	1-1/2" Hex	2.88	3.38	034750109
3/4"	3/4"	3/4"	550	**0R75B**	0RB75B	1-1/2" Hex	2.88	3.38	034750109
NITRILE DIAPHRAGMS (Nitrile static seals)									
1/8"	1/8"	1/8"	70	**0R12B**	0RB12B	7/8" Sq.	1.75	1.88	036408000
	1/8"	1/4"	70	**0R12NB**	0RB12NB	7/8" Sq.	1.75	1.88	036408000
1/4"	1/4"	1/4"	90	**0R25B**	0RB25B	7/8" Sq.	1.75	1.88	036408000
	1/4"	3/8"	90	0R25NFB	0RB25NFB	1" Hex	2.06	2.44	033408000
3/8"	3/8"	3/8"	240	0R37FB	0RB37FB	1" Hex	2.06	2.44	033408000
3/4"	3/4"	3/4"	550	0R75FB	0RB75FB	1-1/2" Hex	2.88	3.38	034759000
FLUOROCARBON DIAPHRAGMS for extended temperature operation (Fluorocarbon static seals)									
1/8"	1/8"	1/8"	70	0R12VB	0RB12VB	7/8" Sq.	1.75	1.88	036508000
	1/8"	1/4"	70	0R12NVB	0RB12NVB	7/8" Sq.	1.75	1.88	036508000
1/4"	1/4"	1/4"	90	0R25VB	0RB25VB	7/8" Sq.	1.75	1.88	036508000
3/8"	3/8"	3/8"	240	0R37VB	0RB37VB	1" Hex	2.06	2.44	033400319
1/2"	1/2"	1/2"	450	0R50VB	0RB50VB	1-1/2" Hex	2.88	3.38	034750120
3/4"	3/4"	3/4"	550	0R75VB	0RB75VB	1-1/2" Hex	2.88	3.38	034750120
PTFE DIAPHRAGMS for higher pressure and temperature (Fibre static seals)									
3/8"	3/8"	3/8"	240	0R37TB	0RB37TB	1" Hex	2.06	2.44	033400504

† At 100 PSIG inlet pressure with full pressure drop. **BOLD ITEMS ARE MOST POPULAR.**

Shuttle Valve







General Information

Shuttle valves determine a single pneumatic output from two separate inputs. If pressure is applied to both ports simultaneously, the valve will select the port with the higher pressure.

Valve Specifications

Maximum Operating Pressure..... 200 PSIG Maximum
3 PSIG Minimum: Differential Pressure

Operating Temperature ..... 0° to 160°F*

* Ambient temperatures below freezing require moisture-free air. Ambient temperatures below freezing and above 180° require lubricants especially selected for suitability at these temperatures. Pneumatic valves should be used with filtered and lubricated air.

Component Materials

Body Material..... Aluminum
Internal Components..... Aluminum
Seals..... Nitrile

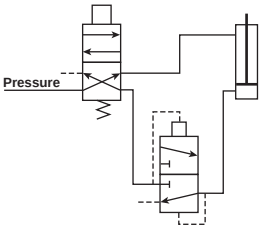
Model Selection and Dimensions

Model Number	Port Size	Dimensions											
		A	A1	B	C	D	E	F	G	H	J	K	L
N164 1001	1/8"	N/A	1.62	0.81	0.62	0.31	1.00	0.281	0.312	1.00	0.75	1/8 - 27	0.219
N164 2003	1/4"	2.50	2.12	1.25	1.25	0.62	2.00	0.67	0.265	1.25	1.35	1/4 - 18	0.219
N164 3003	3/8"	2.50	2.12	1.25	1.25	0.62	2.00	0.67	0.265	1.25	1.35	3/8 - 16	0.219

Performance Data – Flow

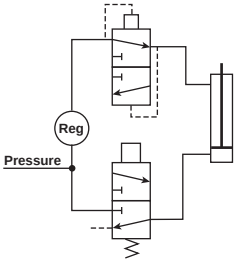
Model Number	Port Size	Flow (Cv)
N164 1001	1/8"	0.32
N164 2003	1/4"	1.65
N164 3003	3/8"	2.02

Typical "Quick Exhaust Valve" Applications



Rapid Retraction – Double Acting Cylinder

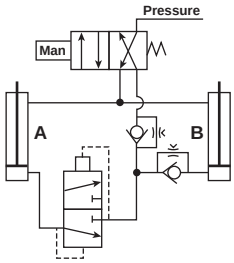
In this circuit, air is exhausted through a Quick Exhaust Valve that is **close coupled** to the cap end of the cylinder. Because the Quick Exhaust Valve has a greater exhaust capacity than the four-way Control Valve, increased cylinder speed can be accomplished with a smaller and less expensive control valve.



Dual Pressure Actuation of Double Acting Cylinder

This circuit utilizes a Quick Exhaust Valve and a three-way Control Valve to permit rapid extension of the cylinder at a high pressure. nder life.

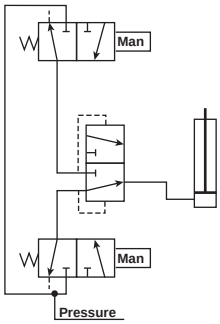
NOTE: Line pressure must be 3 or 4 times greater than rod end pressure. Effective working pressure is the differential between the cap and rod end.



Bi-Directional Control of Two Double Acting Cylinders

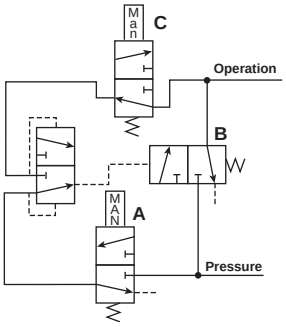
This circuit provides maximum control with a minimum of valving. A large four-way Control Valve is not needed to permit the rapid retraction of Cylinder A, as the Quick Exhaust Valve performs this function. The extension of Cylinders A and B and retraction of Cylinder B are controlled by Speed Control Valves.

Typical "Shuttle Valve" Applications



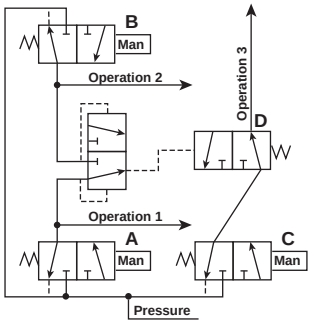
"OR" Circuit

The most common application of the Shuttle Valve is the "OR" Circuit. Here a cylinder or other work device can be actuated by either control valve. The valves can be manually or electrically actuated and located in any position.



Memory Circuit

This circuit enables continuous operation once initiated. Pressure is delivered to the circuit when Valve A is actuated. This allows pressure to pass through the shuttle valve actuating Valve B. Pressure then flows through Valve B and also the other side of the shuttle valve which holds Valve B open for continuous operation. To unlock the circuit, Valve C must be opened to exhaust the circuit and allow Valve B to return to its normally closed position.



Interlock

This circuit prevents the occurrence of a specific operation while one or another operation takes place. When either Valve A or B is actuated to perform operation 1 or 2, Valve D is shifted to the closed position and prevents operation 3 from occurring.

AirGuard Protection System

Airfuse - protection of personnel, machinery and equipment



Protect your most important assets: your employees and their equipment!

The AirGuard offers simple but efficient protection of a broken compressed-air hose. The air supply is immediately shut off by the AirGuard, should the volume of air exceed a set value. This “value” is factory preset and is set to allow normal air consumption when using air tools.

Should the air consumption exceeds the set value, e.g. the air line is severed, then the internal piston instantly shuts off the main flow. An integral bleed hole allows some air to flow though. This enables the line pressure to automatically reset the AirGuard once the main line break is repaired.

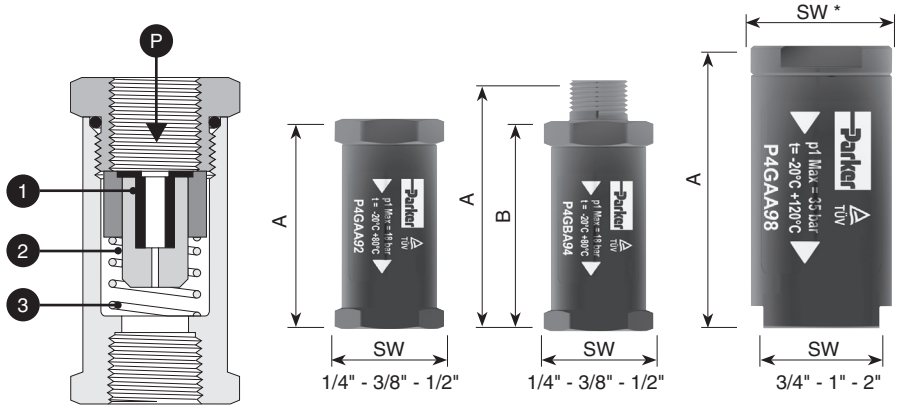
Product Features:

- Maintenance Friendly: Repair possible while plant is still operating
- Economic: Competitive pricing
- Complies with EU Standard: EN 983 - § 5.3.4.3.2.
- Reliable and Tamperproof: No adjustment necessary
- Complies with ISO Standard: 4414 - § 5.4.5.11.1
- Complies with MSHA Regulation: 30CFR 56.13021, 57.13021 and 57.1730
- Lightweight: Compact size.
- Compatible with all Pneumatic Systems
- Can be used as a Flow Blocker
- TUV Approval: No. 01-02-0145
- EU Registered Utility: Model No. 0025 73 525
- Complies with OSHA Regulation Standard: 29CFR 1926.302 (Partial)

AirGuard Protection System

Function:

(P) is the inlet. Air passes the piston (1) and continues through the seat (3). The air flow, passing the piston, is slowed down by means of length wise grooves on the outer side of the piston. If the flow is too high, the air cannot pass the piston quickly enough, and the piston is forced against the spring (2) and towards the seat. The maximum flow is shown in the graph. If the value indicated is exceeded e.g. if the hose suddenly breaks - the air supply is automatically shut of. An integral bleed hole allows some air to flow though. This enables the line pressure to automatically reset the AirGuard once the main line break is repaired.



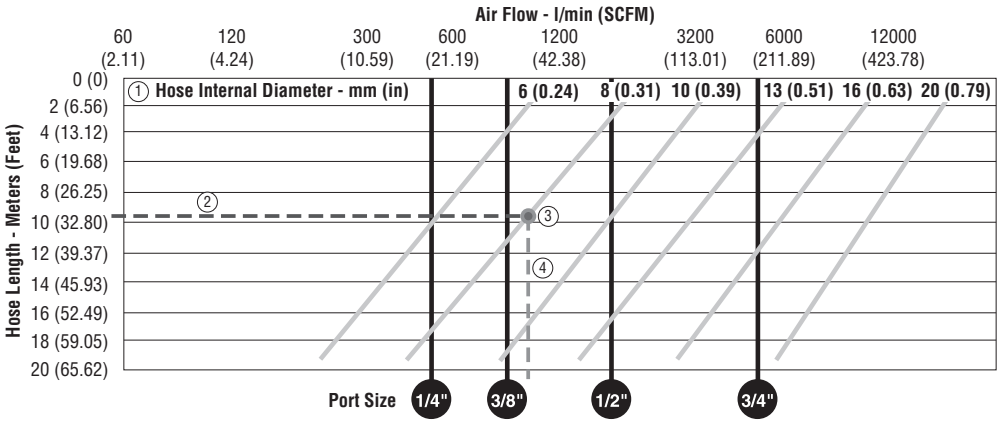
Weight and Dimensions metric (imperial)

Thread Connection	Dimensions mm (inch)			Weight g (oz.)	Max. Inlet Pressure	Temp. Range	Material	P1 Inlet Thread	P2 Outlet Thread	Part Number NPT	Part Number BSP
	A	B	SW								
1/4"	48 (1.89)	-	22 (.87)	30 (1.06)	(18 bar) 255 PSIG	-20°C to 80°C (-4°F to 176°F)	Housing: Aluminum Piston: Polyacetal	Female	Female	**P4GAA92**	**P4GAA12***
1/4"	58 (2.28)	49 (1.93)	22 (.87)	36 (1.27)				Male	Female	**P4GBA92**	**P4GBA12***
3/8"	59 (2.32)	-	28 (1.10)	58 (2.05)				Female	Female	**P4GAA93**	**P4GAA13***
3/8"	71 (2.80)	59 (2.32)	28 (1.10)	62 (2.19)				Male	Female	**P4GBA93**	**P4GBA13***
1/2"	65 (2.56)	-	31 (1.22)	78 (2.75)				Female	Female	**P4GAA94**	**P4GAA14***
1/2"	80 (3.15)	65 (2.56)	31 (1.22)	85 (3.00)				Male	Female	**P4GBA94**	**P4GBA14***
3/4"	76 (2.99)	-	30/36* (1.18/1.42*)	107 (3.77)		-20°C to 120°C (-4°F to 248°F)	Housing: Aluminum Piston: Aluminum	Female	Female	**P4GAA96**	**P4GAA16***
1"	100 (3.94)	-	41/50* (1.61/1.97*)	300 (10.58)	(35 bar) 500 PSIG			Female	Female	**P4GAA98**	**P4GAA18***
2"	130 (5.12)	-	70/80* (2.76/3.15*)	775 (27.34)				Female	Female	**P4GAA9C**	**P4GAA1C***

*** Note: BSP Threads Available Upon Request.**

How to Select the Optimal Size of an AirGuard

Information based on an inlet pressure of 7 bar (100 PSIG)



a. Determine the internal diameter of the hose, tube or pipe being used ① (see specification Hose-internal Diameter in yellow box, yellow diagonal line).
b. Determine the length of the hose, tube or pipe ② (Hose length in meters).
c. Define the intersection of point a and b, and mark a vertical line downwards. ③ - ④ (In the example the red/green dot and the green dashed line).
d. The next vertical black line, left of the intersection line ④ (example: green dashed) tells the correct AirGuard size (in inches).
e. Important: Every flow value to the right of the respective vertical line (black) would activate the AirGuard in case of a bursting hose, pipe or tube. All AirGuard sizes right of the intersection line (green) are too big and will not close up.
f. Example: Which air fuse should be used for a hose, pipe or tube bearing 8 mm inner diameter and 10 meters of length - follow the 10 meter line (red ②) to the intersection point (red/green dot ③). Now the next left black line marks the correct size.
g. Result: The correct size in our example is the AirGuard 3/8"

Automatic Electrical Drain Valve
WDV3



WDV3-G

Specifications

Operating Pressure ..... 230 PSIG (15,9 bar)

Ambient Operating Range Temperature ..... 34° to 130°F (1.1° to 54°C)

Coil Insulation
Class H ..... 340°F (171.1°C)

Voltages
AC 115, 230/50-60

Timer:
Open Time ..... 5 to 10 sec., Adjustable
Cycle Time ..... 5 sec. to 45 min., Adjustable

Maximum Current Rating ..... 4mA Max.

Port Size ..... 1/4, 3/8, 1/2 NPT

Weight ..... 1.8 lb. (0.8 kg)

The WDV3 Electrical Drain is designed to remove condensate from compressors, compressed air dryers and receivers up to any size, type or manufacturer.

The WDV3 offers true installation simplicity and it is recognized as the most reliable and best performing condensate drain worldwide. The large orifice in the direct acting valve, combined with its sophisticated timer module ensure many years of trouble-free draining of condensate.

Materials of Construction

Valve Body ..... Brass / Stainless Steel

Enclosure (NEMA 4) ..... ABS Plastic

Internal Parts ..... Brass / Stainless Steel

Sealing Material ..... FPM (Fluorocarbon)

Benefits

- Does Not Air-Lock During Operation
- Compressed Air Systems Up to Any Size
- Also Available In Stainless Steel
- The Direct Acting Valve Is Serviceable
- Suitable for All Types of Compressors
- TEST (Micro-Switch) Feature
- High Time Cycle Accuracy
- Large (4.5mm) Valve Orifice

Ordering Information

	Family	Voltage	Pipe Size	Valve Material	Pressure
WDV3 –	G	1	2	B	L

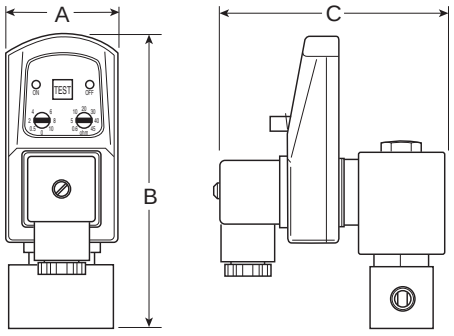
Family
G General

Voltage
1 120V AC
2 230V AC
3* 24VDC
* Available in 1/2" Only

Pipe Size
2 1/4" General
3 3/8" General
4 1/2" General

Valve Material
B Brass

Pressure
L 230 PSIG (16 bar)



Model Selection and Dimensions

Model Number	A	B	C
WDV3-G**BL	1.73 (44)	4.53 (115)	3.46 (88)

G

Airline Accessories

Zero Air Loss Condensate Drain – ED



Zero air loss condensate drains are designed for economical removal of unwanted water, oil emulsions, and other liquids. These drains will only open when liquid is present and will not allow any compressed air to escape from the system.

Specifications

Operating Pressure..... 232 PSIG (16 bar)

Ambient Operating Range Temperature .....35° to 140°F (1.6° to 60°C)

Voltages

NPT.....115/50-60Hz Standard

BSPP ..... 230/50-60Hz & 24VDC Optional

Zero Air Loss Condensate Drains

Port Size (NPT)	Compressor Aftercooler (SCFM)*	Capacity Refrigeration Dryer (SCFM)**	Filter (SCFM)	Drain Capacity Per Day (Gal/Liter)	Model Number	Service Kit †
3/8	—	—	424	6 (22.7)	**ED3002N115-K**	**SKED3000N115**
1 x 1/2, 1/8	141	282	1,413	13 (49.2)	**ED3004N115-K**	**SKED3000N115**
2 x 1/2, 1/8	247	494	2,472	23 (87.1)	**ED3007N115-K**	**SKED3000N115**
2 x 1/2, 1/8	1,059	2,119	10,594	100 (378.5)	**ED3030N115-K**	**SKED3000N115**
2 x 1/2, 1/8	3,532	7,063	35,315	330 (1,249.2)	**ED3100N115-K**	**SKED3000N115**

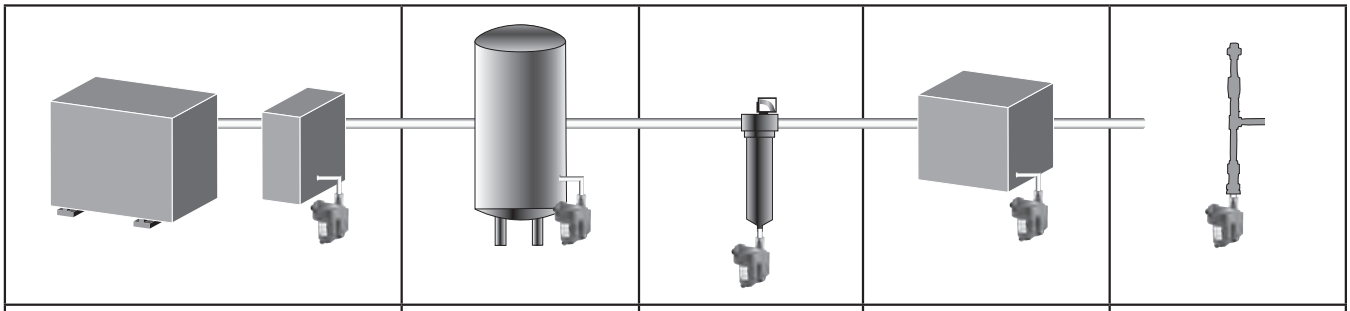
* Based on 100 PSI working pressure, air compressor inlet at 77°F (25°C) at 60% RH, air discharge temperature od 95°F (35°C) following the aftercooler, pressure dewpoint of 37°F (2.8°C) after the refrigerated dryer.

** Condensate from aftercooler or refrigerated dryer to be drained upstream – only for residual oil content or small quantities of condensate.

† ____

Note: A 6 ft. line cord will be included with each drain.

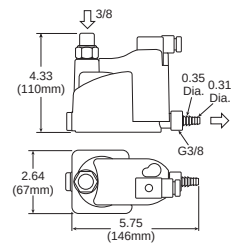
Where are condensate drains used?



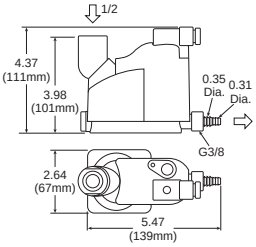
Compressor with Aftercooler	Receiver Tank	Filter	Air Dryer	Drip Leg
Removes the condensate that is collected after the air cools in the aftercooler	Removes the condensate that is collected when the air cools inside of the receiver tank	Removes the condensate that is collected in the filter bowl	Removes the condensate that is collected in the air dryer	Point-of-use applications: removes the condensate from compressed air pipes in a plant

Dimensions

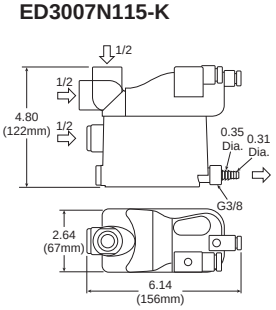
ED3002N115-K



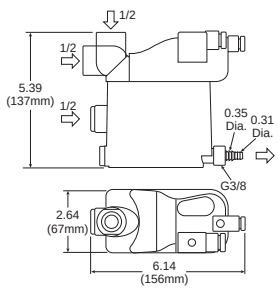
ED3004N115-K



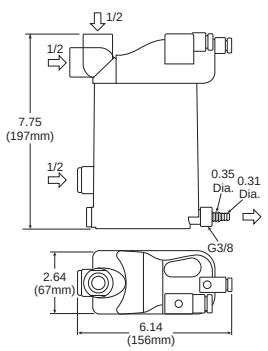
ED3007N115-K



ED3030N115-K



ED3100N115-K



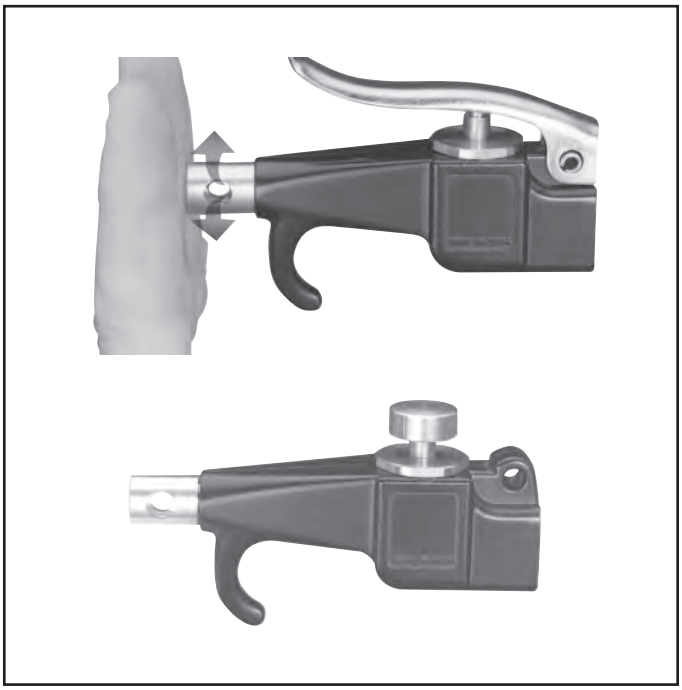
G

Airline Accessories

O.S.H.A. Certification — All safety blow guns conform to the requirements of Compressed Air Standards as currently described in the U.S. Bureau of Labor Standards, paragraph 1910.242, when pressurized at the inlet to a maximum of 100 PSIG. Conform to current O.S.H.A. Directive No. 100-1.

Brass Nozzle Blow Guns

Contoured lever or button control both provide a natural, comfortable grip even when used with gloves. Finger guard and hang-up hook for finger protection and quick safe storage. Die cast zinc body, painted finish.



Lever Operated

Part Number	Inlet Port	SCFM Rating*
00475 0010	1/4"	20

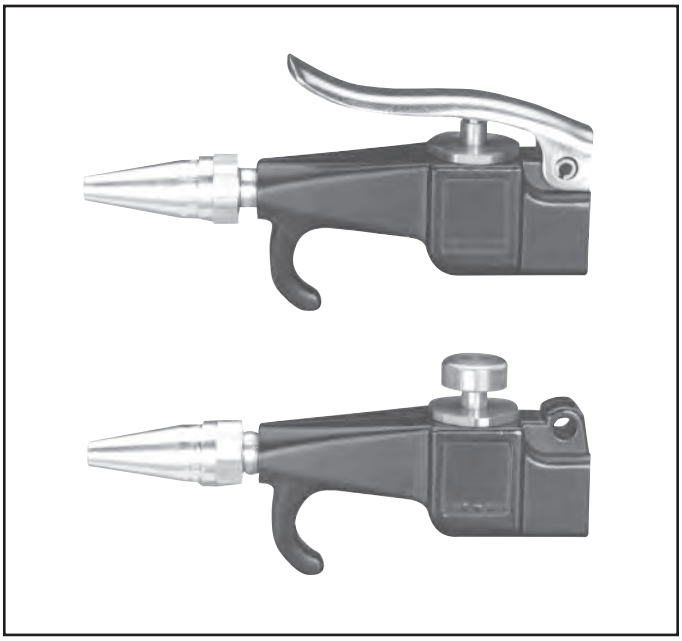
Button Operated

Part Number	Inlet Port	SCFM Rating*
00470 0010	1/4"	20

*Based on 100 PSIG inlet pressure.

Vortec FLO-GAIN Blow Guns

A quiet Vortec FLO-GAIN nozzle is combined with a high performance blow gun. Compressed air attains sonic velocity through an adjustable slot and attaches to the exterior surface of the cone shaped nozzle. Settings are shown on a micrometer dial. Sound level of 80 dBA with 80 PSIG inlet. Finger guard and hang-up hook offers desirable finger protection and quick secure storage.
Die cast zinc body, painted finish.



Lever Operated

Part Number	Inlet Port	SCFM Rating*
00475 0900	1/4"	70+

Button Operated

Part Number	Inlet Port	SCFM Rating*
00470 0900	1/4"	70+

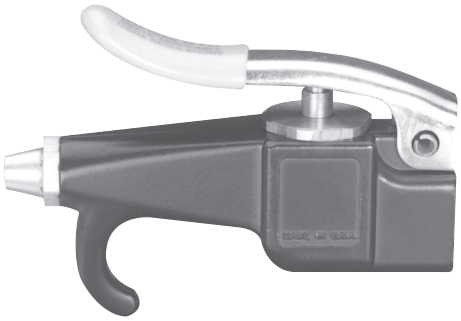
*Based on 100 PSIG inlet pressure.

Self-Regulating Blow Gun

Designed with integral self-regulating pressure reducing valve for automatic shut-off when nozzle is blocked. Prevents air pressure buildup over 30 PSIG in compliance with U.S. Dept. of Labor standards.

Air shield aids in protecting the operator against blow back of flying chips of dirt. Designed to operate at less than 90 dBA to comply with government regulations. Die cast zinc body, painted finish.

May be used with nozzle extensions on page G69.



Lever Operated

Part Number	Inlet Port	SCFM Rating*
00475 2900	1/4"	10

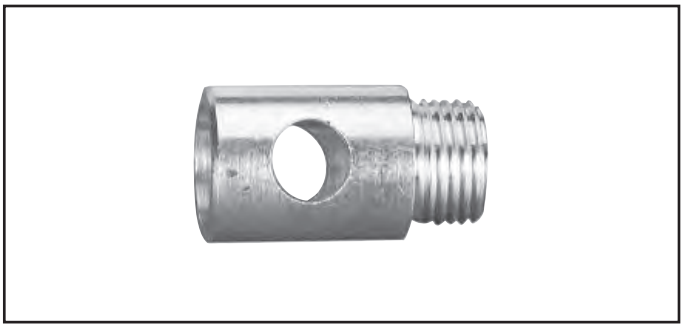
Performance Data

Inlet Pressure	Blocked Pressure	Sound Level
70 PSIG	17.0 PSIG	79 dBA
100 PSIG	21.0 PSIG	83 dBA
175 PSIG	28.0 PSIG	87 dBA

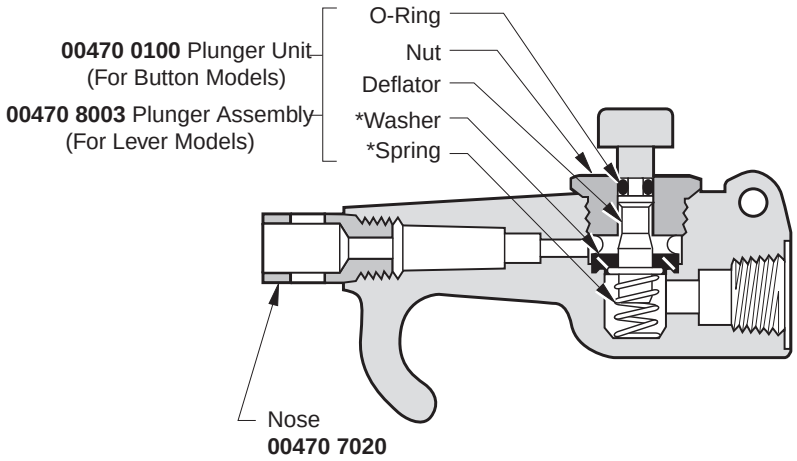
*Based on 100 PSIG inlet pressure.

Brass Nozzle
Model No. 00470 7020

General purpose nozzles are supplied as standard on 00470 0010, 00475 0010 and 07184 1000 blow guns. Conform to the requirements of the Williams Steiger Occupational Safety and Health Act of 1970, paragraph 1910.242 when fitted with blow guns pressurized at the inlet to a maximum of 100 PSIG. Conform to O.S.H.A. Directive 100-1.



470 and 475 Series Blow Guns



* Contained in Service Kit No. **00470 0090**

Notes



Safety Guidelines

Safety Guide For Selecting And Using Pneumatic Division Products And Related Accessories

⚠ WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF PNEUMATIC DIVISION PRODUCTS, ASSEMBLIES OR RELATED ITEMS ("PRODUCTS") CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE. POSSIBLE CONSEQUENCES OF FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THESE PRODUCTS INCLUDE BUT ARE NOT LIMITED TO:

- Unintended or mistimed cycling or motion of machine members or failure to cycle
- Work pieces or component parts being thrown off at high speeds.
- Failure of a device to function properly for example, failure to clamp or unclamp an associated item or device.
- Explosion
- Suddenly moving or falling objects.
- Release of toxic or otherwise injurious liquids or gasses.

Before selecting or using any of these Products, it is important that you read and follow the instructions below.

1. GENERAL INSTRUCTIONS

1.1. Scope: This safety guide is designed to cover general guidelines on the installation, use, and maintenance of Pneumatic Division Valves, FRLs (Filters pressure Regulators and Lubricators), Vacuum products and related accessory components.

1.2. Fail-Safe: Valves, FRLs, Vacuum products and their related components can and do fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of associated valves, FRLs or Vacuum products will not endanger persons or property.

1.3 Relevant International Standards: For a good guide to the application of a broad spectrum of pneumatic fluid power devices see: ISO 4414:1998, Pneumatic Fluid Power – General Rules Relating to Systems. See www.iso.org for ordering information.

1.4. Distribution: Provide a copy of this safety guide to each person that is responsible for selection, installation, or use of Valves, FRLs or Vacuum products. Do not select, or use Wilkerson valves, FRLs or vacuum products without thoroughly reading and understanding this safety guide as well as the specific Wilkerson publications for the products considered or selected.

1.5. User Responsibility: Due to the wide variety of operating conditions and applications for valves, FRLs, and vacuum products Wilkerson and its distributors do not represent or warrant that any particular valve, FRL or vacuum product is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the appropriate valve, FRL, Vacuum component, or accessory.
- Assuring that all user's performance, endurance, maintenance, safety, and warning requirements are met and that the application presents no health or safety hazards.
- Complying with all existing warning labels and / or providing all appropriate health and safety warnings on the equipment on which the valves, FRLs or Vacuum products are used; and,
- Assuring compliance with all applicable government and industry standards.

1.6. Safety Devices: Safety devices should not be removed, or defeated.

1.7. Warning Labels: Warning labels should not be removed, painted over or otherwise obscured.

1.8. Additional Questions: Call the appropriate Wilkerson technical service department if you have any questions or require any additional information. See the Wilkerson publication for the product being considered or used, or call 269-629-2550, or go to www.wilkersoncorp.com, for telephone numbers of the appropriate technical service department.

2. PRODUCT SELECTION INSTRUCTIONS

2.1. Flow Rate: The flow rate requirements of a system are frequently the primary consideration when designing any pneumatic system. System components need to be able to provide adequate flow and pressure for the desired application.

2.2. Pressure Rating: Never exceed the rated pressure of a product. Consult product labeling, Pneumatic Division catalogs or the instruction sheets supplied for maximum pressure ratings.

2.3. Temperature Rating: Never exceed the temperature rating of a product. Excessive heat can shorten the life expectancy of a product and result in complete product failure.

2.4. Environment: Many environmental conditions can affect the integrity and suitability of a product for a given application. Pneumatic Division products are designed for use in general purpose industrial applications. If these products are to be used in unusual circumstances such as direct sunlight and/or corrosive or caustic environments, such use can shorten the useful life and lead to premature failure of a product.

2.5. Lubrication and Compressor Carryover: Some modern synthetic oils can and will attack nitrile seals. If there is any possibility of synthetic oils or greases migrating into the pneumatic components check for compatibility with the seal materials used. Consult the factory or product literature for materials of construction.

2.6. Polycarbonate Bowls and Sight Glasses: To avoid potential polycarbonate bowl failures:

- Do not locate polycarbonate bowls or sight glasses in areas where they could be subject to direct sunlight, impact blow, or temperatures outside of the rated range.
- Do not expose or clean polycarbonate bowls with detergents, chlorinated hydro-carbons, keytones, esters or certain alcohols.
- Do not use polycarbonate bowls or sight glasses in air systems where compressors are lubricated with fire resistant fluids such as phosphate ester and di-ester lubricants.

2.7. Chemical Compatibility: For more information on plastic component chemical compatibility see Pneumatic Division technical bulletins Tec-3, Tec-4, and Tec-5

2.8. Product Rupture: Product rupture can cause death, serious personal injury, and property damage.
- Do not connect pressure regulators or other Pneumatic Division products to bottled gas cylinders.
- Do not exceed the maximum primary pressure rating of any pressure regulator or any system component.
- Consult product labeling or product literature for pressure rating limitations.

3. PRODUCT ASSEMBLY AND INSTALLATION INSTRUCTIONS

3.1. Component Inspection: Prior to assembly or installation a careful examination of the valves, FRLs or vacuum products must be performed. All components must be checked for correct style, size, and catalog number. DO NOT use any component that displays any signs of nonconformance.

3.2. Installation Instructions: Wilkerson published Installation Instructions must be followed for installation of Wilkerson valves, FRLs and vacuum components. These instructions are provided with every Wilkerson valve or FRL sold, or by calling 269-629-2550, or at www.wilkersoncorp.com.

3.3. Air Supply: The air supply or control medium supplied to Valves, FRLs and Vacuum components must be moisture-free if ambient temperature can drop below freezing

4. VALVE AND FRL MAINTENANCE AND REPLACEMENT INSTRUCTIONS

4.1. Maintenance: Even with proper selection and installation, valve, FRL and vacuum products service life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a component failure, and experience with any known failures in the application or in similar applications should determine the frequency of inspections and the servicing or replacement of Pneumatic Division products so that products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.9.

4.2. Installation and Service Instructions: Before attempting to service or replace any worn or damaged parts consult the appropriate Service Bulletin for the valve or FRL in question for the appropriate practices to service the unit in question. These Service and Installation Instructions are provided with every Wilkerson valve and FRL sold, or are available by calling 269-629-2550, or by accessing the Wilkerson web site at www.wilkersoncorp.com.

4.3. Lockout / Tagout Procedures: Be sure to follow all required lockout and tagout procedures when servicing equipment. For more information see: OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – (Lockout / Tagout)

4.4. Visual Inspection: Any of the following conditions requires immediate system shut down and replacement of worn or damaged components:
- Air leakage: Look and listen to see if there are any signs of visual damage to any of the components in the system. Leakage is an indication of worn or damaged components.
- Damaged or degraded components: Look to see if there are any visible signs of wear or component degradation.
- Kinked, crushed, or damaged hoses. Kinked hoses can result in restricted air flow and lead to unpredictable system behavior.
- Any observed improper system or component function: Immediately shut down the system and correct malfunction.
- Excessive dirt build-up: Dirt and clutter can mask potentially hazardous situations.

Caution: Leak detection solutions should be rinsed off after use.

4.5. Routine Maintenance Issues:
- Remove excessive dirt, grime and clutter from work areas.
- Make sure all required guards and shields are in place.

4.6. Functional Test: Before initiating automatic operation, operate the system manually to make sure all required functions operate properly and safely.

4.7. Service or Replacement Intervals: It is the user's responsibility to establish appropriate service intervals. Valves, FRLs and vacuum products contain components that age, harden, wear, and otherwise deteriorate over time. Environmental conditions can significantly accelerate this process. Valves, FRLs and vacuum components need to be serviced or replaced on routine intervals. Service intervals need to be established based on:
- Previous performance experiences.
- Government and / or industrial standards.
- When failures could result in unacceptable down time, equipment damage or personal injury risk.

4.8. Servicing or Replacing of any Worn or Damaged Parts: To avoid unpredictable system behavior that can cause death, personal injury and property damage:
- Follow all government, state and local safety and servicing practices prior to service including but not limited to all OSHA Lockout Tagout procedures (OSHA Standard – 29 CFR, Part 1910.147, Appendix A, The Control of Hazardous Energy – Lockout / Tagout).
- Disconnect electrical supply (when necessary) before installation, servicing, or conversion.
- Disconnect air supply and depressurize all air lines connected to system and Pneumatic Division products before installation, service, or conversion.
- Installation, servicing, and / or conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversions air and electrical supplies (when necessary) should be connected and the product tested for proper function and leakage. If audible leakage is present, or if the product does not operate properly, do not put product or system into use.
- Warnings and specifications on the product should not be covered or painted over. If masking is not possible, contact your local representative for replacement labels.

4.9. Putting Serviced System Back into Operation: Follow the guidelines above and all relevant Installation and Maintenance Instructions supplied with the valve FRL or vacuum component to insure proper function of the system.

Warning: Use Limitations

Wilkerson's warranties are void, and Wilkerson assumes no responsibility for any resulting cost, loss, injury or any other damages whatsoever, with respect to any plastic bowl unit for which a bowl guard is standard equipment if the unit is placed in service without the bowl guard and, except as otherwise specified in writing by Wilkerson, with respect to any Wilkerson products which are used in other than compressed air service. Specific warnings with respect to these and other use limitations appear elsewhere in this catalog.

Wilkerson maintains a policy of ongoing product development and improvement. We therefore reserve the right to change dimensions specification and design without notice.

Do not place plastic bowl unit in service without bowl guard installed.

Plastic bowl units are sold only with bowl guards with the exception to miniature units (C04, F00, L00, & M00). To minimize the danger of flying fragments in the event of plastic bowl failure, the bowl guards should not be removed. If the unit is in service without the bowl guard installed, manufacturer's warranties are void, and the manufacturer assumes no responsibility for any resulting loss.

If the unit has been in service and does not have a bowl guard, order one and install before placing back in service.

Caution

Certain compressor oils, chemicals, household cleaners, solvents, paints and fumes will attack plastic bowls and can cause bowl failure. Do not use near these materials. When bowl becomes dirty replace bowl or wipe only with a clean, dry cloth. Reinstall bowl guard or buy and install a bowl guard. Immediately replace any crazed, cracked, damaged or deteriorated plastic bowl with a bowl or a new plastic bowl and bowl guard.

Caution

Except as otherwise specified by the manufacturer, this product is specifically designed for compressed air service, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquids or gases in the system (such as alcohol or liquid petroleum gas) could be harmful to the unit or result in a combustible condition or hazardous external leakage. Before using with fluids other than air, or for non-industrial applications, or for life support systems, consult Wilkerson Operations for written approval.

Some of the Materials that will Attack Polycarbonate Plastic Bowls

Acetaldehyde
Acetic acid (conc.)
Acetone
Acrylonitrile
Ammonia
Ammonium Fluoride
Ammonium Hydroxide
Ammonium Sulfide
Anaerobic adhesives
Trichloride and Sealants
Antifreeze
Benzene
Benzoic Acid
Benzyl Alcohol
Brake Fluids
Bromobenzene
Butyric Acid
Carbolic Acid
Carbon Disulfide
Carbon Tetrachloride
Caustic Potash Solution
Caustic Soda Solution
Chlorobenzene
Chloroform
Cresol
Cyclohexanol
Cyclohexanone
Cyclohexene
Dimethyl Formamide
Diozane
Ethgane tetrachloride
Ethyl Acetate
Ethyl Ether
Ethylamine
Ethylene Chlorohydrin
Ethylene Dichloride
Ethylene Glycol
Formic Acid (conc.)
Freon (Refrig. & Propell.)
Gasoline (High Aromatic)
Hydrazine
Hydrochloric Acid (conc.)
Lacquer Thinner
Methyl Alcohol
Methylene Chloride
Methylene Salicylate
Milk of Lime (CaOH)
Nitric Acid (conc.)
Nitrobenzene
Nitrocellulose Lacquer
Phenol
Phosphorous Hydroxy Chloride
Perchlorethylene
Phosphorous
Propionic Acid
Pyridine
Sodium Hydroxide
Sodium Sulfide
Styrene
Sufuric Acid (conc.)
Sulphural Chloride
Tetrahydronaphthalene
Tiophene
Toluene
Turpentine
Xylene & Others

Trade Names of some Compressor Oils, Rubber Compounds and other Materials that will Attack Polycarbonate Plastic Bowls.

Atlas "Perma-Guard"
Buna N
Cellulube #150 and #220
Crylex #5 cement
*Eastman 910
Garlock #98403 (polyurethane)
Haskel #568-023
Hilgard Co.'s hil phene
Houghton & Co. oil #1120, #1130 & #1055
Houtosafe 1000
Kano Kroil
Keystone penetrating oil #2
*Loctite 271
*Locite 290
*Loctite 601
*Loctite Teflon-Sealant
Marvel Mystery Oil
Minn. Rubber 366Y
National Compound #N11
"Nylock" VC-3
Parco #1306 Neoprene
*Permabond 910
Petron PD287
Prestone
Pydraul AC
Sears Regular Motor Oil
Sinclair oil "Lily White"
Stauffer Chemical FYRQUEL #150
Stillman #SR 269-75 (polyurethane)
Stillman #SR 513-70 (neoprene)
Tannergas
Telar
Tenneco anderol #495 & #500 oils
Titon
*Vibra-tite
Zerex

*When in raw liquid form.

We cannot possibly list all harmful substances, so check with Mobay or the General Electric office for further information on polycarbonate plastic.

The trade names "EconOmist" and "Flow-Guide" are registered at the United States Patent Office.

"Auto-Fill", "Dial-Air", "Flex-Drain", "Mainliner" and "Whirl-Flo" are tradenames of Wilkerson.

Claims and Shortages: Risk of loss passes to buyer when goods are delivered to the carrier. Inspect all shipments for damage at time of receipt. Claims should be filed by the consignee against the carrier.

Changes: Wilkerson maintains a policy of ongoing product development and improvement. We therefore reserve the right to change dimensions, specifications and design without notice.



Offer of Sale

PARKER-HANNIFIN CORPORATION
OFFER OF SALE

1. Definitions. As used herein, the following terms have the meanings indicated.

Buyer:	means any customer receiving a Quote for Products from Seller.
Goods:	means any tangible part, system or component to be supplied by the Seller.
Products:	means the Goods, Services and/or Software as described in a Quote provided by the Seller.
Quote:	means the offer or proposal made by Seller to Buyer for the supply of Products.
Seller:	means Parker-Hannifin Corporation, including all divisions and businesses thereof.
Services:	means any services to be supplied by the Seller.
Software:	means any software related to the Products, whether embedded or separately downloaded.
Terms:	means the terms and conditions of this Offer of Sale or any newer version of the same as published by Seller electronically at www.parker.com/saleterms.

2. Terms. All sales of Products by Seller are contingent upon, and will be governed by, these Terms and, these Terms are incorporated into any Quote provided by Seller to any Buyer. Buyer's order for any Products whether communicated to Seller verbally, in writing, by electronic date interface or other electronic commerce, shall constitute acceptance of these Terms. Seller objects to any contrary or additional terms or conditions of Buyer. Reference in Seller's order acknowledgement to Buyer's purchase order or purchase order number shall in no way constitute an acceptance of any of Buyer's terms of purchase. No modification to these Terms will be binding on Seller unless agreed to in writing and signed by an authorized representative of Seller.

3. Price; Payment. The Products set forth in Seller's Quote are offered for sale at the prices indicated in Seller's Quote. Unless otherwise specifically stated in Seller's Quote, prices are valid for thirty (30) days and do not include any sales, use, or other taxes or duties. Seller reserves the right to modify prices at any time to adjust for any raw material price fluctuations. Unless otherwise specified by Seller, all prices are F.C.A. Seller's facility (INCOTERMS 2010). All sales are contingent upon credit approval and payment for all purchases is due thirty (30) days from the date of invoice (or such date as may be specified in the Quote). Unpaid invoices beyond the specified payment date incur interest at the rate of 1.5% per month or the maximum allowable rate under applicable law.

4. Shipment; Delivery; Title and Risk of Loss. All delivery dates are approximate. Seller is not responsible for damages resulting from any delay. Regardless of the manner of shipment, delivery occurs and title and risk of loss or damage pass to Buyer, upon placement of the Products with the shipment carrier at Seller's facility. Unless otherwise agreed, Seller may exercise its judgment in choosing the carrier and means of delivery. No deferment of shipment at Buyers' request beyond the respective indicated shipping date will be made except on terms that will indemnify, defend and hold Seller harmless against all loss and additional expense. Buyer shall be responsible for any additional shipping charges incurred by Seller due to Buyer's acts or omissions.

5. Warranty. The warranty related to the Products is as follows: (i) Goods are warranted against defects in material or workmanship for a period of twelve (12) months from the date of delivery or 2,000 hours of use, whichever occurs first; (ii) Services shall be performed in accordance with generally accepted practices and using the degree of care and skill that is ordinarily exercised and customary in the field to which the Services pertain and are warranted for a period of six (6) months from the completion of the Services by Seller; and (iii) Software is only warranted to perform in accordance with applicable specifications provided by Seller to Buyer for ninety (90) days from the date of delivery or, when downloaded by a Buyer or end-user, from the date of the initial download. All prices are based upon the exclusive limited warranty stated above, and upon the following disclaimer:

DISCLAIMER OF WARRANTY: THIS WARRANTY IS THE SOLE AND ENTIRE WARRANTY PERTAINING TO PRODUCTS. SELLER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING DESIGN, NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. SELLER DOES NOT WARRANT THAT THE SOFTWARE IS ERROR-FREE OR FAULT-TOLERANT, OR THAT BUYER'S USE THEREOF WILL BE SECURE OR UNINTERRUPTED. BUYER AGREES AND ACKNOWLEDGES THAT UNLESS OTHERWISE AUTHORIZED IN WRITING BY SELLER THE SOFTWARE SHALL NOT BE USED IN CONNECTION WITH HAZARDOUS OR HIGH RISK ACTIVITIES OR ENVIRONMENTS. EXCEPT AS EXPRESSLY STATED HEREIN, ALL PRODUCTS ARE PROVIDED "AS IS".

6. Claims; Commencement of Actions. Buyer shall promptly inspect all Products upon receipt. No claims for shortages will be allowed unless reported to the Seller within ten (10) days of delivery. Buyer shall notify Seller of any alleged breach of warranty within thirty (30) days after the date the non-conformance is or should have been discovered by Buyer. Any claim or action against Seller based upon breach of contract or any other theory, including tort, negligence, or otherwise must be commenced within twelve (12) months from the date of the alleged breach or other alleged event, without regard to the date of discovery.

7. LIMITATION OF LIABILITY. IN THE EVENT OF A BREACH OF WARRANTY, SELLER WILL, AT ITS OPTION, REPAIR OR REPLACE THE NON-CONFORMING PRODUCT, RE-PERFORM THE SERVICES, OR REFUND THE PURCHASE PRICE PAID WITHIN A REASONABLE PERIOD OF TIME. **IN NO EVENT IS SELLER LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, NON-COMPLETION OF SERVICES, USE, LOSS OF USE OF, OR INABILITY TO USE THE PRODUCTS OR ANY PART THEREOF, LOSS OF DATA, IDENTITY, PRIVACY, OR CONFIDENTIALITY, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT SELLER'S WRITTEN CONSENT, WHETHER BASED IN CONTRACT, TORT OR OTHER LEGAL THEORY. IN NO EVENT SHALL SELLER'S LIABILITY UNDER ANY CLAIM MADE BY BUYER EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCTS.**

8. Loss to Buyer's Property. Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which are or become Buyer's property, will be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer ordering the Products manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Special Tooling. Special Tooling includes but is not limited to tooling, jigs, fixtures and associated manufacturing equipment acquired or necessary to manufacture Products. A tooling charge may be imposed for any Special Tooling. Such Special Tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in Special Tooling belonging to Seller that is utilized in the manufacture of the Products, even if such Special Tooling has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller has the right to alter, discard or otherwise dispose of any Special Tooling or other property in its sole discretion at any time.

10. Security Interest. To secure payment of all sums due, Seller retains a security interest in all Products delivered to Buyer and, Buyer's acceptance of these Terms is deemed to be a Security Agreement under the Uniform Commercial Code. Buyer authorizes Seller as its attorney to execute and file on Buyer's behalf all documents Seller deems necessary to perfect its security interest.

11. User Responsibility. The Buyer through its own analysis and testing, is solely responsible for making the final selection of the Products and assuring that all performance, endurance, maintenance, safety and warning requirements of the application of the Products are met. The Buyer must analyze all aspects of the application and follow applicable industry standards, specifications, and other technical information provided with the Product. If Seller provides Product options based upon data or specifications provided by the Buyer, the Buyer is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the Products. In the event the Buyer is not the end-user, Buyer will ensure such end-user complies with this paragraph.

12. Use of Products, Indemnity by Buyer. Buyer shall comply with all instructions, guides and specifications provided by Seller with the Products. **Unauthorized Uses**. If Buyer uses or resells the Products for any uses prohibited in Seller's instructions, guides or specifications, or Buyer otherwise fails to comply with Seller's instructions, guides and specifications, Buyer acknowledges that any such use, resale, or non-compliance is at Buyer's sole risk. Buyer shall indemnify, defend, and hold Seller harmless from any losses, claims, liabilities, damages, lawsuits, judgments and costs (including attorney fees and defense costs), whether for personal injury, property damage, intellectual property infringement or any other claim, brought by or incurred by Buyer, Buyer's employees, or any other person, arising out of: (a) improper selection, application, design, specification or other misuse of Products provided by Seller; (b) any act or omission, negligent or otherwise, of Buyer; (c) Seller's use of patterns, tooling, equipment, plans, drawings, designs or specifications or other information or things furnished by Buyer; (d) damage to the Products from an external cause, repair or attempted repair by anyone other than Seller, failure to follow instructions, guides and specifications provided by Seller, use with goods not provided by Seller, or opening, modifying, deconstructing or tampering with the Products for any reason; or (e) Buyer's failure to comply with these Terms. Seller shall not indemnify Buyer under any circumstance except as otherwise provided in these Terms.

13. Cancellations and Changes. Buyer may not cancel or modify any order for any reason, except with Seller's written consent and upon terms that will indemnify, defend and hold Seller harmless against all direct, incidental and consequential loss or damage. Seller, at any time, may change Product features, specifications, designs and availability.

14. Limitation on Assignment. Buyer may not assign its rights or obligations without the prior written consent of Seller.

15. Force Majeure. Seller does not assume the risk and is not liable for delay or failure to perform any of Seller's obligations by reason of events or circumstances beyond its reasonable control ("Events of Force Majeure"). Events of Force Majeure shall include without limitation: accidents, strikes or labor disputes, acts of any government or government agency, acts of nature, delays or failures in delivery from carriers or suppliers, shortages of materials, or any other cause beyond Seller's reasonable control.

16. Waiver and Severability. Failure to enforce any provision of these Terms will not invalidate that provision; nor will any such failure prejudice Seller's right to enforce that provision in the future. Invalidation of any provision of these Terms by legislation or other rule of law shall not invalidate any other provision herein and, the remaining provisions will remain in full force and effect.

17. Termination. Seller may terminate any agreement governed by or arising from these Terms for any reason and at any time by giving Buyer thirty (30) days prior written notice. Seller may immediately terminate, in writing, if Buyer: (a) breaches any provision of these Terms (b) appoints a trustee, receiver or custodian for all or any part of Buyer's property (c) files a petition for relief in bankruptcy on its own behalf, or one if filed by a third party (d) makes an assignment for the benefit of creditors; or (e) dissolves its business or liquidates all or a majority of its assets.

18. Ownership of Software. Seller retains ownership of all Software supplied to Buyer hereunder. In no event shall Buyer obtain any greater right in and to the Software than a right in the nature of a license limited to the use thereof and subject to compliance with any other terms provided with the Software.

19. Indemnity for Infringement of Intellectual Property Rights. Seller is not liable for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights ("Intellectual Property Rights") except as provided in this Section. Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on a third party claim that one or more of the Products sold hereunder infringes the Intellectual Property Rights of a third party in the country of delivery of the Products by the Seller to the Buyer. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of any such claim, and Seller having sole control over the defense of the claim including all negotiations for settlement or compromise. If one or more Products sold hereunder is subject to such a claim, Seller may, at its sole expense and option, procure for Buyer the right to continue using the Products, replace or modify the Products so as to render them non-infringing, or offer to accept return of the Products and refund the purchase price less a reasonable allowance for depreciation. Seller has no obligation or liability for any claim of infringement: (i) arising from information provided by Buyer; or (ii) directed to any Products provided hereunder for which the designs are specified in whole or part by Buyer; or (iii) resulting from the modification, combination or use in a system of any Products provided hereunder. The foregoing provisions of this Section constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for such claims of infringement of Intellectual Property Rights.

20. Governing Law. These Terms and the sale and delivery of all Products are deemed to have taken place in, and shall be governed and construed in accordance with, the laws of the State of Ohio, as applicable to contracts executed and wholly performed therein and without regard to conflicts of laws principles. Buyer irrevocably agrees and consents to the exclusive jurisdiction and venue of the courts of Cuyahoga County, Ohio with respect to any dispute, controversy or claim arising out of or relating to the sale and delivery of the Products.

21. Entire Agreement. These Terms, along with the terms set forth in the main body of any Quote, forms the entire agreement between the Buyer and Seller and constitutes the final, complete and exclusive expression of the terms of sale. In the event of a conflict between any term set forth in the main body of a Quote and these Terms, the terms set forth in the main body of the Quote shall prevail. All prior or contemporaneous written or oral agreements or negotiations with respect to the subject matter shall have no effect. These Terms may not be modified unless in writing and signed by an authorized representative of Seller.

22. Compliance with Laws. Buyer agrees to comply with all applicable laws, regulations, and industry and professional standards, including those of the United States of America, and the country or countries in which Buyer may operate, including without limitation the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.S. Anti-Kickback Act ("Anti-Kickback Act"), U.S. and E.U. export control and sanctions laws ("Export Laws"), the U.S. Food Drug and Cosmetic Act ("FDCA"), and the rules and regulations promulgated by the U.S. Food and Drug Administration ("FDA"), each as currently amended. Buyer agrees to indemnify, defend, and hold harmless Seller from the consequences of any violation of such laws, regulations and standards by Buyer, its employees or agents. Buyer acknowledges that it is familiar with all applicable provisions of the FCPA, the Anti-Kickback Act, Export Laws, the FDCA and the FDA and certifies that Buyer will adhere to the requirements thereof and not take any action that would make Seller violate such requirements. Buyer represents and agrees that Buyer will not make any payment or give anything of value, directly or indirectly, to any governmental official, foreign political party or official thereof, candidate for foreign political office, or commercial entity or person, for any improper purpose, including the purpose of influencing such person to purchase Products or otherwise benefit the business of Seller. Buyer further represents and agrees that it will not receive, use, service, transfer or ship any Product from Seller in a manner or for a purpose that violates Export Laws or would cause Seller to be in violation of Export Laws.

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