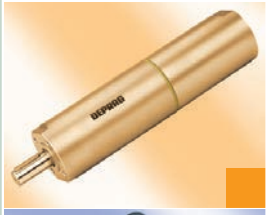
Complete Product Line

DEPRAG

Screwdriving Technology

Automation



Air Motors

Air Tools

D0012E 01.2018

OVERVIEW

SCREWDRIVING TECHNOLOGY

SCREWDRIVERS

MEASUREMENT TECHNOLOGY

CONTROLLER TECHNOLOGY

FEEDING TECHNOLOGY

AUTOMATION

SCREWDRIVING AND ASSEMBLY SYSTEMS

STANDARDISED ASSEMBLY SYSTEMS

FULLY EQUIPPED MANUAL WORK STATIONS

OVERVIEW

AUTOMATION

MACHINE BUILDING COMPONENTS

AIR MOTORS

AIR VANE MOTORS

TURBINES

TOOTH-GEAR MOTORS

SPEED REGULATOR

ACCESSORIES

GREEN ENERGY

Details will be provided at www.deprag.com.

DEPRAG INDUSTRIAL AIR TOOLS

Any news and further details will be provided at www.deprag.com.
All catalogues can be downloaded from there.

GENERAL INFO

Listing of individual catalogues

HANDHELD SCREWDRIVERS PNEUMATIC with mechanical shut-off clutch

345-3008U
to
345-7008U

NANOMAT / MICROMAT Screwdrivers

Type	Part no.	Torque min. Ncm	Torque max. soft pull-up Ncm	Torque max. hard pull-up Ncm	Speed, idling rpm	Screws	Weight kilos
straight, reversible, push-to-start (hex. female), 3 mm							
345-3008U	202600C	1	15	15	1400	M 2	0.14
345-5008U	202600E	0.8	25	25	680		
345-6008U	202600F	0.8	30	30	500		
345-7008U	202600G	0.8	30	30	300		
straight, right rotation, push-to-start (hex. female), 3 mm							
345-308	339267A	2	50	60	1600	M 3	0.15
345-408	345763A	2	55	55	1100		
345-708	385162A	2	70	70	600		0.16
345-508	339268A	2	70	70	350		
straight, reversible, push-to-start (hex. female), 3 mm							
345-308U	339269A	2	40	50	1300	M 3	0.17
345-408U	345764A	2	50	50	950		0.17
345-708U	385163B	2	70	70	480		0.18
345-508U	339270A	2	70	70	300		0.18

Performance data relate to an air pressure of 6.3 bar (90 psi)

345-308U
to
345-508U

MINIMAT Screwdrivers

Type	Part no.	Torque min. Nm	Torque max. soft pull-up Nm	Torque max. hard pull-up Nm	Speed, idling rpm	Screws	Weight kilos
straight, reversible, push-to-start (hex. female), 1/4"							
347-218U	397060A	0.3	1	1	1900	M 3	0.40
347-318U	397060B	0.3	1.4	1.4	1300		0.40
347-518U	397060C	0.2	2	2	900		0.40
347-618U	397060D	0.2	2	2	600		0.43
347-228U	386363A	0.5	1.3	1.8	3000	M 4	0.68
347-728U	386363E	0.4	1.8	2.0	1600		0.69
347-328U	386363B	0.4	2.4	2.8	1100		0.69
347-428U	386363D	0.4	3.5	4	750		0.69
347-528U	386363C	0.3	5	5	500	M 5	0.69
345-7258U	351568A	1	5	6	1100		0.90
345-3258U	351568B	1	10	10	640	M 6	0.90
345-4258U	351568C	1	12	12	310		0.90
346-238U	396188B	2	4.5	5.5	2300	M 5	1.31
346-738U	396188C	2	7	8	1200	M 6	1.45
346-338U	396188D	2	12	12	650		1.45
346-438U	396188E	2	20	20	320	M 8	1.45
straight, reversible, lever-start (hex. female), 1/4"							
347-221U	386364A	0.5	1.3	1.8	3000	M 4	0.68
347-721U	386364E	0.4	1.8	2.0	1600		0.69
347-321U	386364B	0.4	2.4	2.8	1100		0.69
347-421U	386364D	0.4	3.5	4	750		0.69
347-521U	386364C	0.3	5	5	500	M 5	0.69
345-7251U	384354A	1	5	6	1100		0.9
345-3251U	384354B	1	10	10	640	M 6	0.9
345-4251U	384354C	1	12	12	310		0.9
346-731U	398684C	2	7	8	1200		1.45
346-331U	398684D	2	12	12	650		1.45
346-431U	398684E	2	20	20	320	M 8	1.45

Performance data relate to an air pressure of 6.3 bar (90 psi)

347-218U
to
347-618U

347-228U
to
347-528U

345-7258U
to
345-4258U

346-238U
to
346-438U

HANDHELD SCREWDRIVERS PNEUMATIC with mechanical shut-off clutch

MINIMAT Screwdrivers

Type	Part no.	Torque min. Nm	Torque max. soft pull-up Nm	Torque max. hard pull-up Nm	Speed, idling rpm	Screws	Weight kilos
pistol grip, lower air-inlet, reversible, trigger-start (hex. female), 1/4"							
347-227U	394569A	0.5	1.3	1.5	3000	M 3	0.75
347-327U	394569B	0.4	3	3.2	1100	M 4	0.75
347-427U	394569D	0.4	3.5	4	750		0.75
347-527U	394569C	0.3	5	5	500	M 5	0.75
346-7257U	412799A	1	5	6	1025		1.2
346-3257U	412799B	1	10	10	525	M 6	1.2
346-4257U	412799C	1	12	12	270		1.2
346-237U	400373B	2	4.5	5.5	2300	M 5	1.6
346-737U	400373C	2	7	8	1200	M 6	1.7
346-337U	400373D	2	12	12	650		1.7
346-437U	400373E	2	20	20	320	M 8	1.7
pistol grip, upper air-inlet, reversible, trigger-start (hex. female), 1/4"							
347-227OU	394570A	0.5	1.3	1.5	3000	M 3	0.75
347-327OU	394570B	0.4	3	3.2	1100	M 4	0.75
347-427OU	394570D	0.4	3.5	4	750		0.75
347-527OU	394570C	0.3	5	5	500	M 5	0.75
pistol grip, lower air-inlet, reversible, push-to-start (hex. female), 1/4"							
347-229U	394573A	0.5	1.3	1.5	3000	M 3	0.75
347-329U	394573B	0.4	3	3.2	1100	M 4	0.75
347-429U	394573D	0.4	3.5	4	750		0.75
347-529U	394573C	0.3	5	5	500	M 5	0.75
345-7259U	390854A	1	5	6	1025		1.2
345-3259U	390854B	1	10	10	525	M 6	1.2
345-4259U	390854C	1	12	12	270		1.2
346-239U	411447B	2	4.5	5.5	2300	M 5	1.6
346-739U	411447C	2	7	8	1200	M 6	1.7
346-339U	411447D	2	12	12	650		1.7
346-439U	411447E	2	20	20	320	M 8	1.7
pistol grip, upper air-inlet, reversible, push-to-start (hex. female), 1/4"							
347-229OU	394574A	0.5	1.3	1.5	3000	M 3	0.75
347-329OU	394574B	0.4	3	3.2	1100	M 4	0.75
347-429OU	394574D	0.4	3.5	4	750		0.75
347-529OU	394574C	0.3	5	5	500	M 5	0.75
pistol grip, lower air-inlet, upper air-inlet or rear air-inlet, reversible, trigger-start (hex. female), 1/4"							
344-347U	400320D	3	6.5	8.5	2300	M 5	1.7
344-447U	400320E	3	8	10	1600	M 6	1.7
344-247U	400320F	2	17	17	650	M 8	1.95
pistol grip, lower air-inlet, upper air-inlet or rear air-inlet, reversible, push-to-start (hex. female), 1/4"							
344-349U	411448D	3	6.5	8.5	2300	M 5	1.7
344-449U	411448E	3	8	10	1600	M 6	1.7
344-249U	411448F	2	17	17	650	M 8	1.95

Performance data relate to an air pressure of 6.3 bar (90 psi)

347-227OU
to
347-527OU

346-7257U
to
346-4257U

346-237U
to
346-437U

344-347U
to
344-447U

HANDHELD SCREWDRIVERS PNEUMATIC with mechanical shut-off clutch

377-321U
377-421U
377-521U

376-7251U
376-3251U

377-731U
377-331U
377-431U

377-941U
377-741U
377-841U

377-321U-SW..
377-421U-SW..
377-521U-SW..

376-7251U-SW..
376-3251U-SW..

MINIMAT Screwdrivers

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed, idling rpm	Drive	Screws	Weight kilos
angle-head, reversible, lever-start (square male)							
377-321U	386530B	0.4	3.5	780	1/4"	M 4	0.85
377-321U-E10	390887B	0.4	3.5	780	3/8"		0.85
377-421U	386530D	0.4	4.5	500	1/4"		0.85
377-421U-E10	390887D	0.4	4.5	500	3/8"	M 5	0.85
377-521U	386530C	0.3	6.5	350	1/4"		0.85
377-521U-E10	390887C	0.3	6.5	350	3/8"		0.85
376-7251U	378385A	1.5	8	810	1/4"		1.2
376-7251U-E10	382687A	1.5	8	810	3/8"		1.2
376-3251U	378385B	1.5	15	410	1/4"	M 6	1.2
376-3251U-E10	382687B	1.5	15	410	3/8"		1.2
377-731U-E12.5	396037C	4	11	700	1/2"		2
377-331U-E12.5	396037D	4	20	350	1/2"	M 8	2
377-431U-E12.5	396037E	4	35	180	1/2"	M 10	2
377-731U-E10	411310C	4	10	730	3/8"	M 6	1.9
377-331U-E10	411310D	4	19	365	3/8"	M 8	1.9
377-431U-E10	400611E	4	33	190	3/8"		1.9
377-941U-E12.5	379100B	8	32	410	1/2"	M 10	2.3
377-741U-E12.5	379100C	8	46	270	1/2"		2.3
377-841U-E12.5	379100D	8	65	185	1/2"	M 12	2.3
377-941U-E10	400638B	7	30	430	3/8"	M 10	2.2
377-741U-E10	400638C	7	44	285	3/8"		2.2
angle-head, reversible, lever-start (hex. female, non-magnetic)							
377-321U-D	390883B	0.4	3.5	780		M 4	0.85
377-421U-D	390883D	0.4	4.5	500		M 5	0.85
377-521U-D	390883C	0.3	6.5	350	1/4"	M 5	0.85
376-7251U-D	382683A	1.5	8	810		M 6	1.2
376-3251U-D	382683B	1.5	15	410		M 6	1.2
angle-head, reversible, lever-start (hex. female, magnetic)							
377-321U-DM	390884B	0.4	3.5	780		M 4	0.85
377-421U-DM	390884D	0.4	4.5	500		M 5	0.85
377-521U-DM	390884C	0.3	6.5	350	1/4"		0.85
376-7251U-DM	382684A	1.5	8	810		M 6	1.2
376-3251U-DM	382684B	1.5	15	410			1.2
angle-head, reversible, lever-start (hex. female, with quick change chuck)							
377-321U-F	390885B	0.4	3.5	780		M 4	0.85
377-421U-F	390885D	0.4	4.5	500		M 5	0.85
377-521U-F	390885C	0.3	6.5	350	1/4"		0.85
376-7251U-F	382685A	1.5	8	810		M 6	1.2
376-3251U-F	382685B	1.5	15	410			1.2
angle-head, reversible, lever-start (hex. female, with quick change chuck and spring-sleeve)							
377-321U-FH	390886B	0.4	3.5	780		M 4	0.85
377-421U-FH	390886D	0.4	4.5	500		M 5	0.85
377-521U-FH	390886C	0.3	6.5	350	1/4"		0.85
376-7251U-FH	382686A	1.5	8	810		M 6	1.2
376-3251U-FH	382686B	1.5	15	410			1.2
angle-head, reversible, lever-start (integrated socket with hex. female drive)							
377-321U-SW6	3909251B	0.4	3.5	780	AF6		0.85
377-321U-SW8	3909252B	0.4	3.5	780	AF8	M 4	0.85
377-321U-SW10	3909253B	0.4	3.5	780	AF10		0.85
377-321U-SW13	3909254B	0.4	3.5	780	AF13		0.85
377-421U-SW6	3909251D	0.4	4.5	500	AF6		0.85
377-421U-SW8	3909252D	0.4	4.5	500	AF8		0.85
377-421U-SW10	3909253D	0.4	4.5	500	AF10		0.85
377-421U-SW13	3909254D	0.4	4.5	500	AF13	M 5	0.85
377-521U-SW6	3909251C	0.3	6.5	350	AF6		0.85
377-521U-SW8	3909252C	0.3	6.5	350	AF8		0.85
377-521U-SW10	3909253C	0.3	6.5	350	AF10		0.85
377-521U-SW13	3909254C	0.3	6.5	350	AF13		0.85
376-7251U-SW6	3861391A	1.5	8	810	AF6		1.2
376-7251U-SW8	3861392A	1.5	8	810	AF8		1.2
376-7251U-SW10	3861393A	1.5	8	810	AF10		1.2
376-7251U-SW13	3861394A	1.5	8	810	AF13	M 6	1.2
376-3251U-SW6	3861391B	1.5	15	410	AF6		1.2
376-3251U-SW8	3861392B	1.5	15	410	AF8		1.2
376-3251U-SW10	3861393B	1.5	15	410	AF10		1.2
376-3251U-SW13	3861394B	1.5	15	410	AF13		1.2

Performance data relate to an air pressure of 6.3 bar (90 psi)

HANDHELD SCREWDRIVERS PNEUMATIC with mechanical shut-off clutch

MICROMAT-ESD / MINIMAT-ESD Screwdrivers

Type	Part no.	Torque min. Nm	Torque max. soft pull-up Nm	Torque max. hard pull-up Nm	Speed, idling rpm	Drive	Screws	Weight kilos
straight, reversible, push-to-start (hex. female)								
345-308UESD	376846A	0.02	0.4	0.5	1300	3 mm	M 3	0.17
345-408UESD	376846B	0.02	0.5	0.5	950			0.17
345-708UESD	385164A	0.02	0.7	0.7	480			0.18
345-508UESD	376846C	0.02	0.7	0.7	300			0.18
347-218UESD	403345A	0.3	1	1	1900	1/4"		0.40
347-318UESD	403345B	0.3	1.4	1.4	1300			0.40
347-518UESD	403345C	0.2	2	2	900			0.40
347-618UESD	403345D	0.2	2	2	600			0.43
347-228UESD	392476A	0.5	1.3	1.8	3000		M 4	0.68
347-328UESD	392476B	0.4	2.4	2.8	1100			0.69
347-428UESD	392476D	0.4	3.5	4	750			0.69
347-528UESD	392476C	0.3	5	5	500		M 5	0.69
345-7258UESD	409631A	1	5	6	1100			0.9
345-3258UESD	409631B	1	10	10	640		M 6	0.9
345-4258UESD	409631C	1	12	12	310			0.9

Performance data relate to an air pressure of 6.3 bar (90 psi)

345-308UESD to 345-508UESD

347-218UESD to 347-618UESD

347-228UESD to 347-528UESD

HANDHELD SCREWDRIVERS PNEUMATIC with controlled clutch function

SENSOMAT Screwdrivers

Type	Part no.	Seating Torque min. Nm	Seating Torque max. Nm	Driving Torque max. Nm	Speed, idling rpm	Screws	Weight kilos
straight, reversible, push-to-start (hex. female), 1/4"							
347S-218U	405158A	0.3	1	1.1	1900	M 3	0.52
347S-318U	405158B	0.4	1.4	1.6	1300		0.52
347S-518U	405158C	0.4	2	2.2	900		0.52
347S-618U	405158D	0.4	2	2.2	600		0.52
347S-328U	386542B	0.4	2.8	3.1	1100	M 4	0.76
347S-428U	386542D	0.4	3.5	3.9	750		0.76
347S-528U	386542C	0.3	5	5.5	500		0.76
346S-238U	409114B	0.5	4.5	5	2300	M 5	1.41
346S-738U	409114C	0.4	5	7	1200		1.48
pistol grip, lower air-inlet, reversible, trigger-start (hex. female), 1/4"							
347S-327U	391486B	0.4	3	3.3	110	M 4	0.82
347S-427U	391486D	0.4	3.5	3.9	750		0.82
347S-527U	391486C	0.3	5	5.5	500		0.82
345S-237U	392773A	0.5	4.5	5	2300	M 5	1.5
345S-737U	392773B	0.4	5	7	1200		1.6
pistol grip, upper air-inlet, reversible, trigger-start (hex. female), 1/4"							
347S-327OU	391490B	0.4	3	3.3	1100	M 4	0.82
347S-427OU	391490D	0.4	3.5	3.9	750		0.82
347S-527OU	391490C	0.3	5	5.5	500	M 5	0.82

Performance data relate to an air pressure of 6.3 bar (90 psi)

347S-328U to 347S-528U

347S-327U to 347S-527U

HANDHELD SCREWDRIVERS PNEUMATIC with mechanical shut-off clutch

MICROMAT-F / MINIMAT-F Screwdrivers

347F-228
to
347F-528

Type	Part no.	Torque min. Nm	Torque max. soft pull-up Nm	Torque max. hard pull-up Nm	Speed, idling rpm	Drive	Screws	Weight kilos
straight, right rotation, push-to-start (hex. female)								
345F-308	399400A	0.02	0.5	0.6	1600	3 mm	M 3	0.15
345F-408	399400B	0.02	0.55	0.55	1100			0.15
345F-708	399400C	0.02	0.7	0.7	600			0.16
345F-508	399400D	0.02	0.7	0.7	350	1/4"		0.16
347F-218	397061A	0.3	1	1	1900			0.40
347F-318	397061B	0.3	1.4	1.4	1300			0.40
347F-518	397061C	0.2	2	2	900			0.40
347F-618	397061D	0.2	2	2	600			0.43
347F-228	386365A	0.5	1.8	2	4000		M 4	0.68
347F-328	386365B	0.4	3	3.2	1550			0.69
347F-428	386365D	0.4	4	4.5	1000			0.69
347F-528	386365C	0.3	5	5	680		M 5	0.69
345F-7258	401537A	1	5	6	1100			1.2
345F-3258	401537B	1	10	10	680		M 6	1.2
345F-4258	401537C	1	12	12	310			1.2
346F-238	396359B	2	5	6	2500		M 5	1.28
346F-738	396359C	2	8	9	1400		M 6	1.34
346F-338	396359D	2	14	14	750			1.34
346F-438	396359E	2	20	20	400		M 8	1.34
pistol grip, lower air-inlet, right rotation, trigger start (hex. female)								
347F-227	391735A	0.4	1.5	1.8	4000	1/4"	M 3	0.75
347F-327	391735B	0.4	3	3.2	1550		M 4	0.75
347F-427	391735D	0.4	3.5	4	1000			0.75
347F-527	391735C	0.3	5	5	680		M 5	0.75
345F-7257	394625A	1	5	6	1025			1.2
345F-3257	394625B	1	10	10	525			1.2
345F-4257	394625C	1	12	12	270		M 6	1.2
346F-737	400561C	2	8	9	1400			1.7
346F-337	400561D	2	14	14	750			1.7
346F-437	400561E	2	20	20	400		M 8	1.7
pistol grip, upper air-inlet, right rotation, trigger-start (hex. female)								
347F-227O	391473A	0.4	1.5	1.8	4000	1/4"	M 3	0.75
347F-327O	391473B	0.4	3	3.2	1550		M 4	0.75
347F-427O	391473D	0.4	3.5	4	1000			0.75
347F-527O	391473C	0.3	5	5	680		M 5	0.75
pistol grip, lower air-inlet, reversible, trigger-start (hex. female)								
347F-227U	395047A	0.4	1.5	1.8	3000	1/4"	M 3	0.75
347F-327U	395047B	0.4	3	3.2	1100		M 4	0.75
347F-427U	395047D	0.4	3.5	4	750			0.75
347F-527U	395047C	0.3	5	5	500		M 5	0.75
346F-737U	402845C	2	7	8	1200		M 6	1.7
346F-337U	402845D	2	12	12	650			1.7
346F-437U	402845E	2	20	20	320		M 8	1.7
pistol grip, upper air-inlet, reversible, trigger-start (hex. female)								
347F-227OU	395052A	0.4	1.5	1.8	3000	1/4"	M 3	0.75
347F-327OU	395052B	0.4	3	3.2	1100		M 4	0.75
347F-427OU	395052D	0.4	3.5	4	750			0.75
347F-527OU	395052C	0.3	5	5	500		M 5	0.75
angle-head, right rotation, lever-start (square male)								
377F-321	389689B	0.4	3.5	3.5	820	1/4"	M 4	0.85
377F-421	389689D	0.4	4.5	4.5	530		M 5	0.85
377F-521	389689C	0.3	6.5	6.5	380			0.85
376F-7251	392061A	1.5	8	8	810			1.2
376F-3251	392061B	1.5	15	15	410		M 6	1.2
377F-731	404085C	4	13	13	840	1/2"		2
377F-331	404085D	4	23	23	450		M 8	2
377F-431	404085E	4	33	33	240			2
377F-941-E12.5	204209B	8	32	32	410		M 10	2.3
377F-741-E12.5	204209C	8	46	46	270			2.3
377F-841-E12.5	204209D	8	65	65	185		M 12	2.3

345F-7257
to
345F-4257

347F-227O
to
347F-527O

377F-321
to
377F-521

Required accessories for MINIMAT-F screwdriver:
Function controller fc und pneumatic controller pc.
For technical details see brochure D3440E or page 18/19 of this catalogue.

Performance data relate to an air pressure of 6.3 bar (90 psi)

VARIOMAT - drilling machine and screwdriver in one tool

Type	Part no.	Torque min. Nm	Torque max. soft pull-up Nm	Torque max. hard pull-up Nm	Speed, idling rpm	Screws nominal Ø	Ge-wicht kilos
Basic model, drive 1/2" 20 UNF / F6.3 *)							
305-237UH	401354A	according to equipment (equipment optional)			2000	max. 5	0.9

Please order necessary accessories extra

*) according to equipment, see also broschure D3520E

Performance data relate to an air pressure of 6.3 bar (90 psi)

305-237UH

325-3258UL
325-4258UL

RECYCLING Drivers

Type	Part no.	Torque max. Nm	Speed, idling rpm	Weight kilos
straight, reversible, push-to-start (hex female), 1/4"				
325-3258UL	362714A	10	640	0.8
325-4258UL	362714B	10	310	0.8
pistol grip, lower air-inlet, reversible, trigger-start (hex. female), 1/4"				
305-3257UL	352587E	15	525	1.05
305-4257UL	352587F	18	270	1.05

Performance data relate to an air pressure of 6.3 bar (90 psi)

305-3257UL
305-4257UL

Flat head wrenches

Type	Part no.	Speed, idling rpm	Screws	Weight, kilos
straight, lever-start, closed head				
39-521-19K	391625A	90	M 4 - M 6	1.15
39-331-19K	390518F	165		1.5
39-331-21K	390518G	160	M 4 - M 7	1.5
39-331-32K	390518A	150	M 6 - M 12	1.6
39-331-32L	390518C	150		1.75
39-331-46K	390518N	110	M 8 - M 18	1.7

Performance data relate to an air pressure of 6.3 bar (90 psi)

39-521-19K

39-331-19K
to
39-331-46K

HANDHELD SCREWDRIVERS PNEUMATIC FOR SPECIAL APPLICATIONS

HY235P7

HY115G1
HY135G8

HY160P7

Impulse Driver with shut-off

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed, idling rpm	Air consumption m^3/min	Drive	Screws	Weight kilos
pistol grip, reversible (quick change chuck with hex. female)								
HY115G1	363027A	5	15	3000	0.10	1/4"	to M 6	1.1
HY135G8	363031A	15	35	4000	0.37	7/16"	to M 8	1.35
pistol grip, reversible (quick change chuck with hex. female)								
HY307P7	421136A	4	7	6000	0.2	1/4"	M 5 to M 6	0.83
HY211P7	411558A	6	11	6500	0.3		to M 6	0.85
HY220P7	411559A	10	20	7500	0.35		to M 7	0.85
HY235P7	411560A	20	35	6500	0.55		to M 8	1
pistol grip, reversible (square male)								
HY160P7	375930A	30	60	3500	0.7	1/2"	to M 10	2
HY180P7	423088A	50	80	6000	0.75		to M 12	1.4
HY1120P7	423185A	70	120	5500	0.85		to M 14	1.7

Performance data relate to an air pressure of 6.3 bar (90 psi)

345T-7257U
345T-3257U
345T-4257U

345T-7258U
345T-3258U
345T-4258U

MINIMAT-T the Depth-Stop-Driver

Type	Part no.	Torque max. Nm.	Speed, idling rpm	Weight kilos
straight, reversible, push-to-start (hex. female), 1/4"				
345T-7258U	369272A	5	1100	0.8
345T-3258U	369272B	10	680	0.8
345T-4258U	369272C	12	310	0.8
pistol grip, lower air-inlet, reversible, trigger-start (hex. female), 1/4"				
345T-7257U	369273A	5	1025	1.1
345T-3257U	369273B	10	525	1.1
345T-4257U	369273C	12	270	1.1

Performance data relate to an air pressure of 6.3 bar (90 psi)

HANDHELD SCREWDRIVERS ELECTRIC

Electric Screwdrivers with mechanical shut-off clutch

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed, reversible rpm	Screws	Weight kilos
straight, reversible, lever-start (hex. female), 1/4"						
342EGT-0003	454500A	0.04	0.3	700/1000	M 2	0.39
342EGT-0012	454501A	0.15	1.2	700/1000	M 3	0.52
342EGT-0019	454502A	0.3	1.9	700/1000	M 4	0.52
342EGT-0029	454503A	1	2.9	750/1000		0.8
342EGT-0049	454504A	2	4.9	750/1000	M 5	0.8
342EGT-0088	454505A	3	8.8	600/800	M 6	1.2
342EGT-0120	454512A	4	12	400/550	M 6	1.2
straight, reversible, push-to-start (hex. female), 1/4"						
342EGA-0012	454506A	0.15	1.2	700/1000	M 3	0.52
342EGA-0019	454507A	0.3	1.9	700/1000	M 4	0.52
342EGA-0029	454508A	1	2.9	750/1000		0.8
342EGA-0049	454509A	2	4.9	750/1000	M 5	0.8
342EGA-0088	454510A	3	8.8	600/800	M 6	1.2
342EGA-0120	454511A	4	12	400/550	M 6	1.2

342EGT-0003 with screwdriver-cable

342EGT-0012 to 342EGT-0019

342EGA-0029 to 342EGA-0049

342EGx-0088

Cordless Screwdriver with mechanical shut-off clutch

Type	Part no.	Torque min. / max. Nm	Speed, reversible rpm	Screws
pistol grip, reversible, trigger-start (quick change chuck with hex. female), 1/4"				
342APT-0035	385851A	1.0 / 3.5	1300/2000	M 4
342APT-0060	385852A	2.0 / 6.0	650/1000	M 5

Required accessories for cordless screwdrivers: Rechargeable battery, charger and power supply cable.
For technical details see brochure D3484E.

342APT-....

Cordless Impact Wrenches with automatic shut-off

Type	Part no.	Torque max. Nm	Speed, idling rpm	Impacts per minute min^{-1}
pistol grip, reversible, trigger-start (square male), ½"				
300APTS-250	385880A	250	2300	3200

Required accessories for cordless impact wrenches: Rechargeable battery, charger and power supply cable.
For technical details see brochure D3487E.

300APTS-250

HANDHELD SCREWDRIVERS ELECTRIC

MINIMAT-EC-Servo
325EGA22-00005
to
325EGA22-00080

MINIMAT-EC-Servo
325EGA22-00120
to
325EGA22-00200

MINIMAT-EC-Servo Screwdrivers

Type	Part no.	Torque, Nm min.	Torque, Nm max.	Speed, rpm min.	Speed, rpm max.	Drive
straight, push-to-start (hex. female)						
325EGA22-00005	104400A	0.01	0.05	120	1500	3 mm
325EGA22-00012	104400B	0.03	0.12	120	1500	
325EGA22-00025	104400C	0.05	0.25	100	2000	
325EGA22-00050	104400D	0.1	0.5	80	1600	
325EGA22-00080	104400E	0.16	0.8	60	1200	
325EGA22-00120	104400F	0.18	1.2	50	900	1/4”
325EGA22-00200	104400G	0.4	2.0	30	550	

Required accessories for EC-Servo screwdrivers: Sequence controller and power supply cable.
For technical details see brochure D3496E or page 18/19 of this catalogue.

MINIMAT-EC
320EGT22-…
trigger start

MINIMAT-EC
320EGA27-…
320EGA36-…

MINIMAT-EC Screwdrivers

Type	Part no.	Torque, Nm min.	Torque, Nm max.*)	Speed, rpm min.	Speed, rpm max.*)	Drive
straight, push-to-start (hex. female)						
320EGA22-00005	420555G	0.01	0.05	120	1500	3 mm
320EGA22-00012	420555F	0.03	0.12	120	1500	
320EGA22-00025	420555A	0.05	0.25	100	2000	
320EGA22-00050	420555B	0.1	0.5	80	1600	
320EGA22-00080	420555C	0.16	0.8	60	1200	
320EGA27-0010	399515B	0.15	1	50	1000	
320EGA22-00120	420555D	0.18	1.2	50	900	1/4”
320EGA22-00200	420555E	0.4	2.0	30	550	
320EGA27-0018	399515F	0.4	1.8	100	1000	
320EGA27-0022	399515C	0.4	2.2	50	700	
320EGA27-0040	399515D	0.7	4	40	400	
320EGA36-0040	404866A	0.8	4	100	1000	
320EGA36-0060	404866B	1	6	70	740	
320EGA36-0120	404866C	2	12	35	380	
320EGA36-0180	404866D	3	18	25	280	
320EGA36-0250	404866G	5	25	20	220	
pistol-grip, trigger-start (hex. female)						
320EPT27-0010	403636B	0.15	1	50	1000	3 mm
320EPT27-0022	403636C	0.4	2.2	50	700	1/4”
320EPT27-0040	403636D	0.7	4	40	400	
320EPT36-0040	400532A	0.8	4	100	1000	
320EPT36-0060	400532B	1	6	70	740	
320EPT36-0120	400532C	2	12	35	380	
320EPT36-0180	400532D	3	18	25	280	
angle head, lever-start (square male)						
320EWT27-0022-E6	400580B	0.4	2.2	80	800	1/4”
320EWT27-0035-E6	400580C	0.7	3.5	50	500	
320EWT27-0060-E6	400580E	1	6	30	300	
320EWT27-0022-E10	409902B	0.4	2.2	80	800	3/8”
320EWT27-0035-E10	409902C	0.7	3.5	50	500	
320EWT27-0060-E10	409902E	1	6	30	300	
320EWT36-0060-E6	405646B	1	6	75	750	1/4”
320EWT36-0120-E6	405646C	2	12	40	400	
320EWT36-0180-E10	405646D	3	18	20	240	3/8”
320EWT36-0250-E10	405646E	5	25	15	180	
320EWT36-0060-E10	410932B	1	6	75	750	
320EWT36-0120-E10	410932C	2	12	40	400	

Required accessories for EC screwdrivers: Sequence controller, motor cable and power supply cable. For technical details see brochure D3490E or page 18/19 of this catalogue.

*) as per VDI/VDE 2647 Directive

MINIMAT-EC
320EPT27-…
320EPT36-…

320EWT27-..
320EWT36-..

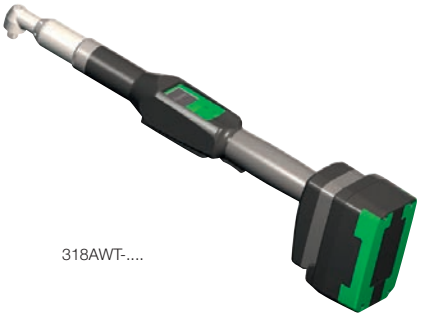
Remark: All EC Screwdrivers in straight version are also available with trigger start. Please see brochure D3490E.

MINIMAT-EC Screwdrivers

Type	Part no.	Torque, Nm		Speed, rpm		Drive
		min.	max.*)	min.	max.*)	
angle head, lever-start (hex female)						
320EWT27-0022-F6	409903B	0.4	2.2	80	800	1/4"
320EWT27-0035-F6	409903C	0.7	3.5	50	500	
320EWT27-0060-F6	409903E	1	6	30	300	
320EWT27-0022-D6	409900B	0.4	2.2	80	800	
320EWT27-0035-D6	409900C	0.7	3.5	50	500	
320EWT27-0060-D6	409900E	1	6	30	300	
320EWT27-0022-DM6	409901B	0.4	2.2	80	800	
320EWT27-0035-DM6	409901C	0.7	3.5	50	500	
320EWT27-0060-DM6	409901E	1	6	30	300	
320EWT36-0060-F6	411307B	1	6	75	750	
320EWT36-0120-F6	411307C	2	12	40	400	
320EWT36-0060-D6	410934B	1	6	75	750	
320EWT36-0120-D6	410934C	2	12	40	400	
320EWT36-0060-DM6	411301B	1	6	75	750	
320EWT36-0120-DM6	411301C	2	12	40	400	

Required accessories for EC screwdrivers: Sequence controller, motor cable and power supply cable. For technical details see brochure D3490E or page 18/19 of this catalogue.

*) as per VDI/VDE 2647 Directive



318AWT-....

MINIMAT-EC-Cordless Screwdriver

Type	Part no.	Torque, Nm		Speed, rpm		Drive
		min.	max.	min.	max.	
angle head, trigger-start (square male)						
318AWT-0050	416000D	1	5	100	1000	1/4"
318AWT-0120	416000A	2	12	50	780	3/8"
318AWT-0210	416000B	5	21	30	430	
318AWT-0320	416000C	7	32	30	280	
318AWT-0500	416000E	12	50	30	185	

Required accessories for Cordless Angle Nutrunner: Rechargeable battery and Charger
For technical details see brochure D3710E.

318APT-....

MINIMAT-EC Cordless Screwdriver

Type	Part no.	Torque, Nm		Speed, rpm		Drive
		min.	max.	min.	max.	
pistol grip, trigger-start (hex. female)						
318APT-0040	955500A	0.8	4.0	90	1500	1/4"
318APT-0080	955500B	1.6	8.0	50	800	
318APT-0130	955500E	2.6	13.0	30	500	

Required accessories for MINIMAT-EC Cordless screwdriver: Rechargeable battery and Charger
For technical details see brochure D3710E.

330EG36-..

MINIMAT-ED Digital Electric Screwdriver

Type	Part no.	Torque, Nm		Speed, rpm	Drive
		min.	max.		
straight, trigger-start or push-to-start (hex. female)					
330EG36-0012	440000A	0.24	1.2	1500	1/4"
330EG36-0018	440000B	0.36	1.8	1500	
330EG36-0048	440000C	1.0	4.8	1000	
330EG36-0032	440000E	0.64	3.2	1200	

Required accessories for Digital screwdrivers: Power supply, motor cable and power supply cable
For technical details see brochure D3495E.

MINIMAT-EC-Servo Screwdriver

Type	Part no.	Torque, Nm		Speed, rpm	
		min.	max.	min.	max.
angle head design					
315EWT58-0600-E12	399853A	12	60	25	550
315EWT58-0350-E10	399853B	7	35	50	800
315EWT58-1200-E12	399853C	25	120	15	250

Required accessories for EC-servo screwdrivers:
Sequence controller and motor cable. For technical details see brochure D3497E or page 18/19 of this catalogue.

315EWT58-..

SCREWDRIVER SPINDLES PNEUMATIC with mechanical shut-off clutch

345-3008-31
to
345-7008-31

347-228-31
to
347-528-31

344-340-31
to
344-840-31

345-308-31
to
345-508-31

346-338-31
with Off-Set-Gear

NANOMAT / MICROMAT / MINIMAT Screwdriver Spindles

Type	Part no.	Torque min. Nm	Torque max. soft pull-up Nm	Torque max. hard pull-up Nm	Speed, idling rpm	Drive	Weight kilos
right rotation, push-to-start (hex. female)							
345-3008-31	204000C	0.01	0.15	0.15	1700	3 mm	0.14
345-5008-31	204000E	0.008	0.25	0.25	880		0.14
345-6008-31	204000F	0.008	0.30	0.30	660		0.14
345-7008-31	204000G	0.008	0.30	0.30	380		0.14
345-308-31	339271A	0.02	0.5	0.6	1600		0.18
345-408-31	345765A	0.02	0.55	0.55	1100		0.18
345-708-31	385138A	0.02	0.7	0.7	650		0.19
345-508-31	339271B	0.02	0.7	0.7	350		0.19
347-218-31	397066A	0.3	1	1	1900	1/4"	0.5
347-318-31	397066B	0.3	1.4	1.4	1300		0.5
347-518-31	397066C	0.2	2	2	900		0.5
347-618-31	397066D	0.2	2	2	600		0.55
347-228-31	386369A	0.5	1.6	2.2	4000		0.89
347-328-31	386369B	0.4	3	3.5	1550		0.89
347-528-31	386369C	0.3	5	5	680		0.89
346-238-31	406109B	2	5	6	2500		1.5
346-738-31	406109C	2	8	9	1400		1.6
346-338-31	406109D	2	14	14	800		1.6
346-438-31	406109E	2	20	20	400		1.6
344-340-31[3]	389730A	4	8	8	2800	7/16"	2.5
344-440-31[3]	389730B	4	10	10	2100		2.5
344-740-31[3]	389730C	16	34	34	640		2.65
344-840-31[3]	389730D	16	45	45	450		2.65
344-940-31	404623B	40	85	85	250	1/2"	6
344-140-31	404623C	40	130	130	160		6
344-240-31	404623D	40	180	180	115		6
for Off-Set / Reduction Gear, right rotation, push-to-start							
347-228-31LV	388645A						
for Off-Set Gear	388649A	0.5	1.5	2	4200	1/4" [1]	1.34
347-328-31LV	388645B						
for Off-Set Gear	388649A	0.4	2.8	3.3	1700		1.34
347-528-31LV	388645C						
for Off-Set Gear	388649A	0.3	4.7	4.7	750		1.34
346-738-31LV	401068C						
for Off-Set Gear	401236B	2.6	9	9	1050		3
346-338-31LV	401068D						
for Off-Set Gear	401236B	2.6	15	15	600		3
346-438-31LV	401068E						
for Off-Set Gear	401236B	2.6	20	20	300		3
346-338-31	406109D						
for Off-Set Gear	407204A	4	42	42	200	3/8" [2]	3.2
for Off-Set Gear	3331781A	6	62	62	130	1/2" [2]	4.1
346-438-31	406109E						
for Off-Set Gear	407204A	4	72	72	100	3/8" [2]	3.2
for Off-Set Gear	3331781A	6	105	105	60	1/2" [2]	4.1
for Off-Set Gear	3431551A	7	140	140	50	1/2" [2]	4.4

[1] hex. female [2] square male [3] with Remote-Start Performance data relate to an air pressure of 6.3 bar (90 psi)

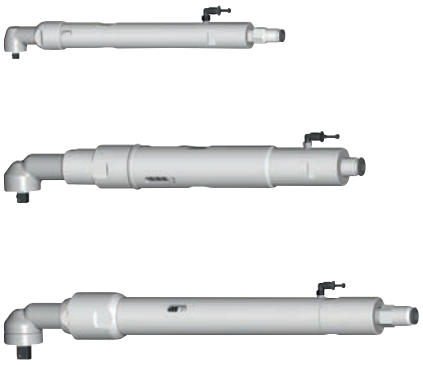
SCREWDRIVER SPINDLES PNEUMATIC with mechanical shut-off clutch

MINIMAT Screwdriver Spindles

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed max. rpm	Drive	Weight kilos
angle head, right rotation, remote start (square male)						
377-320-7-E6.3	200616B	0.4	3.6	1070	1/4" 1)	0.9
377-420-7-E6.3	200616D	0.4	4.5	710	1/4" 1)	0.9
377-520-7-E6.3	200616C	0.3	6.5	470	1/4" 1)	0.9
377-230-7-E10	200941B	4	7	1500	3/8"	1.9
377-730-7-E10	200941C	4	12	840	3/8"	1.9
377-330-7-E10	200941D	4	20	450	3/8"	1.9
377-430-7-E10	200941E	4	35	240	3/8"	1.9
377-740-7-E12.5	200662C	20	48	390	1/2"	2.7
377-840-7-E12.5	200662D	20	67	270	1/2"	2.7

1) also available with hex. female

Performance data relate to an air pressure of 6.3 bar (90 psi)



377-320-7-E6,3
to
377-840-7-E12,5

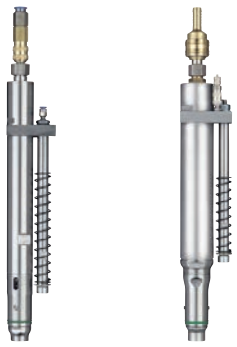
All Screwdriver Spindles in angle head design are also available with reversible operation.

SCREWDRIVER SPINDLES PNEUMATIC with controlled clutch function

SENSOMAT Screwdriver Spindles

Type	Part no.	Seating Torque min. Nm	Seating Torque max. Nm	Driving Torque max. Nm	Speed idling rpm	Weight kilos
SENSOMAT, right rotation, push-to-start (hex. female), 1/4"						
347S-228-31	391488A	0.5	1.6	2	4000	0.9
347S-328-31	391488B	0.4	3	3.3	1550	0.9
347S-528-31	391488C	0.3	5	5.5	680	0.9
346S-238-31	409280B	0.5	4	4.5	2500	1.3
346S-738-31	409280C	0.5	5	7	1400	1.3

Performance data relate to an air pressure of 6.3 bar (90 psi)



Remark: All pneumatic Screwdriver Spindles are also available with left-rotation, reversible and remote-start operation.

SCREWDRIVER SPINDLES ELECTRIC

311E 27-...

311E 36-...

MINIMAT-EC-Servo Screwdriver Spindles

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed min. rpm	Speed max. rpm	Drive	Weight kilos
EC-Screwdrivers with Torque- and Angle Transducer (hex. female)							
311E27-0010	413400A	0.2	1	100	1600	1/4"	1.2
311E27-0020	413400B	0.4	2	60	1500		1.2
311E27-0050	413400C	1	5	40	800		1.2
311E27-0120	413400E	2.4	12	20	400		1.2
311E36-0150	205000A	3	15	50	1000		2.8
311E36-0300	205000C	6	30	30	600	7/16"	2.8
311E36-0500	205000D	10	50	20	380		2.8
311E42-0300	206000B	6	30	50	890		4.2
311E42-0800	206000D	16	80	20	330		4.2
311E63-1800	416400D	36	180	15	300	3/4"	12.9
311E63-3500	416400F	70	350	10	155		12.9
311E63-5000	416400H	100	500	10	90		12.9

The screwdriver spindles of the series 311E... can be supplied with a redundant measuring system for torque and angle.
Technical details are available in our catalog D3161E.

320E12-0012

320E19-... 320E22-... 320E27-... 320E36-...

NANOMAT-EC / MICROMAT-EC / MINIMAT-EC Screwdriver Spindles

Type	Part no.	Torque min. Nm	Torque max.*) Nm	Speed min. rpm	Speed max.*) rpm	Drive
EC-Screwdrivers (hex. female)						
320E12-00012	420400B	0.02	0.12	120	1500	3 mm
320E19-0002	405024A	0.03	0.2	150	1500	
320E19-0005	405024C	0.08	0.5	120	1200	
320E19-0008	405024B	0.15	0.8	100	1000	
320E22-00120	420988D	0.24	1.2	50	900	1/4"
320E22-00200	420988E	0.4	2.0	30	550	
320E27-0010-D	416500B	0.15	1.0	50	1000	3 mm
320E27-0018-D	416500H	0.4	1.8	100	1000	
320E27-0024-D	416500C	0.4	2.4	50	700	
320E27-0042-D	416500D	0.7	4.2	40	400	
320E36-0040-D	416600E	0.5	4	100	1000	1/4"
320E36-0060-D	416600A	1	6	70	740	
320E36-0090-D	416600F	2	9	50	550	
320E36-0120-D	416600B	2	12	35	380	
320E36-0180-D	416600C	3	18	25	280	

*) as per VDI/VDE 2647 Directive

342EA36-...

MINIMAT-E Screwdriver Spindles

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed rpm	Drive
Screwdrivers with mechanical shut-off clutch, stationary (hex. female), push-to-start					
342EA36-0009-200	304001A	0.3	0.9	2000	1/4"
342EA36-0009-100	304001B			1000	
342EA36-0009-65	304001C			650	
342EA36-0024-100	304002A	0.4	2.4	1000	
342EA36-0024-65	304002B			650	
342EA36-0036-65	304003A	0.5	3.6	650	
342EA36-0018-200	304004A	0.5	1.8	2000	
342EA36-0018-100	304004B	0.4		1000	
342EA36-0018-65	304004C	0.3		650	
342EA36-0048-100	304005A	0.4	4.8	1000	
342EA36-0048-65	304005B	0.3		650	

All MINIMAT-E Screwdriver Spindles are also available with remote-start operation.

Required Accessories for:	NANOMAT-EC / MICROMAT-EC / MINIMAT-EC and MINIMAT-EC Servo screwdriver spindles: Controller → Page 18/19 of this catalogue

SCREWDRIVER SPINDLES ELECTRIC

MINIMAT-ED Digital Electric Screwdriver Spindles

Type	Part no.	Torque, Nm min.	Torque, Nm max.	Speed, rpm min.	Speed, rpm max.	Drive
straight, (hex. female)						
330E36-0012	450000A	0.24	1.2	150	1500	1/4"
330E36-0018	450000B	0.36	1.8	150	1500	
330E36-0032	450000E	0.64	3.2	120	1200	
330E36-0048	450000C	1.0	4.8	90	900	

Required accessories for Digital screwdriver spindles: Motor cable, power supply, interface and software.
For technical details see brochure D3195E.

330E36-....

MEASURING TECHNOLOGY

Measuring Instruments for manual use

Designation	Type	Measuring range Power Supply	Electric	Remark
Measuring electronic	ME5000	see transducer	Rechargeable Battery with Docking Station Battery charger	Value Display
Measuring electronic	ME5400 ME6000 ME6100	see transducer	Power Unit 100 up to 240 Volt (50 or 60 Hz)	Value Display external standard PC-Monitor
Measuring electronic	ME5600	see transducer	Power Supply 85 up to 264 Volt (50 or 60 Hz)	Value Display LC-Display graphic Touch Screen

Measuring electronic ME 5000 with Docking Station

ME5400
ME6000
ME6100

ME5600

Torque-Transducers for measuring instruments

Designation	Type	Part no.	Measuring range Nm
Piezo-electric (PE) transducers			
Torque-Dynamometer	MP1PE	408000C	0.1 - 1
	MP25PE	360850A	2.5 - 25
	MP200PE	373205A	20 - 200
	MP1000PE	408000A	50 - 500
Torque-Wrench	MS25PE-W	346217A	2.5 - 25
	MS25PE-WS	346217C	2.5 - 25
Strain gage (DMS) transducers			
Torque-Dynamometer	MP2DMS	385200B	0.2 - 2
	MP7DMS	385200A	1.05 - 7
	MP25DMS	385200C	2.5 - 25
	MP160DMS	385200D	16 - 160
	MP500DMS	408088A	50 - 500
Torque-Wrench	MS2DMS	387798B	0.2 - 2
	MS7DMS	387798A	1.05 - 7
	MS7DMS-W	388050A	1.05 - 7
	MS25DMS-W	388050C	2.5 - 25
Offset torque transducers			
Torque transducer	V002-E6.3/F6.3	385481B	0.2 to 2 (pos./neg.)
	V005-E6.3/F6.3	385481C	0.5 to 5 (pos./neg.)
	V010-E6.3/F6.3	385481D	1 to 10 (pos./neg.)
	V020-E6.3/F6.3	385481E	2 to 20 (pos./neg.)

Torque-Dynamometer

Torque-Wrench

Offset Torque transducer

Mechanical Torque-Wrenches with manual indicator

Part no.	Measuring range Nm	Increment Nm	Drive (square male)
804686	0 - 3.4	0.1	1/4"
804687	0 - 8.4	0.2	1/4"
804688	0 - 17	0.5	3/8"
804689	0 - 60	1	3/8"

Mechanical Torque Wrench

CONTROLLER TECHNOLOGY - Screwdriving controllers - AST

Next to the screwdriver, the screwdriving controller is the most important component of an electronic screwdriving system. It controls the EC drive of the screwdriver according to the parameters of the screwdriving sequence, it evaluates measurement signals and provides all operating and documentation functions.
The available systems - EC and EC servo, both equipped with highly dynamic brushless servo motors, differ in the way they generate torque measurement values. Whilst the EC technology of the controllers AST5, AST6 and AST11 are based on the exact motor current measurement, in the EC servo system of the controller AST30 or AST40 the signals of the measurement transducer integrated into the tool are evaluated.

AST5

Screwdriving controller Type AST5 / AST5-S

- Torque range: 0.01 Nm - 2.0 Nm
- For MICROMAT-EC and MINIMAT-EC handheld screwdrivers (further details → D3490E)
- For MINIMAT-EC-Servo handheld screwdrivers (further details → D3496E)
- Number of multi-level screw sequences: 100
- Documentation options: internal storage, output via Ethernet (Datalogger, http)
- Operator friendly colour touch screen for direct entry of screw sequences and tightening parameters, graphic portrayal of screwdriving graphs

AST6

Screwdriving controller Type AST6 / ASTi6

- Small size to fit in manual work stations
- Torque range: 0.02 - 2.0 Nm
- For NANOMAT-EC and MICROMAT-EC screwdriver spindles (further details → D3165E)
- Number of multi-level screw sequences: 100
- Documentation options: internal storage, output via Ethernet (Datalogger, http)
- Operator friendly colour touch screen for direct entry of screw sequences and tightening parameters, graphic portrayal of screwdriving graphs
- Small size for confined spaces

ASTi6

ASTi6 without display, for installation into a switch cabinet

Screwdriving controller Type AST11

- Torque range: 0.03 - 25 Nm
- For MICROMAT-EC and MINIMAT-EC screwdrivers handheld and screwdriver spindles (further details → D3490E or D3165E)
- Number of multi-level screw sequences: 16
- Documentation options: internal storage, output via Ethernet (Datalogger, http), adjustable printer interface
- PLC interface: inputs/outputs
- Integrated RS232 port with varied options:
  - 4 fieldbuses available: Profibus, Profinet, EtherCat, EthernetIP
  - direct connection of a barcode scanner
  - connection of a serial printer

AST11

Screwdriving controller Type AST30-31

- Torque range: 7 - 120 Nm
- For MINIMAT-EC-SERVO screwdrivers handheld, angle-head design (further details → D3497E)
- Number of multi-level screw sequences: 32
- Documentation options: internal storage, output via RS232 or Ethernet (Datalogger), printer interface
- PLC interface: input/output, Profibus

AST30

Screwdriving controller Type AST40 / ASTi40

- Torque range: 0.2 - 500 Nm
- For MINIMAT-EC-SERVO screwdriver spindles (further details → D3161E)
- Number of multi-level screw sequences: 120 (via input/output interface)
- Documentation options: internal storage, output via RS232 or Ethernet (Datalogger), printer interface
- PLC interface: input/output, Profibus, Profinet, EtherCAT, EthernetIP

AST40

ASTi40 without display, for installation into a switch cabinet

ASTi40

CONTROLLER TECHNOLOGY

Function control - fc

The function control increases the processing reliability of manual screwdriving assembly. It enables monitoring of every single screw assembly and guarantees the success of the screw connection on the component.

fc11

Screwdriver controller fc11

The screwdriving function controller fc11 and the handheld screwdriver MICROMAT-F/MINIMAT-F provide the intelligent solution for your processing reliability.
The screw system counts your assemblies, monitors their times, shuts-off only upon reaching torque, recognises work piece exchange and is 100 % self-checking.

fc20

Screwdriver controller fc20

The functions control fc20 also enables the monitoring of complex assembly processes through programmable sequences. This screwdriver controller can control up to three screwdrivers of differing types. The use of the fc20 allows you high flexibility for various screwdriving requirements on one component.

FEEDING SYSTEMS

Vibratory Bowl Feeders

11011-0.15
11011-0.75
11011-1.2

11011-2.5

Sword Feeders

1811-1.5-x

ERGOMAT-Z

DEPRAG FEED MODULE

Vibratory Bowl Feeders and Sword Feeders for handheld Drivers and Press-In Tools

Type	Number of screw-drivers	Filling capacity l	max. Head dia. mm	max. Shaft length mm	Shaft dia. from - to mm	Power source AC
11011-0.15	1	0.15	5	8	1.2 - 2.5	24 Volt DC
11022-0.15	2	0.15	4	8	1.2 - 2.5	
11011-0.75	1	0.75	12	35	1.5 - 6.3	
11022-0.75	2	0.75	8	25	2 - 6.3	
11011-1.2	1	1.2	12	50	3 - 7	
11011-2.5	1	2.5	16	60	4 - 10	
11022-2.5	2	2.5	14	60	4 - 10	
1811-ES/0.15-x	1	0.15	5	8	1 - 2.5	230 V/115 V
1811-1.5-x	1	1.5	12	25	2 - 6.3	

ERGOMAT-Z the stroke screwdriver for feeding machines

Type	Part no.	Torque min. Nm	Torque max. Nm	Speed, idling rpm	Drive	Screws	Weight kilos
347V-218	406859A	0.3	1	1900	1/4"	M 3	0.8
347V-318	406859B	0.3	1.4	1300		M 3	0.8
347V-518	406859C	0.2	2	900		M 3	0.8
347V-718	406859G	0.2	2.5	640		M 4	0.8

Performance data relate to an air pressure of 6.3 bar (90 psi)

DEPRAG FEED MODULE - DFM

DEPRAG FEED MODULE (DFM) version 1	1 stroke, screw assembly via nosepiece, stroke 60mm, max. vertical pressure 120N
DEPRAG FEED MODULE (DFM) version 2	2 strokes, vacuum-supported screw/nut assembly, stroke 60mm, max. vertical pressure 120N

Please find more informations about the DEPRAG FEED MODULE in our brochure D3820E.

Press-In Tools for feeding systems

Type	Parts to be transported	Remark
EDG-..	Rivets, Dowel Pins Pins, Bushings	with one press-in stroke
EDGZ-..-..		with one press-in stroke and one additional locking stroke

Press-In Tools

Screwfeeding Machines for stationary use

Type	Number of screw-drivers	Filling capacity l	max. Head dia mm	max. Shaft length mm	Shaft dia. from - to mm	Power source AC
06. .	1	0.05	3	8	0.6 - 2.0	230 V/115 V
010. .	1 - 6	0.15	5	8	1.2 - 2.5	24 Volt DC
010. .	1 - 6	0.75	8 / 12	35	1.6 - 6.3	
010. .	1 - 6	1.2	16	50	3 - 7	
010. .	1 - 6	2.5	14 / 16	50	4 - 8	
05. .	1 - 6	6	30	100	8 - 16	230 V/115 V
05. .	1 - 4	12	30/40	120/130	12 - 18 14 - 20	
08..	1	0.15	5	8	1 - 2.5	
08. .	1 - 6	1.5	12	25	2 - 6.3	

Vibratory Bowl Feeders

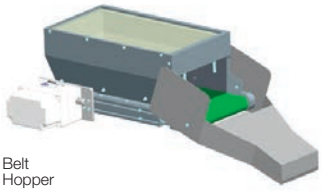
Nut Feeders for stationary use

Type	Number of screw-drivers	Filling capacity l	Across Flats mm	Female Thread mm	max. Nut height mm	Power source AC
010. .	1 / 2 / 4	0.75	4 - 8	3 - 5	5	24 Volt DC
010. .	1 / 2 / 4	2.5	5.5 - 13/17	3 - 8	8	

Feeders for small components for stationary use

Type	Number of Outlets	Filling capacity l	Parts to be transported	Power source AC
06. .	1	0.75	Rivets, Bolts, Pin, Washers	230 V/115 V
05. .	1	2.5	Sleeve etc.	
08. .	1	1.5	Tooling Parts, Balls	

Screwfeeding Machines for automated Assembly Units can be supplied with or without magnetic valves, as well as with electronic sequence control integrated.



Belt Hopper

Supply systems - Linear hoppers for feeding systems

Type	Part no.	Filling capacity l	Operating Voltage DC
B10	415050A	10	24 V
B20	418247A	20	24 V

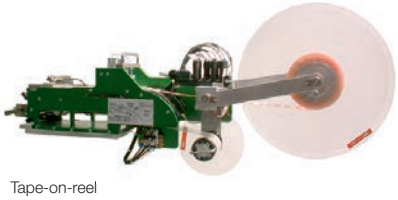
Screw-Presenters

Type	Number of screw-drivers	Filling capacity l	Shaft dia. from - to mm	Shaft length from - to mm	Operating Voltage DC	Remark
SG1211-. .	1	0.1	1.4 - 5	2 - 25	12	for handheld Screwdrivers
SG0211-. .	1	0.1	1.4 - 5	2 - 18	12	for stationary Screwdrivers

Screw-Presenters

Tape-on-reel

Type	Suitable components	Operating Voltage
0111-. .	single- and double-sided adhesive components	24 V



Tape-on-reel

SCREWDRIVING AND ASSEMBLY SYSTEMS

From highly automated large-scale systems, fully automated assembly lines, standardised assembly cells up to partially automated reliable manual work stations we offer an enormous range of automation solutions for the most varied of industries:

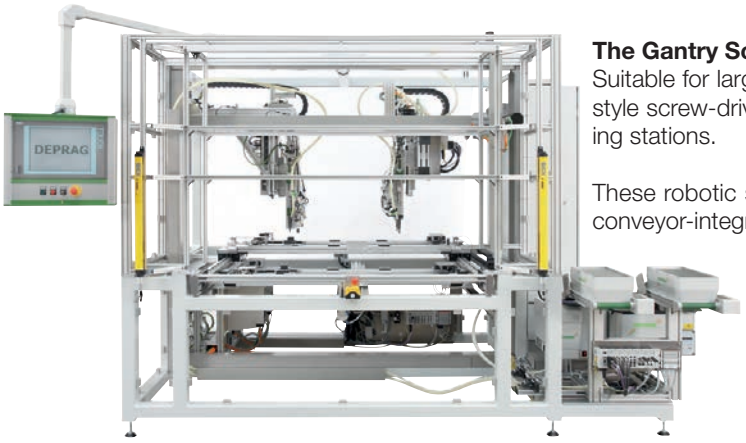
- Electronics industry, information technology and telecommunication
- Automobile industry
- Vehicle manufacture, Aircraft manufacture
- Household goods
- Medical technology
- Tool manufacture
- Sanitation technology
- Food industry
- Machine construction
- etc.

Screwdriving and assembly systems for efficient automatic production.

DEPRAG - Your one stop shop, we take full responsibility for your complete system!
Take a look at our capabilities and range from numerous application examples andcustomer references!

- one stop shop
- reliable
- efficient
- economical
- high level of reusability

Application examples



The Gantry Screwdriving Cell:
Suitable for larger work areas (up to 2.0 m x 1.5 m / 6.6 x 5.0 ft.), a gantry style screw-driving cell can be equipped with several individual screwdriving stations.

These robotic screwdrivers can be used in individual workstations or in a conveyor-integrated system.

The complete Assembly Cell

When looking for assembly tasks beyond screwdriving, DEPRAG offers complete assembly cells that can include welding, coil-winding, etc.

Such a station will include all necessary feeding, handling, pick & place, as well as the complete control functions.

STANDARDISED ASSEMBLY SYSTEMS

Screwdriving, labelling, palettising, clipping, pressing in, laser engraving, ultrasonic welding, testing, gluing...
DEPRAG assembly modules enable the low-cost realisation of numerous functions.

We make use of our modular system in the creation of your assembly cells:

DCAM

DEPRAG COMPACT ASSEMBLY MODULE

The compact machine system with standardised base structure and integrated positioning and sequence controller.

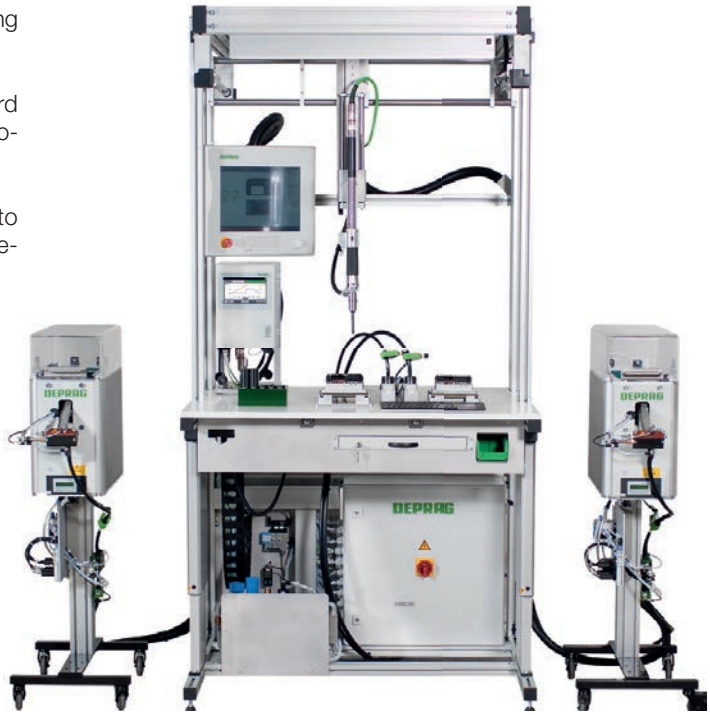
FULLY EQUIPPED MANUAL WORK STATIONS

“Smart Work Benches" combine manual handling with processing reliability to equal automatic production.

DEPRAG has a comprehensive range of sophisticated standard modules which are used to create precise, economical, and ergonomic manual work stations.

These tried and tested components which can be combined to make a system of high reliability, allow flexible worker change-over without sacrificing quality.

Please find more informations in our brochure D3390E.



Controller technology

CONTROL SYSTEM AND PROCESS CONTROLLER DCOS (DEPRAG CONTROLLER SYSTEM)

The controller system DCOS (DEPRAG CONTOLLER SYSTEM) is designed to fulfil the highest requirements. It is particularly user friendly and has high functionality. The DCOS controls, records, documents and analyses.

The integrated networkability enables unproblematic connection to SCADA and MES systems, optimal data administration and storage and above all, the access to common PC applications such as browsers, data back-up and remote access opens up almost infinite user possibilities.

A DCOS consists of:
- the control and operating unit
- the control cabinet
- and standardised software packages

Control and operating unit

Control unit DPU **D**EPRAG **P**ROCESSING **U**NIT	**DPU010 (C)**	**DPU050**	**DPU100**	**DPU200**

The DPU series controllers are based on an industrial PC. The compact controllers DPU010, DPU050, DPU100 run on the Windows CE operating system whereas the DPU200 uses Windows XP.
The DPUs control complex motion sequences with extremely short cycle times (typically < 6 ms). A colour touch screen with VGA resolution (except on the DPU010) enables high level user comfort in the operation and display of operating conditions. Two USB ports allow the user to connect additional peripheral devices with ease. The DPU can access the company network or world wide web via the freely accessible Ethernet port.

Control cabinet

Control cabinet DSEC **DE**PRAG **S**AFETY **E**XTENSION **C**ONTROL**LER**	**DSEC10**	**DSEC20**	**DSEC30**	**DSEC40**

As well as the DPU a control cabinet such as DSEC10, DSEC20, DSEC30 or DSEC40 is used, depending on the control task. These each contain 32 digital inputs and outputs which are connected to the DPU via the modern Ethercat field bus. A 24V DC voltage supply is already integrated in the DSEC to supply the control components (DPU, sensors and actuators etc.). To meet the safety function requirements the DSEC10 and DSEC20 both include two inbuilt safety relays.
Both control cabinets DSEC30 and DSEC40 are equipped with freely programmable compact safety controllers enabling highly complex safety functions.

Software Packages

DFUN	**DVIP**	**DPRO**	**DAST**	**DSPEC**
DFUN10 Part no. 815454		DPRO10 Part no. 815632		
DFUN50 Part no. 815455	DVIP50 Part no. 815629	DPRO50 Part no. 815633		Part no. based upon order
DFUN100 Part no. 815456	DVIP100 Part no. 815630	DPRO100 Part no. 815634	DAST100 Part no. 815641	
DFUN200 Part no. 815457	DVIP200 Part no. 815631	DPRO200 Part no. 815635	DAST200 Part no. 815642	
The basic software package regulates the functions of your system components. The functionality matches the performance capability of the relevant system control.	The software package for visualisation and positioning. Operator guidance on the positioning control necessitates processing and sequencing visualisation. The functionality matches the performance capability of the relevant system control.	This software package supports the process control through BDE, MDE and MES connections. The functionality matches the performance capability of the relevant system control.	The software-panel for EC and EC Servo Systems. DAST is used to supervise the operation and visualization of the screwdriver sequence controller (AST series) through the system control. The functionality matches the performance capability of the relevant system control.	For the regulation of customer specific applications. DSPEC is required when actions and functions are used which are not covered by the software packages DFUN, DVIP and DPRO.

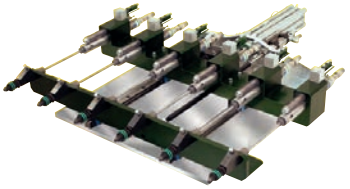
Feeding technology → Page 20 / 21

Measuring Technology → Page 17

Please find more informations in our brochure D3350E.

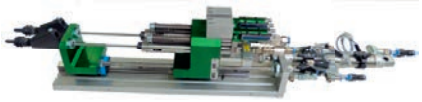
Screwdriving function module

Screwdriving function module for automated screw assembly
Screwdriving function modules make up the base for every reliable, automated screw assembly. You also profit from our many years of experience in screwdriving technology and assembly automation.
We offer both single spindle and multi-spindle units.

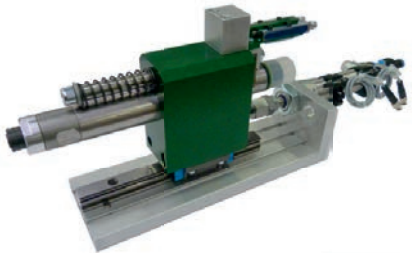


Wide variety for all applications
DEPRAG screwdriving function modules are extremely varied. For every application we have a suitable solution. For example our designs span a large torque range and single or multi-spindle units are available in various forms.

The modular designs of our screwdriving units are based on six different standard forms:



Normal
slim design for horizontal screw assembly or assembly from above
Short design
for tight working spaces
Under floor design
for vertical screw assembly from below
Vacuum design
for difficult to access or recessed screw positions in any screw direction
Pick & Place design
for connection elements with defined pick position
Nut design
for automatic feeding and assembly of nuts



Screwdriver Spindles → Page 14 / 15 / 16

Please find more informations in our brochure D3310E.

AIR MOTORS

Air motors are safe and robust drive systems which come into play when a resilient, overload-safe, high performance drive is required. Always ready for action long after traditional drive technologies have stopped rotating.

Advantages: explosion proof high longevity service-friendly stainless steel compact sterilisable

A wide range of motors is available, such as oil-free, fully sealed, cleaning agent resistant motors for use in the food industry; sterilisable motors for medical technology; motors for use under special conditions such as the resilient drain milling robot drive; and our ATEX-conform complete system of air motor - holding brake - gearing for use in potentially explosive environments. We will find the safest and most economical drive solution for your individual application, whether it is an air motor from our catalogue or a complex system solution.

PRODUCT SPECTRUM

Air vane motors

- BASIC LINE
- ADVANCED LINE
- POWER LINE
- INDIVIDUAL LINE
- Drill motors, Milling motors, Grinding motors
- Motors with integrated holding brake

Turbines

- Turbine production according to your specific application
- Innovative turbine generator: Harnessing power from small amounts of process gas

Tooth-gear motors

Tooth-gear motors can be individually designed according to your requirements.

Speed regulator

Innovative system solution to offset speed fluctuations.

Accessories

Maintenance units, special oil, pressure hoses, silencer, pressure regulator valves, etc. can be found in our product catalogue D3340 E.

AIR VANE MOTORS

BASIC LINE

Our great value for money model for use in non-critical production environments.
Additional benefit:
You save production time with our patented vane exchange system!

Power range:
200 - 1200 W
Your advantages:
- ATEX certified
- patented vane exchange system
- wide speed range
- reversible
- robust design

D6200E

ADVANCED LINE

Our product line of stainless steel motors stands out from the rest with its comprehensive range of sealed, oil-free operable, non-corrosive air motors. Particularly suitable for use in the paper industry, food processing industry, for medical technology and much more…

Power range:
20 - 1200 W
Your advantages:
- ATEX certified
- non-corrosive
- oil-free operable
- sealed
- reversible
- integrated holding brake design
- high performance, small size

D6400E

AIR VANE MOTORS

Our product line of high performance bracket and flange motors also features wide versatility. The high starting torque with an unparalleled low performance weight, the robust and reliable design are all clear advantages in comparison with an electric drive.

Power range:
1.6 - 18 kW
Your advantages:
- ATEX certified
- high performance
- high starting torque
- low performance weight
- robust, reliable design
- long life-span

D6600E

POWER LINE

Individual customisation
Great value customisation based on our modular principle, from individually designed motors to customer specific package deals, up to complete system solutions.

Your advantage:
- attractive price-performance ratio

INDIVIDUAL LINE

AIR VANE MOTORS FOR SPECIAL APPLICATIONS

Our efficient drill motors with slim design allow the smallest of drill spacings when using multi-spindle units, such as for the construction of windows.

Power range:
80 - 600 W
Speed range:
150 - 24,000 rpm
Your advantages:
- high precision drill chuck with taper fitting

D6800E

Drill Motors

Our durable milling motors are particularly suitable for robot applications:
space saving and high performance with high speed ranges.

Power range:
400 W
Speed range:
max. 20,000 rpm
Your advantages:
- robust and precise bearing
- high running precision

D6800E

Milling Motors

Our grinding motors programme offers the advantages of the reliable handheld DEPRAG air grinding machines as an integrated version for your machine.
The robust steel housing guarantees high precision and operational safety.

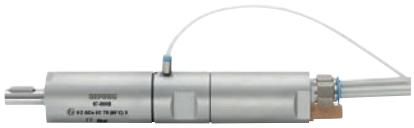
Power range:
150 - 1000 W
Speed range:
15,300 - 47,000 rpm
Your advantages:
- high precision collet for various shaft diameters
- high running accuracy

D6800E

Grinding Motors

AIR VANE MOTORS

Motors with integrated holding brake



The great value complete solution: Customers benefit from our standard program of vane motors with integrated brake equipment.

Available for the series 67 and 68 from 200 W – 3.6 kW.

Advantage of planetary gears:
- effective holding of a large centrifugal mass
- automatic brake by pressure drop
- drive spindle can be held in position without air consumption

D6400E / D6600E

Gear Motors

Due to the high speeds of air motors, gears are often necessary for speed adjustment when used in a machine.
DEPRAG saves systems constructors the time and effort of laborious design work and interface adaptation between gears and air motor.
Our range already consists of a variety of standard motors with high quality integrated gears at a favourable price-performance ratio. If you cannot find a suitable air motor in our catalogue we also offer several low-cost combinations of air motors and gears.

Advantages of planetary gears:
- compact design
- high degree of efficiency
- optional installation position
- gear ratio 5 - 50

Advantages of spur gears:
- good value for money
- gear ratio: optional (i = 7 - 238)

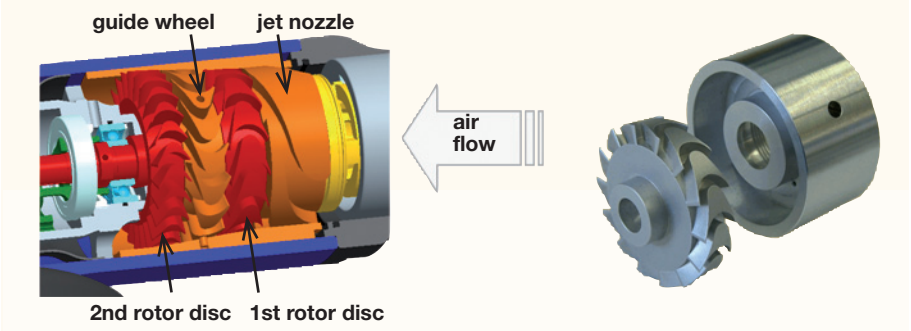
Advantages of worm gears:
- good value for money
- compact design
- high gear ratio possible in one step from 14 - 80
- self-locking

TURBINES

Our turbines are energy efficient, high speed drives which are suitable for continuous use and have an optimal performance weight and guarantee low air consumption. Each turbine is fluid-dynamically designed, calculated and individually produced specific to your application.

Function of a turbine

Turbines are turbo machines which can be designed to be single level or multi-level.
The transformation of pressure energy into kinetic energy happens in the entry jet. On a two level turbine the largest part of the kinetic energy is transferred to the first rotor disc. The air flow is diverted over the fixed rotor disc. The remaining energy is transferred to the second rotor disc.

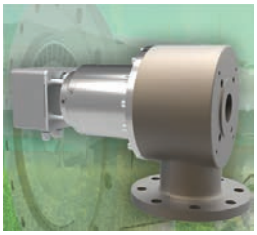


The turbine does not need any tangential sealing. Operation of the turbine with oil-free air is therefore completely wear free. Turbo machines optimally use the energy of pressurised air. This reduces the air consumption by a third in comparison with an air motor. The performance weight [kilos/kW] is only half as big.

Application examples of our turbine drives

Application of turbines for energy reclamation

Our turbine generator enables power to be reclaimed from small amounts of process gas.
With a small investment you can turn used energy into hard cash!



Application of turbines for aircraft emergency exits

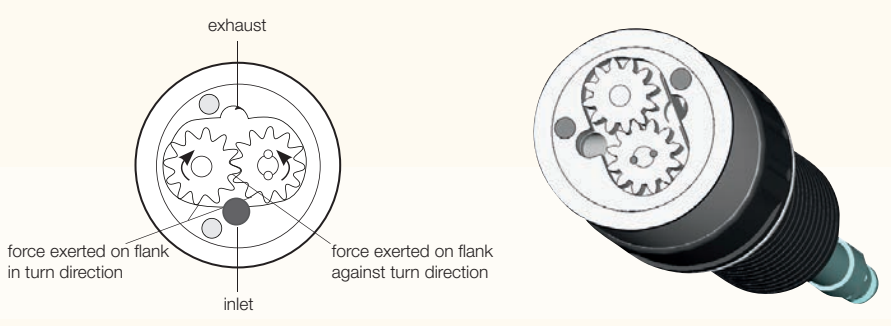
A pyrotechnic ignition indirect turbine drive with reduction gear in PYROTAK emergency door activator provides high power density in a small package.

TOOTH-GEAR MOTORS

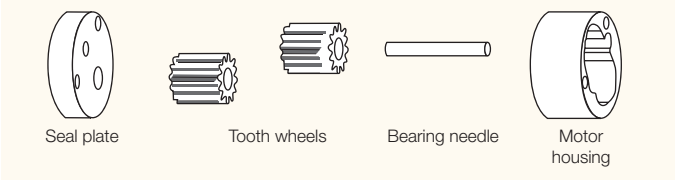
Our tooth-gear motors provide made-to-measure drive solutions for your individual application needs.

Function of the Tooth-Gear Motor

Tooth-gear motors consist of two tooth wheels which turn with little play within a housing. One wheel is connected to rotate with the drive shaft, the other generates torque. Force is exerted on two flanks in the turn direction and one flank against the turn direction. Exhaust air builds up in chambers between the tooth flanks and housing wall, then is guided to the exhaust side and rotational movement is generated.



Structure of a Tooth-Gear Motor



DEPRAG tooth-gear motors are oil-free operated.

SPEED REGULATOR

Innovative system solution to offset speed fluctuations.

- universally applicable due to parameter options
- wide range up to 80,000 1/min
- precise, high resolution controller

ACCESSORIES

- designed for DEPRAG air motors
- service friendly
- economical

Maintenance units, special oil, pressure regulator valves, pressure hoses, hose clamps and connectors can be found in our product catalogue D3340E.

You can find the compatible silencer for your air motor in our motor catalogues.
Compatible valves for the reversal and speed regulator can be purchased from any valve manufacturer.

LISTING OF INDIVIDUAL CATALOGUES

SCREWDRIVING TECHNOLOGY

Handheld Screwdrivers pneumatic

D3415 NANOMAT
D3420 MICROMAT
D3421 MICROMAT / MINIMAT - ESD straight
D3430 MINIMAT, straight
D3435 MINIMAT, pistol grip
D3440 MICROMAT-F / MINIMAT-F
D3450 MINIMAT, angle heaDdesign Screwdriving System
D3460 SENSOMAT

Handheld Screwdrivers pneumatic for special applications

D3520 VARIOMAT
D3530 Recycling Drivers
D3540 Slip clutch Screwdrivers
D3550 Flat head Wrenches
D3571 Impulse Driver, with shut-off
D3470 MINIMAT-T

Handheld Screwdrivers electric

D3480 Electric Screwdrivers
D3484 Cordless Screwdrivers
D3487 Cordless Impact Wrenches

Handheld Screwdrivers electric

D3490 MICROMAT-EC / MINIMAT-EC
D3496 MINIMAT-EC-Servo
D3497 MINIMAT-EC-Servo, angle heaDdesign
D3495 MINIMAT-ED, Digital Electric Screwdriver
D3710 MINIMAT-EC-Cordless Screwdriver, angle head design, pistol grip

Screwdriver Spindles pneumatic

D3125 NANOMAT
D3130 MICROMAT / MINIMAT
D3135 MINIMAT, angle head design
D3140 SENSOMAT

Screwdriver Spindles electric

D3161 MINIMAT-EC-Servo
D3165 NANOMAT-EC / MICROMAT-EC / MINIMAT-EC
D3170 MINIMAT-E
D3195 MINIMAT-ED, Digital Electric Screwdriver

Measuring Technology

D3020 Torque Transducers
D3022 Torque Measuring Instruments for manual use

Feeding Technology

D3820 Screw feeding systems for manual use
D3821 Press-in Devices
D3830 Screw feeding systems for stationary use
D3840 Screw Presenters
D3850 Supply systems – Linear hoppers
D3870 Tape on reel

ADAPTIVE DFS
DEPRAG FASTENING SYSTEM

D3880 ADAPTIVE DFS
D3885 JOINING PROCESS VALIDATION

AUTOMATION

Fully Equipped Manual Work Stations

D3390 The manual work station

Standardised assembly systems

D3370 DCAM

Machine building components

D3350 Control Systems
D3310 Screwdriving function modules

Services

D3330 Services

Accessories

D3320 Inserting Tools for Screwdrivers
D3340 Compressed-air conditioning and accessories
D3345 Ergonomic tool handling with and without position control

Note	Download → www.deprag.com

LISTING OF INDIVIDUAL CATALOGUES

AIR MOTORS

D6000 Air Motors
D6200 BASIC LINE
D6400 ADVANCED LINE
from 20 W up to 1.2 kW
D6600 POWER LINE
from 1.6 up to 18 kW
D6800 Air vane motors for special applications
D6900 Speed regulator

GREEN ENERGY

D6100 GET Turbine Generator

DEPRAG INDUSTRIAL AIR TOOLS

Details will be provided at
www.depragindustrial.com

GENERAL INFO

D0030 Corporate Image
D0012 Complete Product Line
D0080 Screwdriving Technique and Quality Assurance
D0090 Preventive maintenance and repair of air-operated tools

DEPRAG

DEPRAG SCHULZ GMBH u. CO.
P.O. Box 1352, D-92203 Amberg, Germany
Carl-Schulz-Platz 1, D-92224 Amberg
Phone (+49) 9621 371-0, Fax (+49) 9621 371-120
www.deprag.com
info@deprag.de

CERTIFIED AS PER DIN EN ISO 9001