Air Suspension Centrifugal Blower

Product Name: turbo blower, Centrifugal Blower, Air Suspension Blower, Air suspension single stage centrifugal blower

Type: Single Impeller & Double Impellers

Power: 22-300kw

Displacement: 13-331m³/min

Weight: 430-2150kg

Outlet Pipe Diameter: DN150-DN500

Warranty: 2 years

Certification: CE/ASME/ISO

Colour: Optional & customization

Local Service Location: Philippines, Mexico, Russia

1. What is an Air Suspension Centrifugal Blower?

The Sollant Air Suspension Turbo Blower is composed of several key components, including air bearings, an engine base, a permanent magnet synchronous motor, a frequency conversion controller, and a self-cooling system. It is also equipped with air filtration equipment and a vent valve silencer. Thanks to its air suspension bearing technology, this blower minimizes bearing friction and vibration, resulting in a reduced heat dissipation capacity. With noise levels maintained below 80 decibels, there is no need for a lubricating oil system or a complex piping arrangement for gas, oil, and water, nor is there a requirement for specialized soundproofing equipment.

2. Advantages of the Sollant Air Suspension Centrifugal Blower:

The Sollant air suspension centrifugal blower offers several benefits, including energy efficiency, low noise levels, oil-free operation, straightforward and reliable functioning, ease of maintenance, and a semi-permanent service life.

3. Technical Parameters:

Model	Type	Power (kW)	Displacement (m^3/min)	Working Pressure (mm water column)	Dimensions (mm)	Weight (kg)	Outlet Pipe Diameter
SLTCB-30	Single Impeller	22	24	4,000	700x1600x1380	470	DN150
			21	6,000			
			17	8,000		430	
			13	10,000			
SLTCB-50	Single Impeller	37	47	4,000	850x1775x1670	560	DN200
			34	6,000	700x1600x1380	470	DN150
			28	8,000			
			22	10,000			
SLTCB-75	Single Impeller	55	61	4,000	850x1775x1670	560	DN200
			51	6,000			
			42	8,000			
			34	10,000			
SLTCB-100	Single Impeller	75	82	4,000	850x1775x1670	560	DN200
			69	6,000		610	
			55	8,000			
			45	10,000			
SLTCB-125	Single Impeller	90	101	4,000	1000x1975x1877	820	DN300
			86	6,000	850x1775x1670	700	DN200
			71	8,000			
			53	10,000			

Model	Type	Power (kW)	Displacement (m^3/min)	Working Pressure (mm water column)	Dimensions (mm)	Weight (kg)	Outlet Pipe Diameter
SLTCB-150	Single Impeller	110	125	4,000	1000x1975x1877	870	DN300
			105	6,000		820	
			84	8,000			
			65	10,000			
SLTCB-200	Single Impeller	150	165	4,000	1150x1975x1877	910	DN300
			140	6,000	1000x1975x1877	870	
			109	8,000			
			87	10,000			
SLTCB-250	Single Impeller	185	193	4,000	1300x2350x2100	1600	DN400
			165	6,000	1150x1975x1877	910	DN300
			135	8,000			
			105	10,000			
SLTCB-300	Double Impellers	220	266	4,000	1750x2350x2100	2150	DN500
			210	6,000	1300x2350x2100	1600	DN400
			164	8,000			
			133	10,000			DN300
SLTCB-400	Double Impellers	300	331	4,000	1750x2350x2100	2150	DN500
			272	6,000			
			216	8,000			DN400
			172	10,000			

4. Application:

It is applicable across various sectors, including the sewage treatment industry, food and pharmaceutical industries, petrochemical sector, textile industry, printing and dyeing sector, metallurgy, coal chemical industry, cement, and construction materials industry, among others.

5. Feature of Sollant Air Suspension Centrifugal Blower:

1. High Efficiency and Significant Energy Savings

- The high-efficiency impeller combined with a super high-speed motor utilizes a direct connection via an air bearing, eliminating the need for a gearbox and lubrication system. This design results in no mechanical contact, minimal vibration, low noise, and negates the requirement for sound insulation.
- The implementation of a BLDC motor and a variable frequency speed control system allows for precise adjustments in flow and pressure while maintaining high efficiency across the fan's operational flow range.

2. Space Savings and Reduced Investment in Ancillary Facilities

- The compact design of the wind machine room minimizes the required area. The equipment is lightweight, enabling simple foundation construction without the need for lifting devices during installation. Additionally, flexible arrangement options are available, such as positioning the blower room directly above the aeration pool, which conserves pipeline investments and reduces resistance losses.

3. Simplified Operation and High Automation

- The fan features self-monitoring capabilities for speed, pressure, temperature, and flow rate, which helps prevent surges and facilitates unmanned operation. In the operational area, wind volume and pressure can be adjusted automatically in response to external control signals.
- There is no need for a local control cabinet or soft starter cabinet, as the fan integrates its local control system. A main control panel located in the wind machine room can automatically manage pressure, flow, control openings, and alarm for issues through a computer CPU, enabling both single and multiple automatic control operations. Furthermore, remote central control is also possible.
- Relevant technical personnel can easily operate the fan following a straightforward training process and by adhering to the operational manual, allowing for automatic startup and unmanned operation.

4. High Equipment Reliability

- The fan employs two leading-edge technologies: the ultra-high-speed (BLDC) motor and Hydro-Dynamic Air Foil Bearing (HAFB) technology, which eliminates the complexities associated with gearboxes, oil lubrication systems, and complicated control system failures. Key components are constructed from premium materials, such as SUS630 high-strength stainless steel for the impeller and titanium alloys for axial components. Standardized production processes ensure the equipment's performance is consistent, stable, and highly reliable.