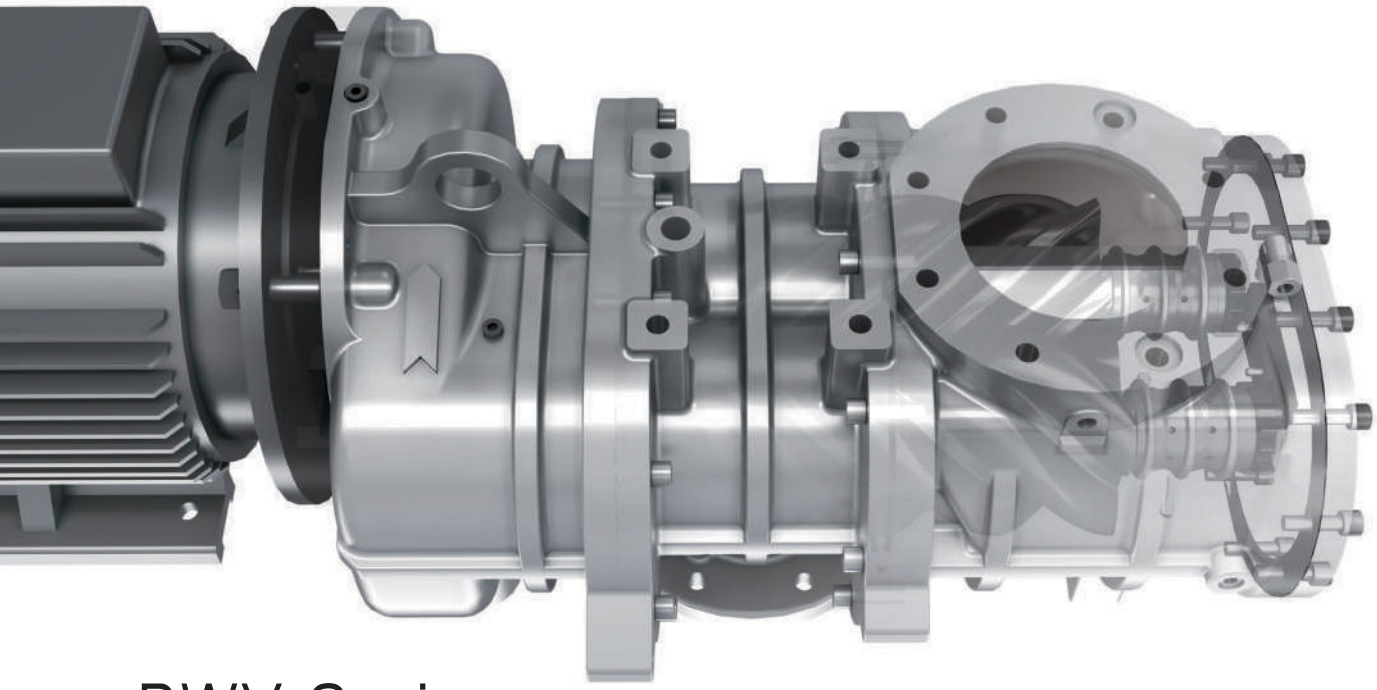
BWV SERIES

Oil-Free Screw Blower

FSCURTIS

Pursuing Excellence,
Enriching Life



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Screw blower — AIREND

- The rotor surface is coated with a dedicated PTFE layer, which provides excellent corrosion resistance, enhances volumetric efficiency, and extends the rotor's service life.
- No contact between rotors and between rotors and casing; gears and shaft away from cylinder for clean, oil-free air transportation.
- Solid, compact casing features deformation resistance to guarantee steady rotations of rotors at high rpm, which enables steady air flow control and suppression of airborne noises.

Why screw blower?

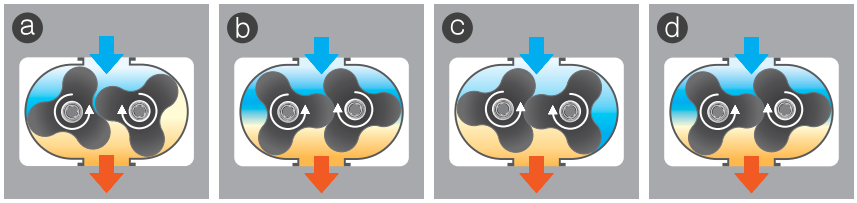
Roots blower - the air mover -
features no volume change in compression chamber, a. k. a. "external compression".

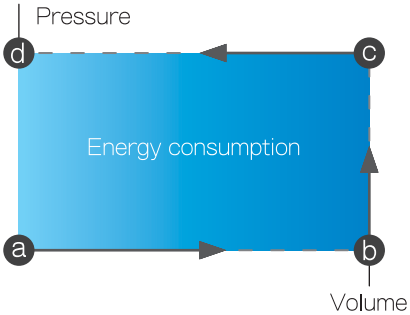
The stages in the figure below are explained as follows:

ⓐ→ⓑ Air is drawn from the atmosphere into the blower.

ⓑ→ⓒ Air is pushed to the pressure side by the blower and mixed with the air leak from the discharge side

ⓒ→ⓓ The discharged air is further pushed to the discharge side by the blower and discharged through pipeline.





Applications

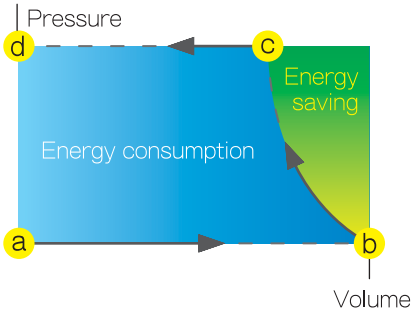
The higher pressure a piece of equipment needs, the more energy-efficient the screw blower is than the Roots blower.

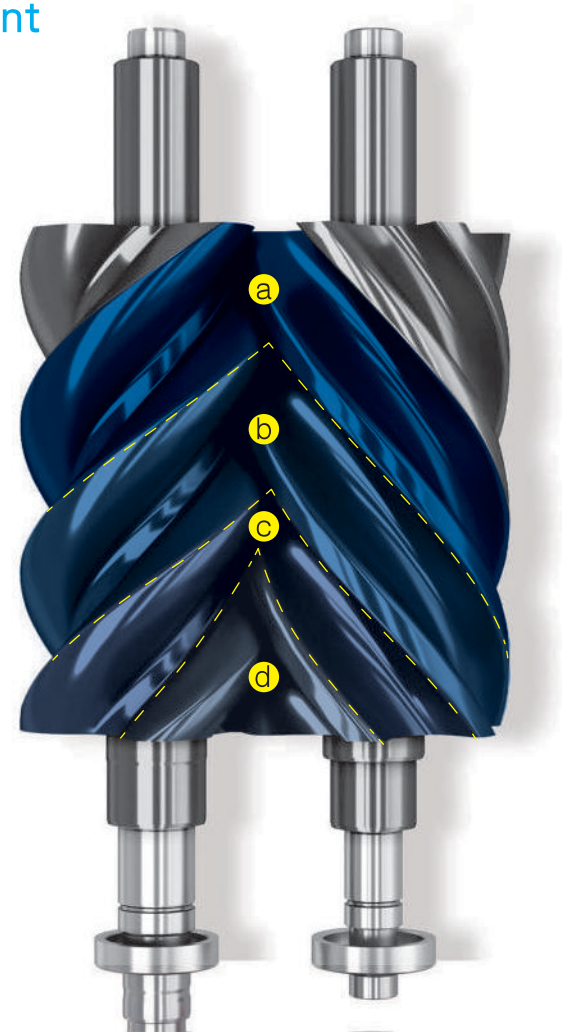
At 0.5 bar, up to **25%** of energy can be saved. At **0.8 bar** or higher, the saving can be as high as **35%**.

a → b Air is drawn from the atmosphere into the blower.

b → c Air is pushed to the pressure side by the blower. The pressure rises as the air volume reduces.

c → d Compressed air is discharged.





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Oil loop sealing: labyrinth ring
Air loop sealing: carbon ring

- There is negative pressure at the inlet aide. The double-screw labyrinth ring designed is adopted at the inlet side to keep shaft lubricant from entering the compression chamber.
- Carbon ring is adopted at the discharge side to seal the compressed air in, reduce compressed air leaks and improve volumetric efficiency.

Product features

Low noise and high reliability

The unique air inlet duct and reasonable layout ensure the density of air suction and guarantee continuous and stable operations without pressure fluctuation. The noise level is far lower than a Roots blower.

Better transmission efficiency

The motor is coupled directly with the unit for the best possible transmission efficiency.

Frequency varying models for better energy efficiency

The combination of efficient permanent-magnet motor and precision frequency converter requires no large starting current. The linear operations are stable with constant pressure control for better energy efficiency.

Outstanding control system

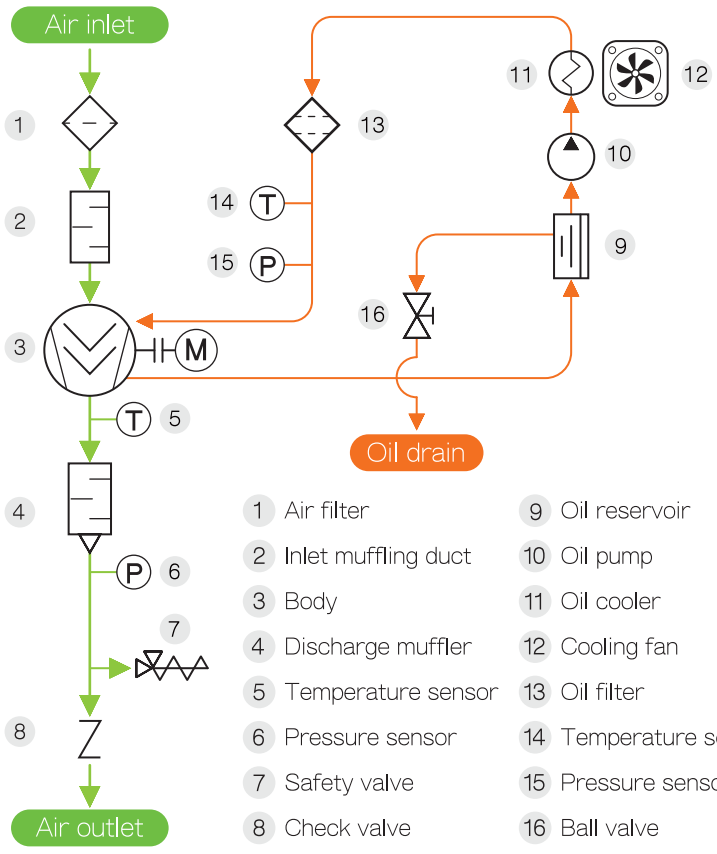
Easy and intuitive controls, large-screen display and intelligent control.

Lightweight and simply construction

Complete modular design with a lighter weight and less vulnerable parts, enabling more economic and easy servicing and maintenance.

Flow chart

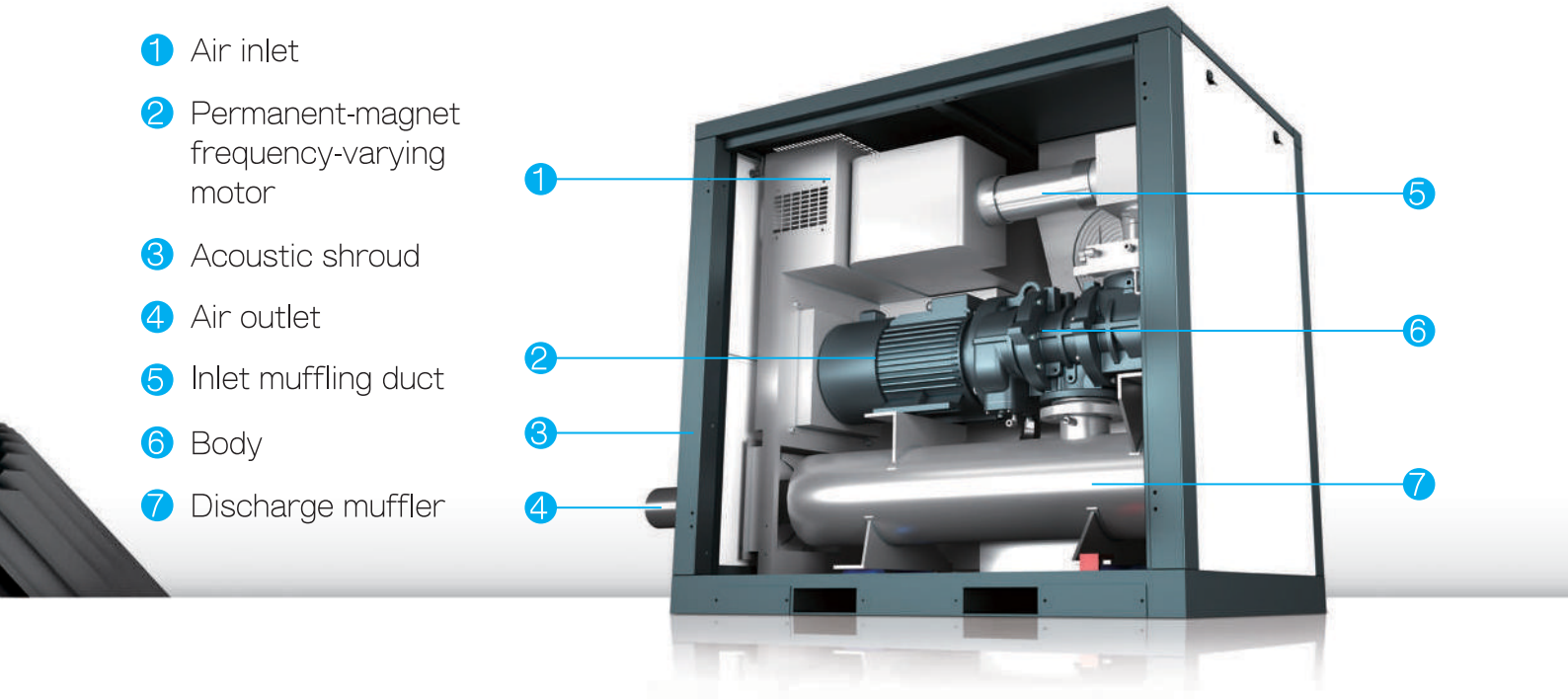
Air Oil



1	Air filter	9	Oil reservoir
2	Inlet muffling duct	10	Oil pump
3	Body	11	Oil cooler
4	Discharge muffler	12	Cooling fan
5	Temperature sensor	13	Oil filter
6	Pressure sensor	14	Temperature sensor
7	Safety valve	15	Pressure sensor
8	Check valve	16	Ball valve

Considerate, Efficient package design

1. Air inlet
2. Permanent-magnet frequency-varying motor
3. Acoustic shroud
4. Air outlet
5. Inlet muffling duct
6. Body
7. Discharge muffler



Intelligent control & Mission oriented.

CONTROL SYSTEM

Large color touch screen allows you to control the unit as if you were using a tablet and enables intelligent control.

- Remote on / off control
- Better interference resistance
- Modular design for better expandability
- RS485 communication
- Intuitive interaction interface with support for multiple languages

Energy saving, reliable,
And better to satisfy industrial applications

Wastewater treatment

- Lower energy cost to run an aeration blower (the blower energy demands account for nearly 70% of total energy demands for wastewater treatment)
- Lower maintenance costs and shorter downtime for servicing
- Greater operating ranges of flow rate and pressure

Air supply / fermentation application

- Lower energy cost (up to 80% savings throughout the entire service life of blower)
- Lower maintenance costs and shorter downtime for servicing
- Greater operating ranges of flow rate and pressure

Textile and dyeing

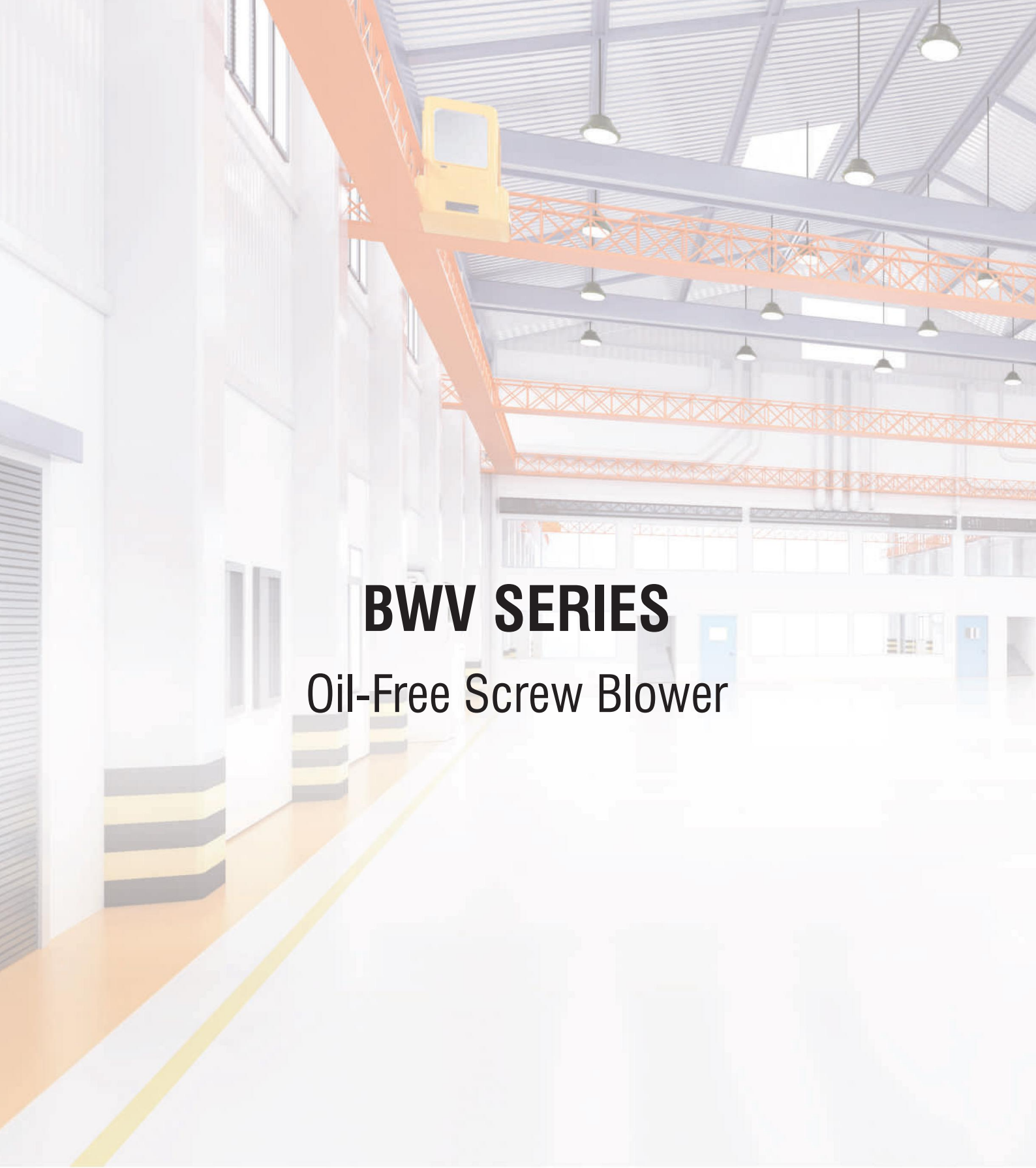
- Regulatable flow rate to better match the properties of textile
- Better energy efficiency and reliability allow for continuous operations 24-7 at a lower cost
- Lower noise level allows for installation at the point of use.

Frequency-varying control

The high-performance vector frequency converter is combined with intelligent logic control and permanent-magnet synchronous frequency-varying motor to save money from minute one.

BWV permanent-magnet frequency-varying screw blower — specifications

Model	Power	Pressure	Air flow	Length	Width	Height	Weight	Air outlet size
	kW	bar	m^3/min	mm	mm	mm	kg	
BWV15	15	0.6	12.1	1500	1000	1400	960	DN125
		0.8	9.6					
		1.0	7.7					
		1.2	6.9					
BWV18	18.5	0.6	15.3	1500	1000	1400	980	DN125
		0.8	12.7					
		1.0	9.6					
		1.2	8.2					
BWV22	22	0.6	18.7	1500	1000	1400	1000	DN125
		0.8	15.6					
		1.0	12.9					
		1.2	11.0					
BWV30	30	0.6	21.5	1500	1000	1400	1100	DN125
		0.8	17.9					
		1.0	16.1					
		1.2	13.6					
BWV37	37	0.6	32.7	1700	1100	1500	1200	DN150
		0.8	24.7					
		1.0	20.4					
		1.2	16.9					
BWV45	45	0.6	38.0	1700	1100	1500	1250	DN150
		0.8	33.6					
		1.0	25.9					
		1.2	22.8					
BWV55	55	0.6	41.0	1800	1150	1600	1350	DN150
		0.8	38.3					
		1.0	32.2					
		1.2	28.0					
BWV75	75	0.6	62.0	2300	1500	2150	2700	DN250
		0.8	54.0					
		1.0	47.7					
		1.2	40.6					
BWV90	90	0.6	76.6	2300	1500	2150	2800	DN250
		0.8	65.3					
		1.0	51.1					
		1.2	45.5					
BWV110	110	0.8	69.0	2300	1500	2150	3000	DN250
		1.0	56.0					
		1.2	49.0					



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Oil-Free Screw Blower

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