

ROBUSCH[®]



Turbo Blower



**Evolving
Technologies**



At Robuschi, we have been providing products and services in the low pressure market for a long time. We have also supplied generations of customers worldwide with blower solutions.

We are well aware that success is a process based on a stream of innovations and on working closely with our customers. Our latest innovation comes in the form of a blower boosted by turbo technology. Now, as a customer, you have access to a full spectrum of low pressure technologies, including lobe, screw and, now turbo blowers.

You can now benefit from dealing with a single, well-established, knowledgeable supplier for every application. At Robuschi, we are able to provide the most suitable solution for your needs that combines superior efficiency, a small footprint, minimum maintenance, operating costs, long service life and low noise emission.

Regardless of your operating needs, we have the perfect solution for your (everyday) needs.

Energy Efficiency is Key

Energy consumption has been a priority for a long time, but now more than ever, our customers are looking for on-going reductions in energy costs.

In wastewater treatment plants for example, energy can account for as much as 75% of the overall operation costs of the facility. Aeration systems are the largest energy user (more than 60% of the total electricity cost). Up to 75% of your compressed air costs will be spent on energy, so state-of-the-art aeration equipment can make the difference, not only to reduce your carbon footprint, but by substantially lower life cycle costs.

Enter Turbo Power

Introducing a Turbo range of blowers can tackle energy savings concerns for customers conscious of their environmental and financial impacts (total cost of ownership).

When choosing the right technology to help you save and reduce your environmental impact, trust our Robuschi Experts to offer you the best combination of solution.





Robox Turbo Outline

Benefits at a glance

1. Touch Screen HMI
2. Inverter
3. PLC
4. Cooling air silencer
5. Blow-off valve and silencer
6. Air-end
7. Inlet silencer



Innovative Design for High Efficiency

Turbo Blower technology relies on centrifugal compression which generates pressure by transforming kinetic energy (speed) into static energy (pressure). This compression is generated within the blower's air end. To control every running and safety parameter of the unit, a PLC-based controller ensures safe and sound operation. Additional core components are also present to guarantee a complete piece of mind for the product but also the operators.



Robox Turbo Outline

Air End

- Compress ambient air and gas
- Centrifugal compression using impeller, diffuser and volute
- Oil free because of using air foil bearing
- Air cooled as standard with water cooled option
- High efficiency Permanent Magnet Synchronous Motor (**PMSM**)

High Speed Motor and Drive for Maximum Efficiency

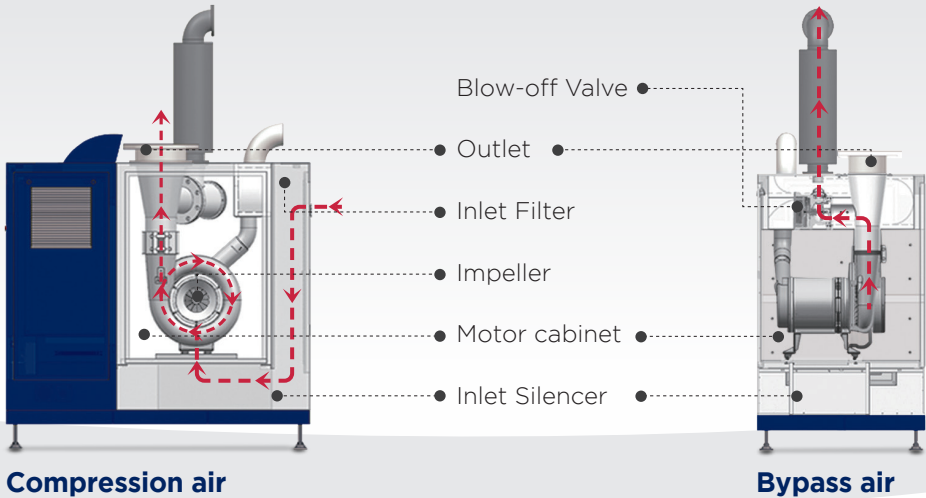
Another key aspect of turbo technology is the need for a high rotational speed required to reach the operating pressure level. The rotational speed is generated by a high speed motor, coupled with a high frequency drive both controlled by the PLC-based unit controller. The rotational speed together with additional parameter adjustments is ensured by the machine without the need of user intervention.

All Robox Turbo are supplied as standard with **PMSM** providing the highest efficiency and reliability:

- **PMSM Permanent Magnet Synchronous Motor** (from 10 Hp to 700 Hp)



Operating Principle - Air Flow



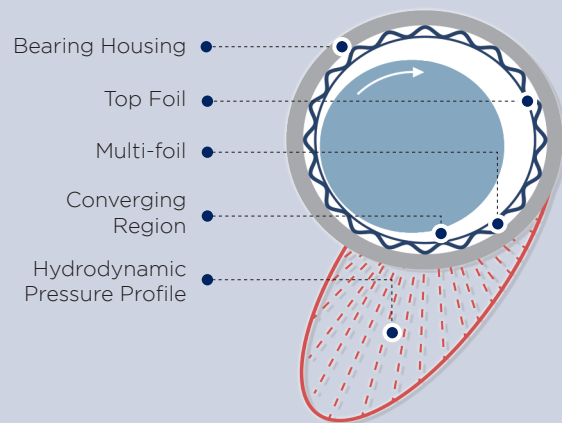
Bearings

Air Foil Bearing

Air Foil Bearing benefits, include:

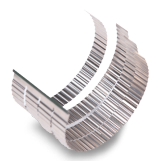
- Simplicity
- Reliability
- Ease of Operation and Maintenance
- Low Total Cost Ownership

The air bearing operating principle is comprised of various technologies applied in a simple way. Levitation is generated by the hydrodynamic pressure present between the rotating part (shaft) and its fixed components when the machine is running. This principle allows an almost friction-free operation, with a very high efficiency output.

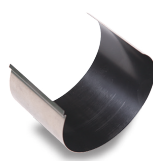


Journal Bearings

Journal bearing technology allows the system to sustain loads while mitigating the effects of operational changes. This results in temperature variation and the creation of mechanical force. The main challenge with this technology is mastering the clearance between components, which guarantees a secured operation within the operating limits of the machine.



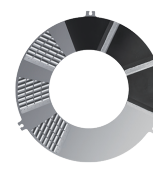
MULTI-FOIL



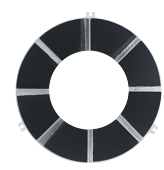
TOP FOIL

Thrust Bearings

Thrust bearings exist to withstand axial loads generated from the machine's operation. These forces are compensated with an architecture of foils that allow the transfer and attenuation of mechanical energy. Combined with the journal bearings, operating loads are sustained and countered in all directions, protecting the technology against loads damage.



MULTI-FOIL



TOP FOIL



Robox Turbo Range



TS 3



TS 6

Robox Turbo	Power Hp	Frames	Pressure Code
TS	10 ÷ 700	1 ÷ 6	06-08-10-12*

- * 06 : 600 mbar(g)
- 08 : 800 mbar(g)
- 10 : 1,000 mbar(g)
- 12 : 1,200 mbar(g)

The Robox Turbo range is able to reach up to 1,200 mbar(g) with a maximum flow of 26,500 m³/h.

Our Engineers are at your disposal to size the Robox Turbo to best fit your plant. They will provide all the technical information and support as well.





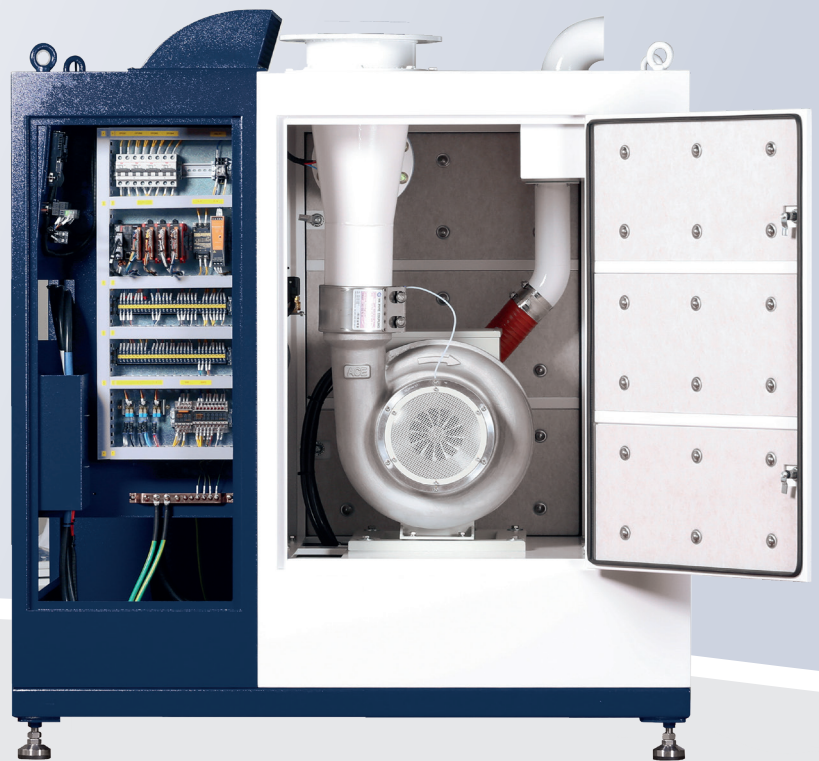
Unique Features for Total Piece of Mind

High Efficiency for Low Life Cycle Cost

A superior design of the Robox Turbo ensures energy savings and low lifecycle costs. Furthermore, the high-speed motor can assure high efficiency over the entire operating range.

Compact Design for Easy Installation

The compact design of the Robox Turbo helps to reduce costs and minimize installation space.



Low Noise

Limited noise emission is assured by the concept design. In addition the silencers guarantee quiet running to meet the most stringent low noise regulations common in today's cities.

Oil Less For Any Application Requirement

The Robox Turbo is completely oil-free to meet the most rigorous of environmental standards and reduce contamination.

Plug & Play: Ready to be Installed

Thanks to its power electric cabinet and integrated variable frequency drive, the Robox Turbo is easy to install. All it needs is a connection to the pipework and electric power, making it virtually "plug & play"!

Easy and Cost-effective Maintenance

Designed for easy access to internal components. All you have to do is open its front door. Maintenance costs are at minimum thanks to the small number of machine components and their simple and robust construction.

Reliability

The Robox Turbo is manufactured with high quality components and carefully tested to grant a steadfast and continuous operation during the entire process.

Extensive Range of Options

Robox Turbo can be configured with a wide range of options and accessories to meet the customer's exacting requirements. For instance, several types of silencers are available as well as a special noise enclosure for outdoor installation. Don't hesitate to ask us for more options.

Wide Turndown

The Robox Turbo is able to meet a large range of demand for compressed air without wasting energy. Thanks to its integrated variable frequency drive (VFD), it maintains the highest efficiency and flexibility.

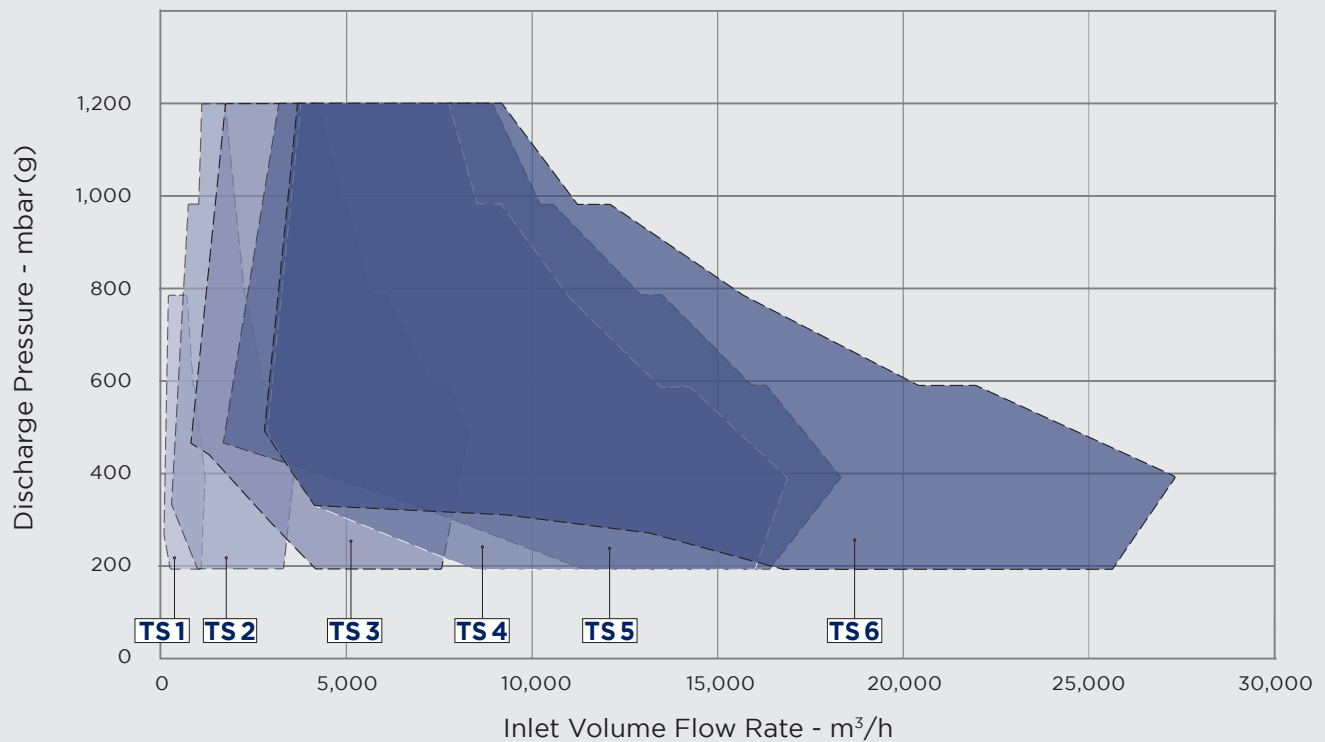
Innovative Controller

The Robox Turbo is equipped with an advanced control system that is extremely user friendly by way of an intuitive menu. The ability to monitor the Robox Turbo continuously ensures reliable operation and proactive protection. The controller manages a variety of operating modes, with the possibility of a remote connection to verify measured parameters and respond to possible alarms.

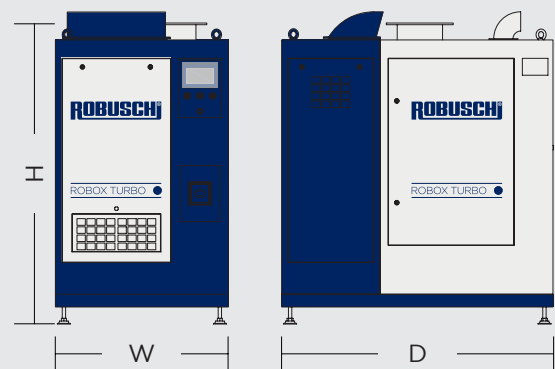
Technical Data

Robox Turbo Performance and Overall Dimensions

Performance Air Map



Overall Dimensions



Robox Turbo	POWER		W	D	H	Weight	DN			
	Hp	kW						mm	mm	mm
TS 1	10	/ 7.4	800	1,200	1,350	390	80			
TS 2	20	/ 14.7	800	1,200	1,350	415	150			
	30	/ 22.1				510	150			
TS 3	50	/ 36.8	920	1,450	1,500	540	150			
	75	/ 55.2				600	200			
	100	/ 73.5				1,020	1,700	1,900	870	250
	125	/ 91.9							870	250
TS 4	150	/ 110.3	1,300	2,000	1,900	900	250			
	200	/ 147.1				950	300			
	250	/ 183.9				1,400	350			
TS 5	300	/ 220.6	1,700	2,500	2,040	1,480	350			
	350	/ 257.4				1,500	350			
TS 6	400	/ 294.2	1,800	3,500	2,200	2,200	400			
TS 6	500	/ 367.7				3,700	500			
	600	/ 441.3				3,860	500			
TS 6	700	/ 514.8				3,900	500			

Manufactured by ACE - 471, Techno valley-ro, Bongdong-eup, Wanju-Gun, Jeollabuk-do, Republic of Korea.

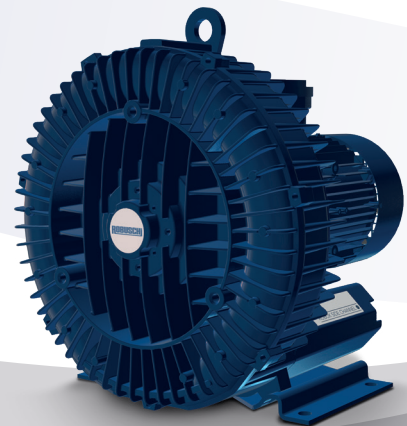


Robox Range to Boost Your Bottom Line



Total Blower Capability

Range up to 2,500 mbar(g) and flow up to 70,000 m³/h.





Maximum uptime. Extending performance.

We provide a range of services to ensure our customers' machines are well maintained to deliver maximum performance.

We offer preventative and planned maintenance programs, genuine parts, on-site service, professional maintenance and efficient training.

Within our service portfolio, you will find many and varied options and services needed to get optimal performance, maximum uptime and operating efficiency from your Robuschi equipment.



Find your Genuine Parts at



**GENUINE
PARTS**

Scan the QR code

GARDNER DENVER S.r.l.
Divisione ROBUSCHI

Manufacturing facilities

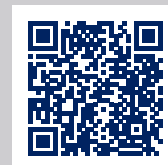
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