

TPG Turbo Blower

Permanent Magnet Motor



High Efficiency Turbo Blowers





Turbo Blower Highlights

Designed for a multitude of applications, where greater energy efficiency is required, including wastewater treatment, mining, energy, and more. **TPG Turbo Blower addresses energy-saving concerns for customers mindful of both environmental and financial impacts, including the total cost of ownership.**

To meet a broader range of industry needs, we have now expanded our range to deliver up to 1,500 mbar(g).



For over 100 years, **PEDRO GIL** has been providing technologically advanced, high performance air blowers, vacuum pumps, and vacuum systems with excellent durability. Our leading-edge technology, service, and quality provide our clients with global coverage and exceptional after-sales service.

Foil-air bearings
Permanent magnet motor
1-Year warranty and 5 years optional
No vibration (under 1.0 Mm/ s)
Low noise (under 80db \pm 3db) 100%
Oil-free (eco-friendly)
Integrated plc and communications protocol (integrated control system)
Inverter-controlled high speed
Easy operation and maintenance
Available CEE and UL certificates

Main Industries and Applications

Energy

Combustion in circulating fluidised bed
Blowers provide air in the seal system loop in fluidised bed circulation.

General Manufacturing

Carbon Black
Blowers supply combustion air to the associated furnaces to ensure safe fuel-burning and mitigate black carbon.

Pneumatic Conveying

Turbo blowers are designed to be used in light phase conveying where clean, dry, pulse-free, and 100% Oil-Free air is required.

Mining

Iron Production
Air blowers are widely used to introduce a reaction of a flow of air under pressure in blast furnace (hot explosion) and combustion air applications.

Metal Refining
In metallurgy, air blowers are used for aeration, oxidation and combustion for biological use and conversion processes.

Metal Odor
Air blowers facilitate oxidation to reduce odor in metal production.

Petrochemical/Refining

Fertiliser Production
Blowers provide atomising air for the fluidised bed.

Sulphur Recovery Units
Blowers/compressors provide the reaction air for the catalytic recovery of sulfur in refineries and gas processing plants.

Waste Water Treatment

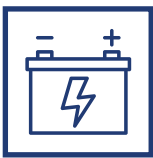
Municipalities
Aeration blowers play a crucial role in the biological treatment of urban waste discharge at municipal water treatment plants.

Effluent Treatment for Industrial Wastewater Treatment
In industrial plants, aeration blowers are essential for the microbial processing of effluents.

Key Elements of the Turbo Blower



- 1. Motor cooling system
- 2. High-efficiency permanent magnet motor
- 3. Foil-air bearing
- 4. High-efficiency impeller
- 5. Flow rate measurement in real time



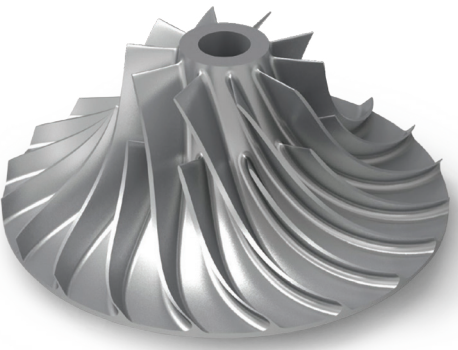
High efficiency permanent magnet motor

The permanent magnet motor is designed and manufactured to offer 95% efficiency, and it can work at a speed of between 10,000 to 45,000 RPM.



High performance turbine

The Turbine guarantees an efficient flow delivery with high quality at all times. It uses a high-resistance aluminium alloy with a hard anodised superficial coating that offers excellent corrosion and wear resistance, and, therefore, is excellent in hostile environments. The motor shaft is made of stainless steel and the primary shaft is titanium.



Air foil bearing

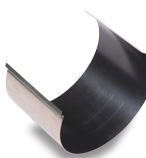
The air foil bearing is an oil-free and frictionless one. Our bearing is designed, manufactured, and tested for 100,000 start/stop cycles, ensuring a life cycle of 50,000 operations.



ASSEMBLY



MULTI FOIL



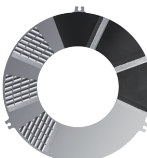
TOP FOIL



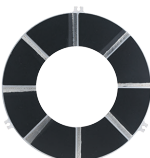
ASSEMBLY



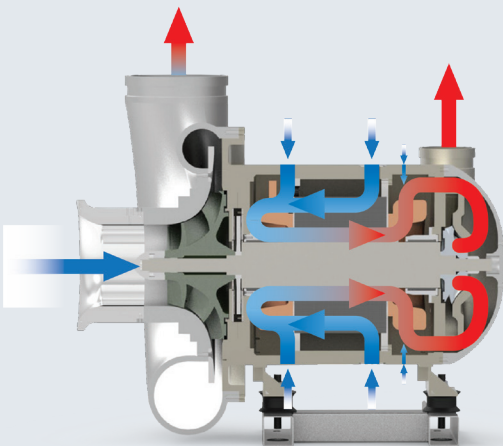
BAES FOIL



BUMP FOIL

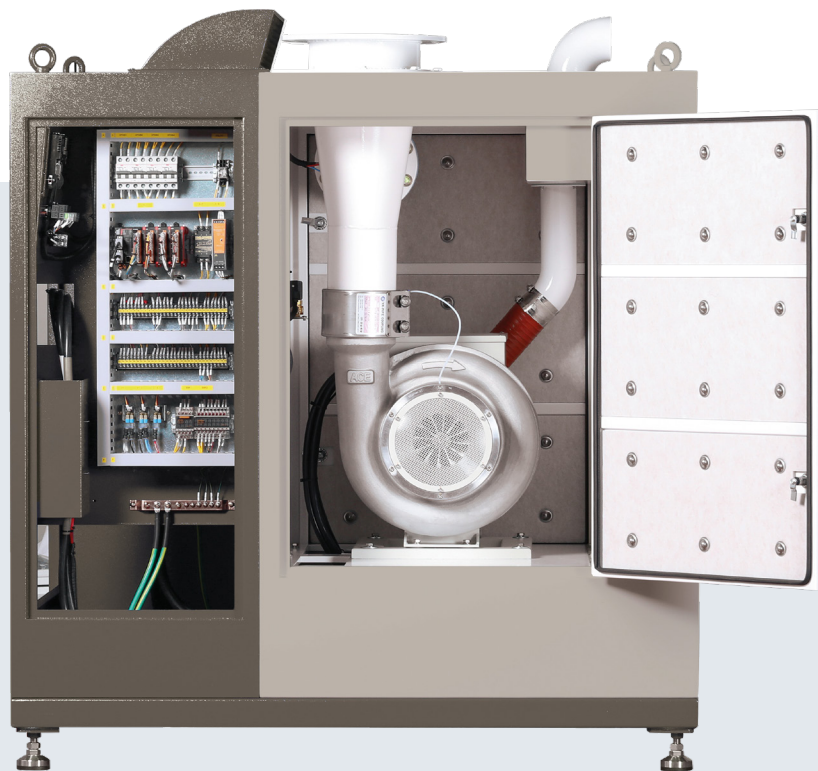


TOP FOIL



Motor Cooling System

Two-stage Turbo Blower cooling can reduce the temperature of the motor by more than 10 degrees. The inlet air cools the primary stator and the secondary bearing/winding/rotor in order, which only requires motor and inverter without additional cooling devices (external fan, filter, etc.)



Plug&Play Solution That Features All The Needed Components For High Efficiency Performance

1 Control Panel

The control panel can be compatible with 3 types of communication modes, such as RS485/RS232/Ethernet. Also, our control panel structure is very simple, compact, and allows for real time pressure, temperature and flow rate measurement. Our inlet nozzle can measure a precise index within a difference of $\pm 0.5\%$ of the flow rate. As a result, the Turbo Blower can be controlled quickly and accurately.

2 User interface Unit

All our equipment is fitted with a 7/9 -inch touch screen so that users can control the pressure, flow rate, speed, motor consumption, temperature, and others, both easily and accurately in real time. Three separate switches (START, STOP, TRIP) enable fast operation in any situation. The unit includes an emergency set for programming sudden stops in the event of an emergency.

3 Inverter Cooling System

The product uses UL/EC certified inverters from different brands to support the workings of the high-speed motor. Thanks to the motor's efficient cooling mechanism, additional devices for temperature regulation are not necessary. This system keeps the air used for cooling contained by drawing it in through the actual turbine instead of releasing it into the surrounding environment.

4 Suction filters

The inlet air is purified by passing through a preliminary screen followed by a more refined filtration unit with a smaller micron rating (85% efficiency or more) for maximum dust removal. This component can be replaced conveniently whether the system is in operation or halted.

5 BOV (Blow off/Shut off valve)

The BOV is required to protect the equipment in an emergency. The BOV has a single function which is activated by differential pressure generated internally without the supply of any external compressed air.

6 Motor blocking device

All the Turbo Blowers are sent with a shim for the motor and bearings which must be removed for commissioning and operation. This protection is applied to minimise damage to the product during transit and installation.

7 Weather-proof (IP 55) (optional)

TPG Turbo Blower can be supplied with weather-proof noise enclosure as optional to be installed in every conditions.



Wide Product Range That Meets Your Needs

Turbo Blower TPG 10~700HP [0.4~1.5 BAR]

TPG range is able to reach up to 1,200 mbar(g) with a maximum flow of 26,500 m3/h and up to 1,500 mbar(g) with a maximum flow of 11,500 m³/h.

High-efficiency Turbo Blower

- **Speed** variable
- Foil-air bearings **without lubrication**
- **Direct** coupling



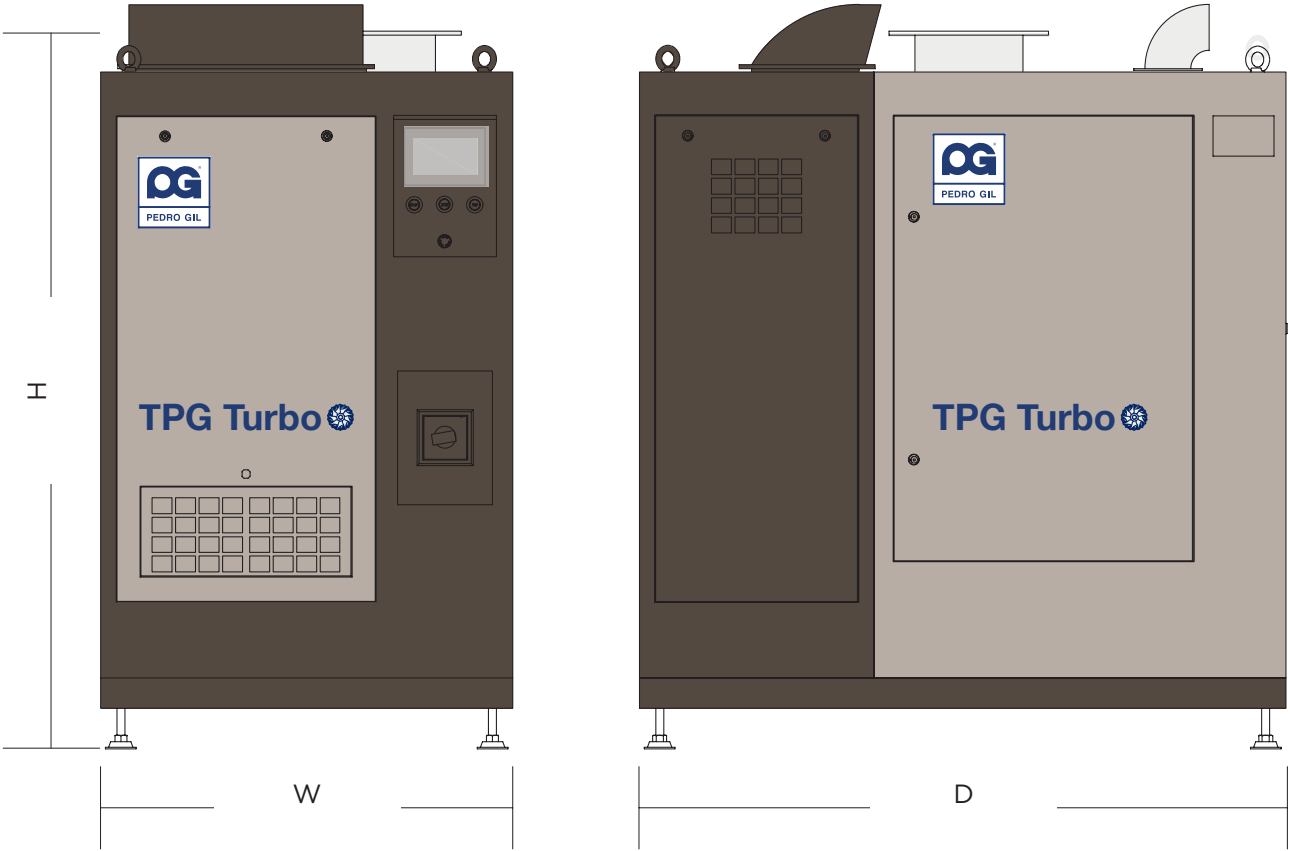
Performance

SPECIFICATION		TPG10	TPG20	TPG30	TPG50	TPG75	TPG100	TPG125	TPG150	TPG200	TPG250
TYPE DISCHARGE PRESSURE (MMCA)		TPG Air flow rate (m3/min): 1 atm,20C,50% RH, Density=1.2kg/m3, Tolerance=±5%									
4,000		–	–	28	47	70	100	115	129	140	180
6,000		7,3	14,5	25	35,9	51	73,8	89,4	104	129	172,6
8,000		5,2	11,1	23	28,1	37,4	57,2	72,8	86,3	100,9	141,4
10,000		–	–	17,7	21,8	31,2	46,8	57,2	68,6	83,2	112,3
12,000		–	–	–	18	28,1	37,4	49,9	60,3	70,2	93,6
POWER (HP)		10	20	30	50	75	100	120	150	200	250
DISCHARGE CONNECTION	4.000	80 A	150A	150 A	150A	200A	250A	250A	250	300A	350A
	6.000	80 A	150A	150A	150A	200 A	250A	250A	250	300A	350A
	8.000	80 A	150A	150A	150A	200A	250A	250A	250A	300A	350A
	10.000	–	–	–	150A	200A	250A	250A	250A	300A	350A
	12.000	–	–	–	125A	200A	250A	250A	250A	300A	350A
DIMENSIONS (MM)	W	800	800	800	800	920	1020	1020	1020	1020	1300
	L	1200	1200	1200	1200	1450	1700	1700	1700	1700	2000
	H	1350	1350	1350	1350	1500	1900	1900	1900	1900	1900
WEIGHT (KG)		390	415	510	540	600	870	870	900	950	1400
W/O BREAKER		28	40	62	100	150	200	250	280	350	400

SPECIFICATION	TPG300	TPG350	TPG400	TPG500	TPG600	TPG700
TYPE DISCHARGE PRESSURE (MMCA)	WL200~WL500: Type Twin / WL600~WL1000: Type Twin*2 Air flow (m3/min): 1 atm, 20C, 65% RH, Density=1.2kg/m3, Tolerance=±5%					
4,000	234	274	303	372,4	420	499
6,000	194,5	236,1	271,4	340	389	360,9
8,000	157	183	224,6	278,6	309,6	309,6
10,000	129	152,9	175,8	221,5	254,1	301,6
12,000	109,2	127,9	148,7	183	215,3	252,7
POWER (HP)	300	350	400	500	600	700
DISCHARGE CONNECTION	4.000	350A	350A	400A	500A	500A
	6.000	350A	350A	400A	500A	500A
	8.000	350A	350A	400A	500A	500A
	10.000	350A	350A	400A	500A	500A
	12.000	350A	350A	400A	500A	500A
DIMENSIONS (MM)	W	1300	1300	1700	1800	1800
	L	2000	2000	2500	3500	3500
	H	1900	1900	2040	2200	2200
WEIGHT (KG)	1480	1500	220	3700	3860	3900
VENT VALVE (V/V)	500	550	250*2	300*2	350*2	400*2

Overall Dimensions

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



Repair Service

Trust in technical repair services with the manufacturer's guarantee

Your lobe blower unit is always ready for use with original Pedro Gil spare parts. Having original spare parts allows you to get the most out of your blower unit while also maintaining your equipment warranty. Their use helps prevent downtime, production stoppages, as well as blower unit breakdowns.

Our preventive maintenance kits include a filter, oil, and belts to help ensure seamless operation.



Quality



Guarantee



Trust



An Ingersoll Rand Business

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