

TURBO

Variable speed Direct transmission 100% Oil free



"The highest efficiency in aeration"

For more than 30 years, its customers have been supplied with a variety of equipment for the purification of wastewater. With this latest addition to our product catalog, we offer the most advanced technology in aeration.



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"Innovation and maximum performance"

The field of application of the Turboplants, includes all those applications that need a maximum air flow of 16,000 m³ / h at a maximum pressure of 1 bar.

The technology applied to the turbo-blowers practically eliminates the maintenance of the same, assuring a supply of air 100% free of oil.

The compressed air of the Turbosoplant satisfies the needs of many industrial processes.

Flow : 15-441 m³/min
Pressure : 50-100 kPa
Noise level : 75dB(A)↓



CURVES

\$SS2S series



075-10

075-08



150-06

100

120



\$SM2S series

\$SL1P series





40

60

80

Presión de Salida (mmAq)

10,000

8,000

6,000

4,000

2,000

0

0

20

Flow (m³/min)



Air sheet bearing.

Unlike a ball bearing, there is no physical contact between the shaft and the bearing. Therefore, the air sheet bearing is more efficient and cleaner since it does not require the use of lubricants. 100% oil~free, without physical contact, does not require maintenance. Operating principle of the air sheet bearing:

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1. The shaft begins to rotate on the internal surface of the bearing.

2. As the speed the axis moves gradually towards the center..



3. When reaching the minimum air sheet generation speed produced by the rotation of the shaft, it is located in the center of the bearing.

Synchronous motor of high speed permanent magnets (PMSM)

With maximum efficiency.

The revolutions of the high speed motor are generated by the frequency inverter. The minimum power losses and low noise are the result of the direct connection of the rotor with the turbine and the use of air sheet bearing eliminating mechanical friction. Maximum efficiency (97~98%).

- Designed for high rotation speed. (Maximum 60,000 RPM).
- Operation and speed control with low consumption.
- Designed to give maximum performance working with low or high load.
- Cooling system by air suction.
- Tested for more than 20,000 start and stop cycles.





Frequency Coverter

The drive directly controls the frequency of the motor. Depending on the temperature of the sucked air and the pressure, the discharge flow and pressure are easily controlled by adjusting the engine *RPM*.

• KEB (Kinetic Energy Back-up) performs a fast and safe braking in case of power failure.

• Fast response to variable loads.variables.



YASKAWA

Yaskawa drives are used for less than 300HP.



VACON drives are used for more than 300HP.



а	PLC
b	BOV Silencer
с	Silencer
d	BOV
е	Acoustic absorption material
f	Permanent magnet motor
g	Acoustic insulation material
h	General switch



Between 50% and 80% of the electricity consumption in a sewage plant comes from the blowers, a better performance of the same constitutes a substantial economic savings.

DESCRIPTION	ROOTS BLOWER 135HP	TURBOBLOWER WITH GEAR REDUCING BOX	SM2S 100-06
Beginning	Volumetric (rotary pistons)	Centrifugal (turbo)	CCentrifugal (turbo)
Power transmission	Trapezoidal belts	Gearbox gearbox	High speed electric motor
Discharge pressure	0.6bar	0.6bar	0.6bar
Discharge Flow	70m³/min	70m³/min	70m³/min
Absorved Power	102kW	90kW	75kW
Noise (@1m)	95~110 dB	85 dB	Less of 80 dB
Level Vibration	High	Medium	Any
Lubrication	Necessary	Necessary	Not Necessary
Useful life	10 year	5 to 10 years	Unlimited

OPERATING COSTS	ROTARY OISTON BLOWER 135HP	SM2S 100-06
Depreciation of the value of the machinery (Annual)	100.0%	53.3%
Energy consumption (Annual)	100%	50%
Maintenance costs (Annual)	100.0%	8.3%
Consumed power (Annual)	100%	48.9%

EASY MAINTENACE

SIMPLE MAINTENANCE / / LOW COST

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There is no need for lubricants or replacement of bearings. Maintenance is based on cleaning or replacing the air filters.

MANUFACTURING / / COMPACT

The structure is simple and the size is minimal, which simplifies transport and installation. According to this, installation costs are minimized.

EASY TO USE AND REGULAR / / CONTROL

The pressure, temperature, engine RPMs and air flow are measured and displayed on the LCD touch screen. It has different modes of control-flow, pressure, RPMs, amps and power.

ENERGY SAVINGS (Up to 45%) / / HIGH EFFICIENCY

The design in the compression part and the application of permanent magnet motors increases the electromechanical efficiency of the equipment up to 65% (in comparison with standard standard equipment).

LOW NOISE / / VIBRATION

The low noise (75-80dB- @ 1m or less) and the absence of vibrations are due to the application of air sheet bearings (there is no contact between the shaft and the bearings).



Structure

The combination of acoustic materials eliminates the need to soundproof the engine room.





Main Filter & Pre-Filter

The combination of corrugated filter and non-winding pre-filter ensure high filtration with low load losses.



LCD touch screen

Easy to use, it monitors pressure readings, air flow. RPM, temperature and consumption.

