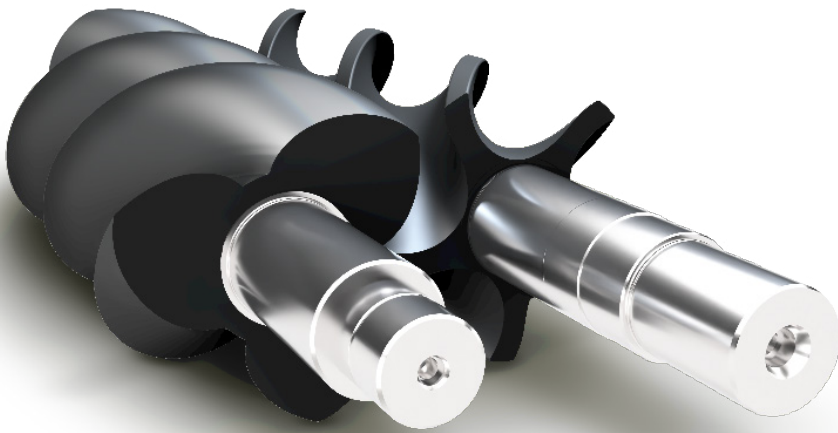




Oil-Free Screw Blowers





Your trusted partner for Wastewater Solutions.

In a competitive global market, our long history of supplying blower solutions to suit our customers' unique requirements sets us apart from the rest.

Using modern machining systems and state-of-the-art production processes, our product range is constantly evolving. With a presence in over 50 countries, we offer local service capability, ensuring our advanced technology is backed by technical support.

One of our latest product innovations is the [HOFFMAN DEFENDER™ Screw Blower](#) with innovative components and design:

- **Efficient** thanks to its patented rotors, which reduce the number of revolutions and enhance the capacity-pressure ratio
- **Quiet Operation** as a result of high-efficiency internal compression, silencers and a noise-reducing enclosure
- **Simple** installation and configuration
- **Flexible** to ensure operation at the point of best efficiency
- **Ease of Maintenance** thanks to its simple and robust construction
- **Lower Operating Speed** compared to Rotary Lobe Blowers

DEFENDER

SCREW

The Ideal Solution for Municipal Wastewater

Our team of highly skilled and experienced engineers is focused on developing products that offer maximum benefits to our customers.

With flexible configurations and enhanced technical features, the DEFENDER Screw blower package is the perfect solution for a broad range of environmental applications, including Municipal Wastewater Treatment.

In wastewater treatment plants, energy consumption accounts for over 50% of annual costs. The DEFENDER Screw blower range meets all cost reduction requirements, allowing customers to save between 15% and 30% on energy consumption when compared with other technologies.

Offering the maximum amount of air with minimum energy consumption thanks to its internal compression, the DEFENDER is also extremely versatile in both continuous and 'stop and start' use

In addition, the ability to provide pressure levels of 14.5 psig means the DEFENDER can feed deep collection basins in wastewater applications - combining the best possible use of limited urban space with low levels of noise pollution.



BENEFITS AT A GLANCE

Ideal for high-pressure applications at 10 psig or more.

Aerobic Activated Sludge System for Wastewater Treatment

- High-efficiency
- Wide turndown capability
- Simple installation
- Reliable
- Quiet operation
- Many models to fit a wide range of applications

SBR (Sequencing Batch Reactor) Wastewater Treatment System

Nitrification - Dentrification Wastewater Treatment in a Single Basin

- High-efficiency
- Intermittent Use
- Pressure variation with a constant capacity
- Simple installation
- Reliable

Silent Membrane Wastewater Treatment System (MBR)

- High-efficiency
- Intermittent Use
- Pressure variation with a constant capacity
- Simple installation
- Reliable
- Quiet Operation

HOFFMAN DEFENDER

A SUPERIOR PACKAGE

PREMIUM EFFICIENCY AIR ENDS

The air ends used here are from a state-of-the-art, patented screw blower with 3x5 profile rotors designed with wide-diameter shafts to reduce the deformation caused by internal and external loads, thereby ensuring the blower can work efficiently in even the harshest conditions.

ONE PACKAGE TWO TECHNOLOGIES

Take advantage of the one solution for both lobe and screw blower technologies. Whether revamping plants, or your processes, you can review and compare each technology's benefits for your operation before you commit to buy. Either way, the DEFENDER Lobe and Screw will fit your requirements.

LOW NOISE

Low noise emissions are ensured by our new discharge and suction silencer design. In addition, cabin enhancements grant noise reduction thanks to the special sound proofing material, upgraded panel thickness and enclosure air inlet and outlet ducts muzzled with a lined single-chamber plenum and lined bends.

EASY INSTALLATION AND MAINTENANCE

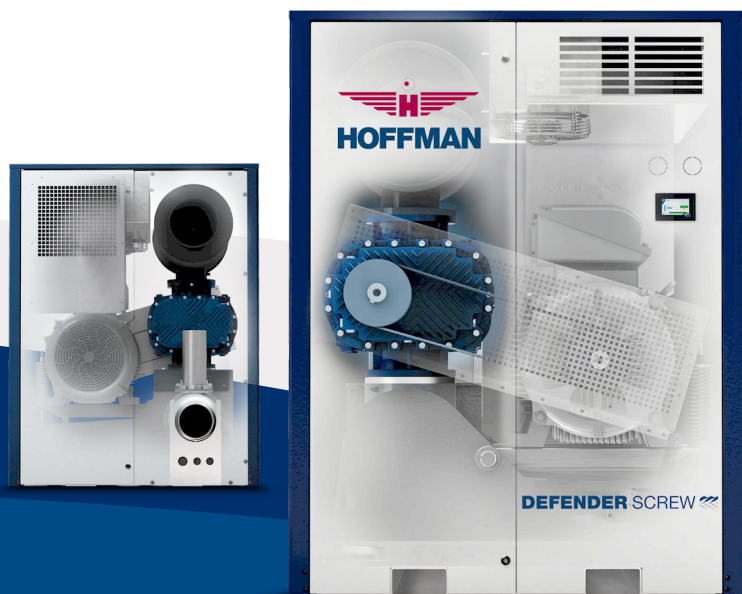
As it can be transported with a forklift and/or pallet truck, the DEFENDER Screw blower offers easy installation.

The electrical system connection is also simple, using the rear auxiliaries' cabinet for configuration with controller.

Furthermore, maintenance costs are reduced as every component of the DEFENDER Screw blower has a simple and robust construction, thereby guaranteeing a long working life.

Thanks to the simple layout of the unit components, all routine maintenance tasks can be carried out from the front of the blower, ensuring:

- easy oil change
- easy oil filter replacement
- easy oil pressure adjustment and air filter replacement
- easy drive belt replacement



FEATURES & BENEFITS

LOW LIFE CYCLE COSTS

The expense of a blower ownership is comprised of equipment, installation, energy, and maintenance costs. Equipment and installation are a one-time expense, while energy and maintenance are continuous costs of ownership. DEFENDER Screw ensures a high level of efficiency (> 75%) within a wide compressor rotation speed range reducing energy consumption. In addition thanks to its robust construction and use of minimum parts contribute to high reliability and long intervals between maintenance.

FLEXIBLE

The DEFENDER Screw blower offers a turndown capability in flow to meet the needs of the customer. It's also suitable for intermittent use with frequent stops and restarts to best satisfy the specific process requirements. The belt drive ensures the right capacity for the application, and also allows the installation of the motor most suitable for the power absorbed by the unit (therefore operating at optimum efficiency).

QUIET OPERATION

The optimum efficiency of the internal compression, guaranteed by an innovative rotor profile, means less noise during the compression phase. The low rotor rotation speed (max. 6,000 rpm) and the absence of a step-up gear, along with special silencers and a noise-reducing enclosure (also available without sound hood - WL version), guarantee low noise levels from the compressor, thus allowing installation in a variety of applications.

RELIABLE

The painstaking design and meticulous choice of each component of the blower, together with a low operating speed, make the DEFENDER Screw extremely reliable. At the same time, the controllers ensure optimum machine operation via the continuous monitoring of the operating parameters. The functions of remote diagnostics and predictive maintenance are proven to contribute to reducing downtime.





DEFENDER

CONNECT

Leading-edge DEFENDER Connect Controller

The touch screen controller is very user friendly with an intuitive menu. It provides you with a real-time view of the DEFENDER Screw's operation, and allows you to continuously monitor the device. This ensures you spot problems and malfunctions before they happen thereby protecting your investment.

The controller manages a variety of operating functions available from the built-in screen, as well as remotely. You can monitor and configure each measured parameter and alarm from any display using a remote connection via Ethernet.

Main DEFENDER Connect Controller Functions

- 44 analog and digital inputs/outputs
- Remote connection via Ethernet
- Sequencing mode (multi-blower control)
- Interval maintenance with a dedicated P&I chart
- Parameter data transmission via Ethernet
- Parameter trends
- Alarm detection
- Data logger for service troubleshooting
- Suitable for any kind of starter device across-the-line, soft-start or VFD
- Multiple language configuration

What are the controlled parameters?

- Control of the starter unit
- Inlet and outlet pressure and temperature
- Oil pressure (forced lubrication)
- Oil temperature
- Air end speed



PERFORMANCE SPECIFICATIONS

FRAME SIZE	OPERATIONAL DATA*				
	PRESSURE (max)	CAPACITY** (max)	BLOWER SPEED (max)	MOTOR (max)	NOISE (max)
	psig	cfm	rpm	hp	dBA
2A	14.5	587	7000	50	70
	14.5	647	5600	75	71
3A	14.5	989	5600	100	72
	14.5	1413	4500	150	76
3.5	14.5	2472	3600	250	79
4B	14.5	3061	2500	300	78
5A	14.5	4180	2500	400	78
	14.5	6180	2500	500	80

*Atmospheric air: absolute pressure 14.7 psi, Temperature 68°F, Relative Humidity 36%
 **Flow tolerance of ± 5%



HOFFMAN® & LAMSON® Products & Systems



HOFFMAN & LAMSON Multistage Centrifugal Blowers

HOFFMAN & LAMSON Multistage Centrifugal Blowers are the ideal solution for processes that require uniform pressure, pulse-free flow, and oil-free operation. With designs optimized for 60 and 50 Hz markets, we offer efficient performance backed by a history of reliable operations.



HOFFMAN REVOLUTION^{PLUS} High-Speed Turbo Blower

The HOFFMAN REVOLUTION^{PLUS} High-Speed Turbo Blower utilizes advanced centrifugal engineering technologies that deliver up to 40% energy savings, provide increased reliability with little or no maintenance, and come factory pre-wired and tested in an ergonomically designed sound enclosure for plug-and-play operation.



Controls & Energy Management

Considering an efficiency upgrade? HOFFMAN & LAMSON upgrades and High-Speed Turbo Blower solutions deliver increased efficiency and improved reliability.



Support, Service & OEM Parts

Restore blower performance and maintain system reliability with HOFFMAN & LAMSON OEM Service, support, and parts - available through our global network of HOFFMAN & LAMSON CERTIFIED™ Service & Distribution Centers.



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