

ESP 45 - 70 Series Screw Compressors



Smarter Air Solution

The ESP fixed speed screw compressors are designed to meet the highest requirements that modern work environment and machine operators place on them. As a result, our gear driven ESP 45, ESP 55 and ESP 70 compressors are extremely energy efficient, quiet, reliable, easy to use, possess long operating life and deliver optimal air quality.

For these fixed speed compressors, we have generated the easy-to-use and accurate drive systems and greatly invested on developing optimal cooling and ventilation. All these features are of direct benefit to the users. Maintenance of

these compressors is facilitated by having an enclosure with six doors. The number of special options available makes ESP fixed speed compressors the right choice for producing high-quality compressed air for a wide range of needs.



AirSmart™ - controlling and monitoring your compressor station

Clear text indicator display

The controller has a four line display with the menus and tactile buttons for easy navigation. Two lines display operating information such as pressure, temperature, operating hours etc. while the other two lines display advisory and shutdown messages, recommended part numbers and service contact information.

It is the same controller used in Gardner Denver's variable speed series, but programmed for load / no load operations with fixed speed compressors.

Communication and sequencing

The optional communication module allows the AirSmart™ units to talk to each other. This isn't just hour-balancing, on/off sequencing scheme. Our controller allows the system to truly optimize efficiency because it knows the capabilities of other machines and orchestrates their operation.



The communication module also allows remote monitoring of the variable speed and fixed speed units.

This application provides better energy efficiency in part load operations.

Focus on Design

Quieter than quiet

The safe and compact enclosure absorbs noise efficiently. Due to that cleverly engineered solution, the standard noise level is only 70-73 dB(A). As a result, normal conversation can take place right next to the running compressor.

Performance is further enhanced by a new cooling system that features separate cooling air flow paths.

Efficient Drive System

This series incorporates a flanged motor/coupling housing - gearbox/element to ensure a constant alignment.

The integrated TEMPEST unit with cyclone preseparation will provide you with the lowest possible residual oil content. In combination with the proven ENDURO air end it is a solid guarantee for excellent performance.



Maximum flexibility

You will appreciate the choice of special options

1 Producing optimal pressure:

We offer drives for 7.5, 8.5, 10 and 13 bar maximum operating pressure plus the low pressure model at 4 bar.

2 Integrated dryer:

The optional integrated dryer reduces both extra installations and the required floor space.

- optimised cooled
- monitored by the controller
- low installation costs
- same dimensions of the compressor

3 Integrated heat recovery system:

Our optional +W heat recovery system guarantees energy savings for your company.

4 Fluid requirements:

AEON lubricants ensure longer lifetime of your compressor and meets all requirements.

- mineral
- foodgrade
- synthetic

In addition, the standard maximum ambient temperature for the ESP series is +40 °C, to ensure that your ESP compressor works constantly in the right conditions with the lowest possible power consumption.

Service is easier than ever before

Effortless and quick

The design of these packages assures the service points are readily accessible. The enclosure side doors are hinged and removable to allow complete access to all service points. The reduced number of moving parts also lowers maintenance costs.



Aftersales products

Gardner Denver carries a full line of after sales products to meet all your requirements. By using original spare parts, you will save both time and money in the long term.



Your benefits at a glance

- Advanced AirSmart™ Control System
- Serviceability
- Modern Design
- Low Noise level
- Great Performance
- Maximum Flexibility
- Optional connectivity & sequencing function



Technical Data

Gardner Denver Model	Maximum target pressure*		Capacity at working pressure*		Motor power		Net weight	Noise level**	Size (Length x Width x Height) mm
	bar	psig	m³/min	cfm	kW	hp	kg	dB(A)	
ESP 45	7,5	110	7,93	280	45	60	1590	70	2152 x 1119 x 1939
	8,5	125	7,15	252					
	10	145	6,82	241					
	13	190	5,21	184					
ESP 55	7,5	110	9,27	327	55	74	1617	73	2152 x 1119 x 1939
	8,5	125	8,31	293					
	10	145	7,88	278					
	13	190	6,47	228					
ESP 70	7,5	110	12,26	433	75	100	1730	73	2152 x 1119 x 1939
	8,5	125	11,13	393					
	10	145	10,26	362					
	13	190	8,59	303					

* Capacity and Power measurements according to ISO 1217, ed. 3, Annex C – 1996 test code

** Noise values determined according to ISO 2151 and ISO 3744

Standard equipment

- Air-cooled
- Air inlet filter
- Zero loss inlet valve
- Fully automatic capacity control: full load, off-load, idle run and timed stop
- Gardner Denver AirSmart™ Controller
- Easy to use operator interface
- Multiple languages
- Y/D starter
- Main switch
- TEFC electric motors: IP55, F-class insulation, thermistor protection
- Emergency stop
- Safety devices for
 - high motor temperature, controlled by thermistor
 - high compressor temperature
 - high compressor pressure
 - main motor overload, controlled by thermistor
 - fan motor overload
- Alarms for
 - inlet filter, controlled by delta p
 - oil separator elements (alarm and tripping)
 - compressor overheat (alarm at 105 °C and tripping at 115 °C)
 - service interval
 - oil filter, controlled by delta p

- Safety valve
- Running condition indicators:
 - pressure
 - temperature
 - hour meter; total running and loaded hours
- Automatic re-start after power cut
- Remote control
- Epoxy powder painted enclosure
- Fan motor and cooling fan (air cooled models)
- Sound absorbing enclosure
- After cooler
- Condensate separator with start oil thermostat
- ENDURO® air end
- TEMPEST compressor unit

Optional Equipment

- Low pressure model
- Water cooled
- Special voltages
- Multiple AEON™ lubricant options
- Communications / sequencing module
- +W heat recovery systems
- Integrated fridge dryer

Auxiliary equipment

- Compressed air after treatment products

For additional information please contact your local representative or

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