



Built for continuous use in demanding applications

The ESD/ESG series compressors are designed for continuous operation and applications that require absolute performance and reliability

Continuous 24-hour use and absolute uptime are critical factors in heavy industry applications.

- In Finland alone, Gardner Denver supplies the compressed air for paper mills that produce millions of tons of paper and board annually.
- Following the example set by the Finnish paper industry, many paper mills and process plants in Europe and in other areas use the Gardner Denver ESD series compressors
- Many European ski resorts have chosen Gardner Denver's proven reliability in harsh conditions
- The ESD compressors are a key part of processes worldwide in automotive and safety glass manufacturing, bottle manufacturing, steel mills etc.
- Oil and gas industry in the Middle East depends in the dependable Gardner Denver ESD compressors.



Technical data

Gardner Denver Model	Maximum pressure		Capacity at nominal pressure*		Motor power 50 Hz		Net weight kg	Compressed air outlet
	bar	psig	m ³ /min	cfm	kW	Hp		
ESG 315	8	115	51.3	1811	315	420	4800	DN 150
	10	145	44.8	1582				
ESD 315 ESG 355	13	190	35.4	1250	315	420	4400	DN 125 DN 150 (DN 200)
	8	115	56.8	2006				
	10	145	51.2	1808				
ESG 400	13	190	44.8	1582	355	475	5000	DN 150 (DN 200)
	8	115	63.3	2235				
	10	145	56.9	2009				
ESD 450 ESG 450	13	190	47.0	1660	400	535	5200	DN 150 (DN 200)
	7.5	110	73.6	2599				
	10	145	62.9	2221				
ESD 500	13	190	53.0	1871	450	600	5100	DN 150 (DN 200)
	9	130	73.5	2595				
					450	600	5200	DN 150 (DN 200)
					500	670	5200	DN 150 (DN 200)

* Capacity measured in accordance with Cagi Pneuop PN2CPTC2 using the following working pressures: 7.5 and 8 bar models at 7 bar, 10 bar models at 9 bar and 13 bar models at 12 bar.



Standard Equipment

- Air-cooled (315 kW) or watercooled (all models) versions
- Air inlet filter
- Fully automatic capacity control: full load, off-load, idle run and start/stop
- DigiPilot microprocessor controller: interactive instrument panel with multi-language information system
- Y/D starter
- Main switch
- TEFC electric motors: IP55, F-class insulation, thermistor protection

- Modulating control with the inlet valve
- Stop/start buttons
- Emergency stop
- Safety devices for:
 - High motor temperature
 - Fan motor overload
 - High compressor temperature
 - High compressor pressure
- Alarms for:
 - Oil filter
 - Oil change
 - Inlet filter
 - Oil separator element
- Week clock
- Remote control
- RS-485 communication line
- Automatic re-start after power failure
- Control for oil separator – pressure difference
- Running condition indicators:
 - Pressure
 - Temperature
 - Hour meter: total running hours, full load
- Safety valve

- Fan motor and cooling fan (air cooled models)
- Sound absorbing enclosure
- After-cooler
- Water trap
- Automatic timer-controlled water drain
- Large and efficient air end

Optional Extras

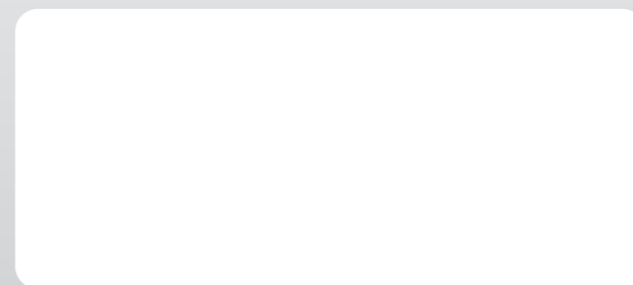
- Additional inlet silencers
- Low pressure models (down to 3 bar)
- Vacuum pump models
- Special voltages

Auxiliary Equipment

- MultiPilot multi-compressor – controller for several compressors
- Air dryers
- Compressed air after treatment line

Gardner Denver Oy/ESD/G 200-500 (GB)/0606/xxxx/Printed in Finland by Hermes/IPS-mainos.fi

For additional information please contact your local representative or



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ESD 315-500, ESG 315-450 Screw Compressors

315 - 500 kW - 50 Hz





The heavyweight winner

The preferred choice for optimum performance

The Gardner Denver ESD/ESG 315-500 series is specially designed for capacities ranging from 51.3 to 73.6 m³/min and pressures from 8 to 13 bar. Low pressure (3 bar) units are available as well. This series is built to meet the demands for continuous 24-hour use and absolute uptime required in critical industrial processes.

More weight on your benefits

- Heavy-duty construction
- Clean air and efficient oil separation

Low energy consumption

Gardner Denver strives to maintain high performance levels while minimizing energy usage through:

- Large air ends
- Premium-efficiency electric motors
- Accurate and reliable DigiPilot control system
- Versatile heat recovery

Low noise construction

Compressor noise is reduced through low rotation speed, an effectively muffled air cooling fan and sophisticated design.

Simple maintenance

The ESD/ESG series is easy to service. Large double doors provide easy access to all service points. All maintenance can be completed from the front of the compressor.

Easy installation

The compact and powerful ESD/ESG series is easy to install on level surfaces and does not require extra foundations or supports.



Designed for maximum efficiency and reliability

Heavy-duty construction

Gardner Denver uses advanced technology to carefully construct industrial compressors to withstand the most demanding industrial applications.

- Each screw element is carefully tested during manufacturing
- Each unit is test run simulating real life conditions
- Electric motors and other components meet the highest European and other standards

Compact design

Gardner Denver's ESD and ESG series compressors are designed to save space. The 315-500 kW compressors are available either with the standard enclosure.

Efficient oil separation, cleaner air

For years Gardner Denver has set the standards in clean air and oil separation efficiency. Its innovative oil separation system is based on a multi-stage process of thorough cyclone separation followed by oil removal in separation elements. Superior separation efficiencies with residual oil content as low as 2 mg/m³.

Gardner Denver screw element

The ESD/ESG series features a large screw element that improves efficiency, maximizes reliability, saves energy and reduces wear and tear by operating at low running speed.

Reliable and energy efficient

The ESD series models are direct driven, without gearing, available for applications with specific capacities and pressures, where even minimal energy losses caused by gearbox or belt transmissions want to be avoided. The ESG models feature a gearbox trans-mission to cover wider pressure and capacity ranges.

High-quality electric motors

Gardner Denver uses the highest quality electric motors available, to ensure high quality and premium efficiency.

Advanced compressor control

The advantages of DigiPilot control

The DigiPilot compressor control ensures accurate and reliable control. DigiPilots sophisticated microprocessor controller facilitates efficient operation and pressure control through its simple user-interface and interactive instrument panel. Warning lights indicate when the air inlet filters, oil separation elements or cooling system require service operations. On the oil filter there is a separate visual indicator. These enable proactive service planning.

- Full load/off load control with automatic start and stop
- Possibility for stepless throttle control from 0 to 100%
- Easy to adapt into a multi-compressor system
- Multi-lingual user interface

The advantages of versatile heat recovery

Versatile heat recovery

Gardner Denver utilizes heat recovery systems to maximize efficiency by recovering energy generated during compressed air production.

- As much as 90% of all energy used can be recovered and utilized
- Thermostatic control maintains desired temperature in the compressor
- Heat exchangers are available in different materials for difficult conditions
- Cooling water circuit can be designed specifically to customers needs

Gardner Denver offers a wide range of heat recovery systems to meet your application needs:

EWNA

- Gardner Denver's standard water cooling system
- An after cooler and oil cooler connected in series as a standard
- Water cooling for all models up to 500 kW

EANA

- Standard air-cooled compressor with separate air module
- All ducts required for efficient heat recovery and utilization are easy to arrange
- Flexible air module placement, 1m from the compressor or further with an additional pump
- Air cooling up to 315 kW

The PRE system

- Designed for water-cooled compressors

- Cooling water is initially directed through the after-cooler and then it absorbs thermal energy from a large oil/water heat exchanger
- Typical water inlet temperature: 15-35°C
- Typical water outlet temperature: 65-75°C.

The DIR system

- Ideal for closed systems with inlet water temperatures up to +50°C
- Separate water-cooling supply is required for the after-cooler

The +W system

- Heat recovery system for air-cooled compressors
- Transfers the heat produced in compression into water
- Maximum outlet +75°C (std. 70°C)

