INDUSTRIALS GROUP

Gardner Denver

Screw Compressors

ESM 50-80-140

Highly Efficient Fixed Speed Solutions

Lifecycle SOLUTIONS

Life Cycle
SOLUTIONS

The perfect fit
for constant air demand

"The perfect fit" – is not just a tagline, more proof of how meeting quality standards, functionality and environmental responsibilities can deliver increased productivity and profitability.

Gardner Denver has launched new optimised efficiency 45-75-132kW, oil-lubricated rotary screw compressor models to further enhance and complement its ESM series range by adding a premium efficiency range ESM 50, ESM 80 and the new ESM 140 feature an **extra large airend** contributing to typically, **8% energy cost savings**.

Innovative design delivers great benefits:

- Highly efficient fixed speed solutions feature larger airend with up to 8% energy costs savings
- Low noise operation
- Advanced control system
- Modern cooling system
- Easy maintenance
- GD 5 Years Extended Warranty Protect 5 – our total commitment to quality and worry free ownership

PROTECT 5 years
Extended Warranty for Gardner Denver Compressors

Focus on life cycle costs

Gardner Denver strives to provide products that not only meet your needs but exceeds them. We want to offer compressed air solutions that save you money and earn more for your business for years to come.

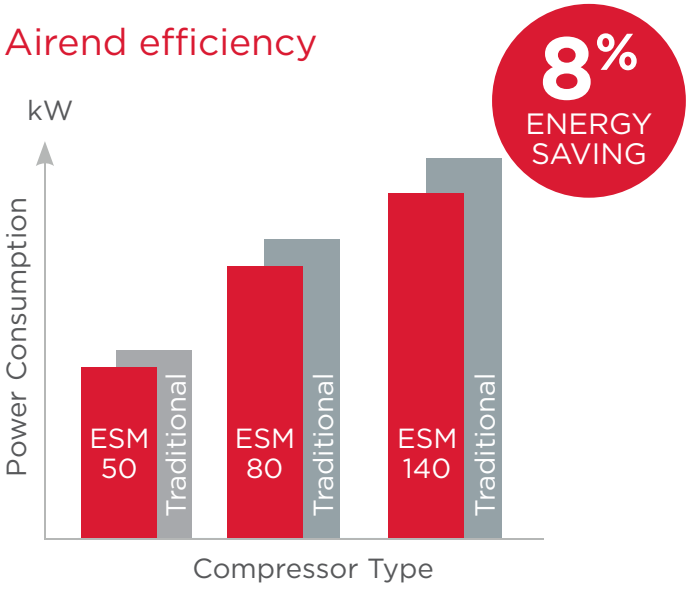
These specific solutions offer a quick return on investment where customers run their compressor for longer than average hours, or where energy costs per kW are higher than the global average.

Product Features

Leading Gardner Denver airends

The 50-80-140 models use a larger airend, with a slower rotor tip speed than would normally be considered for this kW size. Utilising the premium sized airend with optimised rotor tip speed, the compressor works even more efficiently with 8% energy savings and lowers noise levels whilst increasing durability.

Airend efficiency



Optimised cooling system – high efficiency radial fan

The radial fan concept represents quiet and efficient operation. Additionally, peripheral speed means low noise and power consumption that is up to 50% lower than a comparable axial fan.

Another advantage is the high residual thrust (stable curve) that allows the use of exhaust ducting with a pressure drop of up to 130 Pa. The oversized after coolers used in the ESM 50-80-140 series also ensure an optimum cooling and discharge temperature.

A perfectly matched design of motor, drive & airend

The efficient motor/drive/airend combination is designed to optimise specific power, which provides a benefit in the form of energy cost savings. In addition, these compressors utilise the TEFC IP55, high efficiency IE3 or IE4 motors.

"GD Distributors provide
world class maintenance and service support
with a team of highly trained and skilled compressor service technicians"

Quality in every detail

Large surface after cooler

Optimum cooling ensures low operating and compressed air discharge temperatures, resulting in reduced power consumption of downstream dryer equipment.

High performance separator filter

Two-stage filtration ensures highest quality air is delivered to your system (< 3ppm oil carryover).

Automatic motor lubrication (ESM 80 and ESM 140)

Increases bearing life and is maintenance free.

Highest quality connections

Solid hoses and pipe connections with viton victaulic couplings increase reliability and are easy to maintain.

Easy servicing

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

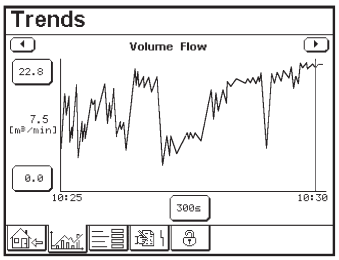
The synthetic efficiency advantage

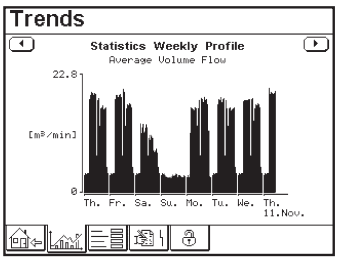
with Gardner Denver AEON™ 9000 SP lubricant as a standard.

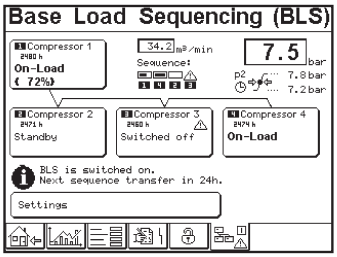
A unique synthetic lubricant designed specifically to maximise compressor efficiency and provide optimum lubricity.

"Green" advantage

- Extended drain intervals
- Energy Savings as a result of optimum operation under demanding temperature conditions
- Make considerable savings on your energy bill







Everything under control - “GD Pilot TS” touch screen controller

The “GD Pilot TS” with its high resolution touch screen display is extremely user friendly and self-explanatory. All functions are clearly structured in five main menus and are visually intuitive.

The multilingual “GD Pilot TS” control system ensures reliable operation and protects your investment by continuously monitoring the operational parameters, which is essential for reducing your running costs.

With the ability to display detailed system analysis in the form of trend diagrams and graphs, operating parameters can be precisely set to maximise efficiency.

- Line/network pressure
- Motor speed (variable speed)
- On load hours/total hours run & average volume flow
- Weekly average volume flow

Base load sequencing

Compressed air systems typically comprise of multiple compressors delivering air to a common distribution system. The addition of the optional base load sequencing module will allow for the central control of up to four compressors matching the delivery to plant demand.

Features & functions

- Home page
  - instant overview of the compressor status
- Real time clock
  - allows pre setting of compressor starting/stopping
- Second pressure setting
- Integrated cooling and dryer control
- Fault history log
  - for in-depth analysis
- Remote control via programmable inputs
- Auto restart after power failure
- Optional base load sequencing
- Optional SD Card
  - stores several run characteristics

Optimise your energy usage with energy recovery systems

Reduce your carbon footprint

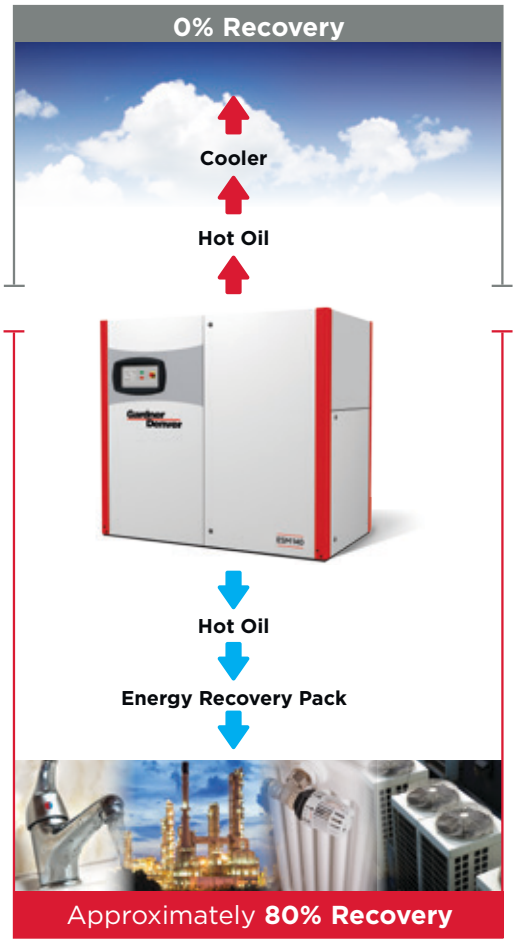
There are plenty of ways to save energy within your compressed air system – and almost as many alternative ways to waste energy! Gardner Denver Compressors offer you reliable auditing tools allowing you to identify opportunities within your installation where energy savings can be made.

Because a large percentage of the energy used in compression is rejected in the form of heat, we have successfully developed effective systems for waste heat recovery – further key energy saving products.

Heat is not a waste product but valuable energy

The largest part of the energy input into compressed air generation is rejected in the form of heat and discharged by means of a cooling medium (air/water).

This cooling medium contains approximately 94 percent of the input electrical energy. This heat need not be wasted and can be used, for example, in space heating or for the heating of domestic water. Up to 80 percent of the used energy can be recovered.



Scan to view our heat recovery video

GD 5 Years Extended Warranty Protect 5 - our total commitment to quality and worry free ownership

GD 5 Years Warranty - a simple, free of charge extended warranty scheme from GD - once again, taking the industry standard and making it better.

PROTECT 5 years
Extended Warranty for Gardner Denver Compressors

Genuine GD Parts – The perfect fit

The vast experience and knowledge of GD's highly qualified air specialists, coupled with the use of genuine GD parts and quality consumables that are guaranteed to perform, ensures the best possible efficiency from your GD air system.

ESM 50 – 80 - 140 - Highly Efficient Fixed Speed Compressors

Gardner Denver model	Nominal pressure	Drive motor	FAD[1]	Noise level[2], 1m	Weight	Dimensions
	bar g	kW	m^3/min	dB(A)	kg	L x W x H mm
ESM50	7.5 10	45	8.67 7.40	67	1055	1722 x 920 x 1659
ESM80	7.5 10	75	14.72 12.26	69	2010	2158 x 1223 x 1971
ESM140	7.5 10	132	24.65 21.59	73	3254	2337 x 1368 x 2039

Integrated dryer option

Gardner Denver model	Integrated Dryer Option	Weight
		kg
ESM50	F45E (ESM50F)	45
ESM80	F75E (ESM80F)	75

[1] Data measured and stated in accordance with ISO 1217, Edition 4, Annex C and Annex E and the following conditions: Air Intake Pressure 1 bar a, Air Intake Temperature 20°C, Humidity 0 % (Dry).
[2] Measured in free field conditions in accordance with ISO 2151, tolerance ± 3dB (A).
[3] Data refer to ISO 7183, working pressure of 7 bar, inlet temperature 35°C and ambient temperature 25°C.

Heat Recovery Performance Data

Gardner Denver model	Water Flow Rate		Outlet Temerature		Typical Energy Saving
	Litre/hr		°C		kW
ESM50	1770	708	45	75	41.0
ESM80	2796	1116	45	75	64.8
ESM140	4782	1914	45	75	110.8

The above table is dependent on the site conditions and shows examples of kW savings at stated water temperature rises. Gardner Denver's energy recovery system offers saving on a wide range of inlet and outlet temperatures. For alternative temperatures please contact your local Gardner Denver representative.

Gardner Denver

Global Expertise

The GD rotary screw compressor range from 2.2 – 500 kW, available in both variable and fixed speed compression technologies, are designed to meet the highest requirements which the modern work environment and machine operators place on them.

The oil-free EnviroAire range from 15 – 160 kW provides high quality and energy efficient compressed air for use in a wide range of applications. The totally oil-free design eliminates the issue of contaminated air, reducing the risk and associated cost of product spoilage and rework.

A modern production system and process demands increasing levels of air quality. Our complete **Air Treatment Range** ensures the highest product quality and efficient operation.

Compressor systems are typically comprised of multiple compressors delivering air to a common header. The combined capacity of these machines is generally greater than the maximum site demand. To ensure the system is operated to the highest levels of efficiency, the **GD Connect** air management system is essential.

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www.gd-industrials.com

For additional information please contact
Gardner Denver or your local representative.

Specifications subject to change without notice.

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