

# **Gardner Denver**

## Premium compressor design & industry leading warranty

ESM/VS Series 55 - 75 kW  
Fixed & Variable Speed



Reliability & efficiency  
without compromise



## Reliability & performance - quality pays off

### The **ESM and VS Series** from Gardner Denver

Well known in the industry for quality and reliability, Gardner Denver continuously develops the ESM and VS series achieving cutting edge performance and efficiency. The lubricated screw compressor range from 55 to 75 kW comprises of fixed, as well as E models providing best-in-class efficiency. All models are optionally available with integrated heat recovery and add-on dryer.

- ▶ **Pressure range**  
5 to 13 bar
- ▶ **Volume flow**  
2.1 - 14.9 m<sup>3</sup>/min
- ▶ **Motor power**  
55 to 75 kW

### Engineering **excellence**

Compressors are more than just a financial investment, they are a key component in ensuring that manufacturers, processors and operators receive consistent, high quality low cost air.

The screw compression element is the heart of the compressor and therefore Gardner Denver keeps the design and manufacture in-house, using the latest CNC rotor grinding machinery, coupled with online laser technology.

The resulting reliability and performance ensures that operating costs will remain low throughout the compressor's life.



### **Premium** efficiency airend

The new GD6 airend ensures higher efficiency levels, by up to 5% compared to the previous one, providing fewer pressure drops, in an optimised compact design. Gardner Denver's unique design, with integrated oil filter and oil regulation valve, ensures external hoses are reduced to a minimum. The integrated airend design assures the reliability of the compressor, continuous hassle-free operation and easy servicing. Under the free Protect 10 warranty the airends are covered up to 44,000 hours or 10 years\*.

\* Whichever is soonest

**GERMAN**   
**ENGINEERING**  
**DESIGN&MANUFACTURE**

“Gardner Denver lubricated rotary screw compressors incorporate the very **latest technological advances** and guarantee a continuous supply of high quality compressed air.”



## Outstanding **Benefits**

The upgraded 55 to 75kW screw compressors from Gardner Denver have only a 2.23m<sup>2</sup> footprint for easier installation in more restrictive locations.

The newly redesigned models offer quick release panel access for easier servicing, redesigned & improved service parts like separators & filters. With an efficiency improvement of up to 6.8%, and a higher flow rate up to 6% from the brand new airends, this improved performance and space saving ability delivers significantly lower lifetime costs.

Designed & manufactured at the centre of excellence in Germany, the latest changes represent a continuing improvement to a range which has been developed over many decades.

### **Re-designed GD6 and GD8 semi integrated airends**

Optimised airends provides better performance, higher efficiency levels and lower pressure drop.

### **Highest efficiency levels**

Up to 7% improvement.

### **Lowest floor space requirement**

In average 8% less than comparable products in the market.

### **Implementation of new automatic oil regulation valve for variable speed models**

Adding to the efficiency improvement.

### **The automatic motor lubrication is standard**

It increases the bearing life and is maintenance free.

### **The new fine separator with just one integrated sealing**

Makes maintenance easy as no o-ring replacement is required.

### **All doors are hinged and can be removed**

Reducing the space requirements and optimising accessibility.

### **Premium electric motor**

The compressors are equipped with a premium high efficiency electric motor.



## New Integrated Add-On Dryer

**Sustainability is the name of the game with the all-new Integrated Add-On Dryer.** With a small footprint and incorporating the latest in gas technology (R513A), this non-cycling refrigeration dryer is designed specifically to work 1 to 1 with the compressor, and is validated for performance and reliability. In fact, the R513A refrigerant used in this dryer has an extremely low environmental impact – or Global Warming Potential (GWP) – when compared to other refrigerants used in comparable dryers, making it truly climate-friendly and sustainable. With a single supply and discharge connection, the minimised circuitry and redesigned high efficiency heat exchanger delivers reduced risk of leakage.

### The features are your benefits:

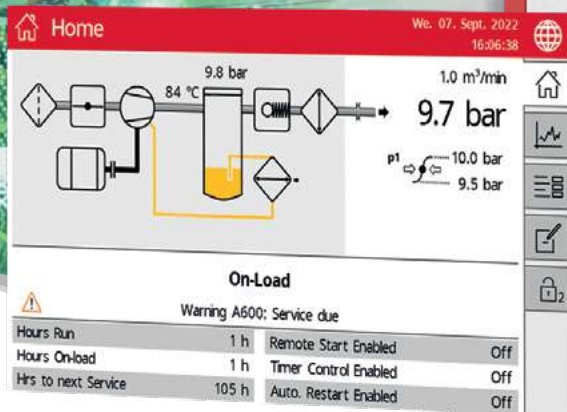
- Air quality & energy efficiency
- Space saving footprint
- Easy to transport & simple plug & play installation
- Removable panels for ease of servicing and access
- Environmentally-friendly – future legislation compliant
- iConn on board

The compressor's GD Pilot controller also monitors and controls the dryer and is connected to the iConn network:

- Continuous tracking of dryer performance
- Remote monitoring of main parameters through any terminal or using the iConnApp
- Dew point monitoring
- Alarms and warnings email notifications
- Historical and predictive analysis and trends reports

**The new modular dryer is of course also covered by our Protect 10 Warranty** and genuine parts service kits are available to cover extended warranties in addition to standard servicing.

“In addition, the new heat recovery system has reduced the company’s annual natural gas consumption by 15%, **saving approximately €8,000 per year.**”



## GD Pilot TS SE7 innovative touch screen compressor controller

The GD Pilot TS SE7 with its high resolution 7" touch screen display is extremely user-friendly and self-explanatory. All functions are clearly structured in five main menus and are intuitively visual. The multilingual GD Pilot TS SE7 control system ensures reliable operation and protects your investment by continuously monitoring the operational parameters, which is essential for reducing your running costs.

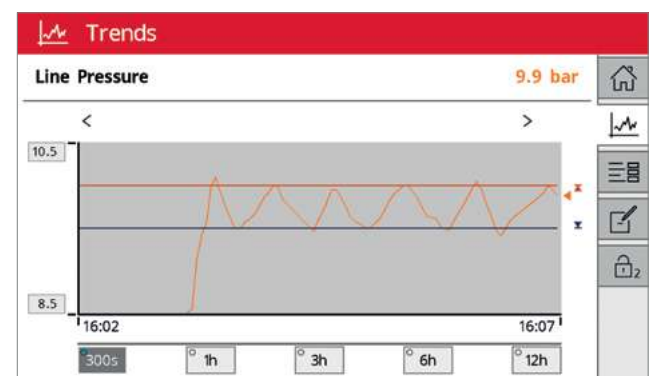
### Features & functions

- 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
- SD Card – stores several run characteristics
- iConn enabled
- Integrated Web-Server

### Trend diagrams

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 (Regulated Speed)
- On Load Hours / Total Hours Run & Average Volume Flow
- Weekly Average Volume Flow





## Energy Efficiency Meets Sustainability

### Analysis & planning for sustainable energy efficiency

A precise analysis of your existing systems and calculation of the current compressed air demand and pressure level, along with that expected in the future, should always be used as the basis for any decision. If the system components, including treatment, are coordinated and maintenance expenses have been determined, running costs and energy costs can be estimated more accurately and carbon footprint reduced.

### Impartial planning

It is best to approach planning without pre-conceived opinions, such as, "It has to be a screw compressor" or "we need a 75 kW machine" and consider all options. In some instances, for example, an oil-lubricated compressor may be the most suitable option to achieve desired running costs and energy savings.

While environment-friendly compressors are all about efficiency, choosing the right model for your compressed air needs is still vital. How much airflow do you need and for which applications?

Will the compressor run constantly or intermittently? So, for example, will the demand for compressed air fluctuate due to shift work, or seasonal demand? How important is air quality? These factors should always be key considerations when specifying a compressed air system.

### Your compressor as a sustainable energy source

- Use the right technology for your application
- Don't compromise on the complete compressed air system
- Carry out air audits & specify the correct air receiver and downstream equipment size
- Avoid leaks and eliminate off-load running
- Choose variable speed to match air demand
- Recover heat for significant savings
- IIoT predictive maintenance coupled with the correct service agreement delivers total peace of mind

### e-models market leading energy efficiency

The e-models feature a class leading efficiency of up to **6.8%** compared to the standard models. With new technology including an automatic oil regulation valve these models can save up to **€ 4,500 in energy costs a year**.

### Innovative oil regulation valve

Specially designed by Gardner Denver's engineering team, this integrated valve:

- Eliminates the risk of condensate to avoid corrosion and extends oil's life time
- Depending on the working conditions improves efficiency by up to **5% for the variable speed models**
- Improves low running speeds

“Since installing the new compressor and heat recovery system, we are on target to achieve **annual energy savings in the region of £23,000**. With these energy savings, we’re also set to benefit from a fast payback on return on investment”

Ricky Dumbleton  
Senior Production Manager,  
Just Trays

### The perfect response to individual air demands

A vast amount of the energy lost in a factory or plant is due to wastage in an air compressor installation. Variable speed (VS) technology ensures that compressed air systems perform as efficiently as possible.

Gardner Denver's VS compressors efficiently and reliably handle the varying air demand found in most air systems which can significantly reduce the annual cost of ownership.

The annual cost of ownership can be significantly reduced using regulated speed technology.

Turn waste heat to your advantage – save huge amounts of energy, cut CO<sub>2</sub> emissions AND improve operating costs!



Hot Water



Heating



Industrial Process



Hot Air Blast

### Integrated heat recovery

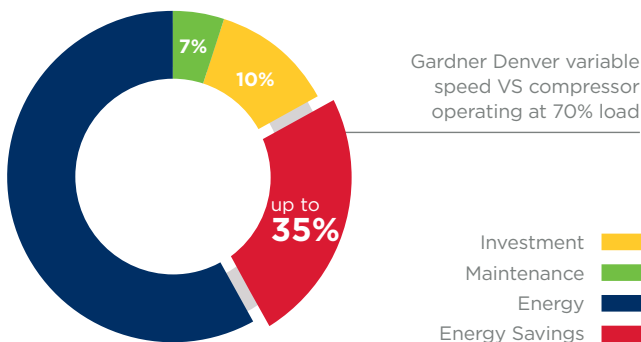
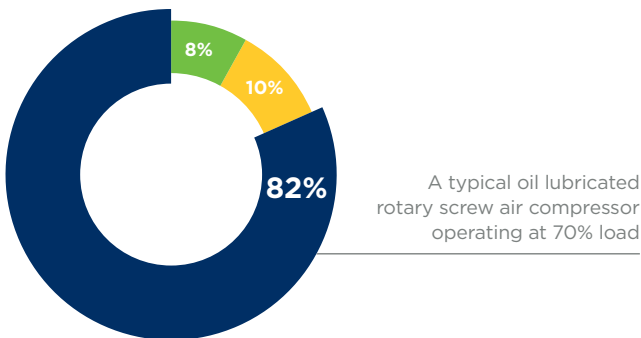
Significant energy and costs savings can be achieved with Gardner Denver's efficient integrated heat recovery system. It can be either factory fitted or supplied as retrofit kit including all necessary pipe-work and fittings.

Around 70% of the energy needed to run a rotary screw compressor gets converted to heat during the compression process. Without heat recovery, this heat is directly blown into the atmosphere.

The heat generated during compression is paid for as part of the process, then it creates additional costs as this heat needs to be removed by cooling fans or by the use of water. At the same time, most companies consume a lot of energy and money to generate hot process water, space heating or preheat water for steam generation.

Given that compressed air systems account for 10% of all electricity used in industry, and energy is the largest single lifecycle cost of a compressor, it makes sense to recover this heat, save energy and reduce costs.

- Significant cost savings
- Lower CO<sub>2</sub> emissions
- Low investment costs



- Investment
- Maintenance
- Energy
- Energy Savings

# iConn Service 4.0

## Proactive Maintenance and Service with iConn Monitoring

The ESM and VS series is equipped with iConn as a standard. iConn is the smart, proactive real-time monitoring service that delivers in-depth and real-time knowledge on the system to our compressed air users. It enables accurate production planning and total peace-of-mind protection, generating insight and statistics that keep users informed on performance, at the same time highlighting potential issues before they become a problem.

## Absolute Efficiency. Absolute Security

Not only does iConn allow deviations from the optimal plant condition to be detected early and countermeasures to be initiated, meaning that expensive failures and downtime is avoided, maintenance intervals are no longer time-controlled – but are based on individual component wear and actual system requirements.

Further more, confidentiality, data integrity, authenticity and protection are **ALL** guaranteed.

**iConn from Gardner Denver –  
changing the way we do business.**

## iConn benefits at a glance

Proactive real-time monitoring with iConn for your compressed air installation, delivers many benefits:

- ✓ Real-time operating data available around the clock
- ✓ On-demand maintenance extends compressor life cycle and optimises costs
- ✓ Maximum compressor performance reduces energy consumption
- ✓ Predictive and preventative monitoring and warnings avoid expensive downtime
- ✓ Wear of compressed air components is identified early
- ✓ Reduce operating costs caused by increased pressure drop in filters and separators through late maintenance
- ✓ Identify potential savings by measuring costs and efficiency
- ✓ Optimised maintenance planning





## Single source compressed air treatment systems

### Meeting & exceeding expectations

Modern production systems and processes demand increasing levels of air quality. Air treatment products **manufactured by Gardner Denver**, utilise the latest technology and provide an energy-efficient solution at the lowest life cycle costs.

Unwanted substances can and do occur in compressed air – from the ambient air inducted and generated by the process, e.g. dirt, dust, water, oil, and other micro-contaminants. By installing the correct air treatment system for your application, moisture and contaminants that will damage your production and application efficiency and increase costs will be avoided altogether. In addition, air treatment enables the delivery of compressed air to the exact quality specified by the application or process.

Meeting or exceeding even the most stringent air purity standards by removing contaminants from compressed air with the correct filtration will undoubtedly lower operating costs significantly and extend the service life of your compressed air systems and application equipment.

In the same way, choosing the correct dryer for your application will help to eliminate moisture and prevent corrosion, avoiding expensive equipment failure and product damage.

Compressed air treatment solutions designed and manufactured by Gardner Denver, protect your systems and processes and deliver an energy-efficient, cost-effective and environmentally-friendly solution.

### A complete range of Air Treatment & Air Management products

- Water Cyclone Separators
- Compressed Air Filters
- Condensate Drain System
- Compressed Air Refrigerant Dryer
- Heatless Desiccant Dryers
- Heat Regenerative Desiccant Dryers
- Sub-Freezing Dryers
- Heated Blower Dryers
- Nitrogen Generator
- GD Connect 12 Plus Multi Compressor Controller





## The **best investment protection** you can get



Extended Warranty for GD Compressors

### 10 Years Warranty!

The Gardner Denver Protect 10 Warranty and Service programmes will protect you up to 44,000 hours/10 years<sup>1</sup>. It is one of the most generous warranties available in the industry affording you total piece of mind.

### Your benefits:

- The Protect 10 warranty is totally free to the compressor owner<sup>2</sup>
- The Gardner Denver authorised service provider will deliver a guaranteed quality of service
- The Protect 10 service agreement underpinning the warranty will enable accurate maintenance, budgeting and cost of ownership
- The use of genuine Gardner Denver parts and lubricants will maximise compressor life and efficiency

<sup>1</sup> Warranty duration is limited to 6 years/44,000 hours on the whole package, 10 years/44,000 hours on the air end. Whichever is the soonest.

<sup>2</sup> subject to Terms & Conditions

### Compact design - easy installation

The small footprint reduces the space required for installation.

### Easy servicing

The design of these packages ensures that 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 further lowers the maintenance costs.

### Gardner Denver genuine spare parts

#### Enjoy complete peace of mind.

Genuine Gardner Denver parts and lubricants ensure that compressed air plant reliability and efficiency is maintained at the highest standards. Gardner Denver spare parts and lubricants are distinguished by:

- Long service life, even under harshest conditions
- Minimum losses contributing to energy savings
- High reliability improves plant up-time
- Products manufactured with the strictest Quality Assurance Systems





## Technical data

### ESM 55 – 75 Fixed Speed Screw Compressors

### Integrated Dryer Option

Gardner Denver Model	Nominal Pressure	Drive Motor	FAD <sup>1)</sup>	Noise Level <sup>2)</sup>	Weight	Dimensions L x W x H	Dimensions L x W x H with Dryer	Pressure Dew Point <sup>3)</sup>	Weight
	bar g								
ESM55	7.5	55	10.71	69	1405	1958 x 1138 x 1857	2458 x 1138 x 1857	3	233
	10		9.50						
	13		8.25						
ESM75	7.5	75	13.98	72	1495	1958 x 1138 x 1857	2458 x 1138 x 1857	3	233
	10		12.54						
	13		10.50						
ESM55 <sup>e</sup>	7.5	55	10.71	69	1406	1958 x 1138 x 1857	2458 x 1138 x 1857	3	233
	10		9.57						
ESM75 <sup>e</sup>	7.5	75	14.80	71	1785	1958 x 1138 x 1857	2458 x 1138 x 1857	3	233
	10		12.70						

### VS 55 – 75 Variable Speed Screw Compressors

### Integrated Dryer Option

Gardner Denver Model	Nominal Pressure	Drive Motor	FAD <sup>1)</sup> Min - Max	Noise Level <sup>2)</sup> at 100% Load	Weight	Dimensions L x W x H	Dimensions L x W x H with Dryer	Pressure Dew Point <sup>3)</sup>	Weight
	bar g								
VS55	5 - 10	55	2.50 - 10.99	69 - 72	1430	1958 x 1138 x 1857	2458 x 1138 x 1857	3	233
VS75	5 - 13	75	2.10 - 14.03	72 - 74	1520	1958 x 1138 x 1857	2458 x 1138 x 1857	3	233

<sup>1)</sup> 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).

<sup>2)</sup> Measured in free field conditions in accordance with ISO 2151, tolerance ± 3dB (A). All models are available in water cooled versions.

<sup>3)</sup> Data refer to ISO 7183, working pressure of 7 bar, inlet temperature 35°C and ambient temperature 25°C.

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

Specifications subject to change without notice.