

Screw Compressors

ESM 7 - 22 Fixed Speed & VS 7 - 22 Variable Speed





Absolute **reliability**

The growing industrial demand for compressed air requires compressor manufacturers to provide more reliable, economic and versatile compressors within a small footprint. Gardner Denver addresses these requirements, with the introduction of the new ESM / VS 7-22 series.

Without an efficient, durable air-end, a unique compressor design means nothing. That's why Gardner Denver designs and manufactures this critical component to exacting standards. Tens of thousands of our air-ends are in operation world-wide, proving that the heart of the ESM / VS 7-22 Series can stand the test of time.

Proven results even in the toughest conditions

Gardner Denver product development is a balance of technology, efficiency and performance — all focused on meeting your demand for compressed air.

Also in smaller business applications you can measure efficiency, **and see the value of year on year saving!**

Advanced design

The ESM / VS 7-22 fixed and variable speed screw compressors are designed to meet the high requirements which the modern work environment and machine operators place on them. As a result, our belt driven ESM / VS 7-22 compressors are extremely energy efficient, quiet, reliable and easy to use, ensuring long operating life and delivery of optimal air quality.

The number of special options available makes the ESM / VS 7-22 compressors the right choice for producing high quality compressed air for a wide range of needs.



Customised for flexibility

The basic ESM / VS 7-22 compressors can be equipped with useful options to meet even the toughest demands for building up a flexible compressor station. As a result, you will get a compact air solution which can be installed quickly and efficiently wherever the need for high quality compressed air exists.

Complete compressor station

includes compressor and refrigerant dryer, both mounted on a tank.

Reliable add-on refrigerant dryer

- Minimum power consumption
- Environmentally friendly refrigerant
- Ensuring top performance and reliability with minimum pressure losses

High quality air receiver

- Built to the highest standard EN 87/404
- With pre dried high quality air, no condensate collects in the receiver

Integrated heat recovery

From 15 kW, the compressors are available with highly efficient heat recovery systems, which can be factory fitted or are available as retrofit kits comprising all the necessary pipe-work and fittings.



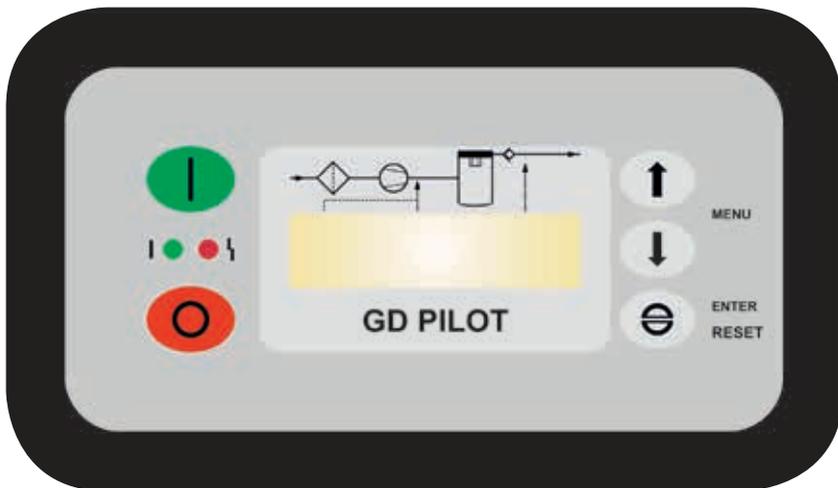
All components are ready to “Plug & Play” Ideal where a smaller footprint is required

Innovative control system

GD PILOT Control System for reliability and simplicity of operation

The new control system ensures reliable operation and protects your investment by continuously monitoring the operational parameters.

The “GD PILOT” controller also has the capability to have programmable inputs and outputs, control additional equipment as well as providing the following features with clear readable text.



- Discharge/line pressure display
- Air/oil temperature display
- Total hours run and loaded hours
- Service due indicator
- Enhanced fault log monitor
- Real time clock
- Timer controlled stop/start
- Remote stop/start
- Auto restart on power failure
- Second pressure setting
- Status indication
- RS485 – Modbus RTU

More benefits

- Three line LCD interface
- Dryer control
- Programmable input and outputs

Dual position ability

- Flexibility for tank mounted version
- User-friendly design



Save even more energy with our unique compressed air management systems

GD Connect 4

Air management system

Today no modern energy efficient compressed air system is complete without the installation of an intelligent master control system.

The new GD Connect 4 is the ideal control solution for smaller compressed air stations, and will intelligently control up to 4 fixed speed compressors.



GD Connect 4

GD Connect 12

Sequencer with up to 35% energy savings!

- Easy to install
- Improved performance and efficiency
- Simple to operate
- Detailed management reports



GD Connect 12

Unique compressed air management system

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 12” management system is essential.

The GD Connect 12 can intelligently control up to 12 fixed speed or variable speed compressors.

- Intelligently selecting the right combination of compressors
- It reduces energy consumption by tightening the network pressure to the smallest possible band

Each 1 bar decrease potentially results in a 6% reduction in energy consumption and as much as 25% decrease in air leakage losses.

- Keeping off load running to the absolute minimum

VS series: Our compressor solution for varying air demand

Typically, air demand in a plant varies widely throughout the day. In addition, fluctuations can occur from shift-to-shift, weekday-to-weekend, and season-to-season. Pressure requirements can also change from machine-to-machine or from one application to another. You need someone to evaluate your unique, often complex requirements and recommend a tailored solution.

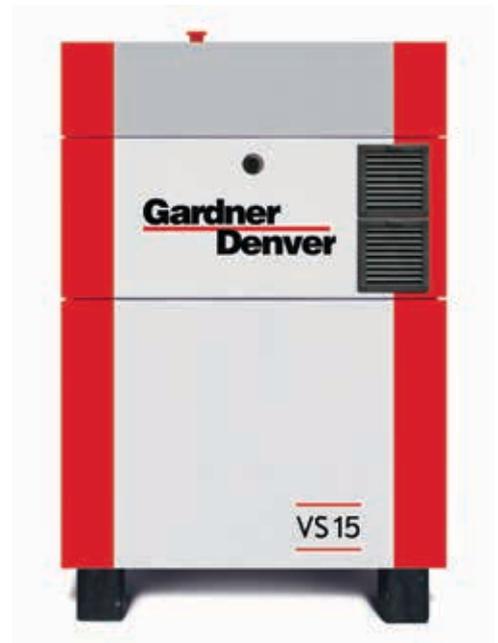
The VS variable speed compressor - one smart solution

Variable speed compressors can efficiently and reliably handle the varying air demand found in most plant air systems. These compressors speed up and slow down to match air supply to air demand as it fluctuates.

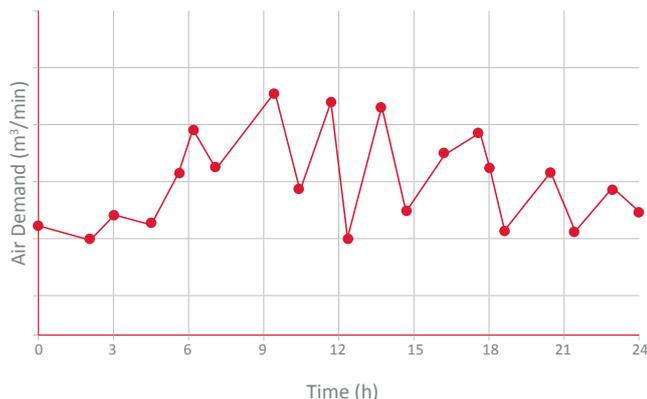
The right variable speed compressor for the application delivers significant energy savings and a stable consistent air supply.

The VS compressor is an efficient and versatile solution even for the most demanding industrial applications and carries all of the Gardner Denver features and benefits associated with reliable, easy to use operations and high efficiency.

The Gardner Denver air-end ensures that maximum reliability and the highest efficiency level are incorporated into these packages. The variable speed drive/motor/compressor combination and the controller are designed to meet the varying demands of your system at the lowest possible specific power, which benefits you in the form of energy cost savings.



Air demand can vary dramatically during a 24hr period



“The VS Series **saves money and maximises plant productivity** – It’s like having several efficient compressors in one. **Smart!**”



Reduced wear and tear thanks to wide regulation range

Superb flexibility comes as standard with the VS series

With a wide capacity range, the VS series features the market's quickest and widest response to air demand changes.

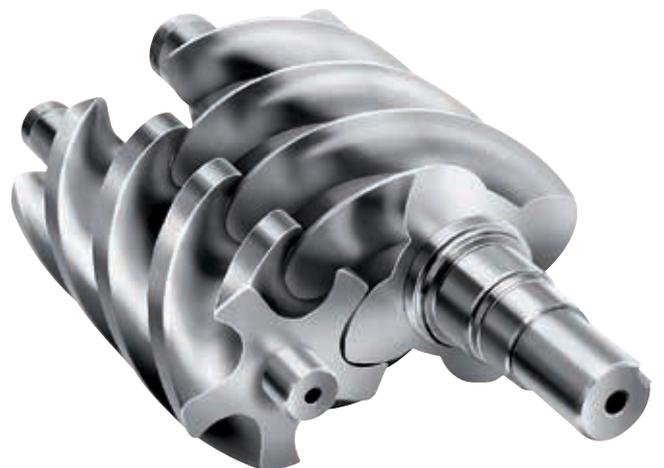
Your benefits during varying air demand:

- Reduced wear and tear on inlet and discharge valve components
- No shock bearing loads for the air-end
- Minimised pulsating load (full load pressure/off load pressure) for all pressurised components within compressor package (oil receiver, hoses etc.)



Tried and tested inverter concept

- Integrated in the electric cabinet
- Protected from dust by replaceable inlet filters
- Maximum reliability by optimised cooling system
- Ensures high availability and long life time



Genuine GD Parts – The perfect fit for maximum performance and best efficiency

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.

Service friendly design

- Short servicing times
- Long service intervals
- Reduced service costs

Minimum space requirements

- Small footprint saves space, allowing installation even in restricted areas

First class accessibility

- Panels and covers easily removable with quick-release catches

Easy service items

- Spin on/off separator cartridge gives residual oil carryover of less than 3mg/m³
- Quick oil change via external drain
- Easy access suction filter element

Combined air/oil cooler

- Low air discharge temperature
- No unnecessary wear or condensate in the system

Easy servicing

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.

“The use of genuine GD parts and lubricants will **maximise your compressor's life and efficiency.**”



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



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

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



GD provides **Protect 5 - an extended warranty cover on your compressor** for 5 years with GD’s authorised service providers delivering a guaranteed quality service*.

We believe that the **GD Protect 5 will become a way of life “working when you need it” to provide maximum uptime AND peace of mind.**

Protect 5 – a simple and free of charge extended warranty scheme from GD.

* Terms and conditions apply. Contact your nearest authorised service provider for full details.



Your benefits at a glance - quality from A to Z

For these fixed and variable speed compressors, we have generated 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 a user-friendly enclosure.

Low noise level is ensured.

Very small installation footprint

- Thanks to advanced compressor concept
- Passes through a standard doorway
- Simplifies installation work
- Can be installed where it is needed
- Expensive pipework can be eliminated



High efficiency motor

- **IP 55 motor**

The drive/motor/compressor combination and the controller are designed to meet the demands of your system at the lowest possible specific power.



High ambient temperature as a standard (45°C)

- Ensures continuous operation even under harshest conditions
- Ensure stress-free operation through efficient heat dissipation

Fully integrated air-end design

- Well proven air-ends
The innovative integrated design, with oil separation, oil filter, thermostatic bypass valve, reduces the number of external hoses and components resulting in increased reliability.

Automatic belt tensioning

- Maintenance-free
- Provides correct belt tension
- Ensures long belt life

Technical data

ESM 7 – ESM 22 - Fixed Speed Screw Compressors

Gardner Denver model	Nominal pressure	Drive motor kW	FAD ¹⁾ m ³ /min	Noise level ²⁾ , 1m dB(A)	Weight kg	Dimensions
	bar g					L x W x H mm
ESM 7	7.5	7.5	1.32	70	205	667 x 630 x 1050
	10		1.09			
	13		0.87			
ESM 11	7.5	11	1.83	70	219	667 x 630 x 1050
	10		1.64			
	13		1.34			
ESM 15	7.5	15	2.72	70	335	787 x 698 x 1202
	10		2.30			
	13		1.83			
ESM 18	7.5	18.5	3.28	71	361	787 x 698 x 1202
	10		2.79			
	13		2.36			
ESM 22	7.5	22	3.66	71	367	787 x 698 x 1202
	10		3.27			
	13		2.65			

VS 7 – VS 22 - Variable Speed Screw Compressors

Gardner Denver model	Nominal pressure	Drive motor kW	FAD ¹⁾ m ³ /min	Noise level ²⁾ , 1m dB(A)	Weight kg	Dimensions
	bar g					L x W x H mm
VS 7	7.5	7.5	0.48 - 1.27	69	222	667 x 630 x 1050
	10		0.46 - 1.02			
	13		0.42 - 0.83			
VS 11	7.5	11	0.63 - 1.81	70	231	667 x 630 x 1050
	10		0.65 - 1.57			
	13		0.58 - 1.27			
VS 15	7.5	15	0.93 - 2.61	72	365	787 x 698 x 1202
	10		0.89 - 2.19			
	13		0.84 - 1.70			
VS 18	7.5	18.5	1.34 - 3.06	73	381	787 x 698 x 1202
	10		1.30 - 2.64			
	13		1.24 - 2.23			
VS 22	7.5	22	1.05 - 3.55	73	386	787 x 698 x 1202
	10		0.95 - 3.16			
	13		0.91 - 2.69			

ESM 7-22TK / VS 7-22TK - TurnKey Compressor Solution (incl. Add-on dryer and Tank Mounted)

Gardner Denver model	Nominal pressure	Refrigeration dryer ³⁾	Air receiver	Dryer voltage	Weight kg	Dimensions	Air Outlet
	bar g			V/Hz		L x W x H mm	
ESM7TK/VS7TK	7.5	GDD12HS-BO	270 Litres	230 / 50 / 1	336 / 353	1541 x 695 x 1577	RP 3/4"
	10						
ESM11TK/VS11TK	7.5	GDD18HS-BO	270 Litres	230 / 50 / 1	350 / 362	1883 x 815 x 1825	RP 1"
	10						
ESM15TK/VS15TK	7.5	GDD30HS-BO	500 Litres	230 / 50 / 1	545 / 575	1883 x 815 x 1825	RP 1"
	10						
ESM18TK/VS18TK	7.5	GDD39HS-BO	500 Litres	230 / 50 / 1	617 / 637	1883 x 815 x 1825	RP 1"
	10						
ESM22TK/VS22TK	7.5	GDD39HS-BO	500 Litres	230 / 50 / 1	622 / 642	1883 x 815 x 1825	RP 1"
	10						

¹⁾ Data measured and stated in accordance with ISO1217, Ed. 4, Annex C & Annex E at the following conditions and the following working pressures are used: 7.5 bar models at 7 bar, 10 bar models at 9 bar and 13 bar models at 12 bar.

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 +/- 3 dB

³⁾ The refrigerant dryer requires a separate electric supply. Data refer to DIN ISO 7183

(class 4, pressure dew point 3° C). For further specifications please refer to refrigerant dryer documentation.

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

Specifications subject to change without notice.