

**Gardner**  
**Denver**

# Oil Free Screw Compressors

EnviroAire VS 15 - 110 Series  
Water-injected Technology





## Why oil-free? Don't compromise on quality...

If 100% clean and oil-free compressed air is a requirement for your industry, you cannot compromise on quality.

The EnviroAire from GD sets the standards for air purity. These water-injected screw compressors are available in water-cooled and air-cooled versions and are ISO 8573-1 CLASS 0 certified. Offering not only 100% pure oil-free air but also improved energy efficiency, these compressors are made to meet the precise needs of a diverse range of industries.

The ISO 8573-1 compressed air standard was revised in 2001 to address the requirements of these critical applications where air purity is vital. Along with a comprehensive methodology for measurement, a new stringent quality standard was born in ISO 8573-1 CLASS 0 - adding further weight to the five existing purity classes.

For many industries such as 'food & beverages', 'pharmaceuticals' and 'electronics', air purity is a critical factor where even the smallest drop of oil risks contamination that can have severe consequences such as:

- Product spoilage
- Production downtime
- Damage to production equipment
- Damage to brand reputation





## Why silicone-free?

Silicone contamination in compressed air systems will cause problems across a wide range of industries, not least of all the automotive industry where a high quality finish is essential.

Blisters, cracking, craters and a loss of adhesion are all symptoms of silicone contamination and will result in costly product spoilage and re-working in addition to production downtime.

The ISO 8573-1 CLASS 0 certified EnviroAire compressors offer the following benefits:

- 100% silicone-free, guaranteed
- Specifically designed for use in pure-air critical applications such as the automotive industry
- Avoids contaminations and provides the highest air quality standards
- Independently tested and certified

Class	Concentration total oil (aerosol, liquid, vapour) mg/m <sup>3</sup>
0	As specified by the equipment user or supplier and more stringent than class 1
1	≤ 0.01
2	≤ 0.1
3	≤ 1
4	≤ 5



TÜV (Technische Überwachungsverein/Technical Monitoring Association) reporting on the GD range of oil-free water-injected screw compressors.

# EnviroAire 15-110 Series

## Advanced totally oil-free technology

### No Oil - No Risk

You can rest assured that the GD EnviroAire series is 100% oil-free with absolutely no oil present in any part of the compressor.

### Hard facts...

	GD EnviroAire Technology	Conventional Oil-Free Technology
Oil	No, 100% Oil-Free compressor system	Yes
Speed	Up to 3,500 rpm	6,000-25,000 rpm
Compression Temperature	60° C	Up to 200° C
Compression Elements	1	2
Number of Gears	0	5-7
Number of Bearings	7	More than 15
Number of Seals	2	More than 15

### ...and even more

- Single-stage, direct-driven drive maximises efficiency and minimises maintenance
- High quality water injection lubricates, cools and seals the compression process, maximising efficiency
- Fully packaged and silenced enclosure reduces noise and simplifies installation
- Variable speed technology available to reduce energy costs
- Comprehensive control ensures safe and reliable operation and includes remote communication capability

## Components **NOT** found in the EnviroAire

- Oil
- Oil separator
- Gearbox
- Oil removal filters
- Aftercooler
- Oil pump
- Complex seal arrangements



# Superior design in every detail...

## ✓ 100% oil-free

Low operating temperatures and bearing loads enable maintenance free sealed bearings to be used, totally removing the need for lubricating oil in the compressor.

100% oil-free compression is therefore guaranteed and the maintenance and environmental costs associated with oil and oil filter changes are eradicated.

## ✓ IP55, totally enclosed fan cooled high efficiency motor

Energy efficient compressors are a major contribution to reduced "Total Life" costs.

Advanced motor-air-end arrangement  
The high output single stage compression element is direct driven by an IP55 drive motor. The direct drive arrangement ensures efficient power transmission with minimum losses.

- No gearbox
- No oil
- No maintenance

## ✓ Easy service arrangement

The design of these packages assures the service points are readily accessible. The removable panels allow complete access to all grouped service parts.

## ✓ Fully integrated silenced package

All components are mounted on a free standing steel base and contained within an acoustically insulated steel enclosure.

The compression element and drive motor assembly are mounted on flexible mountings that minimise transmitted vibration and noise. As a result, the unit can stand on the floor with no fixings required. Low cost and easy installation is ensured.



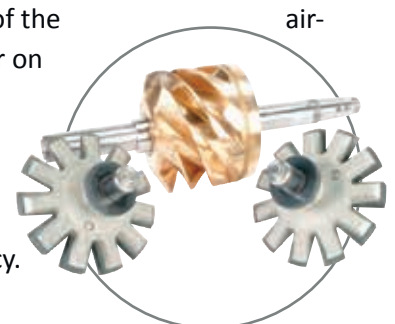
## ✓ Water purification system

Tried and tested reverse osmosis filtration, provides high quality purified water, to lubricate, seal and cool the compression process, thus ensuring reliable operation and extended air-end life.



## ✓ Single stage. Water injected air-end

The direct driven air-end offers the highest level of efficiency and reliability. With exceptionally low rotational speeds, the innovative design of the air-end compresses air on both sides of the rotor significantly reducing bearing loads and increasing efficiency.





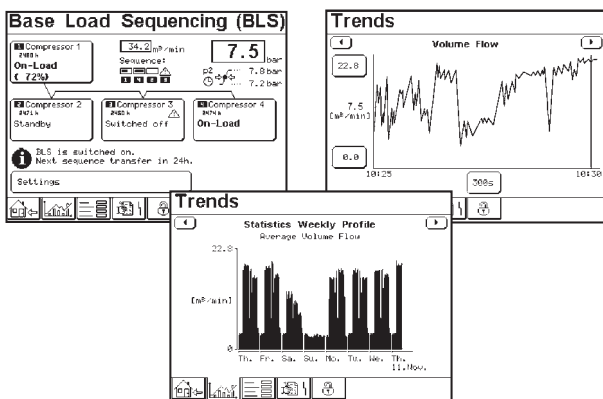
## State-of-the-art “GD Pilot TS” touch screen controller - everything under control

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 intuitively visual.

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 the efficiency.

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





GD TS Pilot

## Save even more energy with our unique compressed air management system

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

- Intelligently selecting the right combination of compressors
- Reducing 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



GD Connect 12

## EnviroAire 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.

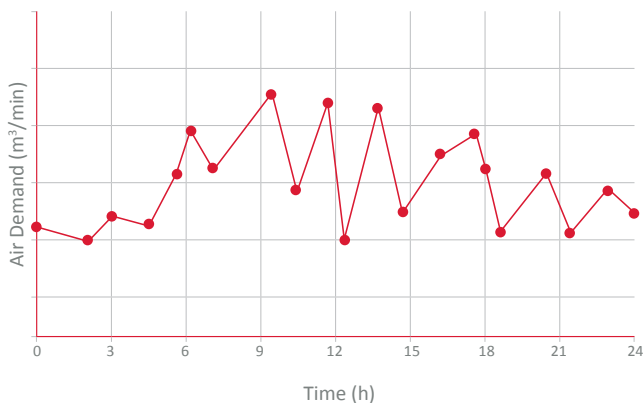
The VS compressor is an efficient and versatile solution even for the most demanding industrial applications and carries all of the Gardner Denver features and benefits associated with reliable, easy to use operations and high efficiency.

### Variable speed — a matched motor, direct drive and air-end

The GD Compressors 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 (hoses etc.)



The VS Series features the market's quickest and widest response to air demand changes

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

## 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.

### Service-friendly

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

### First class accessibility

- Panels and covers easily removable with quick-release catches



## GD 5 Years Extended Warranty - our total commitment to a **worry free quality service**

GD provides 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 5 years warranty will become a way of life “working when you need it” to provide maximum uptime AND peace of mind.

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



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



## Technical data

### Fixed Speed

Gardner Denver model	Cooling Method	Motor Rating	Working Pressure		Free Air Delivered (m <sup>3</sup> /min)		Dimensions	Noise level**	Weight
		(kW)	(bar g)	(bar g)	min.	max.	L x W x H mm	dB(A)	(kg)
EnviroAire 15	Air	15	8	10	2.30	1.80	1345 x 880 x 1612	68	672
	Water							65	
EnviroAire 22	Air	22	8	10	3.50	2.89	1345 x 880 x 1612	68	691
	Water							65	
EnviroAire 37	Air	37	8	10	5.86	5.14	1722 x 920 x 1659	71	960
	Water							61	

### Variable Speed

Gardner Denver model	Cooling Method	Motor Rating	Working Pressure		Free Air Delivered (m <sup>3</sup> /min) at 7 bar *		Dimensions	Noise level**	Weight
		(kW)	(bar g)	(bar g)	min.	max.	L x W x H mm	dB(A)	(kg)
EnviroAire VS 15	Air	15	5	10	0.34	2.25	1345 x 880 x 1612	67	687
	Water							64	
EnviroAire VS 22	Air	22	5	10	0.69	3.37	1345 x 880 x 1612	67	687
	Water							64	
EnviroAire VS 37	Air	37	5	10	1.22	6.42	1722 x 920 x 1659	71	995
	Water							61	
EnviroAire VS 50	Air	50	5	10	1.23	7.54	2158 x 1412 x 1971	73	1570
	Water							1490	
EnviroAire VS 75	Air	75	5	10	1.86	11.34	2158 x 1412 x 1971	75	1890
	Water							1810	
EnviroAire VS 110	Water	110	5	10	3.17	18.46	2158 x 1412 x 1971	78	2200

\* Data measured and stated in accordance with ISO1217 4th Edition Annex C and E at the following conditions:  
Air Intake Pressure: 1 bar a / 14.5 psia, Air Intake Temperature: 20°C / 68°F, Humidity: 0% (dry)

\*\* Measured in free field conditions in accordance with the ISO 2151, tolerance ± 3dB(A)

## 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.