

Gardner
Denver

Oil Free Screw Compressors

EnviroAire T/TVS 75 - 315 Series
Two Stage Technology

PureAir
ISO CLASS: ZERO PLUS SILICONE FREE



Don't compromise on compressed air quality



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

The EnviroAire T series from Gardner Denver sets the standards for air purity. These two stage oil-free compressors are ISO 8573-1 CLASS O certified. Offering not only 100% 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 O – 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

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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 O certified EnviroAire T compressors from Gardner Denver 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 ³
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.

German Engineering & Design



Built for **24/7** use
in demanding applications

Take a proven technology and make it
even better.

Gardner Denver designed the oil-free EnviroAire T series compressors for continuous operation and for applications that require absolute reliability and performance efficiency.

✓ Precise engineering for clean results.

The EnviroAire T series is characterised by its intelligent design, innovative functional principle and high quality workmanship. Its dependable quality and high efficiency ensures safe and cost effective generation of oil-free compressed air.

✓ Using a two stage airend ensures very low specific power consumption

✓ Each air-end 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.

“Gardner Denver
uses **advanced
technology** to
carefully construct
industrial compressors
to withstand the
most **demanding
applications**”

The preferred choice for optimum performance

Advanced design

The modular concept allows the integration of different options within the same enclosure and footprint.

Efficient Gardner Denver two stage air-end design

Designed and manufactured by Gardner Denver to deliver highest outputs reliably and efficiently.



Reliable cooling system

A dedicated closed-loop water circuit cooling system for the airend, ensures a constant internal temperature level and near isothermal compression, which increases the overall longevity of the airend. This unique and protected technical feature guarantees efficient operation and generates a stable and low discharge temperature.

- Air cooling

The innovative configuration of two fully enclosed radial fans, allows installation in harsh conditions in accordance with E rP Efficiency Legislation 2015. Additionally, lower peripheral speeds minimise sound pressure values and power consumption by up to 50%.

- Water cooling

The water cooled option with shell and tube exchangers is designed for the harshest of conditions. The cooling is not dependent on these conditions, which allows a low discharge temperature even at high ambient temperatures. Lower sound pressure values and a better specific performance, compared to air cooled versions, are an additional plus (stainless steel as an option).

IE3/IE4 high quality electric motors

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



Up to 45°C ambient capability

Ensures reliability and trouble-free operation through efficient heat dissipation.

All connections from one side

The modern design provides all connections on one side of the unit, such as cooling air inlet, customer net connection, electrical connection and condensate connection.



Easy installation

Gardner Denver saves you money from the very beginning – starting with transportation to your site.

The unit's compact size allows you to move it through standard industrial double doors. Its small footprint minimises the floor plan usage allowing you to maximise production space.

The compressors require no special foundation and ducting is easy to arrange.

Separate compressed air inlet

A dedicated air inlet designed specifically for the EnviroAire T/TVS 165-315 compressors, provides the coolest possible air which ensures best operation and performance of the air end.



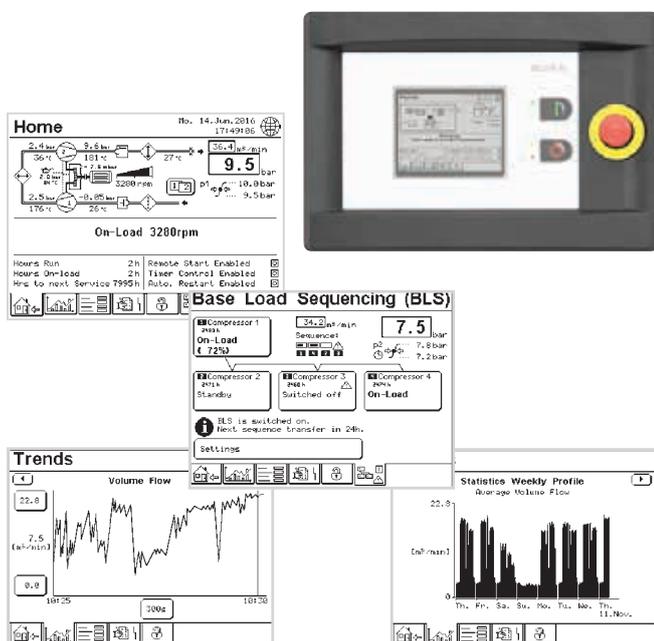
State-of-the-art “GD Pilot TS” touch screen controller - everything under control

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
- Ambient pressure & temperature
- Inlet/outlet pressure and temperature at both stages
- Optional base-load sequencing for up to four compressors



Save even more energy with our unique compressed air management system - GD Connect 12

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 operates 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
- Reducing energy consumption by tightening the network pressure to the smallest possible band
- Keeping off load running to the absolute minimum

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



Extensive visualisation options

A local network connection can be installed, allowing system data to be viewed using the optional web server module.

Any number of users can access the online visual display system via the web server without any loss in speed.



LifeCycle

SOLUTIONS

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.

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

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.

Superb flexibility comes as standard with the TVS Series.

With a wide capacity range, the TVS Series features the market’s quickest and widest response to air demand changes.

Your benefits during varying air demand:

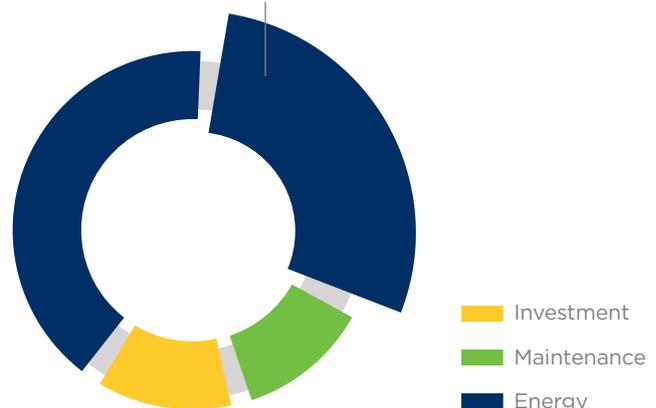
- Reduced wear and tear on inlet and discharge valve components
- No shock bearing loads for the air-end
- Minimised pulsating load (full load pressure/off load pressure) for all pressurised components within compressor package (hoses etc.)



Direct energy savings of up to 35%

The precise pressure control of the VS compressor allows for a tighter pressure band and a lower average working pressure, resulting in reduced energy consumption.

Energy savings with VS technology



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.

Also 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.

How do you benefit?

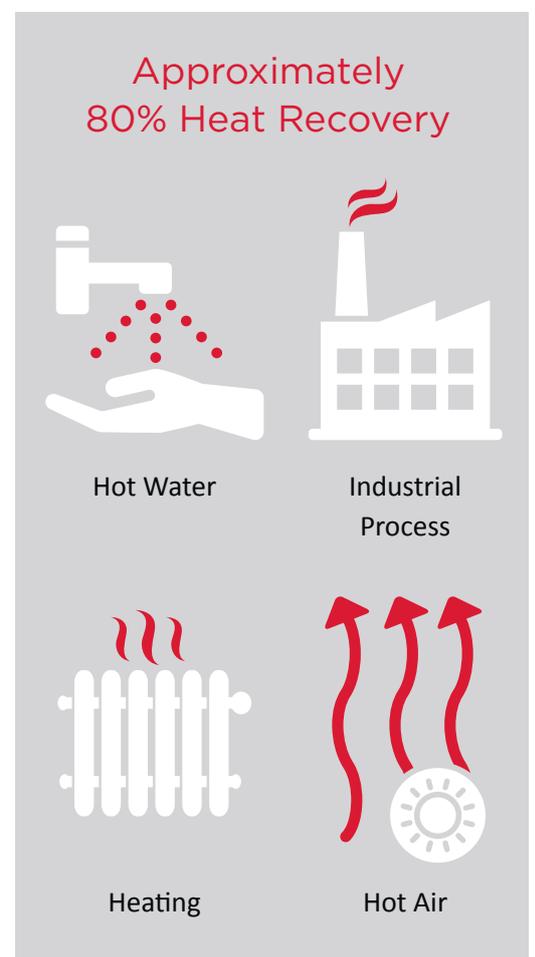
You save energy wherever you add the recovered energy as an auxiliary source to reduce your operating costs. The investments needed for linking the hot water from the compressor to existing circuits can be carried out at a relatively modest cost within a very short payback period.

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.

Re-use heat for industrial processes, heating systems, hot water and hot air!

- Thermostatic control maintains desired temperature in the compressor
- Available factory fitted or as a retrofit kit



“The use of genuine Gardner Denver 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

5 Years extended warranty



Our total commitment to a worry-free quality service

Gardner Denver provides an extended warranty cover on your compressor for 5 years with our authorised service providers delivering a guaranteed quality service*.

We believe that the Gardner Denver 5 years warranty will become a way of life “working when you need it” to provide maximum uptime AND peace of mind.

Our 5 Years Warranty – a simple and free of charge extended warranty scheme from Gardner Denver – 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 - Air and Water Cooled

Gardner Denver model	Cooling Method	Motor Rating	Working Pressure		Free Air Delivered (m ³ /min)*		Dimensions L x W x H	Noise level dB(A)**		Weight
		(kW)	(bar g)		8 bar g	10 bar g	(mm)	8 bar g	10 bar g	(kg)
EnviroAire T75	Air	75	8	10	12.91	10.63	2597 x 1744 x 2001	75	74	3023
	Water							72	70	3223
EnviroAire T90	Air	90	8	10	15.65	13.79	2597 x 1744 x 2001	76	75	3223
	Water							73	72	3423
EnviroAire T110	Air	110	8	10	19.51	17.39	2597 x 1744 x 2001	77	77	3265
	Water							75	74	3465
EnviroAire T132	Air	132	8	10	22.39	20.5	2597 x 1744 x 2001	78	78	3432
	Water							77	76	3632
EnviroAire T160	Air	160	10		-	22.33	2597 x 1744 x 2001	-	78	3644
	Water							-	77	3844
EnviroAire T165	Water	160	8	10	29.1	24.9	3300 x 1994 x 2190	77	78	4715
EnviroAire T200	Water	200	8	10	36.1	32	3300 x 1994 x 2190	80	81	5060
EnviroAire T250	Water	250	8	10	44.5	37.2	3300 x 1994 x 2190	81	82	5215
EnviroAire T315	Water	315	8	10	49.2	44.5	3300 x 1994 x 2190	81	82	5520

Variable Speed - Air and Water Cooled

Gardner Denver model	Cooling Method	Motor Rating	Working Pressure (bar g)		Free Air Delivered (m ³ /min)*		Dimensions L x W x H	Noise level dB(A)** (70% load)	Weight
		(kW)	min.	max.	min.	max.	(mm)		(kg)
EnviroAire TVS 110-8	Air	110	4	8	8.89	19.51	2597 x 1744 x 2001	76	3278
	Water							72	3478
EnviroAire TVS 110-10	Air	110	4	10	10.51	17.68	2597 x 1744 x 2001	76	3278
	Water							71	3478
EnviroAire TVS 132-8	Air	132	4	8	8.95	22.95	2597 x 1744 x 2001	77	3476
	Water							73	3676
EnviroAire TVS 132-10	Air	132	4	10	10.51	21.1	2597 x 1744 x 2001	77	3476
	Water							72	3676
EnviroAire TVS 160-10	Air	160	4	10	10.4	23.52	2597 x 1744 x 2001	77	3688
	Water							73	3888
EnviroAire TVS 200-8.5	Water	200	4	8.5	17.3	37.4	3300 x 1994 x 2190	77	5110
EnviroAire TVS 200-10	Water	200	4	10	18	33.2	3300 x 1994 x 2190	79	5110
EnviroAire TVS 250-8.5	Water	250	4	8.5	17.4	46.9	3300 x 1994 x 2190	78	5265
EnviroAire TVS 250-10	Water	250	4	10	18.4	41.7	3300 x 1994 x 2190	79	5265
EnviroAire TVS 315-8.5	Water	315	4	8.5	16.6	51.1	3300 x 1994 x 2190	78	5570
EnviroAire TVS 315-10	Water	315	4	10	18.3	48.5	3300 x 1994 x 2190	79	5570

* 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 psi, 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 – 315 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.

