Gardner Denver

High efficiency compressed air filtration & water separation

GDF & GDWS Range

Innovative Compressed Air Purification

A filter range you can trust

The reliability of compressed air filtration is paramount to the ongoing fight against problems caused through contamination entering the air system. Contamination in the form of dirt, oil and water can lead to:

- **Pipescale and corrosion within pressure vessels**
- **Damage to production equipment, air motors, air tools, valves and cylinders**
- **Premature and unplanned desiccant replacement for adsorption dryers**
- **Spoiled product**

The Gardner Denver filtration range offers various products and grades of filtration to provide peace of mind whatever the air quality requirement. It has been designed with focus on reliability and efficiency.

Designed and built for exceptional performance

The advanced compressed air filter range from Gardner Denver reduces contamination in your air stream to help protect your critical processes and valuable equipment. These filters are rigorously tested and engineered with superior components to provide years of reliable performance and consistently high-quality air.

Gardner Denver filtration solutions that pay off

Gardner Denver's commitment to providing energy efficient products does not end with the compressor ranges. The air treatment products are perfectly balanced to provide compressed air users with a wide choice of products to gain the right level of performance with optimum energy savings.

The standard for high-quality air

The Gardner Denver filter range provides clean, high-quality air as defined by ISO 8573.1:2010 and are certified by a third party under ISO 12500-1.

"The Gardner Denver filter range has been constantly innovated and has become a leading technology, providing the exact balance between air quality, energy efficiency and low lifetime costs."

Compressed Air Purification – The perfect choice!

Water Separation – The GDWS-Range of water separators

The GDWS-range of water separators provide bulk condensed water and liquid oil removal and are used to protect coalescing filters against bulk liquid contamination.

0.6 – 200 m³/min*

21 – 14885 cfm*

Filtration – The GDF-Range of compressed air filters

The GDF-range of filters efficiently removes water and oil aerosols, atmospheric dirt and solid particles, rust, pipescale and micro-organisms.

0.5 – 45 m³/min*

21 – 1590 cfm*

Filtration – The GDF-Range of flanged filters

For larger flowrate or higher pressure applications the flanged filters are available in the standard four filtration grades.

48 – 516 m³/min*

1702 – 14853 cfm*

* Flow rate at 20° C, 7 bar

Compressed air contamination will ultimately lead to:

- Inefficient production processes
- Spoiled, damaged or reworked products
- Reduced production efficiency
- Increased manufacturing costs

Energy savings without compromised performance

High efficiency bulk liquid removal

Water separators remove bulk liquids such as condensate, water and liquid oil from the air flow through directional and centrifugal separation. Installed before a coalescing filter the water separator can provide added protection against bulk liquid contamination enabling the filter to operate more efficiently. The GDWS Series water separator range from Gardner Denver can operate across various flow conditions and have been optimised to reduce differential pressure with very low maintenance.

Air quality and energy efficiency through design

The benefit of energy saving without compromised performance is achieved through a number of unique and patented design features which minimise differential pressure.

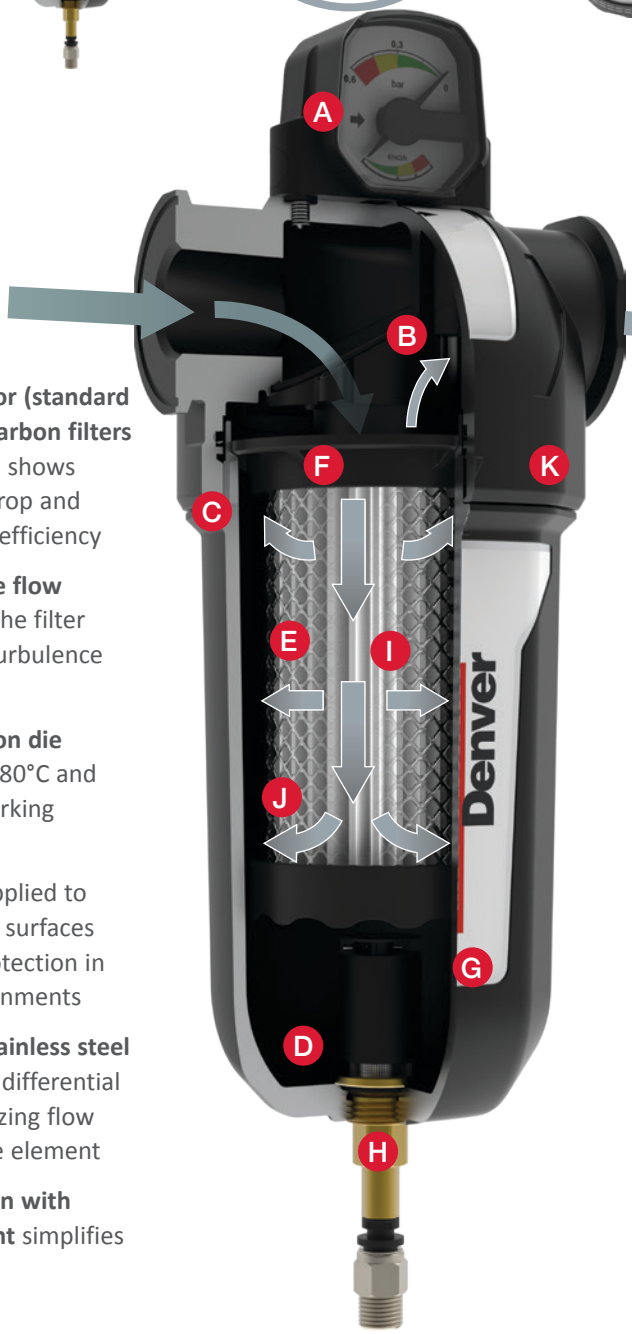
The Gardner Denver compressed air filter range combine filter housing and element to work together in maximising energy savings and provide low lifetime costs without compromising on air quality.

Large range of filtration grades to match the applications air quality needs.

Annual service is easy and clean to carry out thanks to and easy to grip housing bowl and no need for the user to directly handle the contaminated element.

The pressure drop indicator monitors the efficiency of the filter and indicates when pressure drop is getting too high and element replacement is recommended.

Superior Filtration Technology



A **Patented dual indicator (standard for all filters, except carbon filters and water separators)** shows differential pressure drop and economical operating efficiency

B **Patented smooth bore flow insert** directs air into the filter element, minimising turbulence and pressure losses

C **All-aluminum, precision die cast body** suitable for 80°C and 17 bar g maximum working pressure applications

D **Proprietary coating** applied to the inside and outside surfaces provides corrosion protection in harsh industrial environments

E **Filter element with stainless steel mesh** withstands high differential pressure while minimizing flow restriction through the element

F **Ergonomic bowl design with no-touch filter element** simplifies element replacement

G **Time strip label** indicates when it's time to change the element (GDF Grade only)

H **Reliable discharge** The G and H grade filters and water separators are equipped with internal float drain. The Particulate (P) and Activated Carbon (V) filters have manual drain

I **Deep-pleated filter media** reduces air flow velocity to maximise filtration efficiency and minimise pressure losses

J **High-efficiency drainage layer** improves liquid drainage properties and enhances chemical compatibility

K **Simple visual alignment** of the filter head and bowl ensures accurate assembly of components and helps to improve safety

"By guaranteeing air quality and ensuring energy consumption is kept to a minimum, Gardner Denver purification products can reduce the total cost of ownership and help improve profitability through improved manufacturing efficiencies."

Increased productivity and profitability through regular maintenance

Available options

Automatic floating drain
Standard for G and H filters as well as for water separators. Completed with manual testing drain.

Sc-12m – floating drain

This simple type of automatic drain is used to discharge the condensate from air tanks, filters, air dryers, etc. It is supplied with manual testing drain and connection nipple with compensation tube. Max. Pressure: 16 bar

Manual drain
½" ball valve manual drain.

Sc-chrom – timed drain

Thanks to the use of a timer that controls interval and duration of operation, this drain is widely used in compressed air industry. Max. Pressure: 16 bar.

Zero drain
Specifically designed to reduce to zero:
- the air consumption thanks to the capacitive control;
- the maintenance thanks to the Replacement kit;
- the space for the installation underneath the tank. Max. Pressure: 16 bar

Maintaining air quality and energy efficiency through regular maintenance

Filters are installed to provide contaminant removal to a specific air quality requirement. The primary reason to change filter elements is to maintain the air quality, the system efficiency and a low pressure drop. Therefore they should be replaced every 12 months.

The benefits of annual filter element changes

- Guaranteed optimised performance
- Air quality continues to meet international standards
- Protection of downstream equipment, personnel and processes
- Low operational costs
- Increased productivity and profitability
- Continued piece of mind

Technical data

Compressed Air Condensate Separators - GDWS Series

Separator Model	Connection Size	Flow Rate		Max. Pressure		Dimensions (mm)		Weight
		m^3/min	cfm	bar	psi	W	H	kg
GDWS005	3/8"	0.50	18	17	250	76	175	0.6
GDWS007	½"	0.66	23	17	250	76	175	0.6
GDWS018	¾"	1.8	64	17	250	98	230	1.2
GDWS040	1"	4.0	141	17	250	129	268	2.2
GDWS085	1 ½"	8.5	300	17	250	129	268	2.1
GDWS170	2"	17.0	600	17	250	170	467	5.1
GDWS380	3"	38.0	1342	17	250	205	548	20.0
Flange Housing								
GDWS0400	DN100	40	1413	16	232	420	778	40
GDWS0500	DN125	50	1766	16	232	420	784	54
GDWS1100	DN150	110	3885	16	232	524	841	80
GDWS1750	DN175	125	4414	16	232	606	856	116
GDWS2000	DN200	200	7063	16	232	657	848	156

Compressed Air Filters - GDF Series

Filters Model	Grade	Connection Size	Flow Rate		Max. Pressure		Dimensions (mm)		Weight
			m^3/min	cfm	bar	psi	W	H	kg
GDF005	G, H, V, P	3/8"	0.5	18	17	250	76	225	0.55
GDF007	G, H, V, P	½"	0.7	24	17	250	76	225	0.55
GDF013	G, H, V, P	¾"	1.3	44	17	250	98	280	1.07
GDF018	G, H, V, P	¾"	1.8	65	17	250	98	280	1.09
GDF025	G, H, V, P	1"	2.5	88	17	250	129	319	2.06
GDF032	G, H, V, P	1"	3.2	112	17	250	129	319	2.06
GDF038	G, H, V, P	1"	3.8	135	17	250	129	319	2.06
GDF067	G, H, V, P	1 ½"	6.7	235	17	250	129	409	2.36
GDF082	G, H, V, P	1 ½"	8.2	288	17	250	129	409	2.36
GDF100	G, H, V, P	2"	10.0	353	17	250	170	518	5.2
GDF0133	G, H, V, P	2"	13.3	471	17	250	170	518	5.24
GDF0167	G, H, V, P	2"	16.7	589	17	250	170	518	5.26
GDF0200	G, H, V, P	3"	20.0	706	17	250	205	600	9.31
GDF0260	G, H, V, P	3"	26.0	918	17	250	205	700	10.69
GDF0305	G, H, V, P	3"	30.5	1077	17	250	205	700	10.69
GDF0383	G, H, V, P	3"	38.3	1354	17	250	205	930	13.7
GDF0450	G, H, V, P	3"	45.0	1589	17	250	205	930	13.7
Fabricated Housing	Grade	Connection Size	Flow Rate		Max. Pressure		Dimensions (mm)		Weight
			m^3/min	cfm	bar	psi	W	H	kg
GDF0128F	G, H, V, P	DN50	12.8	453	16	232	285	500	8
GDF0220F	G, H, V, P	DN65	22.0	777	16	232	285	690	11
GDF0350F	G, H, V, P	DN80	35.0	1236	16	232	340	880	16
GDF0466F	G, H, V, P	DN100	46.7	1648	16	232	485	1264	125
GDF0700F	G, H, V, P	DN125	70.0	2472	16	232	630	1274	196
GDF0950F	G, H, V, P	DN150	95.0	3355	16	232	630	1384	210
GDF1250F	G, H, V, P	DN150	125.0	4414	16	232	676	1434	264
GDF1550F	G, H, V, P	DN150	155.0	5474	16	232	724	1503	314
GDF1833F	G, H, V, P	DN200	183.3	6474	16	232	724	1503	320
GDF2366F	G, H, V, P	DN200	236.7	8358	16	232	885	1565	530
GDF3316F	G, H, V, P	DN250	331.7	11713	16	232	950	1573	670
GDF5166F	G, H, V, P	DN300	516.7	18246	16	232	1050	1702	1083

Grade V - Activated Carbon Filtration

Oil vapor and hydrocarbon odor removal, providing a maximum remaining oil content of <0.003 mg/m^3 (<0.003 ppm) @ 21°C (Precede with Grade H filter)

Grade G - General Purpose Protection

Particle removal down to 0.1 micron including coalesced liquid, water and oil, providing a maximum remaining oil aerosol content of 0.03 mg/m^3 @ 21°C

Grade H - High Efficiency Oil Removal Filtration

Particle removal down to 0.01 micron including water and oil aerosols, providing a maximum remaining oil aerosol content of 0.01 mg/m^3 (0.01 ppm) @ 21°C (Precede with Grade G filter)

Grade P - General Purpose Dust Filtration

Dust particle removal down to 1 micron

Operating Limitations:

Max Operating Pressure	17.2 bar g	Max Recommended Operating Temp	50°C (Grade V)
Max Recommended Operating Temp	80°C (Grade G, H, P)	Min Recommended Operating Temp	1°C

Line Pressure	bar g	1	2	3	5	7	9	11	13	15	17
Correction Factor		0.38	0.53	0.65	0.85	1.00	1.13	1.25	1.36	1.46	1.56

To use correction factors, multiply the filter's capacity by the correction factor to get the new filter flow capacity at the non-standard operating pressure. For example, a 190 m^3/h filter operating at 11 bar has a correction factor of 1.25. 1.25 x 190 = 237.5 m^3/h capacity at 11 bar.

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 – 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.

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