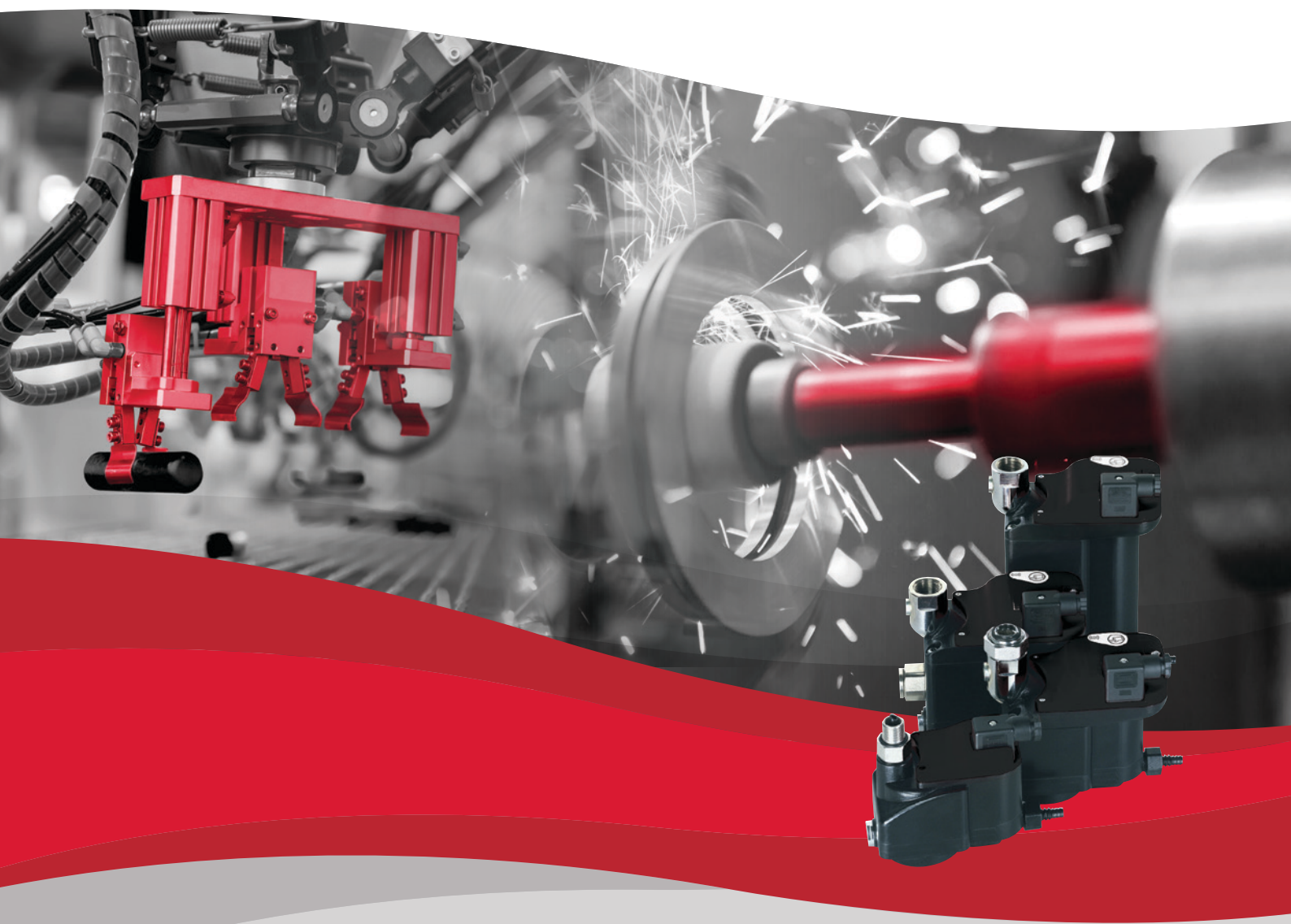


Gardner
Denver

Electronic Condensate Drains

GDZ Series for compressed air and industrial gases





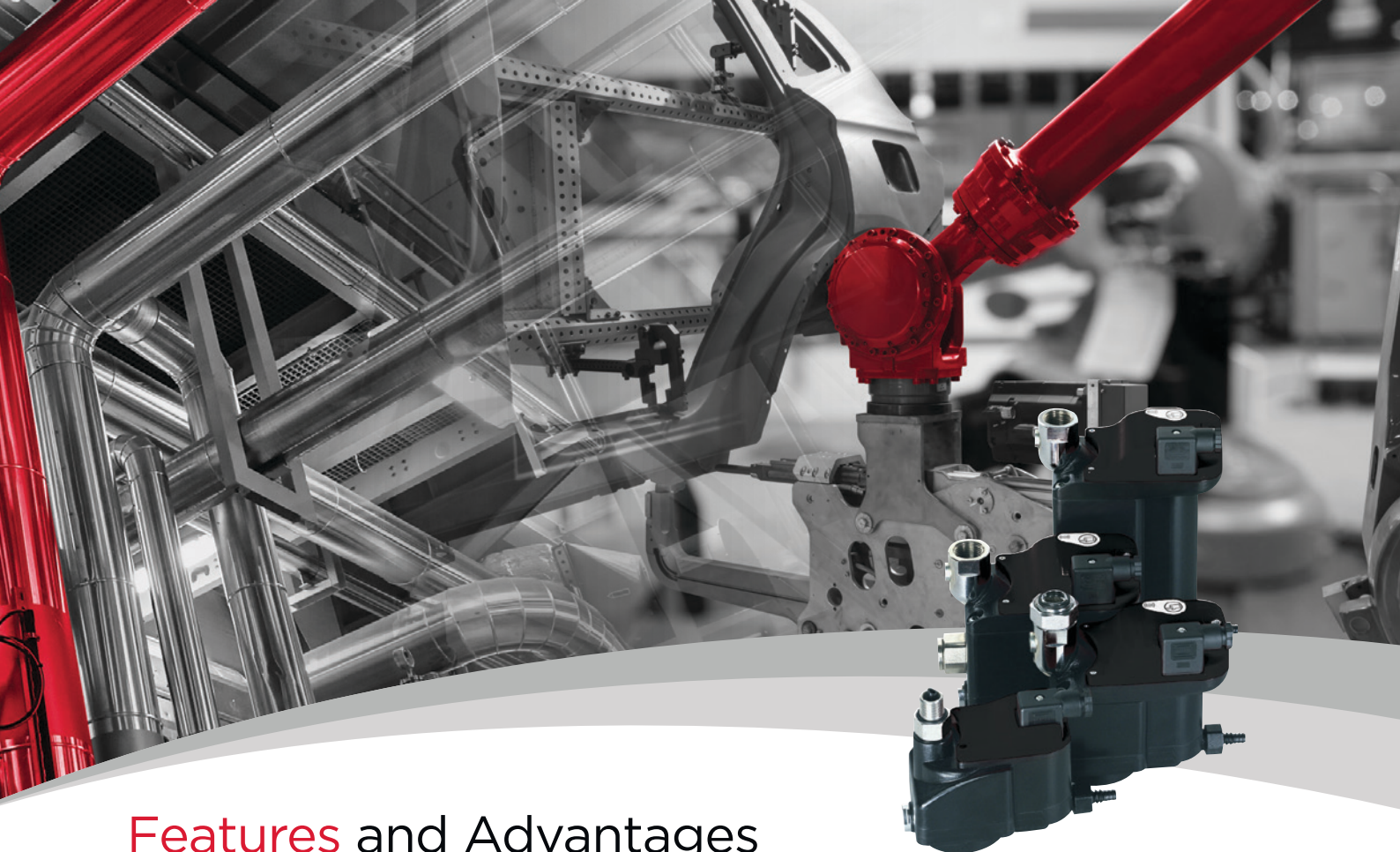
Why Electronic Condensate Drains?

A collection of atmospheric water and oils mixed with carried over compressor lubricants makes condensate the largest volume contaminant in a compressed air system. This acidic and aggressive liquid is removed from the compressed air system by coalescing filters, refrigeration dryers and coolers. The effective drainage of this condensate is paramount to the ongoing health and wellbeing of the whole compressed air system.

Condensate drain options vary, from the basic manual ball valve which requires operators to open the drains on frequent intervals, automatic float drains which open and close as the condensate builds in a reservoir and do not require power but have a habit of creating air leak sources if the float does not seat correctly after opening. There are electronic timed solenoid drains which will open automatically on a set interval, regardless of whether there is condensate or not, sometimes venting valuable compressed air.

The GDZ range of electronic drains operate automatically to give the benefits of the float and timer drain without the potential for wasted compressed air. The GDZ drain senses when there is condensate inside the internal reservoir and opens to expel the condensate liquid then quickly closes before allowing any valuable compressed air to escape. This gives you the peace of mind that your condensate is being drained without the operator intervention and not wasting energy or compressed air.

Electronic condensate drains with alarm contact monitor condensate drainage. If a fault has occurred, i.e. if the condensate cannot be discharged, the electronic control board of the condensate drain generates an alarm signal. This allows timely detection and avoidance of damage caused by condensate to the downstream compressed air system or to the production, which may sometimes lead to immense costs.



Features and Advantages

Electronic condensate drains of the GDZ Series feature:

- Non-wearing magnetic-core level control for optimised and loss free discharge of condensate.
- Integrated dirt screen between level measurement and drain valve to protect the diaphragm valve with alarm monitoring.
- Diaphragm valve with large cross-section and condensate pilot control for extended service life.
- Potential-free alarm contact (except GDZ120, GDZ400).

Non-wearing magnetic-core level control

The magnetic-core level control employs fixed switching points to operate the valve. The magnetic core signal transmitter position is detected by non-contact magnetic sensors:

- Independently of the condensate type (water/oil).
- Independently of the working pressure.

The collection tank integrated in the condensate drain is always used at optimum efficiency.

This results in a minimised number of switching cycles and thus, in a maximum service life of the drain valve. No calibration required!

Integrated dirt screen

The dirt screen which is integrated between the level control and the drain valve:

- Retains any contaminants that could damage the diaphragm valve.
- Triggers an alarm, also if the screen is clogged by dirt.
- Allows the drain to be cleaned easily and rapidly.



Revolving condensate inlet with additional balance option:

- Condensate line can be connected from top or side.
- Simply rotate the condensate inlet and connect.

The connection for an additional vent line integrated in the top condensate inlet provides completely new connecting options so that condensate can no longer back up into the feed lines.

Technical data

GDZ120 - GDZ10000 - Up to 16 bar - normal condensates

Gardner Denver model	Capacity ¹⁾					
	Compressor aftercooler	Refrigeration dryer	Filter ²⁾	Max.working pressure	Temperature range	Connections
	m ³ /h	m ³ /h	m ³ /h	bar	°C	
GDZ120	---	---	720	16 bar	1 - 60	G 3/8
GDZ400	240	480	2,400	16 bar	1 - 60	1 x G 1/2, G 1/8
GDZ700	420	840	4,200	16 bar	1 - 60	2 x G 1/2, G 1/8
GDZ3000	1,800	3,600	18,000	16 bar	1 - 60	2 x G 1/2, G 1/8
GDZ10000	6,000	12,000	60,000	16 bar	1 - 60	2 x G 1/2, G 1/8

¹⁾ Referred to 1 bar(a) and 20°C at 7 bar working pressure, suction air compressor 25°C at 60% RH, air discharge temperature aftercooler 35°C, pressure dew-point refrigeration dryer 3°C.

²⁾ Condensate from aftercooler or refrigeration dryer already drained upstream – only for residual oil content or small quantities of condensate

Standard version with BSP thread (G) for 230V/50 - 60Hz supply voltage (230). Alternatively, versions with NPT thread (N) or 115V/50 - 60Hz (115) or 24V/50 - 60Hz (024) are available. 24V DC on request.

Notes on power supply with instable voltage: We recommend that you use 24VDC units with appropriate power supplies in operating environments with heavily fluctuating mains voltages or high frequency interference (short voltage peaks or voltage drops). This will ensure a reliable long-term operation even where unfavourable power conditions prevail.

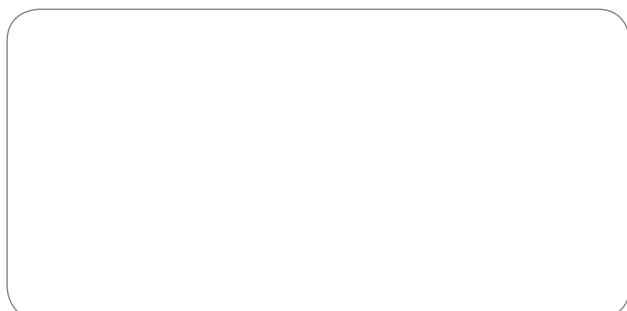
Working pressure	Ambient/Suction conditions (average summer temperature/relative humidity)									
	Compressor/Aftercooler					Refrigeration dryer				
	15°C 40%	20°C 50%	25°C 60%	30°C 70%	35°C 80%	15°C 40%	20°C 50%	25°C 60%	30°C 70%	35°C 80%
4 bar	16.5	3.4	1.5	0.8	0.5	2.6	1.8	1.3	1.0	0.7
6 bar	4.8	2.1	1.1	0.6	0.4	3.6	2.5	1.8	1.4	1.0
8 bar	3.4	1.7	0.9	0.6	0.4	4.7	3.3	2.4	1.8	1.3
10 bar	2.9	1.5	0.9	0.5	0.3	5.7	4.0	2.9	2.2	1.6
12 bar	2.6	1.4	0.8	0.5	0.3	6.8	4.7	3.4	2.6	1.9
14 bar	2.5	1.3	0.8	0.5	0.3	7.8	5.5	4.0	2.9	2.2
16 bar	2.4	1.3	0.8	0.5	0.3	8.9	6.2	4.5	3.3	2.5
25 bar	2.1	1.2	0.7	0.5	0.3	13.5	9.5	6.9	5.1	3.9
50 bar	1.9	1.1	0.7	0.4	0.3	26.6	18.6	13.5	10.0	7.6

All correction factors refer to the capacity of the drains on the aftercooler; they have been calculated for an aftercooler discharge temperature of +10°C above ambient/ suction temperature and 3°C pressure dew-point of the refrigeration dryer.

Servicing items

The GDZ series has a simple single service kit which covers the whole range.

Preventative maintenance should be carried on an annual basis using service kit GDZK



gdcompressors.eu@gardnerdenver.com
www.gardnerdenver.com/gdproducts

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

Specifications subject to change without notice.