

Gardner Denver

Refrigeration Dryer

Reduced Carbon footprint.
Low total cost of ownership.
Small footprint.

GDD-series Non-Cycling Refrigeration Dryers



Energy efficient
compressed air treatment



Optimised energy efficiency for a sustainable future.

First-class air treatment efficiency

For Gardner Denver, quality and efficiency are just as important for compressed air treatment as they are for compressed air generation. Just like Gardner Denver compressors, the GDD-series refrigerant dryers also provide a consistently high performance with optimum efficiency for many industrial compressed air applications. EU regulations are constantly pushing the boundaries for improved sustainability and a reduction in global CO₂ footprint. These new dryers from Gardner Denver are a step ahead – supporting sustainability with low GWP refrigerants (R513A) for ISO Class 4 (+3°C PDP) markets.

Investment protection through compressed air quality

Modern production systems and processes demand high quality compressed air, which is defined in the 6 classes outlined in international standard ISO 8573-1:2010 as illustrated below. These are only achievable with filtration, water separation and drying. Users in the food and pharmaceutical industry must adhere to stringent compressed air quality guidelines, as well as local legislation. Other industries may also follow specific advice regarding, the quality compressed air they use to ensure the protection and efficiency of process equipment and finished product.

Compressed air quality classes according to ISO 8573-1:2010

ISO 8573-1: 2010 Class	Solid Particulate				Water		Oil
	Maximum number of particles per m³			Mass Concentration	Vapour Pressure Dewpoint	Liquid	Total Oil (aerosol liquid and vapour)
	0.1 - 0.5 µm	0.5 - 1 µm	1 - 5 µm	mg/m³	°C	g/m³	mg/m³
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20,000	≤ 400	≤ 10	—	≤ -70	—	0.01
2	≤ 400,000	≤ 6,000	≤ 100	—	≤ -40	—	0.1
3	—	≤ 90,000	≤ 1,000	—	≤ -20	—	1
4	—	—	≤ 10,000	—	≤ +3	—	5
5	—	—	≤ 100,000	—	≤ +7	—	—
6	—	—	—	≤ 5	≤ +10	—	—

CO₂



“Using environmentally-friendly **R513A refrigerants** with the **lowest Global Warming Potential** contributes to **reducing greenhouse gas emissions.**”

Impressive **return on investment** and **operational reliability**

The use of clean dry compressed air ensures high levels of reliability, guarantees that quality standards are met, and can reduce production costs. Gardner Denver offer a range of solutions for drying utilising modern cooling technology.

Features & benefits:

- **High reliability** – plug-in solution works from zero to 100% load
- **Energy efficient** – 10% less energy consumption & 27% pressure drop reduction
- **High sustainability** – up to 32% reduction in CO₂ footprint
- **Smaller footprint** – 40% smaller than comparable machines
- **iConn remote monitoring enabled adding to reliability and total peace of mind**
 - No unplanned downtime
 - Optimised efficiency
 - Covered by Protect 10 Warranty

Save energy with refrigerant dryers

Operators primarily focus on compressed air quality and purchase cost. Differences in the operating costs of refrigerant dryers are often less likely to be considered. The Gardner Denver refrigerant dryers are characterised by their energy efficiency, which helps to reduce running costs, thanks to patented heat exchanger technology.

- High quality heat exchanger with low pressure loss
- Full feature, multi-function innovative control panel
- Anti freeze mode – shuts dryer off to avoid icing
- Low operating costs
- Alarm display with history of alarms
- Effective condensate separation
- Easy to install, operate and maintain
- Simplified access to unit for easy maintenance





Reliable, efficient & clean dry air

Gardner Denver GDD-series refrigerant dryers deliver a comprehensive, cost-effective solution to multiple applications across a wide range of sectors including automotive, manufacturing, petrochemical, oil and gas, dry cleaning and light processing to name a few.

Optimum efficiency by Design

Using refrigerated dryers from Gardner Denver will provide clean, dry air which means less corrosion in the air distribution system, less damage to air-powered tools, and reduced potential for contamination in the production process. The design features of Gardner Denver GDD dryers not only ensure constant dew point at all load levels, but also deliver continuous dry air performance that meets the most challenging ISO 7183 industry standards.

Low cost of ownership

Gardner Denver's refrigerated dryers provide the very best combination of high efficiency, low pressure drop and small footprint which reduces power consumption, reduces installation time and facilitates maintenance.

Specifically designed for challenging applications

The GDD Refrigerated Dryer Range is one range for all applications. These units provide a small footprint with complete, affordable solutions for applications ranging from dry cleaning to automotive body shops, to light processing and manufacturing applications. The high capacity units are designed for large-scale industrial, automotive and petrochemical applications.

Features are your benefits

Air Cooled Condensation (as standard)

Water and Sea Water versions are optional from GDD100F.

Victaulic Connections (optional)

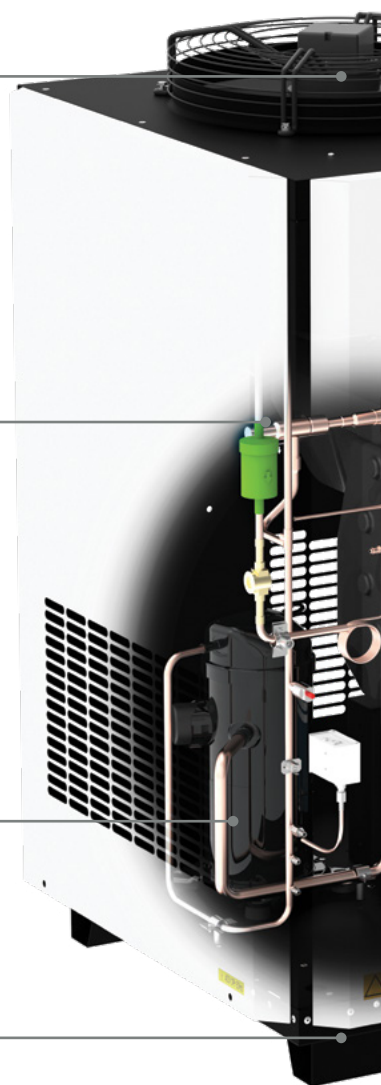
For quick and easy connection of pipework.

Reliable Design

Scroll compressors with corrosion resistant materials. They feature fewer moving parts, are fully-instrumented and monitored for reliability, and are protected by IP42 rated electrical enclosures.

Reduced Footprint

30% smaller than previous model.



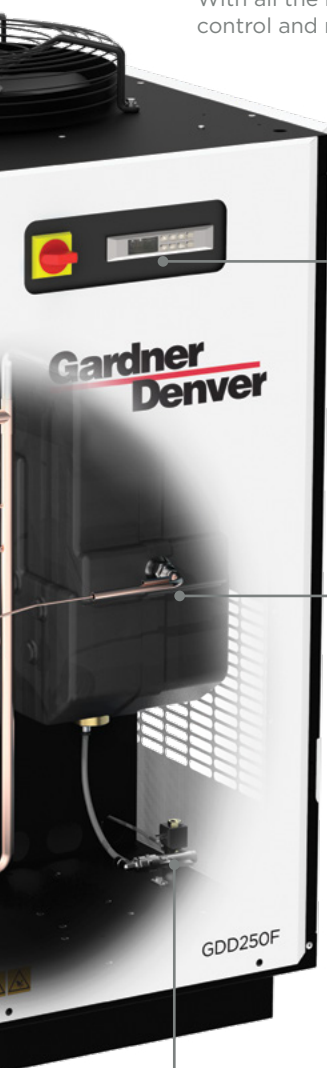


“Gardner Denver’s refrigerated dryers provide the very best combination of high efficiency, low pressure drop and small footprint.”

Innovative Control Panel

With all the main functions you would expect to control and monitor the unit:

- Anti freeze mode – shuts dryer off to avoid icing
- Alarm display: Dew Point, high/low temperature, High ambient temperature
- Remote ON/OFF (optional)
- Alarm history
- Condensate drain management



New Heat Exchangers

Designed and developed in our laboratories to deliver the highest levels of performance with the lowest pressure drop. The adoption of the new Gardner Denver heat exchanger has enabled the removal of the inlet and outlet headers.

Smart Drain (From GDD216F)

With sensor installed directly in the moisture separator and control logic managed by the main Control Panel.

Outstanding efficiency thanks to custom designed heat exchangers and patented control board

The GDD-series of refrigeration air dryers has been designed to maximise efficiency and reliability. All models are equipped with a high efficiency heat exchanger including an integrated condensate separator. The heat exchangers, completely designed and developed in our labs, are capable of achieving the highest levels of performance required from the market, together with a very low pressure drop rate.

Thanks to our patented solution, the programmable control board will adjust the fan speed according to the load in order to guarantee, under any working conditions, a constant and high level performance.

Every unit is equipped with a wide range of adjustable settings and alarm outputs such as high dew point temperature, anti freezing alarm, fault probe, and so on.

GDD-series dryers are all equipped with a programmable electronic condensate discharger, suitable for working with high efficiency in all kind of conditions.

Options

- No loss drain
- Sea water cooled
- Different voltages
- ANSI/NPT air connections
- Remote control
- Different gas



Model shown GDD1460F

Reliable Design

Scroll compressor

Models GDD130 to GDD3840F are fitted with a scroll refrigerant compressor. Scroll compressors with corrosion resistant materials deliver cost efficient, long-life performance. They feature fewer moving parts, are fully-instrumented and monitored for reliability, and are protected by IP42 rated electrical enclosures.

This makes them the optimum investment for high-volume needs with a lot at stake.

Every unit delivers advanced microprocessor control with multi-level menus, password protection and alarms.

Models shown GDD9F, GDD130F, GDD320F



No-loss drain

The powerful no loss electronic drain is standard and eliminates the need for pre-setting the unit. It uses state-of-the-art software combined with a special transducer interface to measure the presence of condensate so that it is released only when needed. Continuous monitoring ensures fast and effective discharge of the condensate with no deficit of compressed air.

Correction Factors

Correction Factors for working pressure																
bar	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
FC1	0.7	0.78	0.85	0.93	1	1.06	1.11	1.15	1.18	1.2	1.22	1.24	1.25	1.26		

Correction Factors for inlet air temperature							
°C	30	35	40	45	50	55	60
FC2	1.2	1	0.85	0.71	0.58	0.49	0.42

Correction Factors for dew point temperature									
°C	3	4	5	6	7	8	9	10	
FC3	1	1.04	1.09	1.14	1.18	1.25	1.3	1.33	

Correction Factors for ambient temperature (for air cooled)							
°C	25	30	35	40	42	45	50*
FC4	1	0.96	0.92	0.88	0.85	0.8	0.7

*units up to, and including GDD160F

Correction Factors for different water inlet temperature (for water cooled version)								
°C	15	20	25	29.4	30	35	38	40
FC4	1.08	1.06	1.03	1	0.99	0.95	0.91	0.88

Calculation for correct Dryer Air flow = Nominal Dryer Air Flow x FC1 x FC2 x FC3

Gardner Denver Refrigeration Dryer - Technical Data

Gardner Denver Dryers from 0.42 m³/min to 383.33 m³/min

Model	Air Flow-rate 3°C	Absorbed power	Power Supply	Dew Point	Max Pressure	Air Connection	Refrigerant	Dimensions W x D x H	Weight
	m ³ /min	kW	V/Ph/Hz	ISO Class	bar g	BSP		mm	kg
GDD4F	0.42	0.12	230/1/50	4	16	3/8"	R513A	305 x 360 x 408	19
GDD7F	0.70	0.14	230/1/50	4	16	1/2"	R513A	390 x 432 x 441	26
GDD9F	0.90	0.17	230/1/50	4	16	1/2"	R513A	390 x 432 x 441	28
GDD12F	1.20	0.17	230/1/50	4	16	1/2"	R513A	390 x 432 x 441	28
GDD18F	1.80	0.41	230/1/50	4	16	3/4"	R513A	420 x 516 x 551	36
GDD24F	2.40	0.5	230/1/50	4	16	3/4"	R513A	420 x 516 x 551	42
GDD30F	3.00	0.5	230/1/50	4	16	3/4"	R513A	420 x 516 x 551	44
GDD37F	3.75	0.7	230/1/50	4	16	1"	R513A	500 x 679 x 980	48
GDD43F	4.33	0.81	230/1/50	4	16	1"	R513A	500 x 679 x 980	49
GDD50F	5.00	0.61	230/1/50	4	16	1 - 1/2"	R513A	500 x 718 x 980	79
GDD60F	6.00	0.74	230/1/50	4	16	1 - 1/2"	R513A	500 x 718 x 980	79
GDD80F	8.00	0.81	230/1/50	4	16	1 - 1/2"	R513A	500 x 718 x 980	85
GDD100F	10.00	1.26	230/1/50	4	16	2"	R513A	720 x 750 x 1360	134
GDD130F	13.00	1.67	400/3/50	4	13	2"	R513A	720 x 750 x 1361	164
GDD160F	15.83	2.03	400/3/50	4	13	2"	R513A	720 x 750 x 1362	168
GDD216F	21.67	2.24	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	234
GDD250F	25.00	2.58	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	234
GDD300F	30.00	3.1	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	234
GDD375F	37.50	3.65	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	290
GDD430F	43.33	4.22	400/3/50	4	14	3"	R513A	806 x 1012 x 1539	290
GDDA533F	53.33	6.38	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	417
GDDA700F	70.00	5.96	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	465
GDDA800F	80.00	6.81	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	465
GDD900F	90.00	9.81	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1555	780
GDD1000F	100.00	10.9	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1555	780
GDD1460F	146.67	13.2	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1570	1058
GDD1600F	160.00	13.56	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1570	1128
GDD1920F	191.67	16.24	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1570	1205
GDD2920F	293.33	26.4	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2116
GDD3200F	320.00	27.12	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2256
GDD3840F	383.33	32.48	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2410

Water Cooled Dryers from 10.00 m³/min to 383.33 m³/min

Model	Air Flow-rate 3°C	Absorbed power	Power Supply	Dew Point	Max Pressure	Air Connection	Refrigerant	Dimensions W x D x H	Weight
	m ³ /min	kW	V/Ph/Hz	ISO Class	bar g	BSP		mm	kg
GDD100FW	10.00	0.96	230/1/50	4	16	2"	R513A	752 x 750 x 1273	143
GDD130FW	13.00	1.55	400/3/50	4	13	2"	R513A	752 x 750 x 1273	168
GDD160FW	15.83	1.89	400/3/50	4	13	2"	R513A	752 x 750 x 1273	168
GDD216FW	21.67	2.04	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	265
GDD250FW	25.00	2.36	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	265
GDD300FW	30.00	2.83	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	265
GDD375FW	37.50	3.38	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	375
GDD430FW	43.33	3.90	400/3/50	4	14	3"	R513A	806 x 1012 x 1422	375
GDDA533FW	53.33	5.7	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	460
GDDA700FW	70.00	5.38	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	486
GDDA800FW	80.00	6.15	400/3/50	4	14	DN150 PN16	R513A	880 x 1819 x 1796	486
GDD900FW	90.00	8.98	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1437	740
GDD1000FW	100.00	9.973	400/3/50	4	13	DN150 PN16	R513A	1510 x 1500 x 1437	740
GDD1460FW	146.67	12.14	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1440	1010
GDD1600FW	160.00	12.43	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1440	1060
GDD1920FW	191.67	14.9	400/3/50	4	13	DN200 PN16	R513A	2270 x 1590 x 1440	1117
GDD2920FW	293.33	24.28	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2020
GDD3200FW	320.00	24.86	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2120
GDD3840FW	383.33	29.8	400/3/50	4	13	2 x DN200 PN16	R513A	4600 x 1590 x 1570	2234

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 – 355 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.