The leader in every market we serve
by continuously improving all business processes
with a focus on innovation and velocity

Gardner Denver®

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GA-RGD 1st Ed. 1/16

Please recycle after use.

Gardner Denver

25–500 SCFM | NON-CYCLING DRYER

RGD Series

Refrigerated
Global Design

RGD series refrigerated air dryers offer the perfect balance between technology and simplicity to dry compressed air systems to a stable ISO 8573-1 Air Quality, Class 4 to 5 pressure dew point.

Design Features

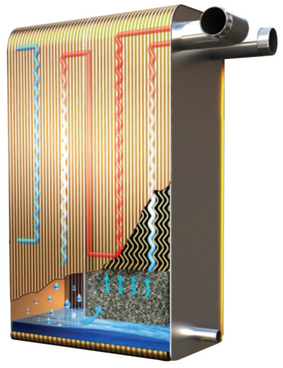
RGD 25–50 SCFM

- Smooth bore, copper tube-on-tube heat exchangers
- Centrifugal separator efficiently captures condensate
- Static condenser design provides trouble free, quiet operation
- Electronic drain valve

RGD 75–500 SCFM

- Stainless steel, cross flow heat exchangers optimize heat transfer and service life
- Compact design saves floor space
- Stainless steel inlet/outlet connections to prevent corrosion
- Timed electric condensate drain
- Integral demister/separator

Copper
“Tube-on-Tube”
Heat Exchanger



Stainless Steel
Demister/Separator

RGD SPECIFICATIONS

MODEL	RATED FLOW (SCFM)	AVAILABLE VOLTAGES	INLET/OUTLET CONNECTIONS (IN)	POWER (KW)	REFRIGERANT	DIMENSIONS (IN) H	W	D	WEIGHT (LBS)
RGD25A1	25	115/1/60	¾" NPT	0.41	R134a	22.00	16.00	15.00	88
RGD35A1	35			0.46		22.00	16.00	15.00	92
RGD50A1	50			0.57		22.00	20.00	20.00	101
RGD75A1	75		1" NPT	0.52		23.67	14.28	32.33	123
RGD100A1	100			0.65		23.67	14.28	32.33	129
RGD125A1	125			0.68		23.67	14.28	32.33	135
RGD150A1	150	115/1/60		1.11	R134a	21.00	13.00	30.00	161
RGD150A2	150	230/1/60		0.91	R-407c	23.67	14.28	34.69	152
RGD200A2	200	230/1/60 460/3/60	2" NPT	1.53	R-407c	29.97	17.43	36.66	196
RGD200A4	200		1½" NPT	1.42	R134a	30.00	17.00	36.00	183
RGD250A2	250		2" NPT	1.87	R-407c	29.97	17.43	36.66	181
RGD250A4	250		1½" NPT	1.98	R134a	30.00	17.00	36.00	211
RGD300A2	300		2" NPT	2.09	R-407c	31.94	19.39	43.75	252
RGD300A4	300		1½" NPT	2.05	R134a	30.00	20.00	38.00	219
RGD400A2	400		2" NPT	2.83	R-407c	31.94	19.39	43.75	270
RGD400A4	400			2.50	R134a	30.00	21.00	38.00	232
RGD500A4	500	460/3/60		3.18	R407c	31.94	21.36	47.69	328

Maximum Inlet Air Temperature: 120°F (49°C) Maximum Operating Pressure: 250 psig (Models RGD25-50), 232 psig (Models RGD75-500).
Above conditions tested at 100°F inlet air temperature, 100% saturated inlet air, 100 psig operating pressure and 100°F ambient air temperature.

OPERATING CONDITIONS

MODEL SCFM	MAX INLET AIR PRESSURE PSIG	BARG	MIN INLET AIR PRESSURE PSIG	BARG	MAX INLET AIR TEMPERATURE °F	°C	MIN INLET AIR TEMPERATURE °F	°C	MAX AMBIENT AIR TEMPERATURE °F	°C	MIN AMBIENT AIR TEMPERATURE °F	°C
25-50	250	17	30	2	120	49	40	4	110	43	45	7
75-500	232	16	10	1	120	49	40	4	110	43	45	7

CAPACITY CORRECTION FACTORS

To adjust the dryer capacity for non-standard conditions, use the Capacity Correction Factors (multipliers) from the tables below.
Sizing Example: What is the capacity of an RGD100 at 100°F inlet air temperature, 150 psig working pressure and 110°F ambient air temperature?
Answer: 100 scfm (rated flow from RGD specifications table) x 1.08 (correction factor for inlet air temperature, table 1) x 0.94 (correction factor for ambient air temperature, table 2) = 102 scfm

INLET AIR PRESSURE PSIG	BARG	INLET AIR TEMPERATURE 90°F/32°C	100°F/38°C	110°F/43°C	120°F/49°C
80	5.6	1.19	0.95	0.77	0.63
100	6.9	1.25	1	0.82	0.68
125	8.6	1.3	1.05	0.86	0.72
150	10.3	1.34	1.08	0.9	0.75
175	12.1	1.37	1.11	0.92	0.78
200	13.8	1.39	1.14	0.95	0.8
250	17.2	1.43	1.17	0.98	0.83

AMBIENT AIR TEMPERATURE	80°F/27°C	90°F/32°C	100°F/38°C	110°F/43°C
Multiplier	1.12	1.06	1	0.94

International Air Quality Class Standards

ISO 8573-1, the international standard for compressed air quality, defines the amount of contamination permissible in compressed air. The ISO standard identifies three primary forms of contamination: solid particles, water and oil contaminants. These forms are classified and assigned to a quality class, ranging from Class 0 being the highest purity level to a Class 6, which is the most relaxed level.

Gardner Denver's RGD series refrigerated air dryers provide dry compressed air at a stable ISO 8573-1 Air Quality Class 4 to 5 pressure dew point.

Pre-Filtration Option

FIL Series—Grade C Filtration removes solids and oil contaminants from the air stream before entering the dryer.

ISO Air Quality Class

- Solids – Class 2
- Remaining Oil – Class 4
- Removes solids 1.0 micron & larger
- Remaining oil content 2.0 mg/m^3

After-Filtration Option

FIL Series—Grade E Filtration provides high efficiency oil removal protecting downstream equipment.

ISO Air Quality Class

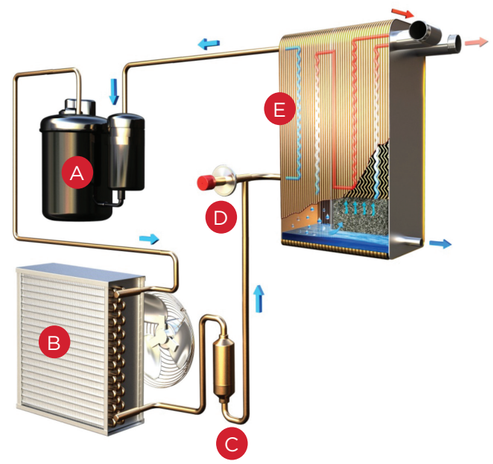
- Solids – Class 1
- Remaining Oil – Class 1
- Removes 99.999+% of solids ≥ 0.01 micron
- Remaining oil content < 0.01 mg/m^3

How it Works

Refrigeration Circuit

A hermetically sealed refrigerant compressor (A) takes in evaporated refrigerant and compresses it to a higher pressure. The air cooled condenser (B) turns the high pressure gas into a high pressure refrigerant. An in-line filter dryer (C) removes contaminants from the high pressure refrigerant gas. A constant pressure valve (D) reduces the pressure and regulates the flow of refrigerant into the heat exchanger (E).

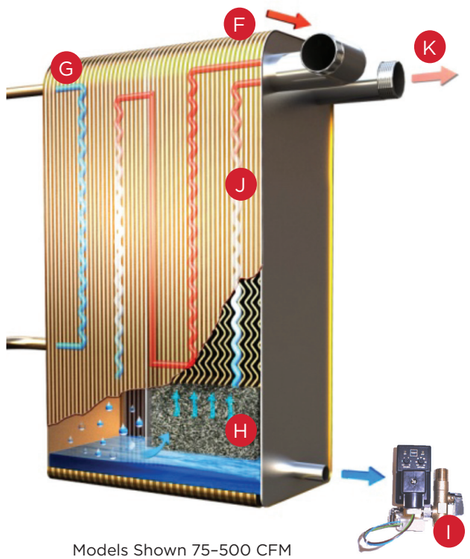
Refrigerant is continuously circulated through the system



Models Shown 75–500 CFM

Air Circuit

Warm, saturated compressed air enters the air to air heat exchanger (F) and is cooled by the exiting air. The precooled air (G) then enters the air to refrigerant heat exchangers and is further chilled causing water vapor to condense. Condensed moisture is collected from the air stream by an integral separator (H) with stainless steel demister. Liquid condensate is removed from the separator by a (I) high performance drain. Cold air is then reheated in the air-to-air heat exchanger (J) to eliminate pipe line sweat. Clean dry air exits (K) the dryer and is now conditioned for use.



Models Shown 75–500 CFM

Value at its Best

Efficient Condensate Management

- Increased calming zone and integral demister/separator captures liquid condensate and solid particles
  - Effectively removes condensate from 0–100% flow conditions without moisture carry-over
- Furnished with condensate drain
  - Electronic or timed electric (dependent on scfm range)

Safety First – Environmentally Friendly

- Models 25–125 scfm CFC free R134A refrigerant
- Models 150–500 scfm R407C refrigerant
- CSA approved

Warranty Protection

- Standard 2 Year Warranty
- 5 Year Heat Exchanger Warranty

1. Fan motor and blade assembly
2. Rugged, epoxy coated cabinet
3. Timed electric drain
4. Controls—models shown are 200–500 scfm
5. Stainless steel heat exchanger with integral demister separator
6. Refrigerant compressor
7. Constant expansion valve
8. Air-cooled condenser core

Take Control

Models 25–150 SCFM

- Illuminated on/off switch
- Dew point temperature display to monitor inlet load conditions

Models 200–500 SCFM

- Illuminated on/off switch
- LED dew point temperature display
- EDV control
- Dry alarm contact
- Equipped with panel mounted drain timer control