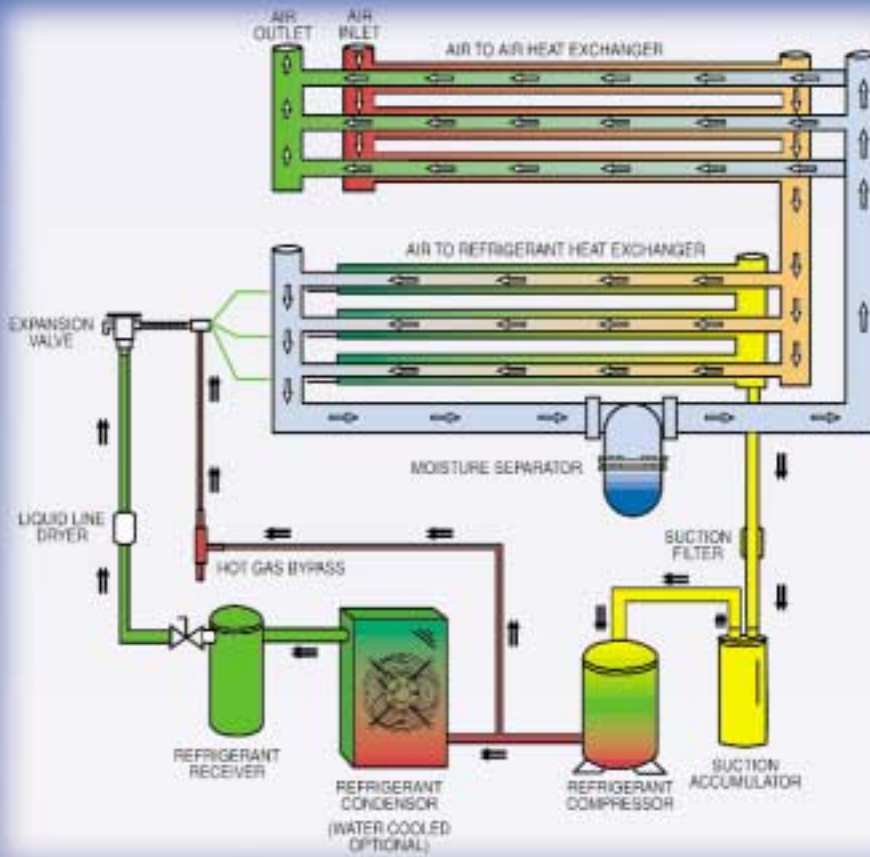


Great Lakes Air



High Quality
Refrigeration Dryers

How Air Dryers Work



Hot wet compressed air enters the AIR-to-AIR heat exchanger where it is pre-cooled with the refrigerated-outlet air. After the AIR-to-AIR heat exchanger has cooled the compressed air to approximately 70°F it flows into the AIR-to-REFRIGERANT heat exchanger which lowers the compressed air to a final temperature of 35-39°F. At this cold temperature, saturated air condenses moisture into liquid droplets that can be efficiently separated with a centrifugal separator. The cold dry compressed air passes through the secondary side of the AIR-to-AIR heat exchanger where it is reheated by the hot inlet air it is pre-cooling. Reheating increases the volume of the compressed air allowing it to do more work and prevents downstream pipe sweating.



GRF-50 & 75



GRF-100/300

Unparalleled Five Year Warranty

Twenty years ago it was decided that the products manufactured by Great Lakes Air would be of the highest quality standard. In an effort to express this quality and stand out from competitors we standardized on an unprecedented no surcharge, non-prorated, 5-YEAR WARRANTY!

For the next 5-YEARS you will not need to be purchasing expensive refrigeration compressors and or components. The Great Lakes warranty gives you the assurance, that the purchase of a compressed air dryer will meet your needs without incurring additional budget expenditures for replacement components.



With continuous improvement of the Great Lakes quality standards, along with engineering improvements that are advancing as fast as current technology, you can be assured that Great Lakes will provide you with a quality product for years of uninterrupted service.

For a complete copy of the Great Lakes Air warranty contact your local distributor or download it from www.glair.com



GRF-400/650



GRF-1500/2300

Superior Design Features

Custom Calibrated Pressure Gauges

Stainless Steel expansion valve with interchangeable orifices and double contact bulb

Heavy gauge steel cabinet with a baked powdercoat finish for corrosion resistance

Valued Isolation refrigeration service port

Hot Gas Bypass for non-freezing capacity control

Low Pressure Drop in a Non Ferrous Copper Heat Exchanger

Refrigerant Pressure Switch for compressor safety

Heavy Duty Industrial Hermetic Compressors

Adjustable Electronic Timed Drain with strainer and isolation valve for extended valve life and ease of maintenance



Great Lakes utilizes only environmentally friendly refrigerants. These low or non-ozone depleting products, HCFCs and HFCs have enabled a global transition away from the environmentally destructive CFCs. The GRF series single phase units utilize the HFC (R134A) refrigerant. The multi phase units utilize the HCFC (R22) refrigerant.

Great Lakes Air Manufacturers GRF Series Dryers with pride in the USA. We offer our customers a reasonably priced quality product that is not affected by fluctuating international finance or overseas shipments. These points in conjunction with a domestically engineered product, and readily available replacement components, makes Great Lakes dryers the best choice for your compressed air system.

Superior Design Features

ENHANCED ACTIVE SURFACE AREA



The utilization of multiple smaller tubes in lieu of a single inner tube increases air turbulence and surface area, which improves heat transfer developing a more efficient heat exchanger. The more efficient the design of the heat exchanger, the more effective the Air Dryer. In house production of all heat exchangers gives Great Lakes control over our extremely high quality standards and production availability.

Standard/Optional Features	GRF Series Dryer Model #				
	5/40	50/75	100/200	250/650	800/2250
5 Year Warranty	Standard	Standard	Standard	Standard	Standard
Refrigerant Analyzer (Suction) Gauge	Standard	Standard	Standard	Standard	Standard
Refrigerant Discharge Gauge	Optional	Optional	Standard	Standard	Standard
Compressed Air Outlet Pressure Gauge	Optional	Optional	Standard	Standard	Standard
Standard Power Cord	Standard	Optional	Optional	Not Available	Not Available
Power Feed Junction Box	Optional	Standard	Standard	Standard	Standard
Power on Switch with Illuminated Indicator	Optional	Standard	Standard	Standard	Standard
Relay/Contactor	Standard	Standard	Standard	Standard	Standard
Compressor Overload Protection	Standard	Standard	Standard	Standard	Standard
Refrigeration High Pressure Shutdown	Optional	Optional	Optional	Standard	Standard
Refrigeration Low Pressure Shutdown	Optional	Optional	Optional	Standard	Standard
Crankcase Heater	Optional	Optional	Optional	Standard	Standard
Condensate Drain Isolation Valve & Strainer	Optional	Optional	Standard	Standard	Standard
Adjustable Electronic Timed Condensate Drain	Optional	Optional	Standard	Standard	Standard
Expansion Valve Refrigeration Control	Standard	Standard	Standard	Standard	Standard
Water Cooled Condenser	Not Available	Optional	Optional	Optional	Optional

Specifications & Dimensions

Model	Capacity		Available Voltages	Input Watts	Ref. HP	In/Out Ports	Maximum Pressure	Dimensions			Shipping Weight
	35°F	50°F						A	B	C	
GRF-5A-116	5	6	120-1-60 • 100-1-50	255	1/6	3/8" OD	250 PSIG	15	13	10	58
GRF-10A-116	12	14									
GRF-20A-116	18	22									
GRF-25A-116	25	30									
GRF-40A-116	40	48									
GRF-50A-116	50	60									
GRF-75A-◆	75	90	208/230-1-60 200-1-50	760	1/2	3/4" NPT	250 PSIG	18	24	19	148
GRF-100A-◆	100	120									
GRF-125A-◆	125	150	208/230-3-60 • 575-3-60	1100	3/4	1-1/2" NPT	250 PSIG	25	33	34	250
GRF-150A-◆	150	180									
GRF-200A-◆	200	240									
GRF-250A-◆	250	300									
GRF-300A-◆	300	360									
GRF-400A-◆	400	480									
GRF-500A-◆	500	600									
GRF-650A-◆	650	780									
GRF-800A-◆	800	960									
GRF-1000A-◆	1000	1200									
GRF-1200A-◆	1200	1440									
GRF-1500A-◆	1500	1800									
GRF-200A-◆	200	240									
GRF-250A-◆	250	300									
GRF-300A-◆	300	360									
GRF-400A-◆	400	480									
GRF-500A-◆	500	600									
GRF-650A-◆	650	780	208/230-3-60 • 200/240-3-50 • 460-3-60	1850	1-1/2	1-1/2" NPT	250 PSIG	25	33	34	334
GRF-250A-◆	250	300									
GRF-300A-◆	300	360									
GRF-400A-◆	400	480									
GRF-500A-◆	500	600									
GRF-650A-◆	650	780									
GRF-800A-◆	800	960	208/230-3-60 • 200/240-3-50 • 460-3-60	2452	2	2-1/2" NPT	150 PSIG	32	45	46	613
GRF-400A-◆	400	480									
GRF-500A-◆	500	600									
GRF-650A-◆	650	780									
GRF-800A-◆	800	960									
GRF-1000A-◆	1000	1200									
GRF-1200A-◆	1200	1440	208/230-3-60 • 200/240-3-50 • 460-3-60	4028	3	2-1/2" NPT	150 PSIG	32	45	46	655
GRF-500A-◆	500	600									
GRF-650A-◆	650	780									
GRF-800A-◆	800	960									
GRF-1000A-◆	1000	1200									
GRF-1200A-◆	1200	1440									
GRF-1500A-◆	1500	1800	208/230-3-60 • 200/240-3-50 • 460-3-60	4028	3	2-1/2" NPT	150 PSIG	32	45	46	686
GRF-650A-◆	650	780									
GRF-800A-◆	800	960									
GRF-1000A-◆	1000	1200									
GRF-1200A-◆	1200	1440									
GRF-1500A-◆	1500	1800									
GRF-1750A-◆	1750	2100	208/230-3-60 • 200/240-3-50 • 460-3-60	5000	4	3" NPT	150 PSIG	35	56	60	1742
GRF-800A-◆	800	960									
GRF-1000A-◆	1000	1200									
GRF-1200A-◆	1200	1440									
GRF-1500A-◆	1500	1800									
GRF-1750A-◆	1750	2100									
GRF-2000A-◆	2000	2400	208/230-3-60 • 200/240-3-50 • 460-3-60	6720	5-1/2	3" NPT	150 PSIG	35	56	60	1900
GRF-1000A-◆	1000	1200									
GRF-1200A-◆	1200	1440									
GRF-1500A-◆	1500	1800									
GRF-1750A-◆	1750	2100									
GRF-2000A-◆	2000	2400									
GRF-2250A-◆	2250	2700	208/230-3-60 • 200/240-3-50 • 460-3-60	6720	5-1/2	3" NPT	150 PSIG	35	56	60	2000
GRF-1200A-◆	1200	1440									
GRF-1500A-◆	1500	1800									
GRF-1750A-◆	1750	2100									
GRF-2000A-◆	2000	2400									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700	208/230-3-60 • 200/240-3-50 • 460-3-60	8346	7-1/2	4" FLG	150 PSIG	57	62	80	2600
GRF-1500A-◆	1500	1800									
GRF-1750A-◆	1750	2100									
GRF-2000A-◆	2000	2400									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700	208/230-3-60 • 200/240-3-50 • 460-3-60	10746	10	4" FLG	150 PSIG	57	62	80	2800
GRF-1750A-◆	1750	2100									
GRF-2000A-◆	2000	2400									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700	208/230-3-60 • 200/240-3-50 • 460-3-60	10746	10	4" FLG	150 PSIG	57	62	80	3000
GRF-2000A-◆	2000	2400									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700	208/230-3-60 • 200/240-3-50 • 460-3-60	12522	12	4" FLG	150 PSIG	57	62	80	3200
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									
GRF-2250A-◆	2250	2700									

- NOTES: 1. Capacity = SCFM @ 100 PSIG, 100°F Inlet Temperature, 100°F Ambient Temperature at Dewpoint specified.
 2. Replace the "A" in the model number with "W" to designate a water-cooled unit.
 3. The symbol "◆" represents a missing voltage designation. (See model number breakdown)
 4. Weights, Dimensions, & Specifications are subject to change, contact factory for specifics at time of order.

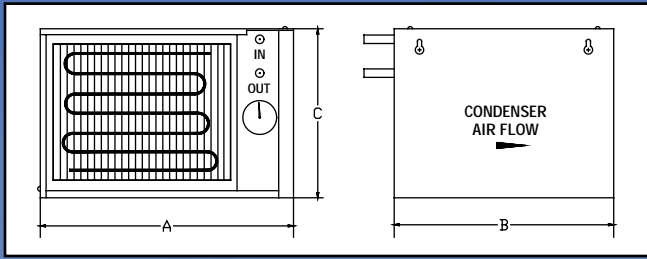
Capacity Correction Table

TEMPERATURE		INLET AIR PRESSURE											
		50	60	70	80	90	100	110	120	130	140	150	200
Air Inlet	Ambient	MULTIPLIER / CORRECTION FACTOR											
	90°F	0.90	0.86	0.82	0.79	0.75	0.72	0.70	0.69	0.67	0.66	0.65	0.62
80°F	100°F	0.95	0.91	0.86	0.83	0.79	0.76	0.74	0.73	0.71	0.70	0.69	0.65
	110°F	1.06	1.01	0.96	0.92	0.88	0.84	0.82	0.81	0.79	0.78	0.77	0.72
90°F	90°F	1.01	0.96	0.91	0.87	0.84	0.81	0.79	0.77	0.76	0.75	0.73	0.68
	100°F	1.06	1.01	0.96	0.92	0.88	0.85	0.83	0.81	0.80	0.79	0.77	0.72
100°F	110°F	1.18	1.12	1.07	1.02	0.98	0.94	0.92	0.90	0.89	0.88	0.86	0.80
	90°F	1.19	1.13	1.08	1.03	0.99	0.95	0.93	0.91	0.89	0.88	0.86	0.81
110°F	100°F	1.25	1.19	1.14	1.09	1.04	1.00	0.98	0.96	0.94	0.93	0.91	0.85
	110°F	1.39	1.32	1.27	1.21	1.16	1.11	1.09	1.07	1.04	1.03	1.01	0.94
120°F	90°F	1.46	1.40	1.34	1.28	1.22	1.17	1.15	1.13	1.10	1.08	1.06	1.00
	100°F	1.54	1.47	1.41	1.35	1.28	1.23	1.21	1.19	1.16	1.14	1.12	1.05
110°F	110°F	1.71	1.63	1.57	1.50	1.42	1.37	1.34	1.32	1.29	1.27	1.24	1.17
	90°F	1.82	1.73	1.63	1.56	1.50	1.44	1.41	1.38	1.35	1.33	1.30	1.24
120°F	100°F	1.92	1.82	1.72	1.64	1.58	1.52	1.48	1.45	1.42	1.40	1.37	1.30
	110°F	2.13	2.02	1.91	1.82	1.76	1.69	1.64	1.61	1.58	1.56	1.52	1.44

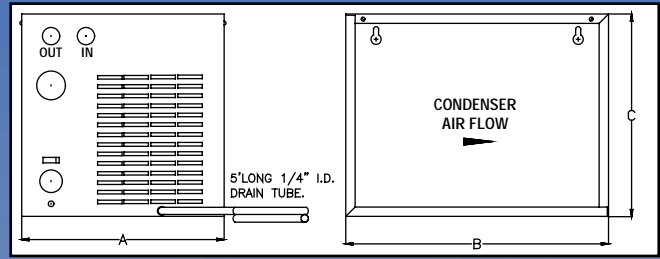
EXAMPLE FOR CALCULATING A CORRECTED FLOW:

1. Locate your correction multiplier if your inlet temperature is 110°F, your ambient temperature is 100°F with an operating pressure of 100 PSIG. (Clue 1.23)
2. Assuming a rated flow of 150 SCFM apply the multiplier of 1.23 to calculate a corrected flow of 184.5 SCFM. (1.23 x 150 = 184.5)
3. Select an appropriate dryer to handle the corrected load. (Clue GRF-200)

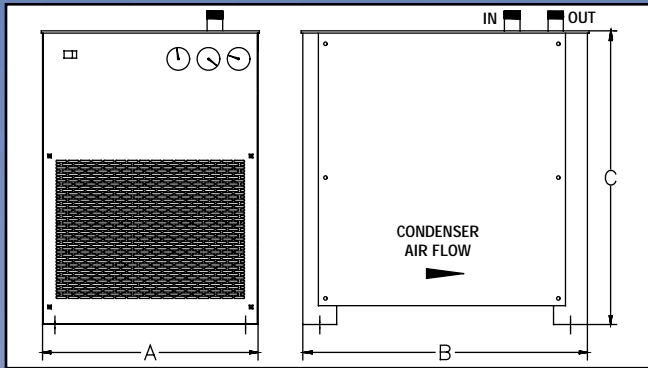
Specifications & Dimensions



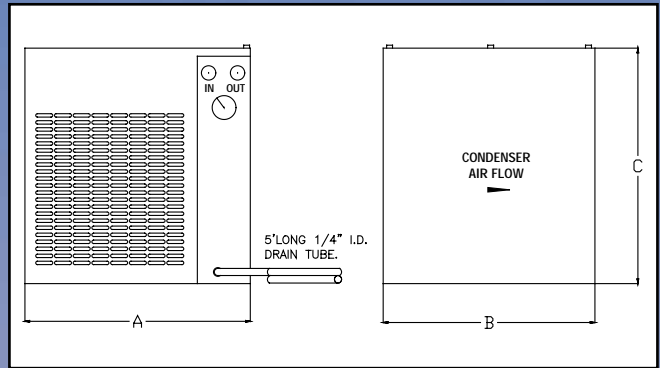
GRF-5/10



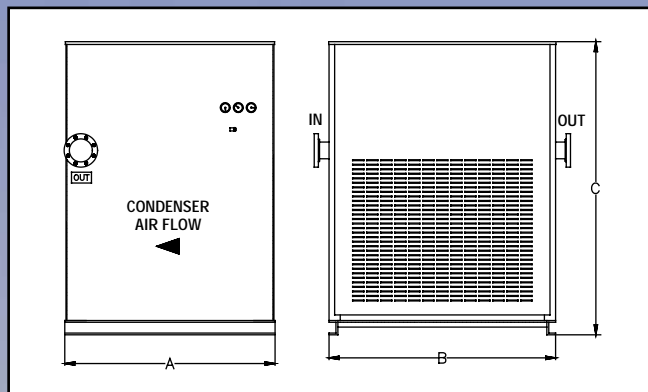
GRF 50/75



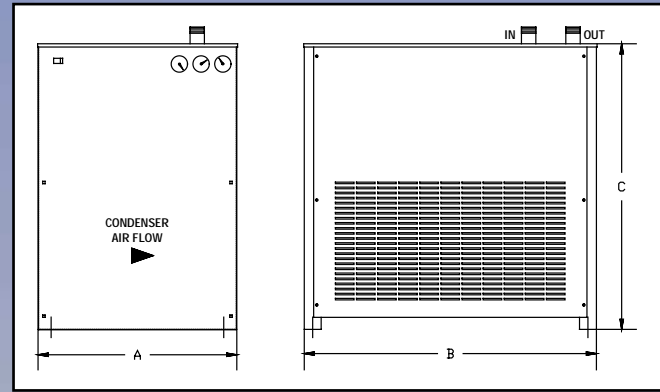
GRF-100/300



GRF-20/40



GRF-1500/2250



GRF-400/1200

Model Number Breakdown

GRF-XXX	X		X		XX		-XXX	
SCFM Capacity	Cooling		Separation		Electrical		Voltage	
@ 100 PSIG & 100°F	A	Air Cooled	Blank	Centrifugal	Blank	NEMA 1	116	115-1-60
	W	Water Cooled	C	Cold	N4	NEMA 4	216	208/230-1-60
				Coalescer	N7	NEMA 7	236	208/230-3-60
							436	460-3-60
							536	575-3-60
					235	200/240-3-50	115	100-1-50
					335	380/420-3-50	215	200-1-50



Other Great Lakes Air Products



EDR Series
High Temperature Refrigeration Dryers



GUF Series
Large Refrigeration Dryers



GIH Series
Regenerative Dryers



LM Series



GMR Series



T-Type 1/4" - 3" NPT
Filtration System



ASME T & F Type
Filtration System



Conversion Elements to
Fit Competitors' Housing



LIS Series



ZLCBD Series
Zero Loss Condensate Drains

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