

OMEGA COMPRESSORS

Refrigerated Air Dryers 10-5000 SCFM

- Reduce Energy Costs
- Excellent ROI
- Lower Pressure Drops
- Environmentally Friendly
- Zero Loss Drain - Standard



For us, it's not just business. It's personal.

OMEGA Refrigerated Air Dryers 10-5000 SCFM

ENERGY SAVING TECHNOLOGY

Compressed air is an effective and reliable source of power which is used in many operations and processes in industry. However compressed air does have some inherent problems, which if not treated properly, will create more trouble than it's worth. Use of contaminated compressed air can result in prematurely worn pneumatic machinery, blocked valves and orifices, spoiled spray paint applications and corroded piping systems due to moisture in the compressed air lines.

The solution to these problems is an OMEGA refrigerated compressed air dryer. This dryer series incorporates an aluminum heat exchanger technology designed to provide optimal drying performance and directly reduce energy consumption by lower pressure drop. The OMEGA heat exchanger module produces very low pressure drop ratings compared to most of our competitors. The lower pressure drop results in energy savings allowing for an excellent return on investment. Combined with a hot gas by-pass valve designed to deliver constant dew point and the industry leading Bekomat, zero loss drain as a standard the OMEGA dryer will provide unmatched performance in the industry.

CONTROL PANEL

The OMEGA dryer operation is controlled by our own custom design DMC controllers

The DMC 15 incorporates a digital bar graph dewpoint read out. The DMC 15 is used on models AMD-10U thru AMD-100U

The DMC 14 controller incorporates a digital dew point read out selectable in degrees F and C scale. As a standard feature the controller also displays a visual alarm condition with the built in capability to send a remote alarm signal. The DMC 14 is utilized in our ACT-125 thru ACT- 400 model dryers.

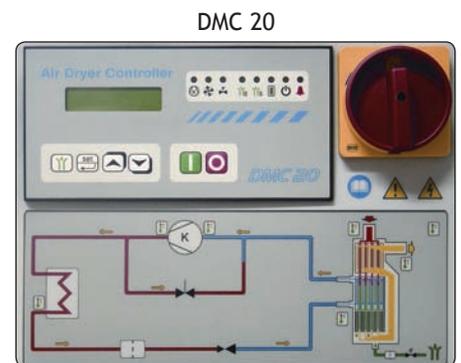
The DMC 20 version is the most advanced microprocessor controller in the industry and is incorporated as a standard controller for our larger range ACT-500 to ACT-5000 model dryers.

HOT-GAS BY-PASS VALVE

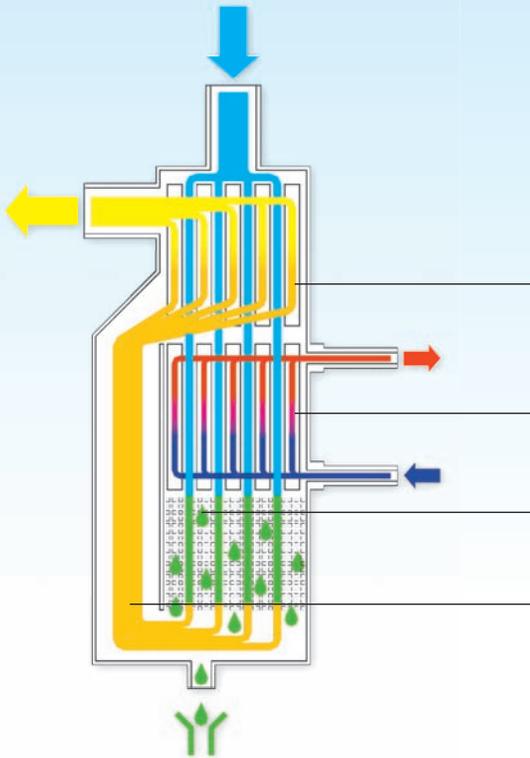
All OMEGA dryers are fitted with a stainless steel hot gas by-pass valve that underwent years of development. This valve is designed to prevent freezing and provide a constant dew point. Since this diaphragm valve is controlled by temperature and pressure, the accuracy of operation is unmatched in the industry. The valve is set during final factory testing and no further adjustments are required.

CONDENSATE DRAIN

Dryers are all fitted with the industry leading Bekomat, zero loss drain as a standard. This intelligent drain provides energy saving operation which enhances an already energy saving dryer design.



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ALU-DRY HEAT EXCHANGER MODULE

The patented air to air and air to refrigerant heat exchangers and the demister type condensate separator are housed in a uniquely designed vertical module

Maximum heat transfer is achieved in the air to air heat exchanger cross flow design.

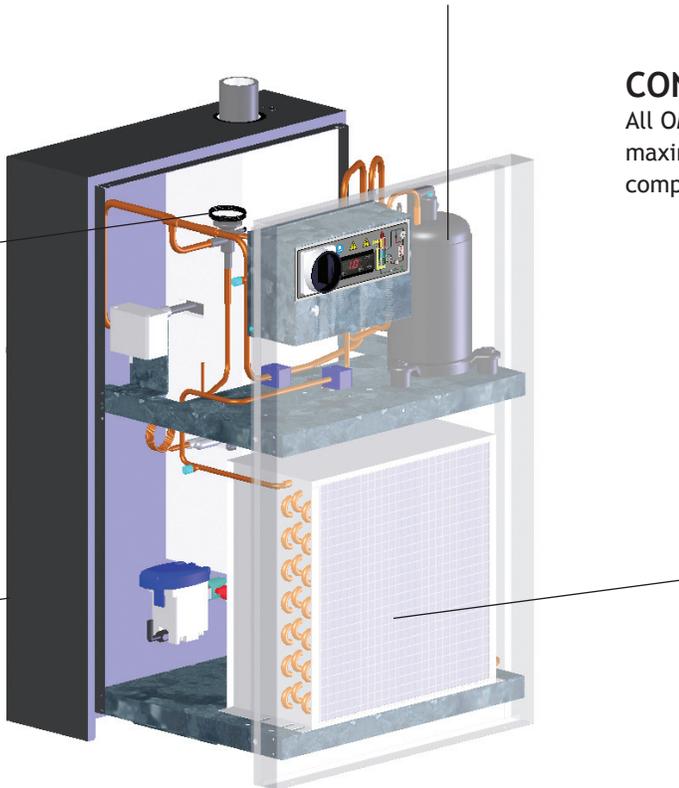
The large surface areas coupled with the cross flow of the refrigerant exchanger ensure no liquid is returned to the refrigeration compressor.

The maintenance free separator is located in the heat exchanger module. This highly efficient separator provides superior moisture separation.

The large cross-section flow channel results in low velocities, producing low-pressure drop and reduced energy costs.

ROTARY REFRIGERANT COMPRESSOR

Our mid range OMEGA dryer models from ACT-125 up to ACT-400, 230/1/60 utilize a rotary compressor. The rotary compressor advantage includes lower operating noise levels, high operating limits, longer life and high efficiency that ensures energy savings. Utilizing the rotary compressors adds to the overall energy saving design of the OMEGA dryers.



CONDENSER COIL

All OMEGA dryer condenser coils are generously sized in order to ensure maximum performance in extreme summer ambient conditions found in all compressor rooms.



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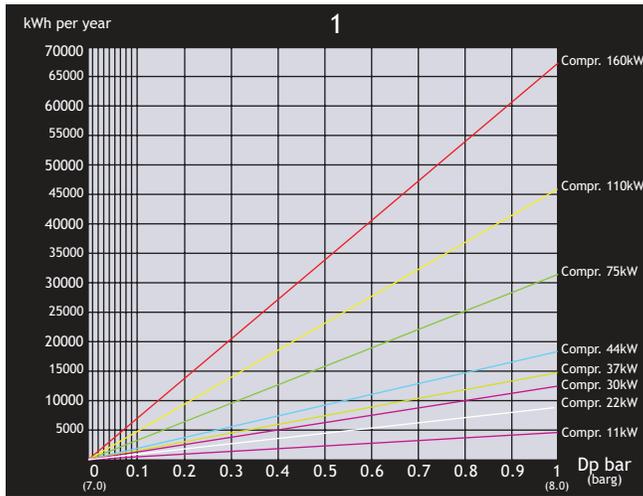
OMEGA ENERGY SAVING TECHNOLOGY

Along with the improved drying performance of the OMEGA dryers we have also dramatically improved the energy saving capabilities of a compressed air dryer via significantly lower pressure drop. Many of our competitors boast energy savings achieved by cycling the refrigerant compressor. The refrigerant compressor represents only 2% to 3% of the total absorbed power of a typical air compressor system. OMEGA low pressure drop dryers are designed to turn off your air compressor instead; this results in much higher overall energy savings. By utilizing our low pressure drop heat exchangers we can reduce pressure drop by more than 50% on most models versus our competition. This results in dramatic energy savings.

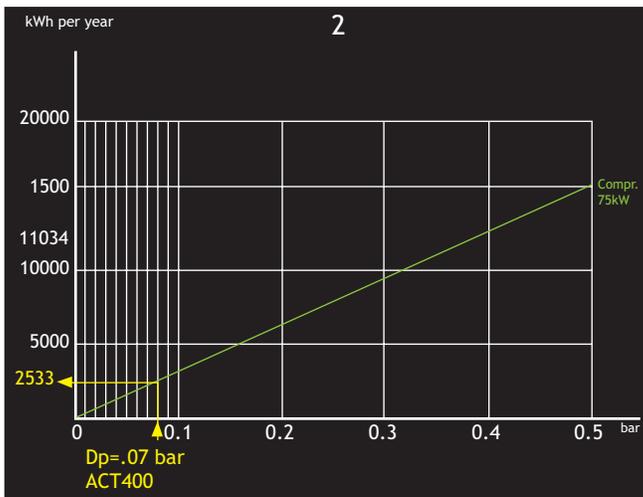
ADDITIONAL ENERGY SAVING TECHNOLOGY

The pressure drop created by the compressed air treatment system must be considered as an additional load that the air compressor must absorb in order to ensure the required line pressure. If you install a dryer with a pressure drop of 5 psig, the compressor must run at 105 psig in order to deliver a line pressure of 100 psig. Most manufacturers of dryers produce dryers with a pressure drop of 3 to 6 psig at a 100 psi operating pressure. The pressure drop is often undisclosed by our competitors unless requested by the customer. We state our pressure drop in our brochure so you can compare ours against our competition. We have provided graphs below to substantiate our claims.

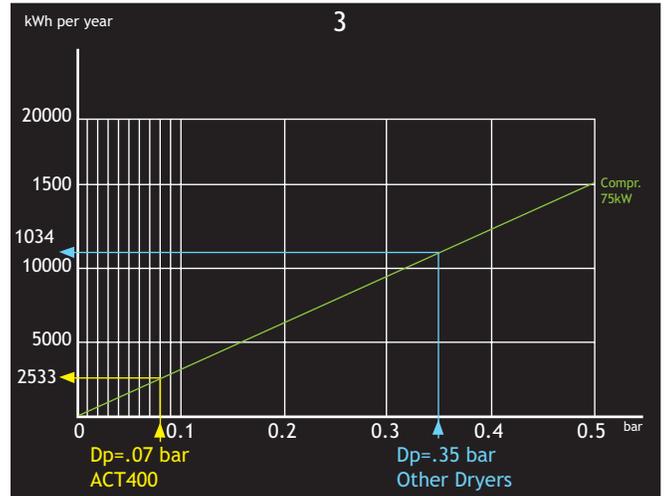
The graph represents the increase in power consumption (kWh per year) of most screw compressors, with the increase in pressure required, in the range from 7 to 8 barg and with 6000 h annual running time.



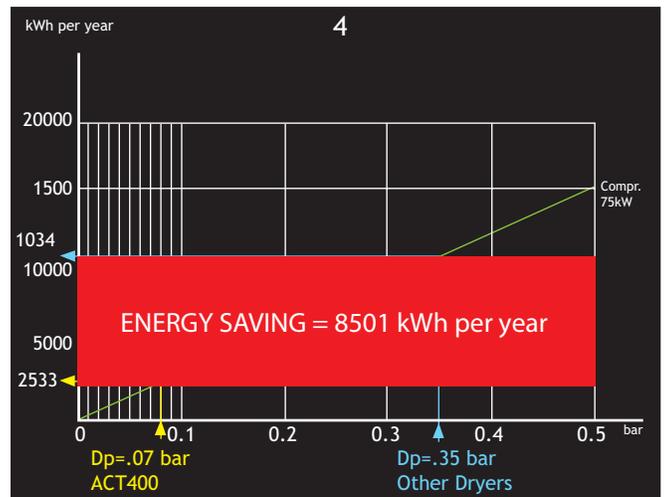
In order to quantify the annual power consumption for an ACT-400 dryer installation, we use the graph below and read the horizontal axis with the pressure drop (0.07 bar), to obtain the annual consumption (in 6000 h year), which is 2533 kWh.



For comparison purposes, we have analysed the pressure drop of other dryers available on the market with the same flow rate. For this graph we have selected a competitor's model with the next lowest pressure drop rating of 0.35 bar. It reveals an annual energy consumption of 11034 kWh.

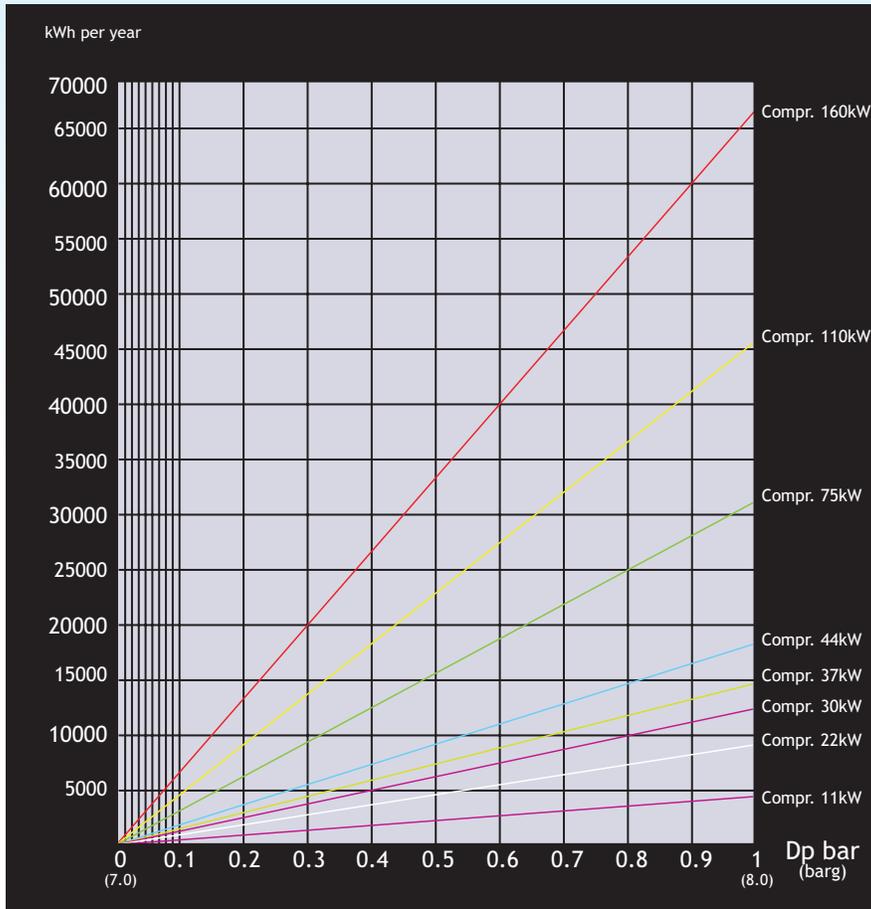


The difference in energy consumption provides the real overall energy saving: 11034 kWh = 8501 kWh per year.



OMEGA Refrigerated Air Dryers 10-5000 SCFM

COMPARE OMEGA DRYERS AGAINST OUR COMPETITORS PRESSURE DROP FOR REAL ENERGY SAVINGS



MODEL	Bar/psig
AMD-10U	.15/2.1
AMD-15U	.04/6
AMD-20U	.11/1.6
AMD-27U	.09/1.3
AMD-35U	.14/2
AMD-50U	.32/4.6
AMD-75U	.24/3.4
AMD-100U	.16/2.2
ACT-125	.18/2.6
ACT-150	.23/3.3
ACT-200	.12/1.7
ACT-250	.25/3.6
ACT-300	.10/1.5
ACT-350	.13/1.9
ACT-400	.07/1.0
ACT-500	.10/1.5
ACT-600	.15/2.2
ACT-800	.20/2.9
ACT-1000	.19/2.8
ACT-1250	.25/3.6
ACT-1500	.19/2.8
ACT-1750	.13/1.9
ACT-2000	.18/2.6
ACT-2500	.25/3.6
ACT-3000	.19/2.8
ACT-4000	.19/2.8
ACT-5000	.26/4.1

OMEGA DRYER FEATURES

- Conforms to TSSA and CSA standards
- CRN approved nationally
- Electrically certified by Entela
- Environmentally friendly refrigerant R134A/R404A
- Energy saving design
- Unique design aluminum heat exchanger with low pressure drop
- New state-of-the-art stainless steel hot gas by-pass valve
- Compact design with easily removable steel panels
- Powder paint coated finish
- Robust inlet/outlet NPT connections flanged on larger models
- Water proof electrical junction box
- Six foot three pronged power cord on 115/1/60 models
- Insulated electrical power wiring
- Digital controller on small models up to ACT 400, LCD on larger models
- Zero loss Bekomat drains on all models
- Illuminated on/off switch on models AMD-10U to AMD-100U
- Disconnect on/off switch on models ACT 125 to ACT 500
- Disconnect and on/off buttons on larger models
- Compressors include thermal overload protection
- Air to air heat exchanger and evaporator in one module
- Heat exchanger includes a high efficiency moisture separator
- Thermally protected condenser fan
- Generously sized condenser

OMEGA
COMPRESSORS

Technical Data

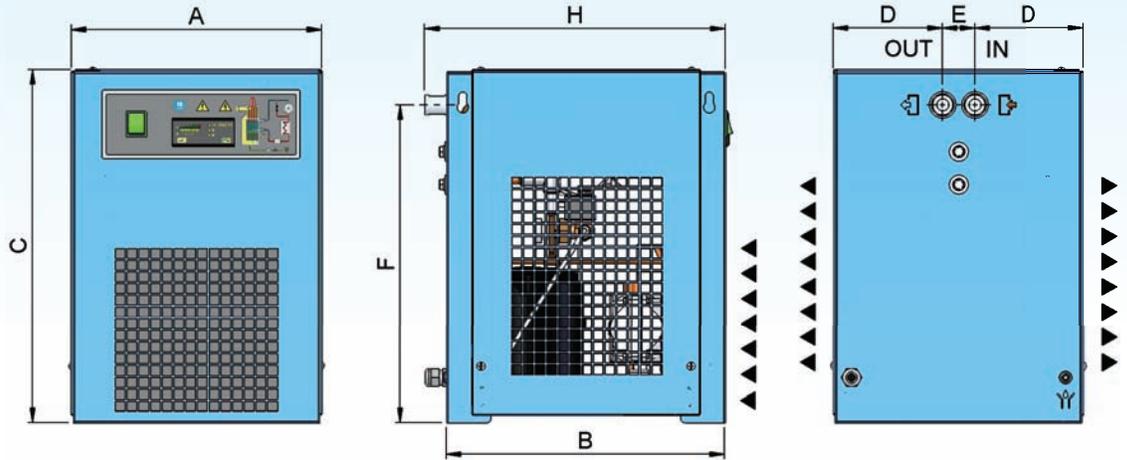
FLOW RATES ARE BASED ON THE FOLLOWING OPERATING CONDITIONS:

100F inlet compressed air temp. 100 F ambient temp. 100 psig operating pressure and 37.4 dewpoint.

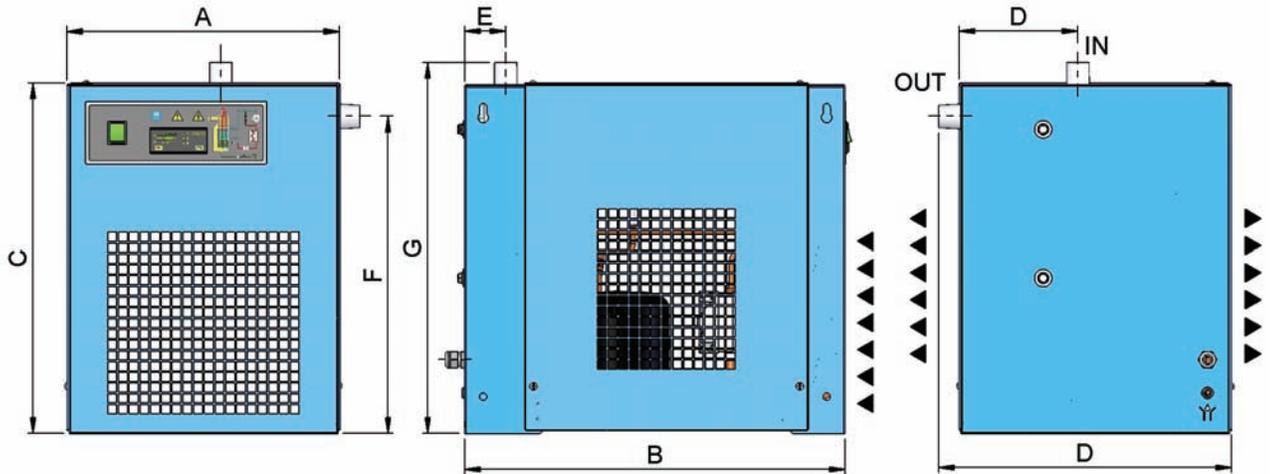
MAXIMUM OPERATING CONDITIONS:

130 F inlet compressed air temp. 115 F ambient temp. 200 psig operating pressure.

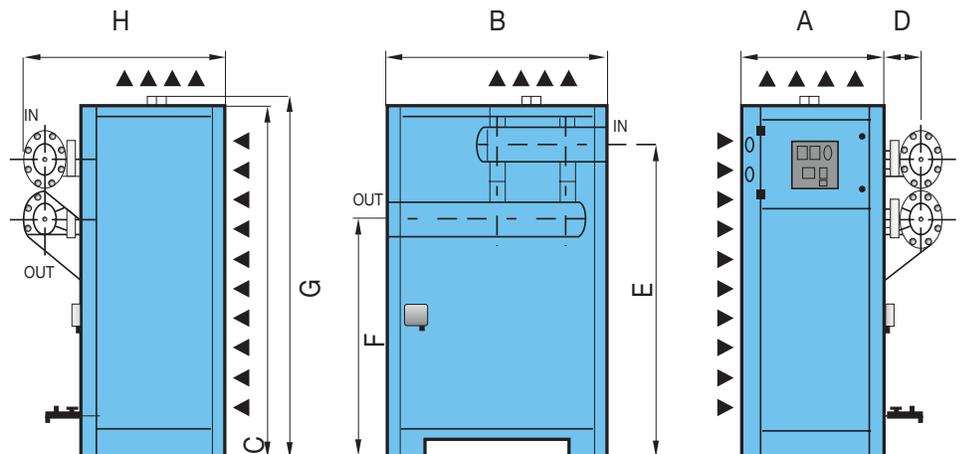
10 TO 15 SCFM MODELS



20 TO 1250 SCFM MODELS



1500 TO 5000 SCFM MODELS



Technical Data

MODEL	FLOW RATE SCFM	POWER SUPPLY	REFRIG.	PIPE SIZE	WEIGHT (lbs.)	DIMENSIONS IN INCHES							
						A	B	CD		E	F	G	H
AMD-10U	10	115/1/60	R134A	3/8" NPT	50	12	13.58	17.12	5.31	1.57	15.43	N/A	14.64
AMD-15U	15	115/1/60	R134A	3/8" NPT	52	12	13.58	17.12	5.31	1.57	15.43	N/A	14.64
AMD-20U	20	115/1/60	R134A	1/2" NPT	55	14.48	20.27	18.62	6.2	2.16	16.88	19.68	N/A
AMD-27U	27	115/1/60	R134A	1/2" NPT	60	14.48	20.27	18.62	6.2	2.16	16.88	19.68	N/A
AMD-35U	35	115/1/60	R134A	1/2" NPT	68	14.48	20.27	18.62	6.2	2.16	16.88	19.68	N/A
AMD-50U	50	115/1/60	R134A	1/2" NPT	70	14.48	20.27	18.62	6.2	2.16	16.88	19.68	N/A
AMD-75U	75	115/1/60	R134A	1" NPT	77	13.58	16.53	29.1	5.23	2.28	25.86	30.51	N/A
AMD-100U	100	115/1/60	R134A	1-1/4" NPT	80	13.58	17.51	29.1	5.23	2.75	25.86	30.51	N/A
AMD-100U-230	100	230/1/60	R134A	1-1/4" NPT	80	13.58	17.51	29.1	5.23	2.75	25.86	30.51	N/A
ACT-125U	125	230/1/60	R404A	1-1/4" NPT	121	19.00	18.00	32.50	5.13	2.63	29.38	34.00	N/A
ACT-150U	150	230/1/60	R404A	1-1/4" NPT	126	19.00	18.00	32.50	5.13	2.63	29.38	34.00	N/A
ACT-200U	200	230/1/60	R404A	1-1/2" NPT	159	21.88	22.88	34.88	5.38	3.38	31.50	36.88	N/A
ACT-250U	250	230/1/60	R404A	1-1/2" NPT	165	21.88	22.88	34.88	5.38	3.38	31.50	36.88	N/A
ACT-300U	300	230/1/60	R404A	2" NPT	249	21.88	24.63	38.38	9.63	4.00	34.13	40.50	N/A
ACT-350U	350	230/1/60	R404A	2" NPT	258	21.88	24.63	38.38	9.63	4.00	34.13	40.50	N/A
ACT-400U	400	230/1/60	R404A	2-1/2" NPT	364	26.13	28.50	43.50	14.75	7.50	36.63	45.50	N/A
ACT-500U	500	575/3/60	R404A	2-1/2" NPT	406	26.13	28.50	43.50	14.75	8.63	36.63	45.50	N/A
ACT-600U	600	573/3/60	R404A	3" 150# FL.	602	30.88	37.38	55.50	19.63	8.63	45.50	58.63	N/A
ACT-800U	800	575/3/60	R404A	3" 150# FL.	613	30.88	37.38	55.50	19.63	8.63	45.50	58.63	N/A
ACT-1000U	1000	575/3/60	R404A	3" 150# FL.	717	30.88	37.38	55.50	19.63	8.63	45.50	58.63	N/A
ACT-1250U	1250	575/3/60	R404A	3" 150# FL.	816	30.88	40.94	55.50	19.63	10.38	45.50	58.13	N/A
ACT-1500U	1500	575/3/60	R404A	4" 150# FL.	1455	39.50	60.50	70.25	6.30	62.63	47.88	72.50	50.20
ACT-1750U	1750	575/3/60	R404A	4" 150# FL.	1570	39.50	60.50	70.25	6.30	62.63	47.88	72.50	50.20
ACT-2000U	2000	575/3/60	R404A	4" 150# FL.	1598	39.50	60.50	70.25	6.30	62.63	47.88	72.50	50.20
ACT-2500U	2500	573/3/60	R404A	4" 150# FL.	1653	39.50	60.50	70.25	6.30	62.63	47.88	72.50	50.20
ACT-3000U	3000	575/3/60	R404A	6" 150# FL.	1730	39.50	73.00	70.25	7.28	62.20	47.88	72.50	52.26
ACT-4000U	4000	575/3/60	R404A	6" 150# FL.	2150	39.50	88.75	70.25	7.28	62.20	47.88	72.50	52.26
ACT-5000U	5000	575/3/60	R404A	8" 150# FL.	3090	39.53	107.64	70.37	8.51	62.13	47.85	72.50	54.73

CORRECTION FACTORS

Inlet Air Pressure	psig	60	80	100	120	140	160	180	200
	barg	4	5.5	7	8	10	11	12.5	14
Factor		0.79	0.91	1.00	1.07	1.13	1.18	1.23	1.27

Correction factor for ambient temperature changes (Air-cooled):

Ambient temperature	F	80	90	100	105	110
	C	27	32	38	40	43
Factor		1.22	1.11	1.00	0.94	0.89

Correction factor for inlet air temperature changes:

Air temperature	F	90	100	105	110	120	130
	C	32	38	40	43	49	55
Factor		1.16	1.00	0.85	0.85	0.73	0.63

Correction factor for Dew Point changes:

Dew Point	F	33 - 39	40 - 44	45 - 49	50 - 54
	C	0.5 - 4	4.1 - 7	7.1 - 9.5	9.6 - 12
Factor		1.00	1.09	1.22	1.40



Compressed Air Accessories

- Aluminum Air Piping
- Ball Valves
- Check Valves
- Compressed Air Filters
- Compressor Oil
- Compressor Pumps
- Desiccant Air Dryers
- Electric Motors
- Electronic Auto Drains
- Filter Elements
- Filter - Regulators - Lubricators
- Flex Hose Connectors
- Gauges
- Magnetic Starters
- Oil Monitors
- Oil/Water Separators
- Pilot Valves
- Pneumatic Auto Drains
- Pressure Switches
- Refrigerated Air Dryers
- Remote Air Receivers
- Safety Valves
- Service Parts
- Throttle Controls
- Vibration Isolators
- Water Separators

2 year limited warranty 

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