

**GREAT LAKES AIR**



39°F DEWPOINT

BUILT IN AFTERCOOL

80°F INLET TEMPER

ON VA

NIC DR

FREEZ

STANDARD ELECTRONIC DRAIN

BUILT IN AFTER COOLER

180°F INLET TEMPERATURE

39°F DEWPOINT

SS TEXV

**EDR Series**  
**High Inlet Temperature**  
**Refrigeration Dryers**

# Features and Benefits

## 5-2-1 Product Warranty

The Great Lakes EDR series refrigerated air dryer is manufactured to the highest quality standard. In an effort to express this quality standard and distinguish our products from competitors, we offer as standard our 5-2-1 product warranty.

- 5** - Year Warranty, covers SS heat exchangers.
- 2** - Year Warranty, covers all independent components omitting only maintenance items.
- 1** - Year Warranty, covers labor required to repair or replace warranty items.

With continuous improvement of quality standards, along with engineering improvements that are moving with technology, you can be assured that Great Lakes Air Products will provide you with a quality product for years of uninterrupted service. For detailed warranty coverage and requirements consult EDR warranty publication.

## 39°F Pressure Dewpoints Deliver 33% Less Moisture

The Great Lakes EDR series refrigeration dryer delivers pressure dewpoints of 39°F. Many other high inlet temperature dryers offer only a 50°F dewpoint, which can prove insufficient in many manufacturing processes. A 39°F pressure dewpoint provides air that contains 33% less moisture than a 50°F pressure dewpoint. The EDR series can be rated for 39°F or 50°F pressure dewpoints.

## Made With Pride in the U.S.A.

Great Lakes Air manufactures all of its compressed air dryers at one of its southeast, Michigan facilities. We offer our customers a steady stream of high quality industrial products with a proven history of performance. Replacement and maintenance components are readily available through the Great Lakes distribution system or are also available through several national networks of wholesale refrigeration supply houses.

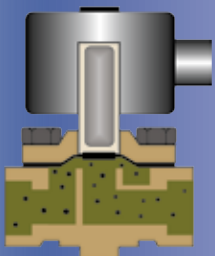
***Purchase the quality and durability of an American made product.***

## Environmental Refrigerants

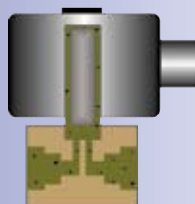
Great Lakes Air GTX series utilizes only non-ozone depleting Hydro-fluorocarbons or HFC refrigerants approved by the EPA and Montreal protocol. Models with fractional HP refrigeration compressors utilize R134A refrigerant. Optional refrigerant types are available consult your representative for details.



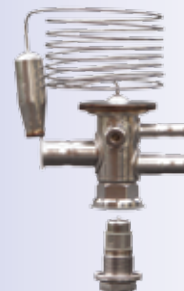
## Smart Design Solenoid Drain



Great Lakes Air uses only diaphragm solenoid valves for the electronic timed condensate drains. Diaphragm valves keep the main stream of condensate away from the internal moveable piston. If particulate contaminant in the condensate stream fouls and restricts movement of the piston, the valve will fail. Diaphragm valves have much larger orifices and flow paths than the industry standard direct acting valves. A larger orifice in conjunction with a strainer virtually eliminates the possibility of clogging a condensate drain valve.

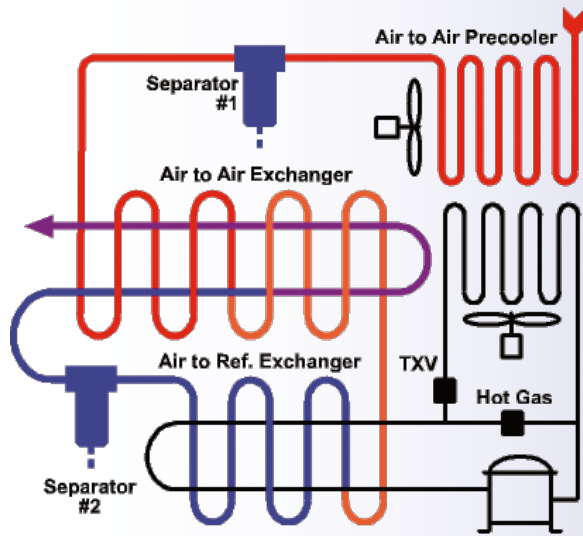


## Automatic & Thermostatic Expansion Valves



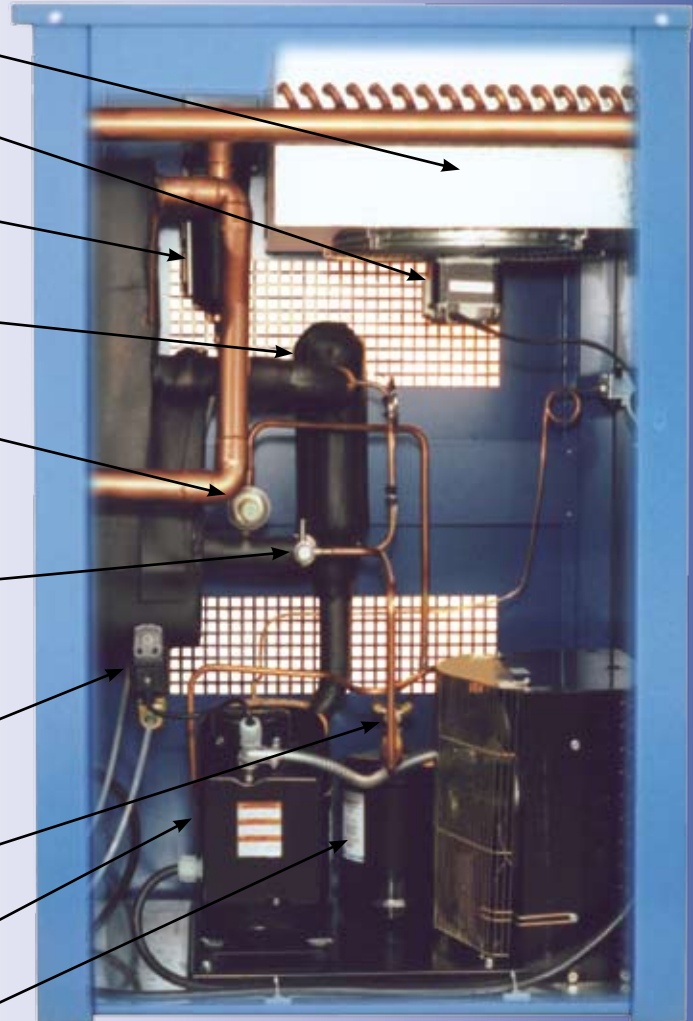
Model specific automatic or thermostatic expansion valves are selected to match the required refrigeration load. The valves modulate refrigerant flow to match changing system requirements caused by ambient temperature fluctuations and or changing compressed air loads. Capillary tube systems commonly used by other manufacturers will increase or decrease refrigerant flow on ambient conditions with no regard to system load. High ambient temperatures or slightly clogged condensers will increase refrigerant flow without a load to balance the system. Operation under these conditions can cause premature compressor failure.

# Cycle of Operation



The EDR Series air dryer takes hot saturated compressed air into an air cooled heat exchanger, which cools the air, and a gross water separator removes the condensed liquid. The air then enters the Air-Air exchanger where it is pre-cooled by the air discharged from the Air-Refrigeration exchanger. The final cooling is accomplished in the Air-Refrigerant exchanger where it is further cooled to the specified dewpoint, and additional condensed moisture is separated from the air stream. The cool dry air enters the Air-Air exchanger where it acts as the cooling medium for the previous pre-cooling stage. It also reheats the discharge air to increase volume and prevent the compressed air piping from sweating.

- Built in air cooled aftercooler
- TEAO Fan Motor
- 1st stage gross water separator with a filter element
- Refrigerant suction accumulator
- Hot gas bypass valve compensates for low or no load conditions eliminating system freeze-up
- Modulating stainless steel thermostatic expansion valve with effective refrigeration control over a wide span of operating conditions
- Electronic solenoid drain valve with isolation valve and strainer
- Refrigeration liquid line service valve suction valve not visible
- Tecumseh hermetic compressor
- Refrigerant liquid receiver



This unit is representative of the EDR B&C series dryers.



## Non Standard Condition Capacity Correction

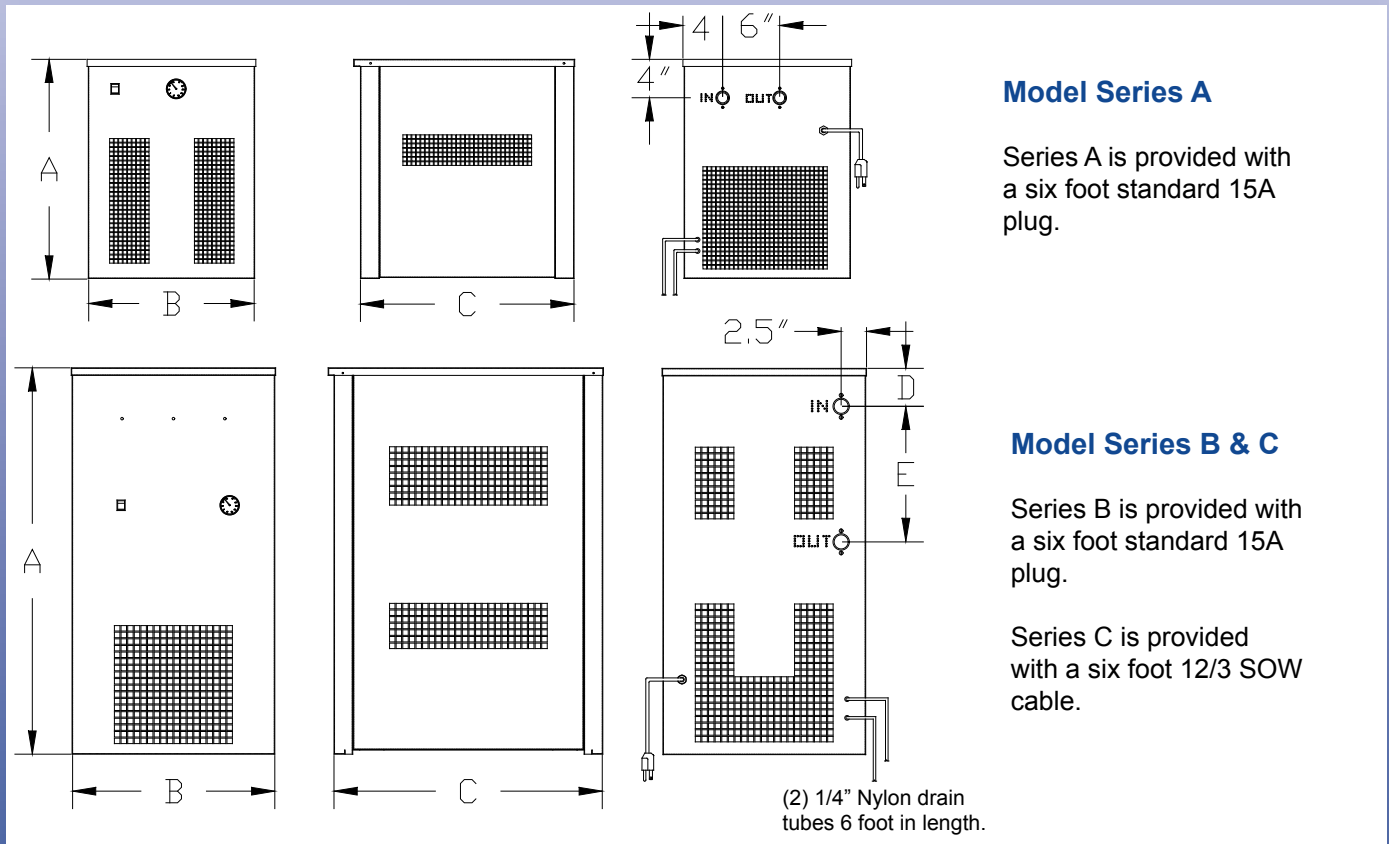
Capacity Correction		Inlet Temperature		
		125°F	150°F	180°F
Ambient °F	100°F	1.18	1.10	1.00
	105°F	1.07	1.00	0.91
	110°F	0.97	0.90	0.82

To obtain flow capacities at conditions other than standard, locate the multiplier at the interception of actual operating conditions. Multiply the rated capacity of the selected dryer by the selected multiplier, the result is the corrected flow capacity. Capacity corrected flows in excess of standard operating conditions will increase pressure drop.

## Specifications & Dimensions

Model Number	Capacity in SCFM @				Refrigeration System		Available Voltage	In / Out Ports	Max. Inlet Pressure	Dimensions in Inches					Shipping Weight (Lbs)	
	50°F PDP		39°F PDP		HP	Watts				A	B	C	D	E		
	120 PSIG	100 PSIG	120 PSIG	100 PSIG												
EDR-A1-116	28	24	23	20	1/5	376	120-1-60 230-1-60	N/A	230 PSIG	3/4"	23	18	23	N/A	N/A	117
EDR-A2-116	36	30	30	25	1/4	451				3/4"	23	18	23	N/A	N/A	120
EDR-B1-116	50	43	42	36	1/3	576				3/4"	35	19	23	2.7	15.3	175
EDR-B2-□	80	67	66	56	1/2	776				3/4"	35	19	23	2.7	15.3	185
EDR-C1-□	102	86	85	72	5/8	1045				1"	42	22	29	4	14.5	275
EDR-C2-□	155	132	129	110	3/4	1135				1-1/2"	42	22	29	4	14.5	288

- Notes: 1. Capacity reflects a maximum 180°F inlet temperature and 100°F ambient  
 2. The symbol "□" represents a missing voltage designation 116 = 120/1/60 and 216 = 230/1/60  
 3. Dimensions and specifications are subject to change without notice



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