

### **GENERAL**

The Powerex Medical Refrigerated Air Treatment Center is designed to provide medical breathing air for hospital and medical institutions. This system meets NFPA 99 requirements for Level 1 breathing air.

### **AIR PURIFICATION PACKAGE**

The air purification package shall be sized in conformance with NFPA 99 specifications and consist of the following: Dual refrigerated air dryers, dual filter and regulator banks with sample ports, Dew Point and CO Monitors with alarms, and all bypass piping. Piping to be brass, stainless, or type K copper, and cleaned for medical air use. All components shall be mounted piped and wired to a common skid.

### **REFRIGERATED AIR DRYERS**

The refrigerated air dryers are non-cycling, direct expansion type, using R-134 A refrigerant (CFC free). A hot gas bypass system maintains a consistent temperature at all load conditions. Heat exchangers are made of copper tube construction and fully insulated. Dryers shall have power on and high temperature lights, suction pressure gage, internal 3-micron filter/separator with stainless steel bowl, and timed electric condensate drain.

### **FILTRATION / PRV VALVES**

A duplex set of filters and regulators shall be provided with block-and-bypass valves, such that one bank can be serviced without disrupting the flow of air to the system. Each bank shall have a coalescing filter, equipped with differential pressure indicators, an activated carbon filter, and an adjustable pressure regulator with gauge. A 75 psig safety valve is provided at the final outlet along with sample ports for CO & Dew point monitors.

### **DEW POINT MONITOR**

The system-integrated hygrometer shall be equipped with an LCD dewpoint display and high dewpoint alarm with dry contacts for remote monitoring. The dew point sensor (probe) shall be installed so that the monitored airflow is downstream of the pressure regulator assembly. The sensor shall include an auto calibration feature to ensure the accuracy of the dewpoint measurement.

### **CARBON MONOXIDE MONITOR**

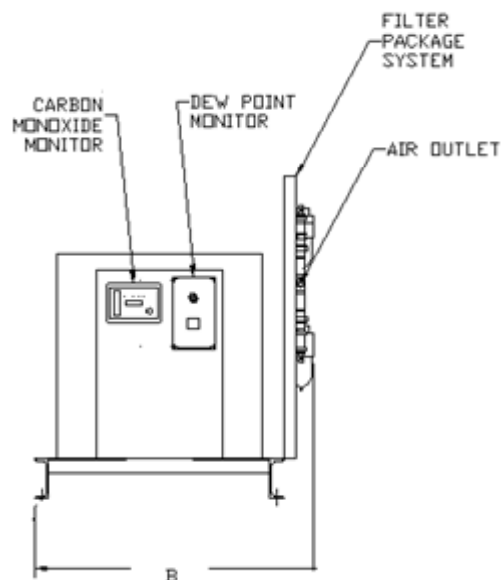
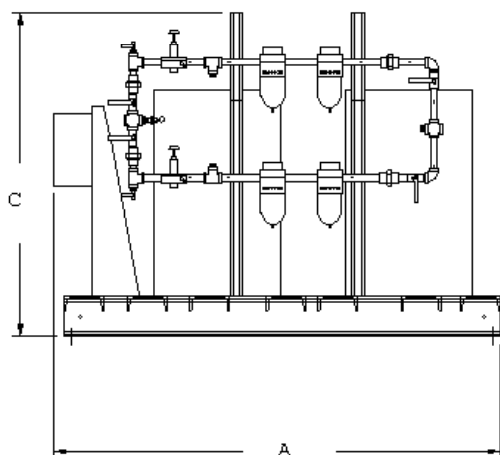
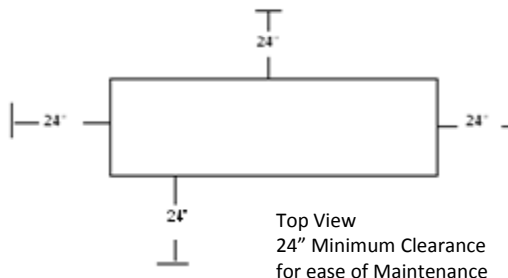
The carbon monoxide (CO) monitor is provided in an enclosure with LCD display of CO concentrations. The monitor shall continuously display the CO content of the discharge air and shall provide audible and visual high CO alarms. High alarm is set at 10 ppm per NFPA99. Dry contacts are provided for remote monitoring of the high CO alarm.



## Medical Refrigerated Dryers

Rev. 4/13/11

DIMENSIONS					
MODEL	DIM. A	DIM. B	DIM. C	Inlet	Outlet
MDR0258	57"	36"	41"	1/2"	1/2"
MDR0358	57"	36"	41"	1/2"	3/4"
MDR0558	57"	36"	41"	3/4"	1"
MDR0708	57"	36"	41"	1"	1.5"
MDR1008	57"	36"	41"	1"	1.5"
MDR1508	57"	36"	41"	1.5"	1.5"



Medical Refrigerated Dryers						
MODEL	SCFM @100 PSIG	Power per Dryer in Watts	Dew Point @ 50 PSIG	Voltage*		Unit Weight**
MDR0258	25	205	31°F	115 V	208-230 V	272
MDR0358	35	253	28°F	115 V	208-230 V	278
MDR0558	55	410	27°F	115 V	208-230 V	482
MDR0708	70	589	26°F	115 V	208-230 V	486
MDR1008	100	930	28°F	115 V	208-230 V	526
MDR1508	150	1300	27°F	115 V	208-230 V	972

Note: Dryer Sizing - SCFM listed is for each dryer. Powerex Medical Dryer Systems provide 100% backup. When selecting the proper Medical Dryer System, match the listed SCFM with the SCFM of the compressor(s) in operation with one compressor in reserve per NFPA 99. Includes: filter package, CO monitor, and Dew point monitor.

\* Dryer available in either 115 V or 208-230 V. Please specify voltage when ordering.

\*\* Unit weights are approximate. Actual weights may vary.