



## DUPLEX TANK MOUNTED "X" SERIES MEDICAL AIR PLANTS WITH DESICCANT AIR DRYERS 1.5 THROUGH 5 HP

The EMSE CORPORATION continuous duty Medical Air Plant is a completely packaged NFPA 99 and NEC compliant assembly featuring 100% oil-less air compressors, U.L. listed control cabinet, ASME receiver, duplex desiccant air dryers with purge control, duplex 0.01 micron pre-filters and 0.5 micron after-filters, duplex regulators, dew point monitor, CO monitor and all the accessories required to meet and exceed the current code requirements.

All components are piped and wired to single-point service connections. The only field connections are air intake, air discharge and power at the control panel.

All interconnecting piping and wiring is complete and operationally tested prior to shipment. Liquid tight conduit, fittings and junction boxes are provided for all control and power wiring.

### AIR COMPRESSORS

The medical air compressors are oil-less, reciprocating and air-cooled. Connecting rods and bearings are sealed for life-time lubrication. **No oil is used in operation of the compressors. The air is 100% oil-free.** Cooling is provided by radial fan and shroud.

Compressors are V-belt driven by 3 phase, 60 cycle, 1750 RPM, NEMA design B motors. Slide bases for belt tension adjustment and totally enclosed OSHA approved belt guards are provided.

Also included are air cooled aftercoolers, check valves, safety relief valves, intake and discharge flexible connectors, solenoid unloaders for no-load starting, isolation valves, high discharge temperature switches, pressure switches, and a shut-off cock for gauge and switches.

### RECEIVER

The system includes a corrosion resistant receiver tank of ASME construction rated for 200 PSI MWP service. The tank is equipped with a pressure gauge, safety relief valve, 3 way by-pass, gauge glass and electronic tank drain with manual override.

### CONTROL PANEL

NEMA 12 UL listed control panel features short circuit, single phase and thermal overload protection. Externally operable circuit breakers with a door interlock, control circuit transformers with fused primary and secondary coils, compressor HOA switches, magnetic starters with 3 leg overload protection and reset switches are standard.



Also included are individual dual-mode 3-position selector switches for air dryers.

The Programmable Logic Controller provides automatic alternation and lead-lag control with the option to select either one of the pumps as a permanent lead for periods of pump maintenance. Human Machine Interface (HMI) display includes compressor run indication, accumulated run time and alarm conditions.

The following audible and visual local alarms are provided per NFPA 99: compressor thermal malfunction, "Backup in use", high dew point and high CO. The audible alarm can be acknowledged with the "Silence" button. All controls and alarms will function even if one of the compressors is shut down for maintenance or repairs.

The panel includes dry contacts for connection to the master alarms for the following: system malfunction (including compressor thermal malfunction and "Backup in use"), high dew point level, high carbon monoxide level and individual monitor signals in case of power loss.



Field adjustable control switches are pre-set to operate the lead compressor between 80 PSIG and 100 PSIG. The lag compressor will automatically start at 75 PSIG if the lead compressor fails to operate.

### **WARRANTY**

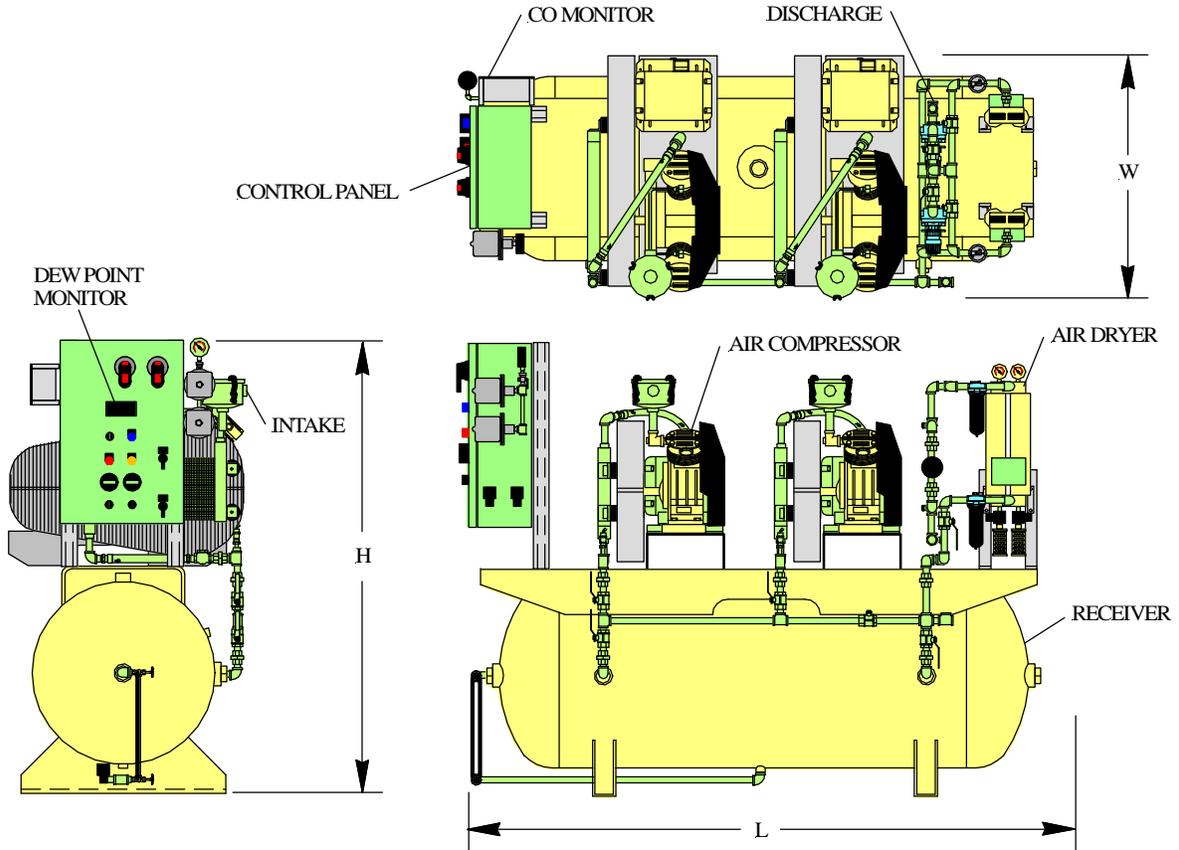
The Medical Air Plant is guaranteed for a period of 12 months from the date of start-up or 18 months from the date of shipment (whichever comes first) against defects in design, materials, or construction. In addition, the compressors are guaranteed for 36 months from the date of shipment.

### **Optional System Accessories**

(only checked options will be supplied)

- Touch Screen HMI (Ethernet ready) including vacuum level display, pump status indication, accumulated run time, all alarm displays and scheduled maintenance reminder
- Touch Screen HMI with Ethernet connectivity, embedded web page for remote monitoring and electronic notifications of alarms and warnings

# **DUPLEX TANK MOUNTED "X" SERIES MEDICAL AIR PLANTS WITH DESICCANT AIR DRYERS 1.5 THROUGH 5 HP LAYOUT AND PERFORMANCE TABLE**



System Model Number	Horsepower		Capacity SCFM (Each Pump)		Disch. Conn.	Tank (Gal.)	Dimensions, In.			Weight Lbs.
	Each	Total	50 PSIG	100 PSIG			L	W	H	
3DOX1.5PT80D	1.5	3	6.7	5.2	1/2"	80	82	30	60	930
3DOX2PT120D	2	4	9.2	7.6	1/2"	120	82	33	60	950
3DOX3PT120D	3	6	12.1	10.1	1/2"	120	82	33	60	1090
3DOX5PT120D	5	10	20.9	17.9	1/2"	120	89	34	66	1130

**Note:** Maximum ambient temperature: 100°F. For higher ambient temperatures consult factory.

### Power Requirements:

(Two) \_\_\_\_\_ HP Motors, 3 Phase 60 Hertz     208 v     230 v     460 v