



DUPLEX STACK MOUNTED "Q" SERIES MEDICAL AIR PLANTS WITH DESICCANT AIR DRYERS 15 THROUGH 20 HP

The EMSE CORPORATION continuous duty Medical Air Plant is a stack mounted modular NFPA 99 and NEC compliant system featuring oil-less air compressors, U.L. listed control cabinet, ASME receiver and duplex twin tower desiccant air dryers with purge control, pre-filters, after-filters, pressure regulators, safety relief valves, dew point monitor, CO monitor and a test port.

After testing the system will be separated into 34" modules for ease of installation.

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. Liquid tight conduit, fittings and junction boxes are provided for control and power wiring.

AIRCOMPRESSORS

The medical air compressors are oil-less, reciprocating, air-cooled design. The compressors feature a cast iron crankcase, teflon-composite compression rings, sealed bearings, stainless steel valves and non-asbestos gaskets. **No oil is used in operation of the compressors. The discharge air is 100% oil-free.** Cooling is provided by a fan compressor pulley with a 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 for each compressor are spring vibration isolators, air cooled aftercoolers, check valves, safety relief valves, intake and discharge flexible connectors, solenoid unloaders, high discharge temperature shut-down switches for each cylinder and isolation valves.

RECEIVER

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

AIRTREATMENT

The dryer assembly consists of two banks of air treatment equipment, piped in parallel, provided with valves to bypass either bank without sacrificing air quality. Each desiccant air dryer is sized for 100% of the system NFPA peak calculated demand.



The dryer is designed to provide a maximum dew point below the frost point of 0°C (+32°F) per NFPA 99. Built-in purge control will automatically minimize and adjust the purge air to match the variable air flow.

Each dryer is equipped with a 0.01 micron pre-filter with electronic drain and element change indicator, 0.5 micron after-filter and a pressure regulator.

Digital dew point and CO monitors with alarm set points at 39°F and 10 PPM are provided. A "demand check" for maintenance is included per current NFPA 99 for each instrument.

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.



CONTROL PANEL (continued)

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 module between 100 PSIG and 120 PSIG. The stand-by compressor will automatically start at 95 PSIG if the lead compressor fails to operate.

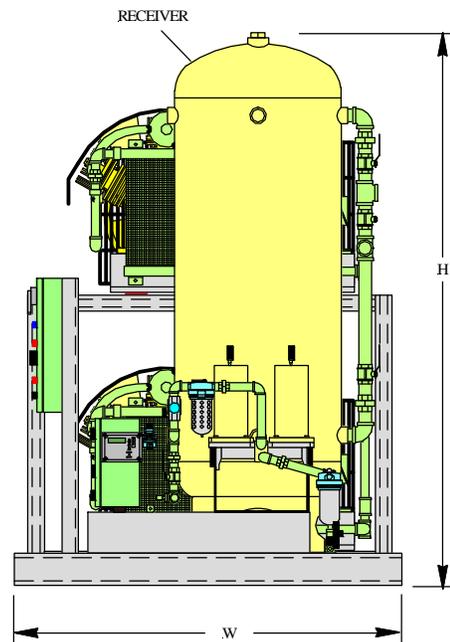
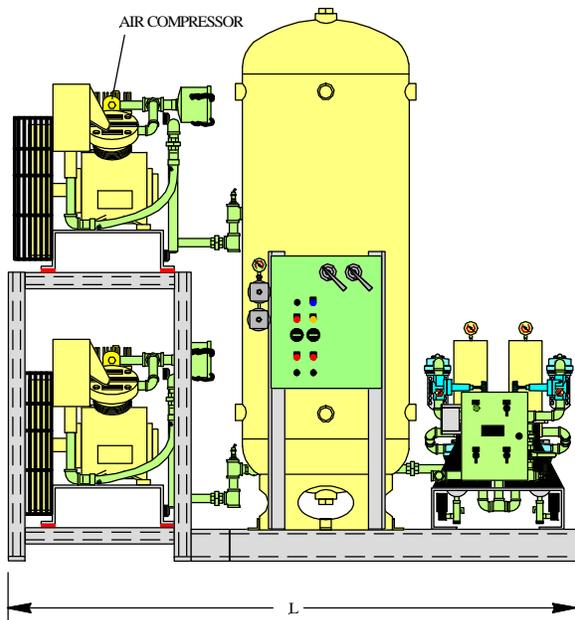
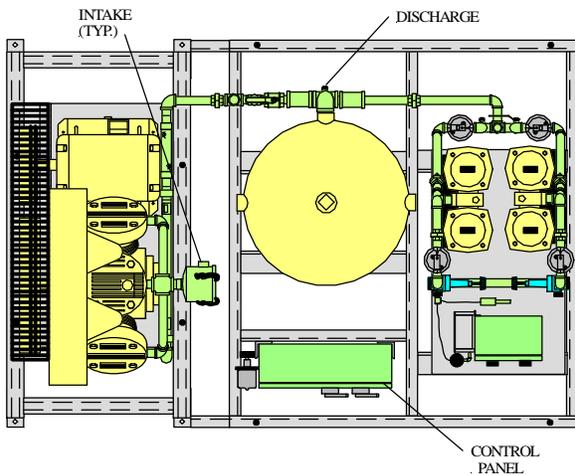
WARRANTY

The Medical Air Plant is guaranteed by the manufacturer 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.

Option (only checked options will be supplied)

- Touch screen interface with ethernet connectivity, embedded web page for remote monitoring and electronic notifications of alarms and warnings

DUPLEX MODULAR STACK MOUNTED "Q" SERIES MEDICAL AIR PLANTS WITH DESICCANT AIR DRYERS 15 THROUGH 20 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	
3DOQ15MS240D	15	30	58.3	51.0	1"	240	118	70	98	3840
3DOQ20MS240D	20	40	75.0	65.1	1"	240	118	70	98	3980

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