



## 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.

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.

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.

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.

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.



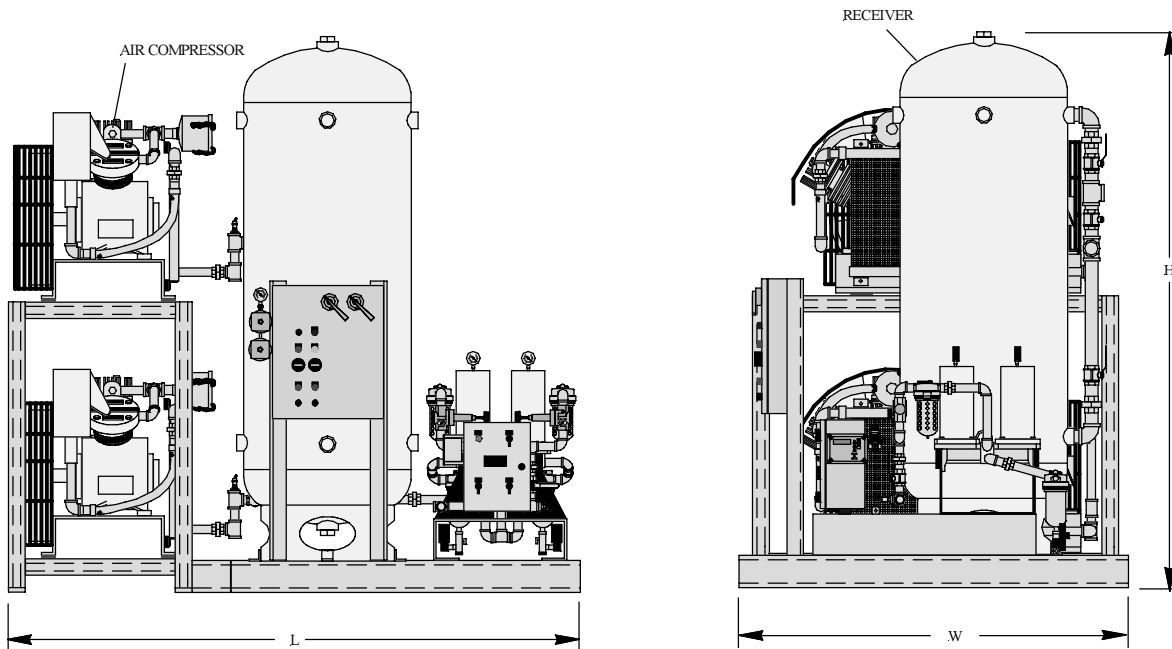
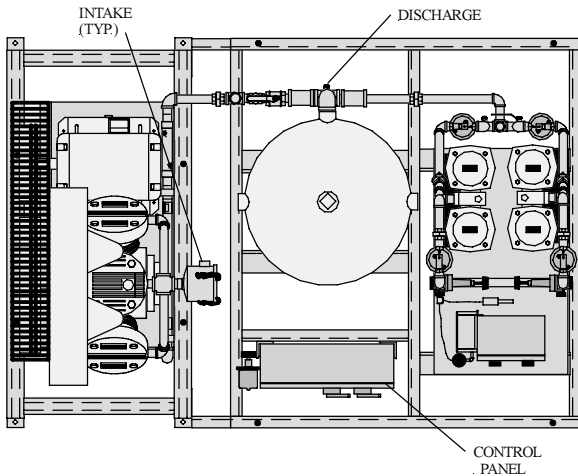
The system includes a UL listed control panel in a NEMA 12 enclosure. The panel includes the following for each pump: externally operable circuit breaker with a door interlock, control circuit transformer with fused primary and secondary coils, H-O-A switch, run light, hour meter and magnetic starter with 3 leg overload protection and reset switch. The panel is equipped with a multiple position selector switch for selection of normal operation (automatic alternation) or manual selection of lead and lag pumps if one pump is taken out of service for scheduled maintenance.

Local audible and visual alarms are provided per NFPA 99 for compressor thermal malfunction, "Backup in use", high dew point and high carbon monoxide. The alarms include indicating lights and a horn. Thermal malfunction shut-down is provided with a manual reset. The audible alarm can be cancelled with the "Silence" button. The visual alarm remains energized until the problem is corrected. Each alarm function includes dry contacts for connection to the master alarm. All control and alarm functions remain energized while any compressor remains electrically on-line.

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.

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.

**DUPLEX MODULAR STACK MOUNTED "Q" SERIES  
MEDICAL AIR PLANTS WITH DESICCANT AIR DRYERS  
15 THROUGH 20 HP  
LAYOUT AND PERFORMANCE TABLE**



| System<br>Model Number | Horsepower |       | Capacity SCFM (Each Pump) |          | Disch.<br>Conn. | Tank<br>(Gal.) | Dimensions, In. |    |    | Weight<br>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