

DUPLEX BASE MOUNTED WATER-LESS LIQUID RING MEDICAL VACUUM SYSTEMS

The EMSE CORPORATION continuous duty base mounted medical vacuum system is completely packaged, NFPA 99 and NEC compliant, featuring water-less, air-cooled, oil-sealed liquid ring vacuum pumps, U.L. listed control cabinet, an ASME receiver and 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. The system is mounted on a common structural steel base.

VACUUMPUMPS

The medical vacuum pump system requires no water. The pumps are a positive displacement, non-pulsating, liquid ring design. Standard construction is cast iron with a stainless steel shaft and mechanical seals.

Each pump provides four stages of oil and smoke removal that include built-in two stage exhaust demisters with 99.9+% efficiency to provide smoke-free exhaust.

The pumps are driven by 40 degree C rise, 3 phase, 60 cycle, NEMA design B induction type motors.

Each vacuum pump is supplied with an inlet check valve, inlet isolation valve, relief valve, exhaust separator with two stage exhaust demisters, sight level and back pressure indicators, separator drain valve, air-to-oil heat exchanger, oil line isolation valve, solenoid valve, temperature gauge, high temperature shut down switch, vacuum switch, inlet and discharge flexible connectors and a shut-off cock for gauge and vacuum switches.

RECEIVER

The system includes a vacuum receiver of ASME construction rated for 200 PSI MWP. The tank includes a vacuum gauge, valved by-pass and manual tank drain.

CONTROL PANEL

The UL listed control panel is supplied in a NEMA 12 enclosure and includes 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, H-O-A switches, magnetic starters with 3 leg overload protection and reset switches are standard.

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. It includes minimum run timers to prevent short cycle operation.

Human Machine Interface (HMI) display includes pump run indication, accumulated run time and alarm conditions.

Local "Backup in use" audible and visual alarms are provided per NFPA 99. The audible alarm can be acknowledged with the "Silence" button. The visual alarm will stay on until manually reset.

All controls and alarms will function even if one of the pumps is shut down for maintenance or repairs.

The panel includes a set of dry contacts for connection to the master alarm.

Field adjustable control switches are pre-set to operate the lead vacuum pump between 20" Hg and 25" Hg. The stand-by vacuum pump will automatically start at 18" Hg if one of the other vacuum pump fails to operate.

The medical vacuum system and its component parts will undergo a complete electric and pneumatic test prior to shipment.



WARRANTY

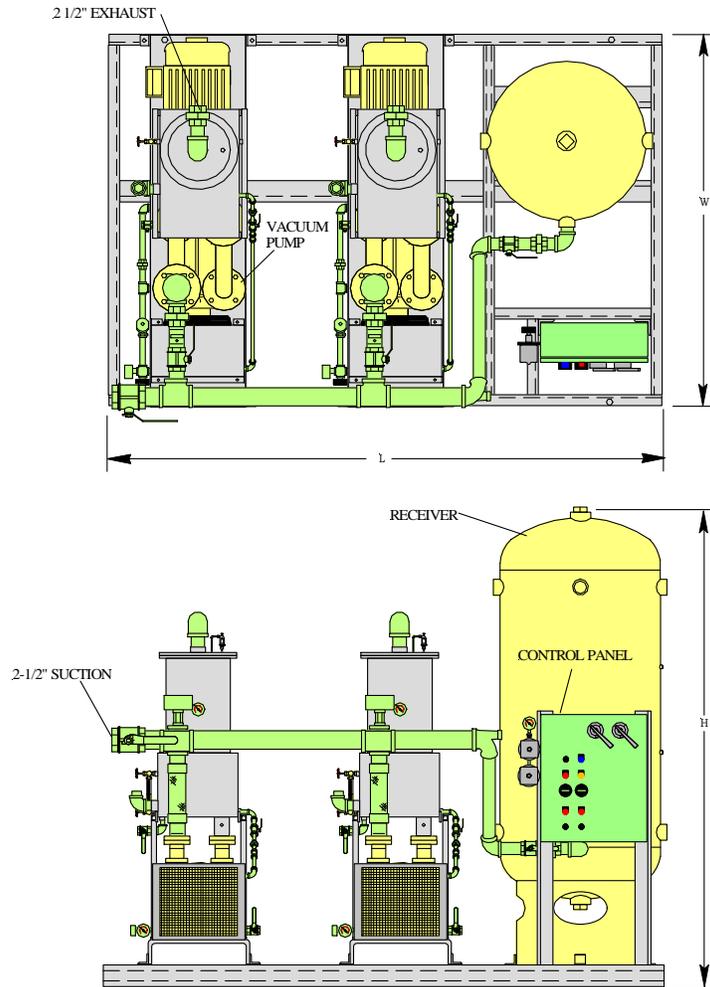
The medical vacuum system is guaranteed by the manufacturer for a period of 18 months from the date of start-up or 24 months from the date of shipment (whichever comes first) against defects in design, materials, or construction. In addition, the **pumps are guaranteed for 5 years** from the date of shipment.

Optional System Accessories

(only checked options will be supplied)

- Rust protection receiver lining
- Galvanized receiver
- Receiver gauge glass

DUPLEX BASE MOUNTED WATER-LESS LIQUID RING MEDICAL VACUUM SYSTEMS LAYOUT AND PERFORMANCE TABLE



Model Number	Motor Horsepower		Performance Data SCFM, Each Pump		Tank Size Gal	Water Usage GPM	Dimensions Inches			System Weight Lbs.
	Each	Total	19" Hg	25" Hg			L	W	H	
1DWOT15B200	15	30	87.6	39.3	200	None	98	65	86	2540
1DWOT20B200	20	40	113.1	47.5	200	None	98	70	86	2990

Notes: 1. To convert Free Air Capacity (SCFM) to Expanded Air Capacity (ACFM):
 at 19" Hg multiply SCFM by 2.74
 at 25" Hg multiply SCFM by 6.1
 2. Maximum ambient temperature: 95°F. For higher ambient temperatures consult factory.

Power Requirements:

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