DUPLEX BASE MOUNTED LIQUID RING MEDICAL VACUUM SYSTEMS WITH TOTAL SEAL RECIRC. 15 THROUGH 30 HP

The EMSE CORPORATION continuous duty base mounted Medical Vacuum system is a completely packaged NFPA 99 and NEC compliant assembly featuring liquid ring vacuum pumps with total seal water recirculation, a U.L. listed electrical control cabinet, an ASME receiver and the necessary accessories required to meet and exceed the current code requirements.

All components are pre-piped and pre-wired to single-point service connections. The only field connections are air intake, air discharge, seal water supply, chilled water supply and return, drain and power connection at the control panel.

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

VACUUM PUMPS

The medical vacuum pumps are of the positive displacement, non-pulsating, liquid ring design capable of passing fluids and soft solids directly to waste without damage. The standard construction is cast iron with bronze impeller, stainless steel shaft and mechanical seals.

Also included as standard equipment for each vacuum pump are: inlet check valve, inlet isolation valve, discharge separator-silencer with gauge glass, shell and tube heat exchanger with chilled water isolation valves, bronze or stainless steel flexible connectors on inlet, discharge and purge water supply lines, vacuum control switch as well as copper tubing with shut-off cock for gauge and vacuum switches. Each seal water line consists of an isolation valve, Y-strainer and temperature switch. Each purge water line consists of isolation valve, Y-strainer, back-flow preventer, solenoid valve, flow control valve and priming valve.

Each vacuum pump is driven by a 3 phase, 60 cycle, ODP NEMA design B motor.

RECEIVER

The system includes a vacuum storage tank of ASME construction rated for full vacuum service. The tank is equipped with a vacuum gauge, valved by-pass and manual tank drain.

CONTROL PANEL

The system includes a UL labeled control panel in a NEMA 12 enclosure. The panel includes the following standard accessories for **each** pump: externally operable circuit breaker with door interlock, control circuit transformer with fused primary and secondary coils, H-O-A switch, run light, magnetic starter with 3 leg overload protection and reset switch, chilled water supply malfunction light, adjustable purge timer and minimum run timer to prevent short cycle operation (for 30 HP pumps). 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 of the pumps is taken out of service due to scheduled maintenance.

Local audible and visual alarms are provided per NFPA 99 for "Reserve in use" and also for "chilled water supply malfunction". The alarms include indicating lights as well as the horn. In addition, the chilled water supply malfunction is provided with a manual reset. The audible alarm can be acknowledged with the "Silence" button. The visual alarm will remain energized until the problem has been corrected.

Each alarm function includes a set of dry contacts for connection to the master alarm. All control and alarm functions will remain energized while any vacuum pump in the system remains electrically on-line. Automatic adjustable purge system will maintain system cleanliness.

In case of the chilled water supply malfunction the vacuum system will automatically switch to partial seal recirculation to conserve water.

Field adjustable control switches are pre-set to operate the lead vacuum pump between 19" Hg and 24" Hg. The lag vacuum pump will automatically start at 18" Hg if the lead vacuum pump fails to operate.

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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.

Optional System Accessories

(only checked options will be supplied)

- ☐ Rust protection receiver lining
- ☐ Galvanized receiver
- ☐ Flow switches
- ☐ Seal water shock arresters
- ☐ Vacuum relief valve
- ☐ Receiver gauge glass
- ☐ Seal water temperature gauge

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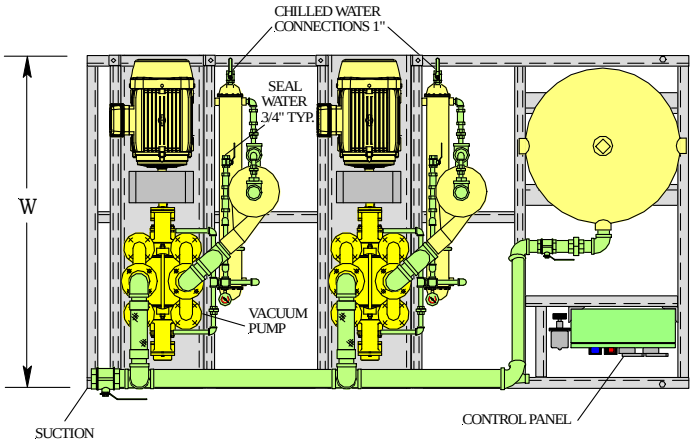
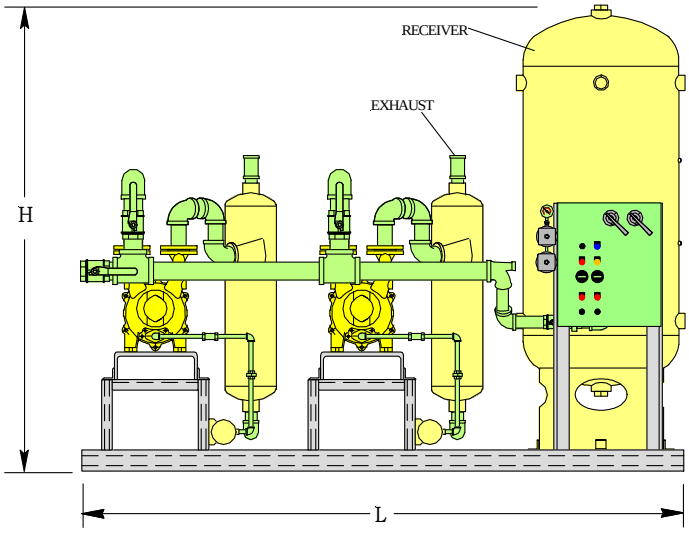
15 THROUGH 30 HP
LAYOUT AND PERFORMANCE TABLE





System Model Number	Horsepower Each	Horsepower Total	SCFM (Each Pump) 19" Hg	SCFM (Each Pump) 25" Hg	Seal Water GPM	Chilled Water GPM	Suct. Conn.	Exh. Conn.	Over-flow Conn.	Tank (Gal.)	Dimensions, In. L	Dimensions, In. W	Dimensions, In. H	Weight Lbs.
1DWSH15B200T	15	30	90.5	33.6	1	10-12	3"	2.5"	2"	200	116	66	86	3510
1DWSH20B200T	20	40	123.0	45.1	1	10-12	3"	2.5"	2"	200	116	66	86	3620
1DWSH30B200T	30	60	175.0	65.6	1	12-15	4"	4"	2"	200	134	76	86	4760

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

Power Requirements:

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