

The EMSE CORPORATION stack mounted Medical Vacuum system is a completely packaged NFPA 99 and NEC compliant assembly featuring dry rotary vane 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.

#### **VACUUM PUMPS**

The medical vacuum pumps are continuous duty, oil-less, rotary vane, air-cooled. Each vacuum pump is driven by a 3 phase, 60 cycle, TEFC NEMA C-face motor.

Each vacuum pump is supplied with an inlet check valve, inlet isolation valve, inlet filter screen, 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 19" Hg and 24" Hg, the lag pump between 18" Hg and 23" Hg. The stand-by vacuum pump will automatically start at 16" Hg if the lead vacuum pump fails to operate.

## **CONTROL PANEL - OPTIONS**

### **LEVEL 1 TOUCH SCREEN HMI:**

A 4.3" touch screen with screen displays inclusive of:

- Vacuum transducer with back-up vacuum switch
- Service alerts, runtime hour meters, system status, system vacuum level
- Visual/audible alarm indications with isolated contacts for all standard remote alarms
- Event log recording alarms and system activity
- BacNet Gateway: Optional

### **LEVEL 2 TOUCH SCREEN HMI**

A 5.7" touch screen with screen displays inclusive of:

- Vacuum transducer with back-up vacuum switch
- Service alerts, runtime hour meters, system status, system vacuum level
- Visual/audible alarm indications with isolated contacts for all standard remote alarms
- Event log recording alarms and system activity
- Ethernet connectivity and embedded web page for remote monitoring of alarms and system status
- Electronic notifications of alarms and warnings
- BacNet Gateway: Optional

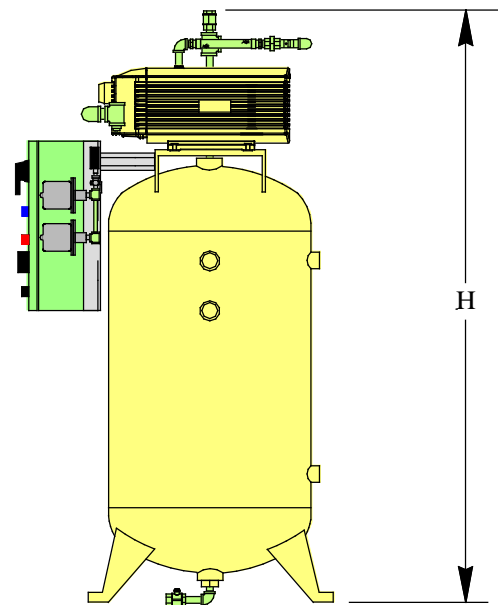
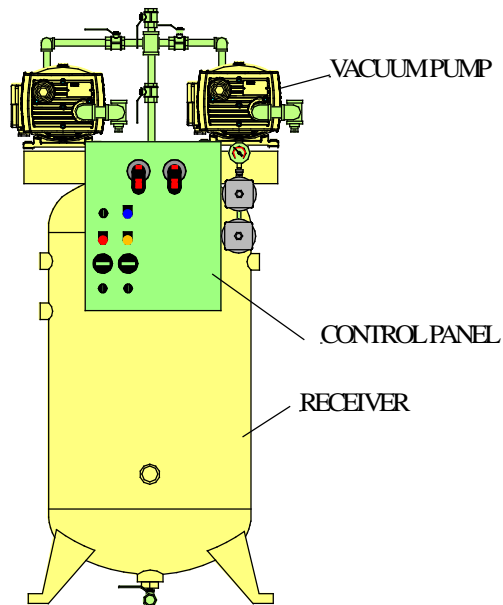
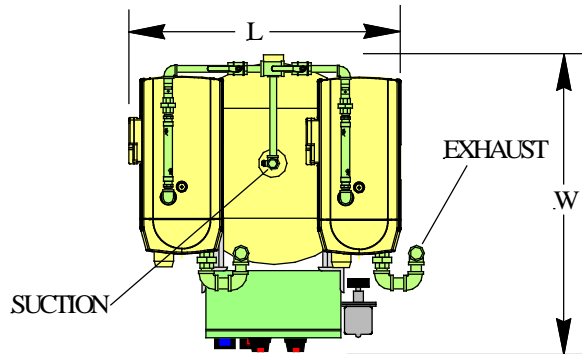
## **WARRANTY**

The Medical Vacuum system is guaranteed by the manufacturer for a period of 24 months from the date of start-up or 30 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)

- |  |   |
|--|---|
| <input type="checkbox"/> Level 1 Touch Screen HMI            | <input type="checkbox"/> Receiver gauge glass                   |
| <input type="checkbox"/> Level 2 Touch Screen HMI            | <input type="checkbox"/> Exhaust Muffler                        |
| <input type="checkbox"/> BacNet Gateway                      | <input type="checkbox"/> Bacteria Inlet Filter with Drain Flask |
| <input type="checkbox"/> Rust protection receiver lining     |   |
| <input type="checkbox"/> Galvanized receiver                 |   |
| <input type="checkbox"/> High discharge temperature switches |   |
| <input type="checkbox"/> External intake filters             |   |



System Model Number	Horsepower		Capacity (SCFM) @ 19" Hg		Suction Conn.	Exhaust Conn.	Tank (Gallon)	Dimensions (inches)			Weight Lbs.	System FLA		
	Each	Total	Pump	System				L	W	H		208V	230V	460V
1DOB1.5T80V	1.2	2.4	5.3	5.3	1-1/4"	1"	30	32	38	67	460	5.9	5.6	3.1
1DOB2T80V	1.7	3.4	8.0	8.0	1-1/4"	1"	30	32	38	67	530	7.7	7.2	3.7

**Notes:**

1. To convert Free Air Capacity (SCFM) to Expanded Air Capacity (ACFM):  
At 19" Hg multiply SCFM by 2.74
2. Maximum ambient temperature: 100° F for standard systems, 90° F if equipped with variable speed drive
3. Allow 36 inches in front of control panel for maintenance and 24" clearance on all other sides
4. Dimensions are subject to change