

## Specification

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### General

The Powerex medical vacuum system is designed to create a suction system to remove unwanted fluids or gases from hospital/ laboratory working areas. The medical vacuum system package is compliant with the NFPA 99 requirements for Risk Category 1 systems. Each system is completely tested before shipment and

includes:

- Multiple vacuum pumps and associated equipment.
- AMSE air receiver.
- Medical control panel.

Each pump is factory piped to a common intake manifold. Vibration isolation pads are included with the system.

### Lubricated Rotary Vane Vacuum Pump

The medical vacuum pumps shall be of the rotary vane air-cooled design. Each vacuum pump shall be directdriven through a shaft coupling by a TEFC electric motor. Belt drives shall not be permitted. The vacuum pumps shall be mounted on vibration isolators.

- Each vacuum pump shall be air-cooled and have absolutely no water requirements.
- Each pump is equipped with a 10 micron inlet filter for removal of particulates.
- Lubrication shall be provided by an integral, fully recirculating oil supply that is filtered by an automotive-type, spin-on oil filter. Non-recirculating (once-through) or partial re-circulating oil supply systems shall not be permitted. Each vacuum pump shall be capable of operation with ISO 100 viscosity oil.
- The oil separation systems shall be integral and shall consist of no less than three stages of internally installed oil and smoke eliminators through which the exhaust gas stream must pass. This system shall consist of bulk separation, oil mist elimination, and smoke elimination, and shall be capable of removing 99.9+ percent of all oil and smoke particles from the exhaust gas stream.
- Each vacuum pump shall include a built-in, antisuck-back valve, mounted at the pump inlet, and three sliding vanes.

### Motor

The motor is continuous duty, C-face, TEFC, suitable for 208-230, or 460V, 3 phase, 60 hertz electrical operation.

### Air Receiver

The system shall include an ASME rated air receiver. The tank shall be equipped with a vacuum gauge, a sight gauge, by-pass valves, and a manual drain.

### Premium NFPA Control Panel

The control system provides automatic lead/lag sequencing and automatic alternation of all pumps in order to equalize the amount of usage among the available vacuum pumps. The Premium NFPA

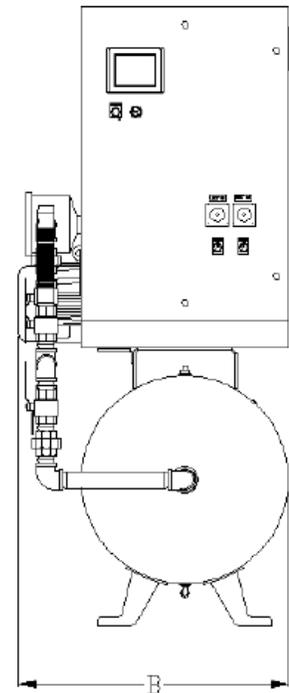
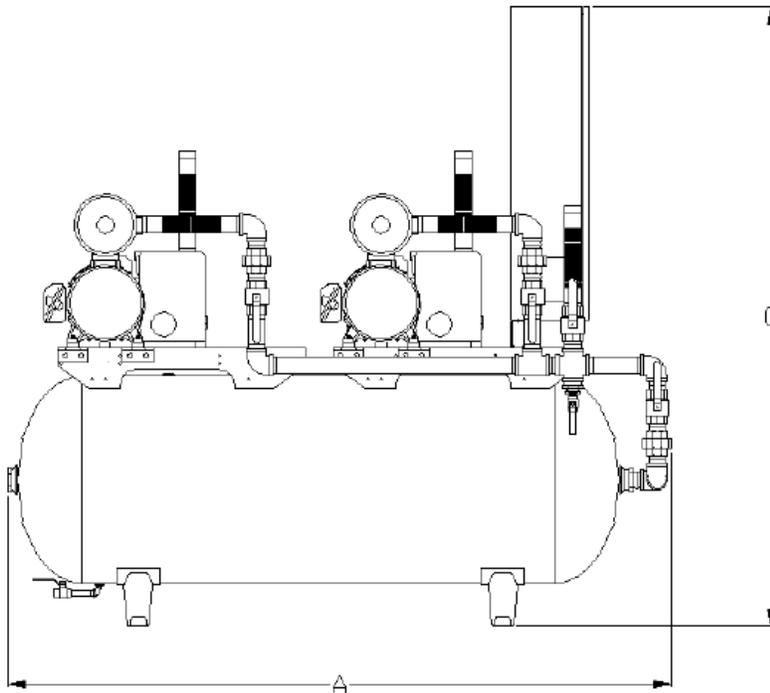
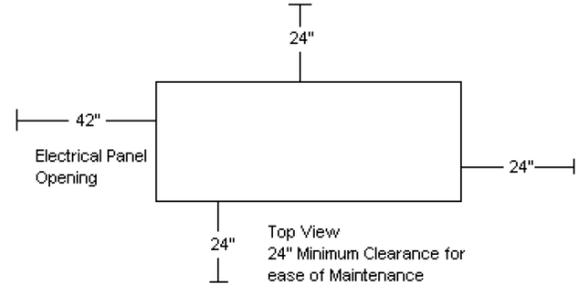
Control panel shall include a gateway server card and all features listed below:

- PLC controller and a color touch screen panel which displays the operating status of the unit.
- Building automation communication gateway with BacNet® protocol and Web server features. Web servers features include email notifications in case the system is in alarm or has achieved one its maintenance intervals and requires service.
- Ethernet port for connection to BacNet® server or direct connection to facility Ethernet for viewing of system operations and status via device IP-address.
- UL508A listed control panel in a NEMA 12 enclosure. The panel door will include: the HMI touch screen, an audible and visual alarms with an acknowledge button, and an HOA switch for each pump.
- Magnetic starters.
- Vacuum transducer for process control.
- Single point power connection.
- Redundant 120Vac control transformers with fused primary and secondary protection.
- System overload trip, high temperature conditions or maintenance intervals for the pump will result in visual and audible alarms.

### Available Options

- Oil temperature gauges.
- Internal tank lining for corrosion resistance.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet
VTD0153	71"	29"	68"	1 ½"	1 ½"
VTD0203	70"	29"	68"	1 ½"	1 ½"
VTD0303	70"	31"	68"	1 ½"	1 ½"
VTD0404	77"	32"	72"	1 ½"	1 ½"
VTD0504	78"	36"	71"	2"	2"
VTD0755	85"	44"	74"	2"	2"
VTD1006	90"	50"	75"	2"	2"



Medical Vacuum Tankmount Duplex with Premium Controls											
Model	HP	SCFM @ 19" Hg	NFPA System Capacity <sup>(1)</sup>	Tank Size (gal)	BTU/Hr <sup>(2)</sup>	dB(A) Level <sup>(3)</sup>	System F.L.A.			System Weight (lbs)	
							208V	230V	460V		
VTD0153	1.5	7	7	80	3,251	63	11	10.8	6.4	850	
VTD0203	2	11	11	80	4,335	66	13.2	12.8	7.4	950	
VTD0303	3	17	17	80	6,503	66	18.8	17.6	9.8	1,100	
VTD0404	5	25	25	120	10,838	68	29.6	28	15	1,250	
VTD0504	5	37	37	120	10,838	74	30.6	27.8	14.9	960	
VTD0755	7.5	52	52	200	16,256	80	44	42.8	22.4	2,200	
VTD1006	10	77	77	240	21,675	81	54.8	53.2	27.6	2,300	

Notes:

- 1 – System Capacity is shown with one or more pumps in reserve per NFPA 99.
- 2 – BTU/Hr levels are shown with reserve pump(s) on standby.
- 3 – dB(A) levels are shown with one pump in reserve per NFPA 99.
- 4 – 3 Year Limited Warranty.