



## Lubricated Vane Medical Vacuum System with Premium NFPA Controls

Rev. 2/27/14

### 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.

### ROTARY VANE VACUUM PUMP

The medical vacuum pumps shall be of the rotary vane air-cooled design. Each vacuum pump shall be direct-driven 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 re-circulating oil supply that is filtered by an automotive-type, spin-on oil filter. Non-re-circulating (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, anti-suck-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<sup>®</sup> 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<sup>®</sup> 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 color 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

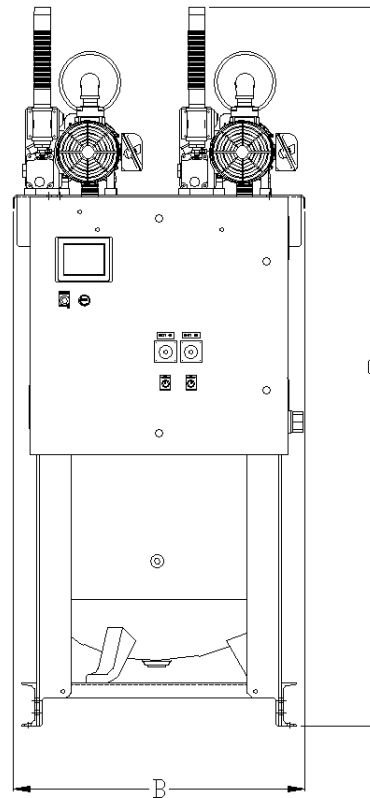
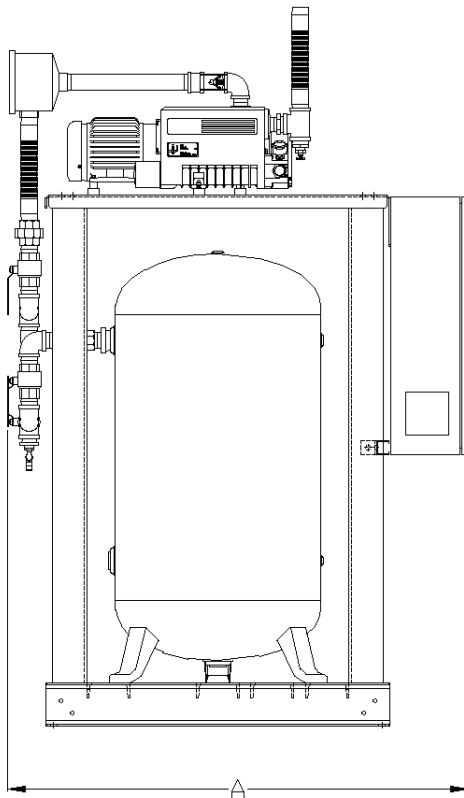
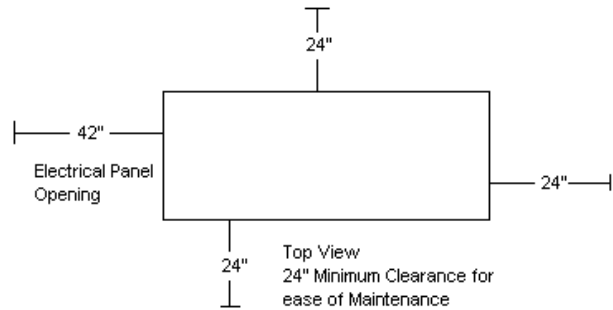
- Oil temperature gauges
- Internal tank lining for corrosion resistance



# Medical Vacuum Tankmount 1.5-2HP with Premium Controls

Rev. 7/25/12

MODEL	DIM. A	DIM. B	DIM. C	Inlet	Outlet
VVTD0153	54"	34"	85"	1-1/2"	1-1/2"
VVTD0203	54"	34"	85"	1-1/2"	1-1/2"



Medical Vacuum Tankmount with Premium Controls										
MODEL	HP	SCFM @ 19" Hg	NFPA System Capacity <sup>1</sup>	TANK SIZE (Gal.)	BTU/HR <sup>2</sup>	dB(A) <sup>3</sup> LEVEL	SYSTEM F.L.A.			SYSTEM WT. (LBS.)
							208V	230V	460V	
VVTD0153	1.5	7	7	80V	3,818	70	11	10.8	6.4	1,200
VVTD0203	2	11	11	80V	5,090	70	13.2	12.8	7.4	1,300

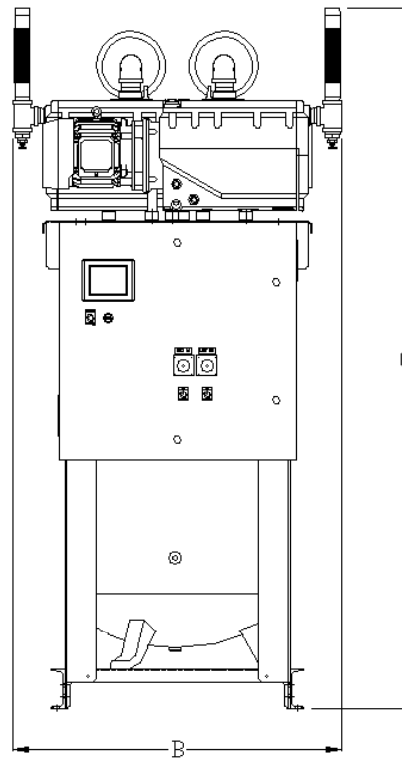
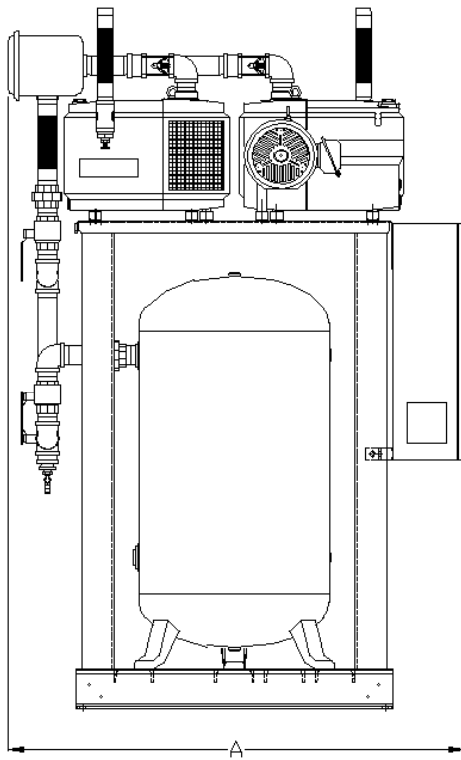
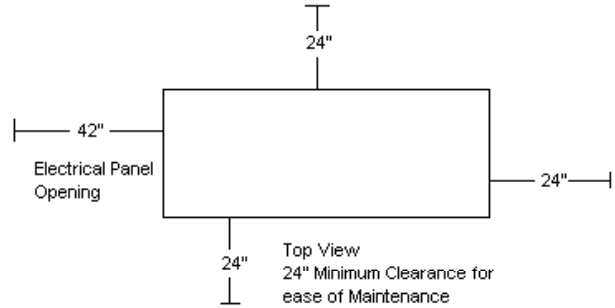
- Notes:
- 1- System Capacity is shown with one or more pumps in reserve per NFPA 99
  - 2- BTU/HR Levels are shown with reserve pump(s) on standby
  - 3- dB(A) is shown with one pump in reserve per NFPA99
  - 4- 3 Year Limited Warranty



# Medical Vacuum Tankmount 3-5HP with Premium Controls

Rev. 7/25/12

MODEL	DIM. A	DIM. B	DIM. C	Inlet	Outlet
VVTD0303	54"	34"	85"	1-1/2"	1-1/2"
VVTD0403	54"	34"	85"	1-1/2"	1-1/2"
VVTD0503	58"	42"	89"	2"	2"



Medical Vacuum Tankmount with Premium Controls											
MODEL	HP	SCFM @ 19" Hg	NFPA System Capacity <sup>1</sup>	TANK SIZE (Gal.)	BTU/HR <sup>2</sup>	dB(A) <sup>3</sup> LEVEL	SYSTEM F.L.A.			SYSTEM WT. (LBS.)	
							208V	230V	460V		
VVTD0303	3	17	17	80V	7,635	70	18.8	17.6	9.8	1,400	
VVTD0403	5	26	26	80V	12,725	71	29.6	28	15	1,500	
VVTD0503	5	41	41	80V	12,725	74	30.4	28	15	1,525	

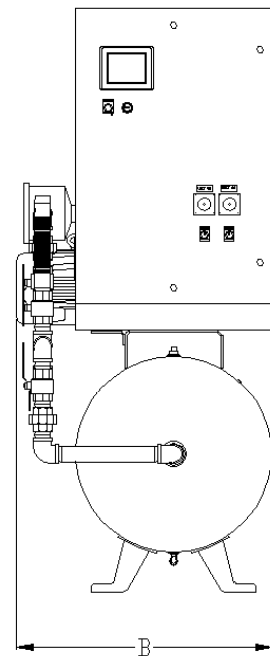
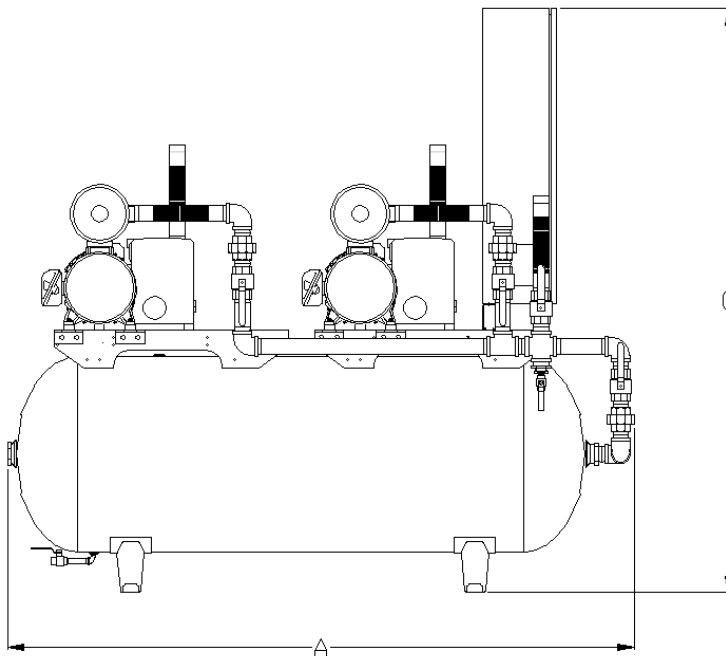
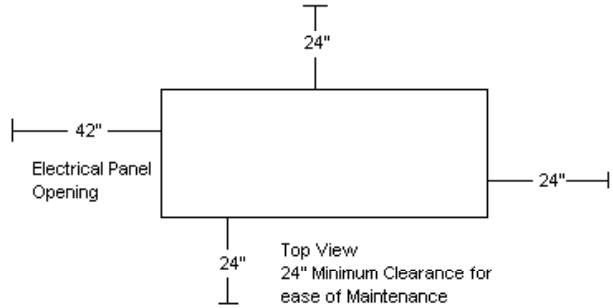
- Notes:
- 1- System Capacity is shown with one or more pumps in reserve per NFPA 99
  - 2 - BTU/HR Levels are shown with reserve pump(s) on standby
  - 3 - dB(A) is shown with one pump in reserve per NFPA99
  - 4 - 3 Year Limited Warranty



# Medical Vacuum Tankmount with Premium Controls

Rev. 7/25/12

MODEL	DIM. A	DIM. B	DIM. C	Inlet	Outlet
VTD0153	71"	29"	68"	1-1/2"	1-1/2"
VTD0203	70"	29"	68"	1-1/2"	1-1/2"
VTD0303	70"	31"	68"	1-1/2"	1-1/2"
VTD0404	77"	32"	72"	1-1/2"	1-1/2"
VTD0504	77"	38"	71"	2"	1-1/2"
VTD0755	85"	44"	74"	2"	2"
VTD1006	90"	50"	75"	2"	2"



Medical Vacuum Tankmount with Premium Controls										
MODEL	HP	SCFM @ 19" Hg Each	NFPA System Capacity <sup>1</sup>	TANK SIZE (Gal.)	BTU/HR <sup>2</sup>	dB(A) <sup>3</sup> LEVEL	SYSTEM F.L.A.			SYSTEM WT. (LBS.)
							208V	230V	460V	
VTD0153	1.5	7	7	80	3,818	70	11	10.8	6.4	850
VTD0203	2	11	11	80	5,090	70	13.2	12.8	7.4	950
VTD0303	3	17	17	80	7,635	70	18.8	17.6	9.8	1,100
VTD0404	5	26	26	120	12,725	71	29.6	28	15	1,250
VTD0504	5	41	41	120	12,725	74	30.4	28	15	1,250
VTD0755	7.5	52	52	200	19,088	79	44	42.8	22.4	2,200
VTD1006	10	77	77	240	25,450	81	54.8	53.2	27.6	2,300

- Notes:
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  - 2 - BTU/HR Levels are shown with reserve pump(s) on standby
  - 3 - dB(A) is shown with one pump in reserve per NFPA99
  - 4 - 3 Year Limited Warranty