

Specification

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

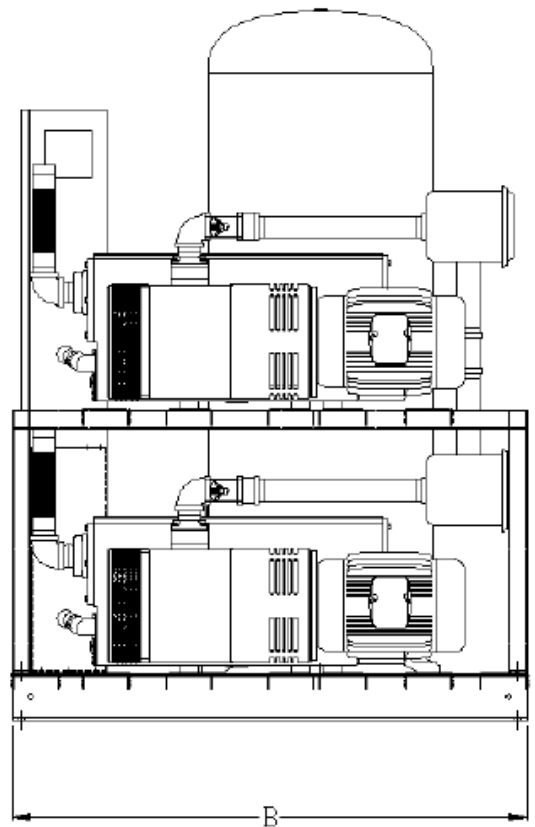
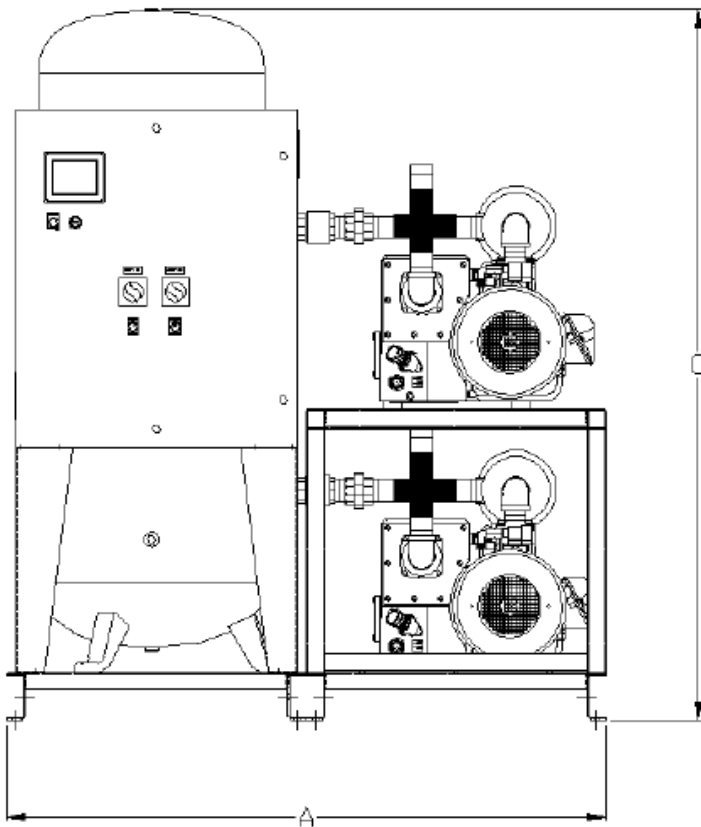
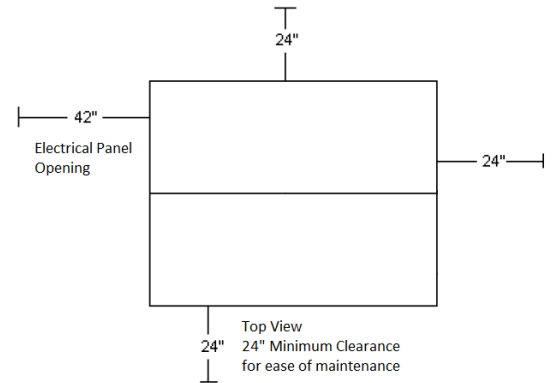
Control panel shall include a gateway server card and all features listed below:

- 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 (x2)
VPD0504	64"	55"	76"	2"	2"
VPD0754	66"	55"	76"	2"	2"
VPD1004	66"	55"	76"	2"	2"
VPD1005	66"	55"	83"	2"	2"

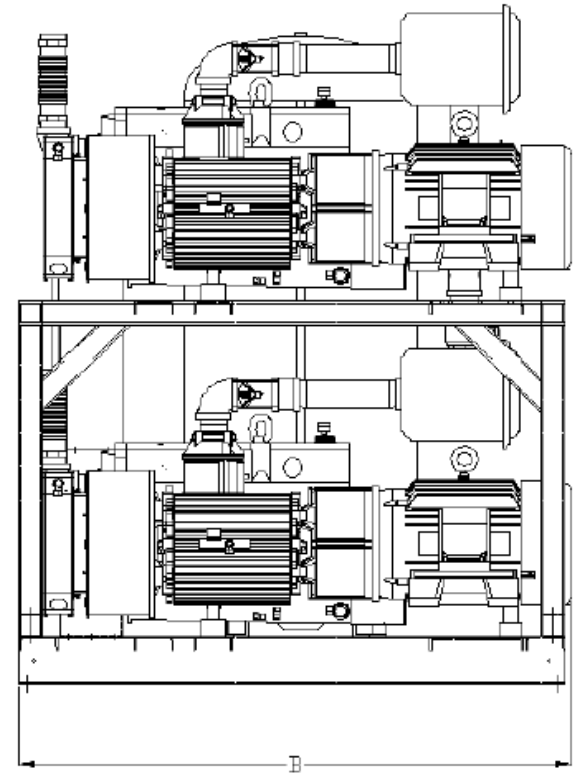
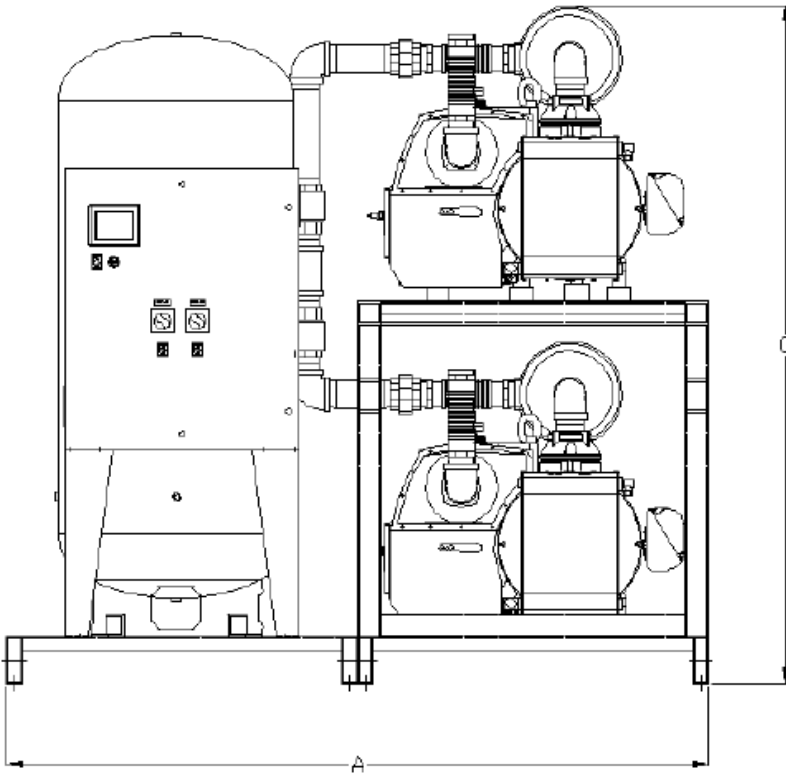
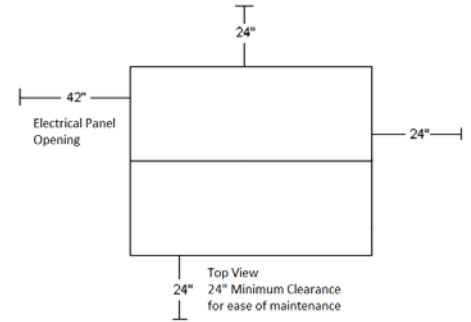


Medical Vacuum Package Seismic with Premium Controls										
Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
VPD0504	5	37	37	120	10,838	72	31.6	27.8	14.9	1,550
VPD0754	7.5	52	52	120	16,256	80	44	42.8	22.4	2,000
VPD1004	10	77	77	120	21,675	81	54.8	53.2	27.6	2,300
VPD1005	10	77	77	200	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.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet
VPD1505	90"	70"	87"	3"	3"
VPD2005	90"	70"	87"	3"	3"
VPD2505	90"	71"	87"	3"	3"

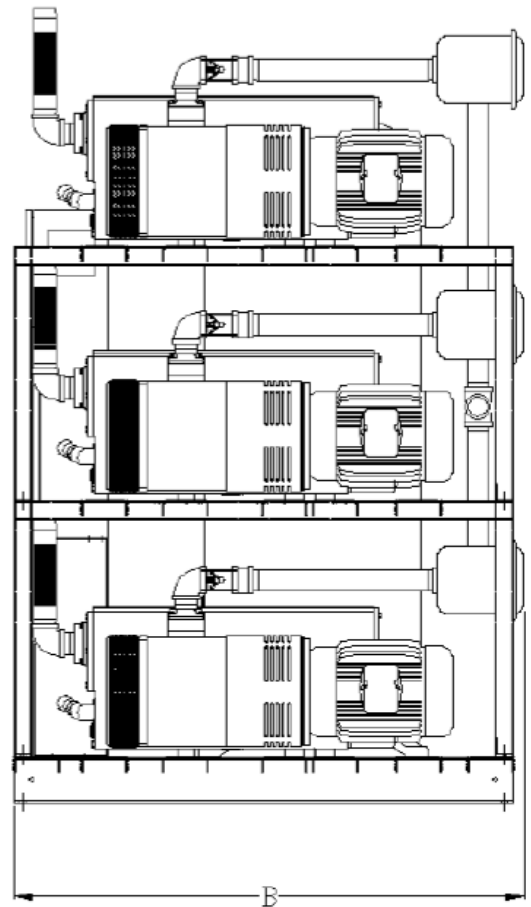
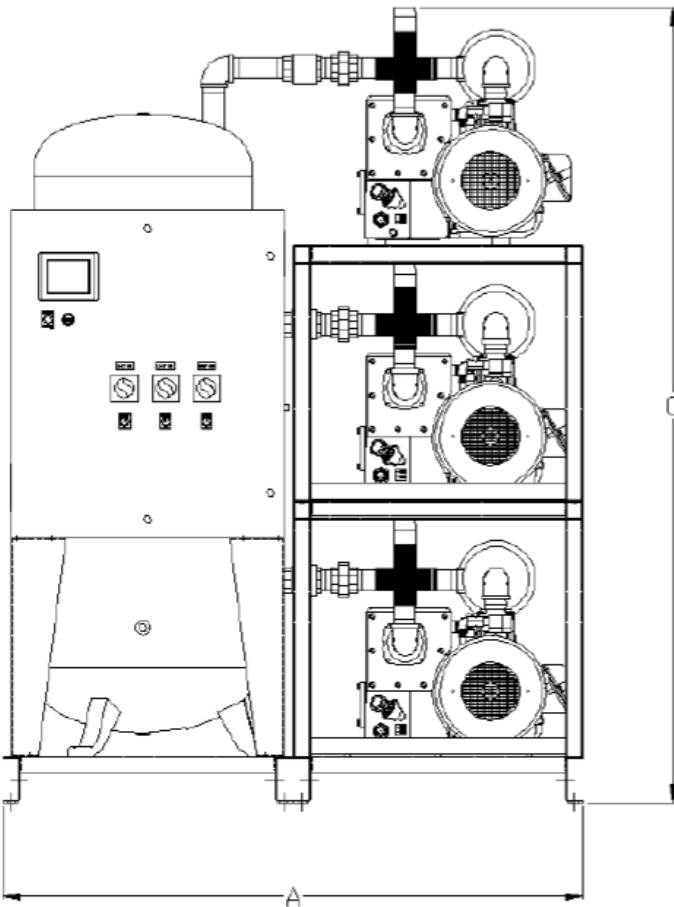
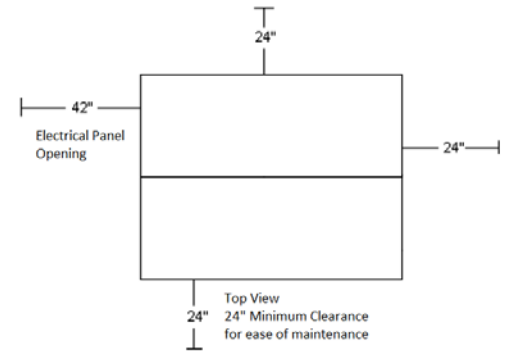


Medical Vacuum Package with Premium Controls										
Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
VPD1505	15	111	111	200	32,513	83	82.8	76.8	39.4	3,200
VPD2005	20	137	137	200	43,350	84	110	106	54	3,600
VPD2505	25	168	168	200	54,188	85	138	126	64	5,000

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.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet (x3)
VPT0504	66"	55"	88"	2"	2"
VPT0754	66"	56"	88"	3"	2"
VPT1004	66"	56"	88"	3"	2"



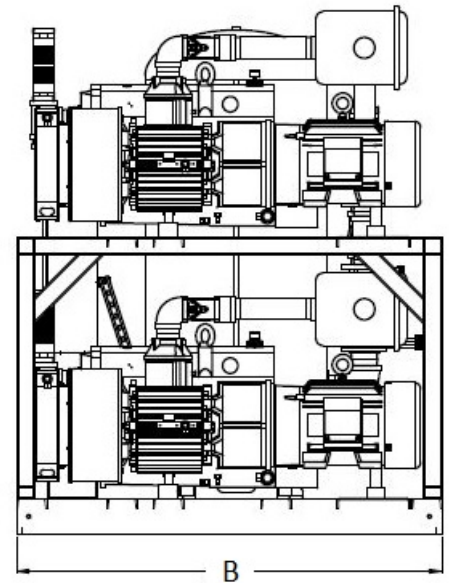
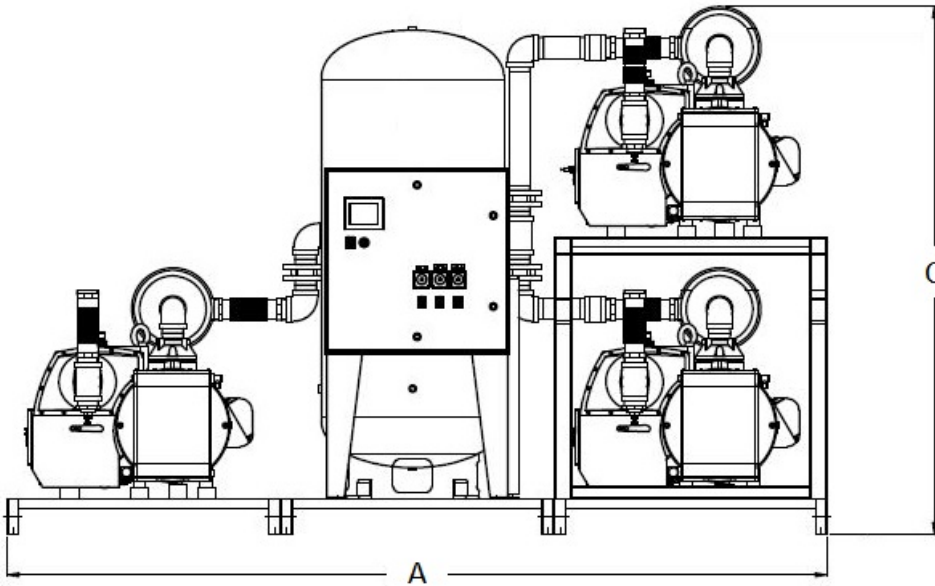
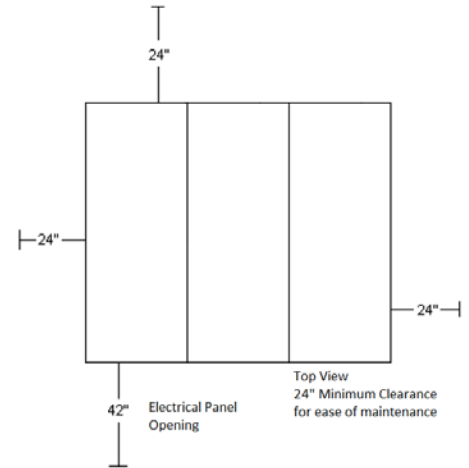
Medical Vacuum Package Triplex with Premium Controls

Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
VPT0504	5	37	74	120	21,676	75	46.4	40.7	21.4	1,800
VPT0754	7.5	52	104	120	32,512	83	65	63.2	32.6	2,450
VPT1004	10	77	154	120	43,350	84	81.2	78.8	40.4	2,750

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.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet
VPT1505	135"	70"	87"	4"	3"
VPT2005	135"	70"	87"	4"	3"
VPT2505	135"	71"	87"	4"	3"

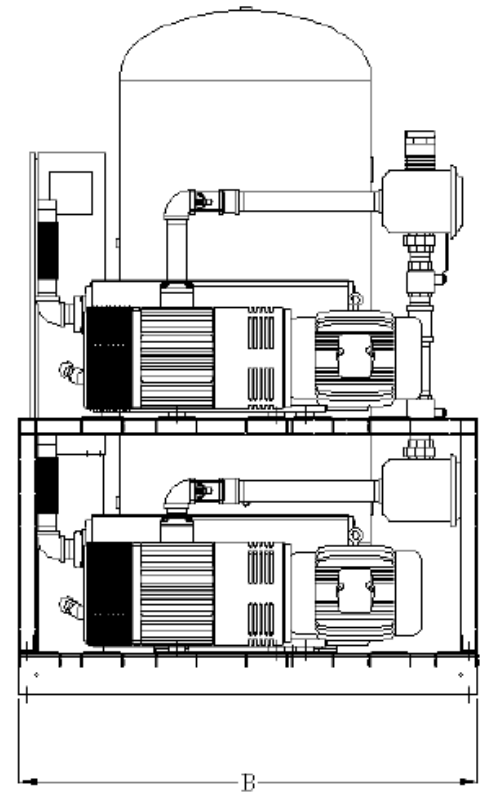
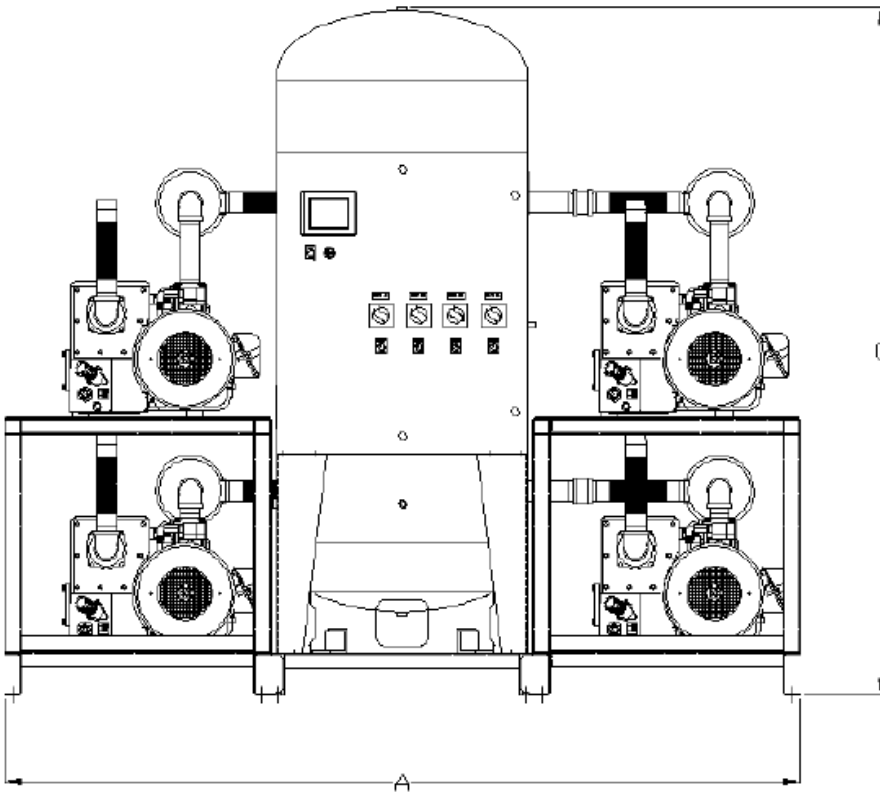
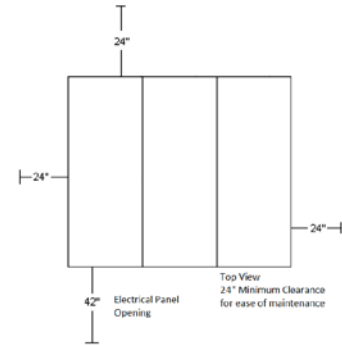


Medical Vacuum Package with Premium Controls										
Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
VPT1505	15	111	222	240	65,026	86	123.2	114.2	58.1	5,700
VPT2005	20	137	274	240	86,700	87	164	158	80	6,200
VPT2505	25	168	336	240	108,376	88	206	188	95	6,850

Notes:

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

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet (x4)
VPQ0505	98"	55"	83"	3"	2"
VPQ0755	98"	55"	83"	3"	2"
VPQ1005	98"	55"	83"	3"	2"

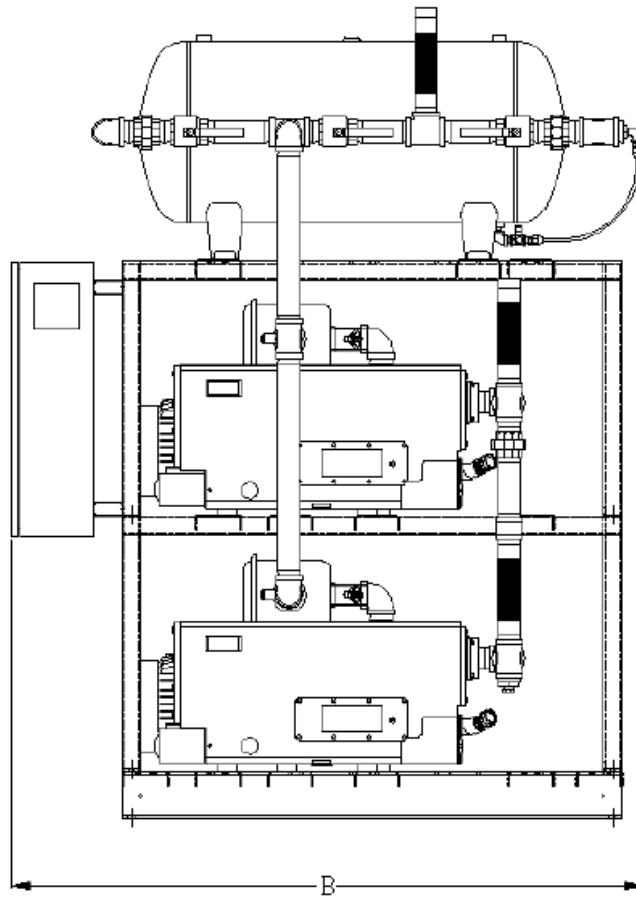
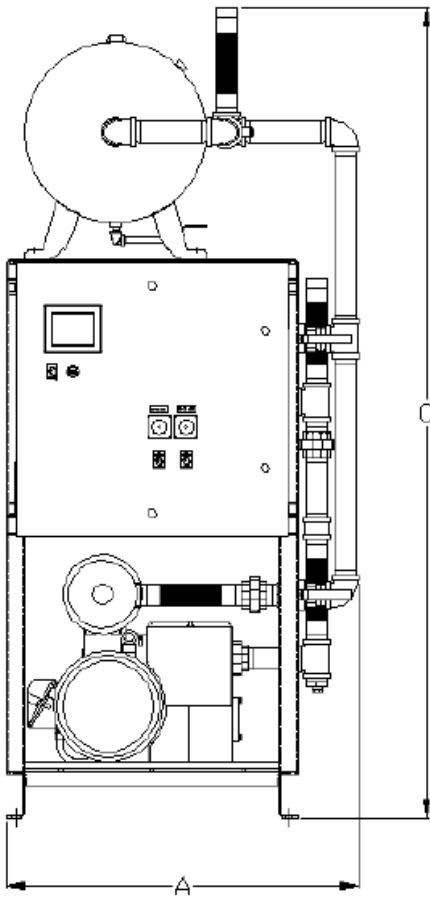
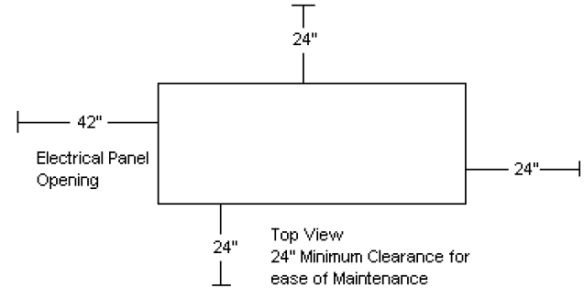


Medical Vacuum Package Quadplex with Premium Controls										
Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
VPQ0505	5 (4)	37	111	200	32,514	77	61.2	53.6	27.8	2,500
VPQ0755	7.5 (4)	52	156	200	48,768	85	86	83.6	42.8	3,000
VPQ1005	10 (4)	77	231	200	65,025	86	107.6	104.4	53.2	3,600

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.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet
VPDT0402	40"	70"	89"	1 ½"	1 ½"
VPDT0502	39"	70"	89"	2"	2"
VPDT0752	39"	70"	89"	2"	2"

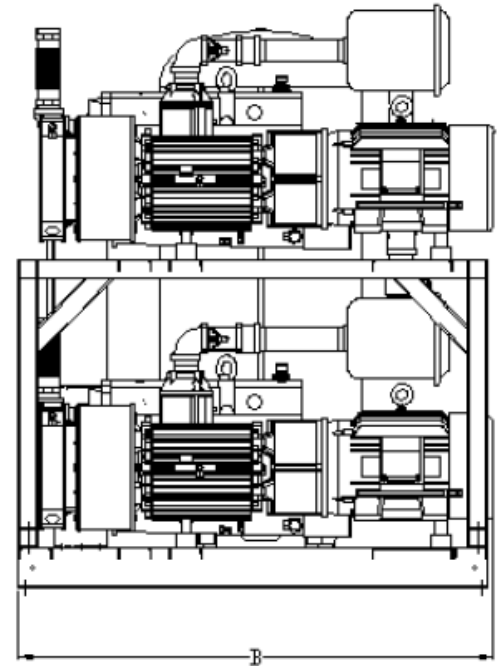
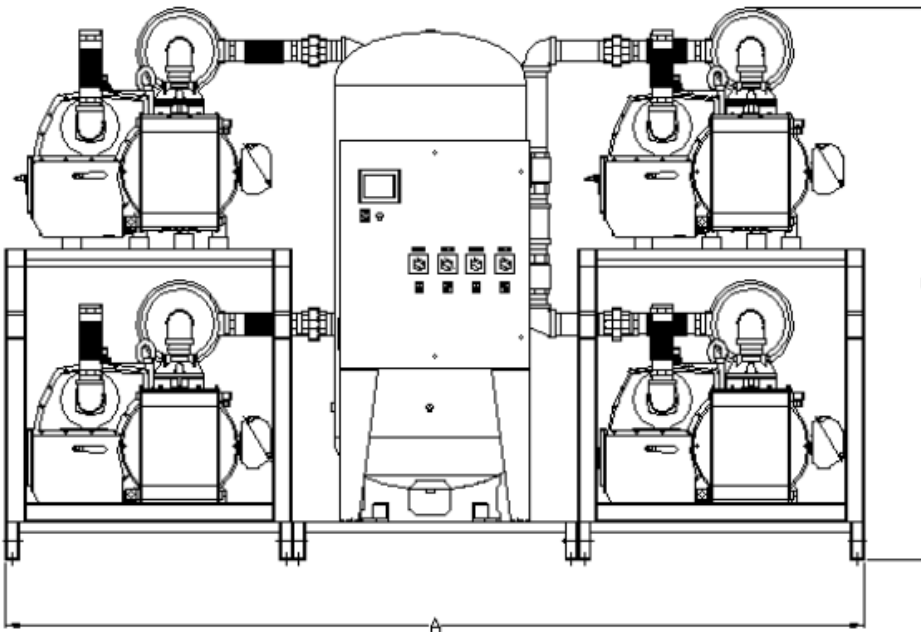
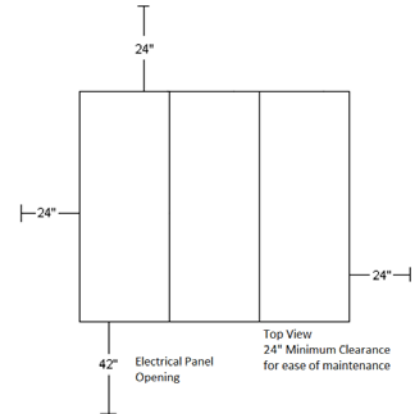


Medical Vacuum Tankmount with Premium Controls											
Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)	
							208V	230V	460V		
VPDT0402	5	25	25	60	10,838	68	29.6	28	15	1,590	
VPDT0502	5	37	37	60	10,838	72	31.6	27.8	14.9	1,815	
VPDT0752	7.5	52	52	60	16,256	80	44	42.8	22.4	2,295	

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.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet (x4)
VPQ1505	135"	70"	90"	4"	3"
VPQ2005	135"	70"	90"	4"	3"
VPQ2505	135"	70"	90"	4"	3"



Medical Vacuum Package Quadplex with Premium Controls											
Model	HP	SCFM @ 19" Hg	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)	
							208V	230V	460V		
VPQ1505	15 (4)	111	333	200	97,539	88	163.6	151.6	76.8	7,000	
VPQ2005	20 (4)	137	411	200	130,050	89	218	210	106	7,700	
VPQ2505	25 (4)	168	504	200	162,564	90	274	250	126	8,600	

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.