

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.

Claw Vacuum Pump

Each pump shall be a rotary claw type vacuum pump, and shall be direct-driven through a shaft coupling by a C-face, TEFC electric motor.

- Each vacuum pump shall be dry-running, featuring two claw-type, non-contacting rotors and shall not require any sealing fluid in the pumping chamber, assuring virtually maintenance-free operation.
- Each vacuum pump shall include an internal relief valve, and a built-in, anti-suck-back valve mounted at the pump inlet.
- Each pump within the system shall include a check valve, inlet and discharge flex connectors, a 5 micron inlet filter and a pump isolation valve.

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.

Optional VFD Control Panel

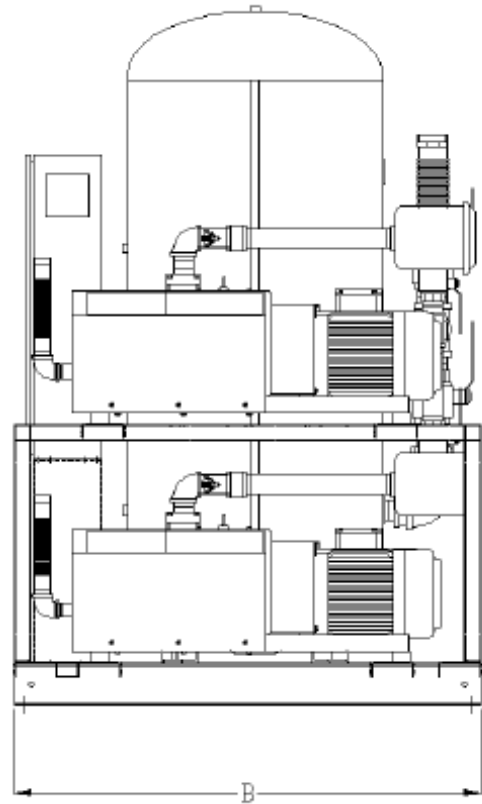
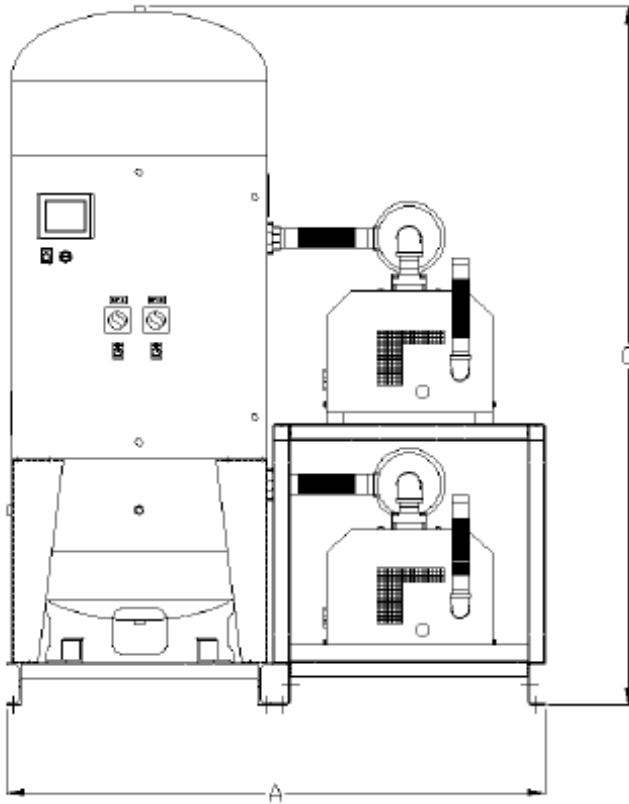
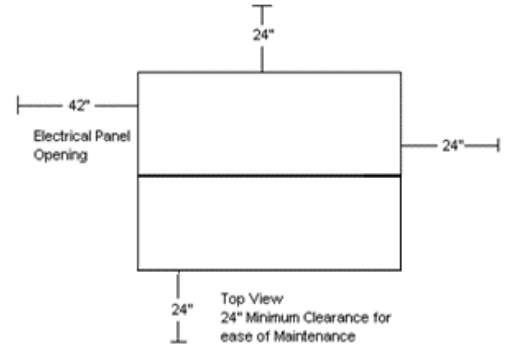
Variable Frequency Drive (VFD) control improves efficiency over a conventional “on/off” demand based system by more closely matching the pump speed to the changing load requirements. All VFD systems come standard with a Premium NFPA Control panel. The VFD and Premium NFPA Control Panel shall include 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 server s 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, VFD start/stop switch 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

- Oxygen assured pumps - prepared for use in WAGD systems.
- Internal tank lining for corrosion resistance.
- Variable Frequency Drive (VFD) Control Panel – with Premium NFPA controls.

Dimensions					
Model	Dim. A	Dim. B	Dim. C	Inlet	Outlet (x2)
CVPD0504A	66"	55"	76"	2"	1"
CVPD0504B	66"	55"	76"	2"	1"
CVPD0754A	66"	55"	76"	2"	1"
CVPD0754B	66"	55"	76"	2"	1"
CVPD1005	66"	61"	83"	3"	2"

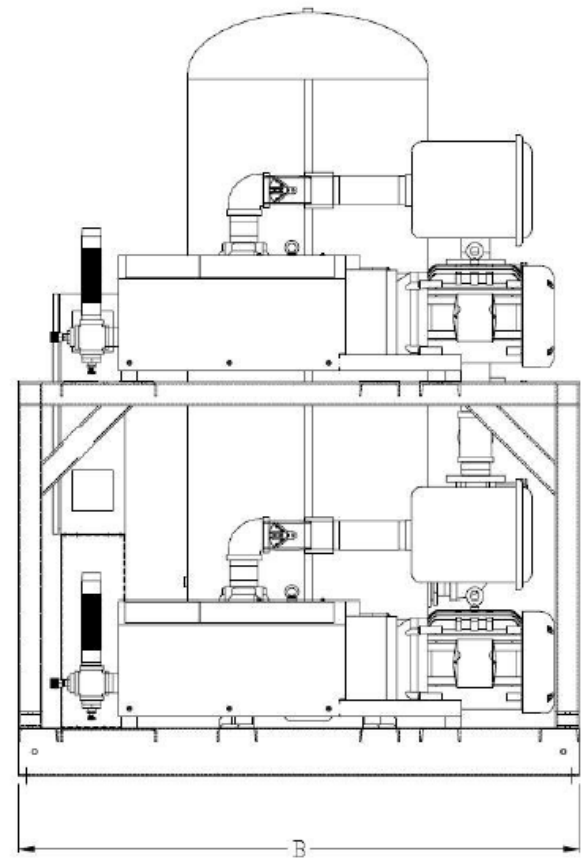
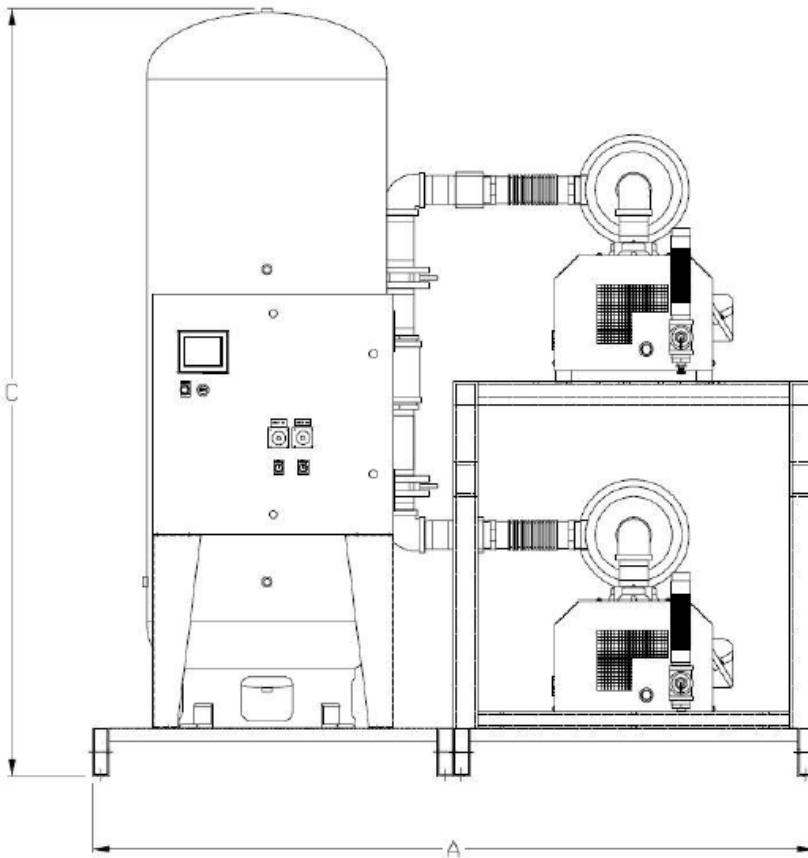
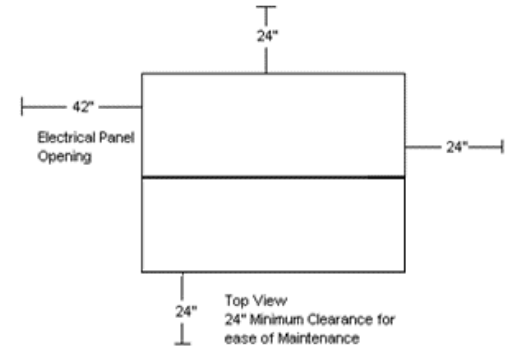


Claw Vacuum Package										
Model	HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPD0504A	4 (2)	29	29	120V	8,670	79	22	24.4	13.2	2,200
CVPD0504B	5 (2)	38	38	120V	10,838	79	26.8	24.8	13.4	2,250
CVPD0754A	6.4 (2)	52	52	120V	13,872	79	34	33.6	17.8	2,550
CVPD0754B	7.5 (2)	65	65	120V	16,256	79	46	37.6	19.8	2,700
CVPD1005	10 (2)	87	87	200V	21,675	83	56.4	49.2	25.6	3,100

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 (x2)
CVPD1505	90"	70"	84"	3"	2"

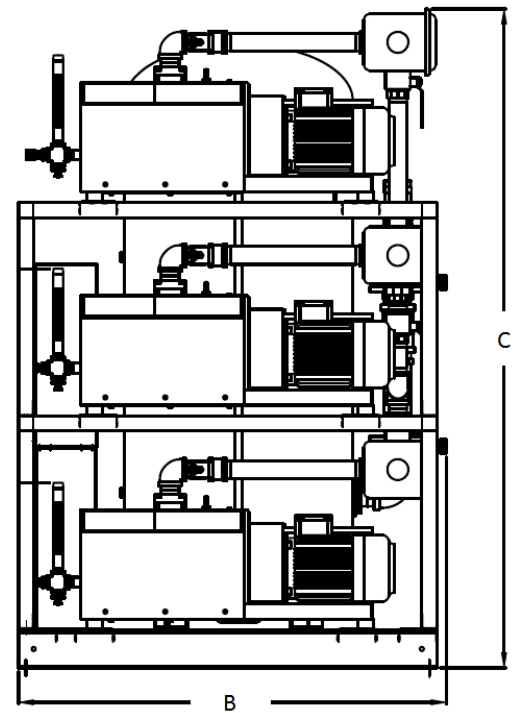
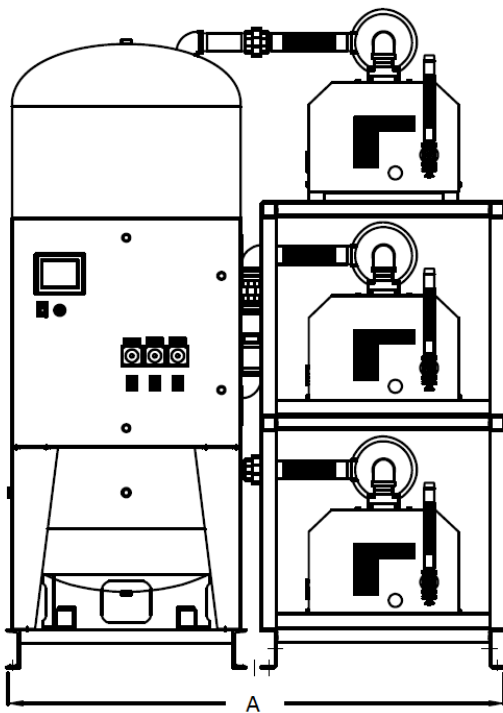
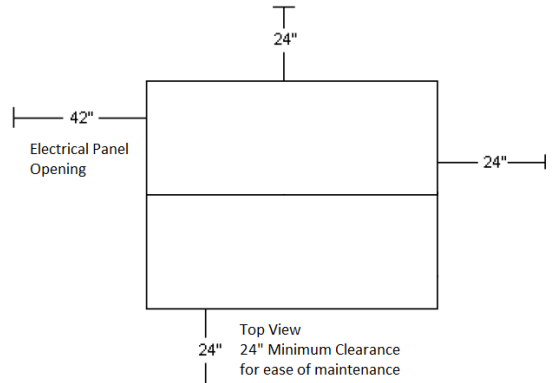


Claw Vacuum Package with Premium Controls										
Model	HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPD1505	15 (2)	118	118	200V	30,345	84	83.0	72.0	37.0	3,154

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)
CVPT0504A	66"	57"	87"	2"	1"
CVPT0504B	66"	57"	87"	2"	1"
CVPT0755A	66"	57"	87"	2"	1"
CVPT0755B	66"	57"	87"	2"	1"

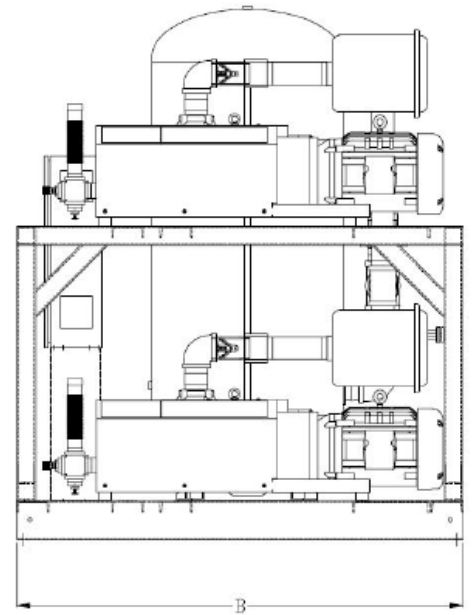
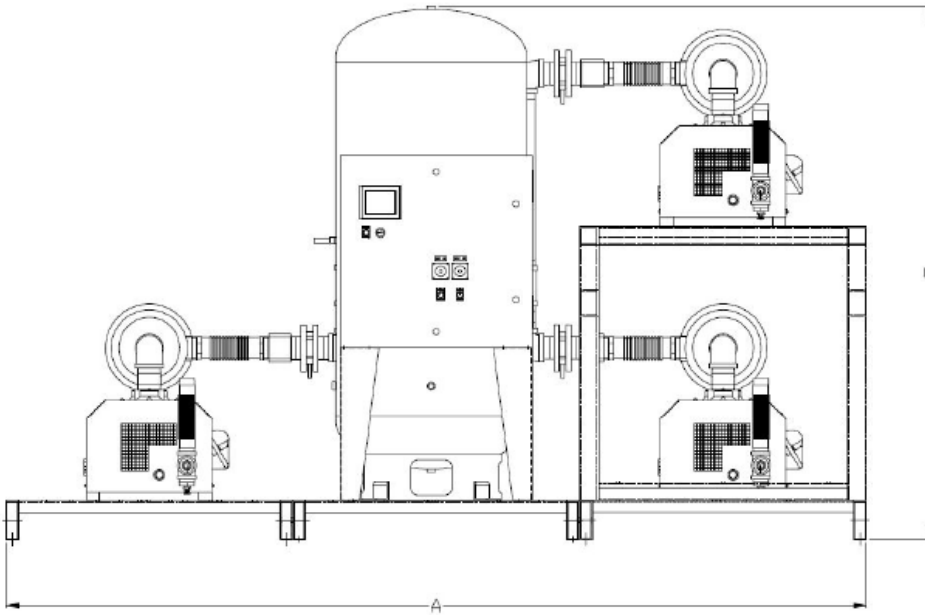
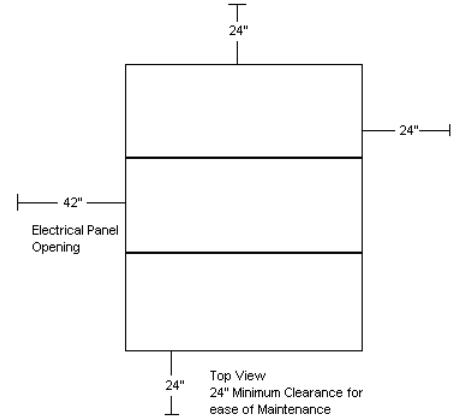


Claw Vacuum Package with Premium Controls										
Model	HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPT0504A	4 (3)	29	58	120V	17,340	82	32	35.6	18.8	2,650
CVPT0504B	5 (3)	38	76	120V	21,676	82	39.2	36.2	19.1	2,800
CVPT0755A	6.4 (3)	52	104	200V	27,744	82	50	49.4	25.7	3,550
CVPT0755B	7.5 (3)	65	130	200V	32,512	82	68	55.4	28.7	3,750

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 (x3)
CVPT1005	98"	61"	83"	3"	2"
CVPT1505	135"	70"	84"	4"	2"

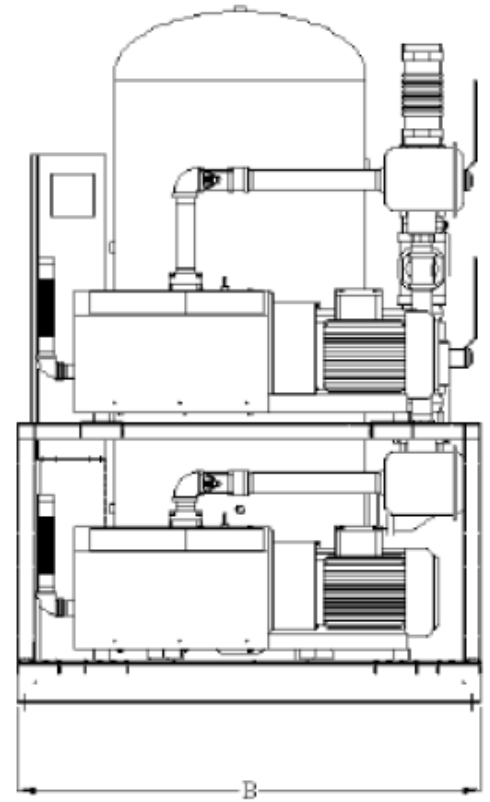
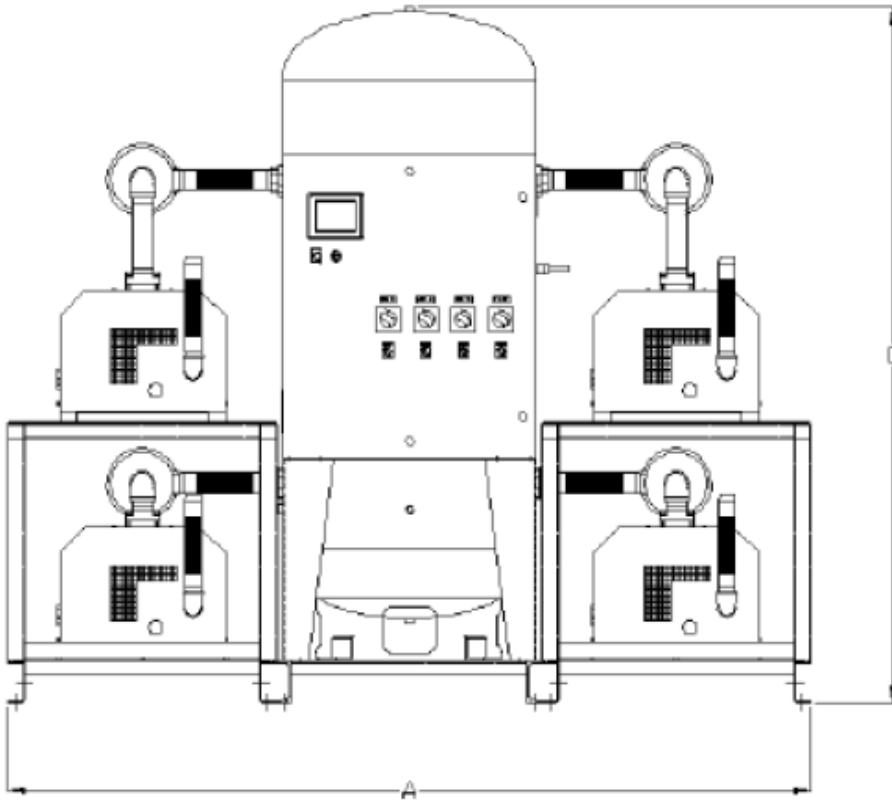
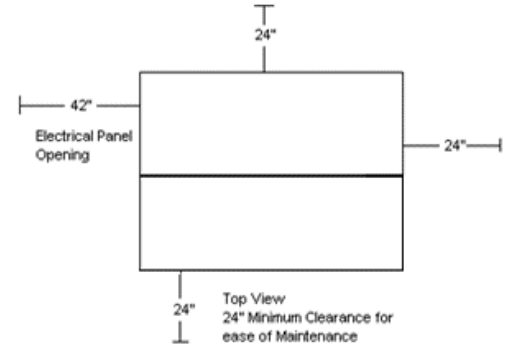


Claw Vacuum Package with Premium Controls										
Model	HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPT1005	10 (3)	87	174	200V	43,350	86	83.6	72.8	37.4	3,358
CVPT1505	15 (3)	129	258	200V	65,026	86	123.5	107.0	54.5	4,181

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)
CVPQ0505A	98"	55"	83"	3"	1"
CVPQ0505B	98"	55"	83"	3"	1"
CVPQ0755A	98"	55"	83"	3"	1"
CVPQ0755B	98"	55"	83"	3"	1"
CVPQ1005	98"	62"	83"	4"	2"

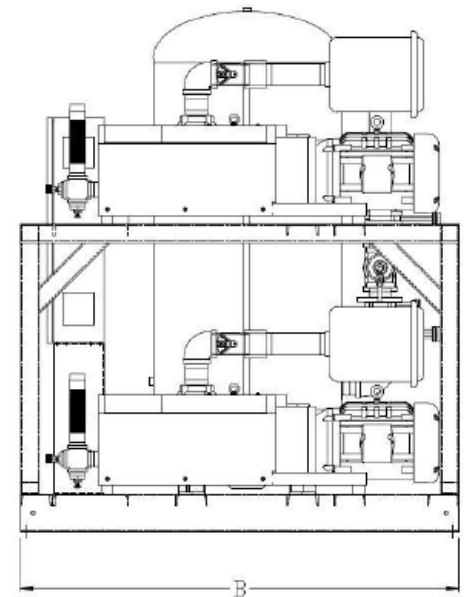
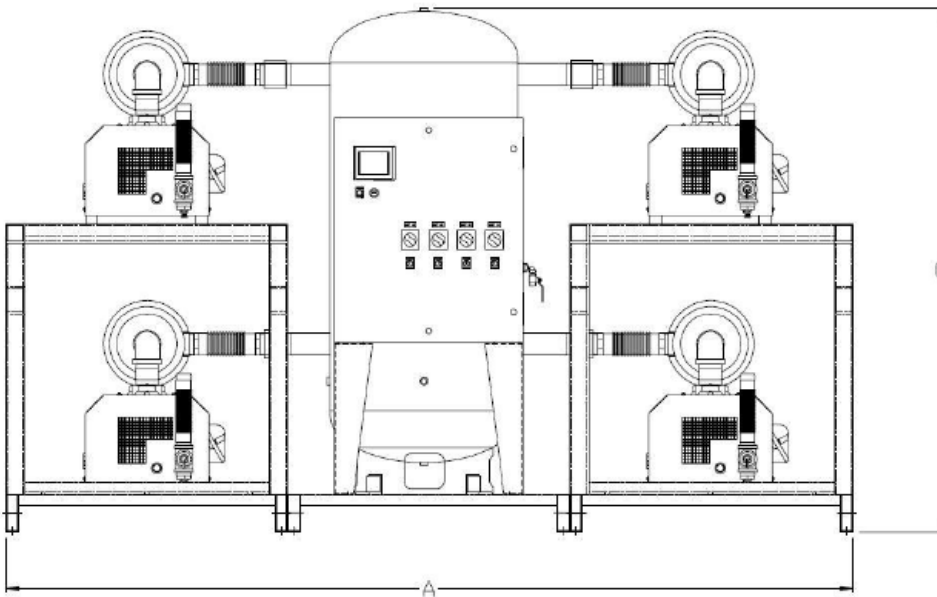
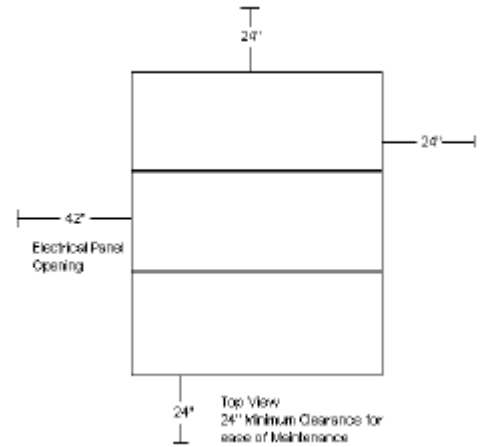


Claw Vacuum Package with Premium Controls										
Model	HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPQ0505A	4 (4)	29	87	200 V	26,010	84	42	46.8	24.4	3,500
CVPQ0505B	5 (4)	38	114	200 V	32,514	84	51.6	47.6	24.8	3,600
CVPQ0755A	6.4 (4)	52	156	200 V	41,616	84	66	65.2	33.6	4,300
CVPQ0755B	7.5 (4)	65	195	200 V	48,768	84	90	73.2	37.6	4,500
CVPQ1005	10 (4)	87	261	200 V	65,025	88	110.8	96.4	49.2	4,900

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)
CVPQ1505	135"	70"	84"	4"	2"

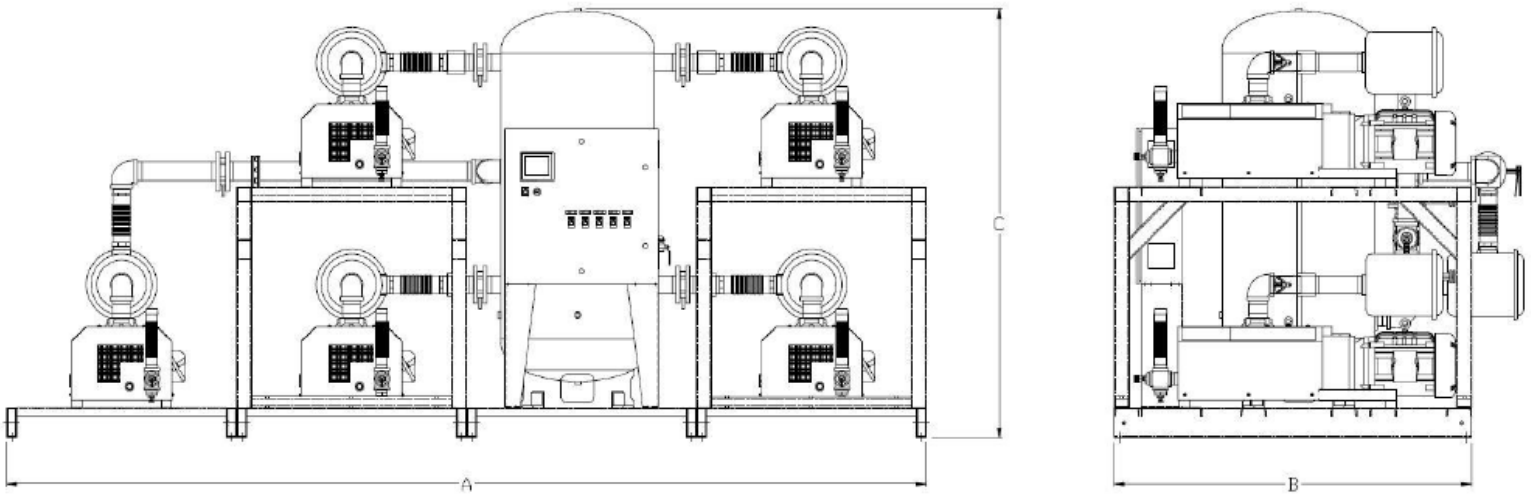
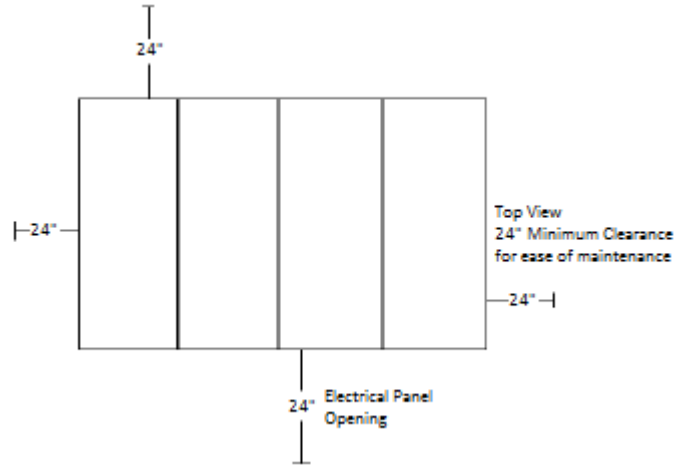


Claw Vacuum Package with Premium Controls										
Model	New HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPQ1505	15 (4)	129	387	200 V	97,539	88	164.0	142.0	72.0	4,908

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 (x5)
CVPP1505	180"	81"	84"	4"	2"

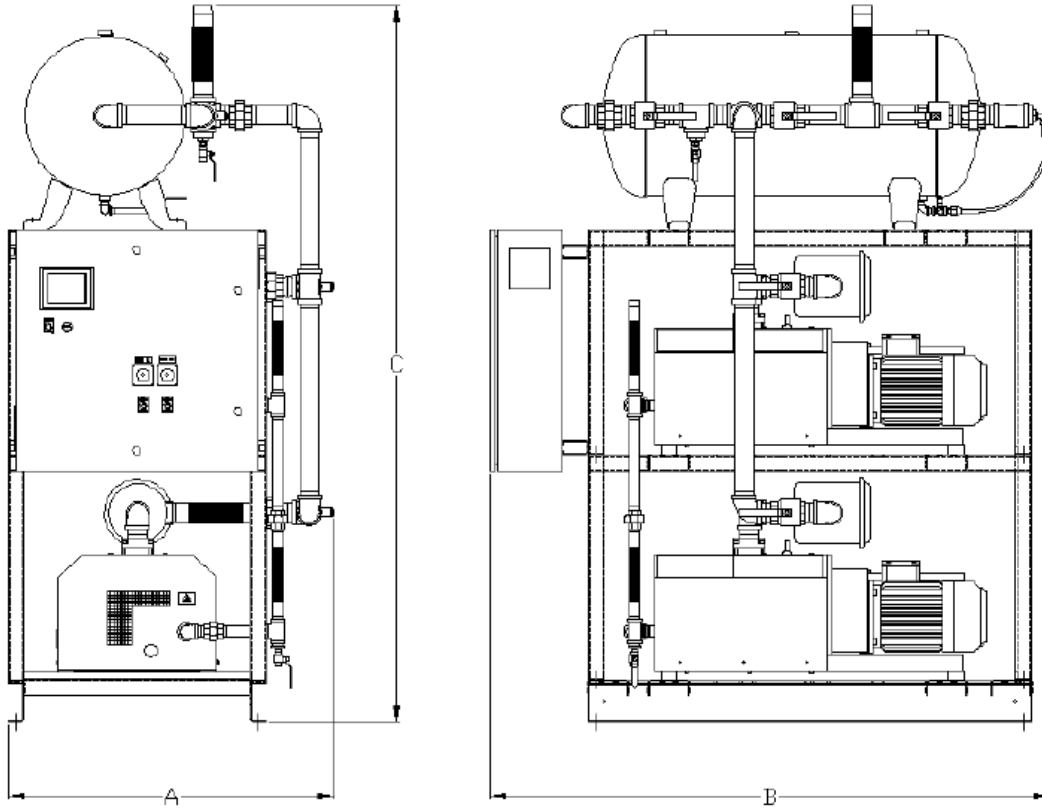
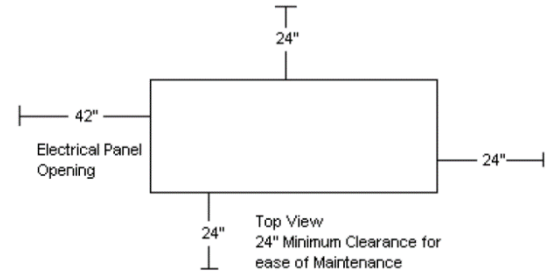


Claw Vacuum Package with Premium Controls										
Model	New HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPP1505	15 (5)	118	472	200 V	121,380	87	204.5	177.0	89.5	7,885

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
CVPDT0202	40"	70"	89"	1 ½"	2"
CVPDT0302	40"	70"	89"	1 ½"	2"
CVPDT0502A	40"	70"	89"	2"	2"
CVPDT0502B	40"	70"	89"	2"	2"
CVPDT0752A	41"	70"	89"	2"	2"
CVPDT0752B	41"	70"	89"	2"	2"



Claw Vacuum Tankmount Duplex with Premium Controls

Model	HP	SCFM @ 19" Hg each	NFPA System Capacity ⁽¹⁾	Tank Size (gal)	BTU/Hr ⁽²⁾	dB(A) Level ⁽³⁾	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
CVPDT0202	2 (2)	16	16	60 H	4,335	70	14.4	13.2	7.6	1,300
CVPDT0302	3 (2)	21	21	60 H	6,503	70	20.8	18.8	10.4	1,350
CVPDT0502A	4 (2)	29	29	60 H	8,670	79	22	24.4	13.2	1,860
CVPDT0502B	5 (2)	38	38	60 H	10,838	79	34	24.8	13.4	1,910
CVPDT0752A	6.4 (2)	52	52	60 H	13,872	79	34	33.6	17.8	2,130
CVPDT0752B	7.5 (2)	65	65	60 H	16,256	79	46	37.6	19.8	2,145

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.