### 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 server 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 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.
### Claw Vacuum Tankmount Duplex with Premium Controls

#### Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Dim. A</th>
<th>Dim. B</th>
<th>Dim. C</th>
<th>Inlet</th>
<th>Outlet</th>
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<tbody>
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<td>70”</td>
<td>89”</td>
<td>1 ½”</td>
<td>2”</td>
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<tr>
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<td>89”</td>
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<td>CVPDT0752A</td>
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<td>89”</td>
<td>2”</td>
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#### 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)

<table>
<thead>
<tr>
<th>Model</th>
<th>HP</th>
<th>SCFM</th>
<th>NFPA System Capacity(1)</th>
<th>Tank Size (gal)</th>
<th>BTU/Hr (2)</th>
<th>dB(A) Level (3)</th>
<th>System F.L.A.</th>
<th>System Weight (lbs)</th>
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</table>

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.