

GPVD-XXXX-P-80VF **2 - 5 HP Duplex Oil-free Dry Claw** **Laboratory Vacuum System-Vertical Frame**

SYSTEM DESCRIPTION:

The GLOBALVAC & AIR Duplex Oil-free Dry Claw Laboratory Vacuum System is built as two dry claw vacuum pumps mounted on an assembled frame over an 80 gallon vertical receiver with a mounted and wired duplex PLC control panel. Both pumps are piped to a common manifold. The system is built with single point connection for process inlet and system power. The complete assembly is finished in GLOBALVAC white and supplied with inlet and discharge flex connectors and vibration pads. The system is piped, wired and factory tested prior to shipment.

OIL-FREE DRY CLAW VACUUM PUMP:

The vacuum pump is direct driven by a continuous duty NEMA rated, TEFC, C-face flanged motor available in 208-230/460/3/60 electrical service. The contact free operating principle provides a nearly maintenance-free operation. The pump is oil-free in the pumping chamber and only requires oil change of Gear Oil. Each pump is air cooled and rated for continuous operation at ultimate pressure. Each pump contains:

- Built-in check valve
- Internal inlet screen
- Pump mounted secondary check valve
- 5 micron inlet filter with polyester element
- Pump isolation valve
- Hi-temp discharge switch
- Oil sight glass (GEAR OIL)
- Oil drain valve (GEAR OIL)
- Exhaust flex connector

AUTOMATIC PURGE SYSTEM:

Each pump is equipped with an automatically controlled purge process. The purge operation consists of an electrically actuated (no compressed air required) normally open solenoid valve closes which isolates the pump from the system while a purge (bleed) solenoid valve opens to atmosphere to remove any gases from the pumping chamber and prevent condensation as the pump cools.

VACUUM RECEIVER:

The 80 gallon vertical vacuum receiver is ASME coded and rated for 200 PSI and full vacuum. The receiver is equipped with sight glass, drain valve, 2" process inlet valve and is Epoxy Lined for corrosion resistance.

DUPLEX PLC CONTROL PANEL:

The system is controlled by UL labeled duplex PLC control panel. The controller provides automatic alternation of the pumps or simultaneous operation if needed. Supplied with comprehensive software package which will display system and pump status and allow adjustment of system parameters. The control panel is built with:

- Finger safe power distribution block
- 120V control transformer with CB protection for primary and secondary circuits
- 120vac/24vdc power supply
- 7" color OIT with integrated Hand/Off/Auto
- Door mounted system disconnect
- Door mounted Emergency Stop button
- Motor Circuit Protector/Disconnect for each pump externally operated
- Adjustable run-on timer (frequent start protection) integrated into OIT
- Automatic restart after power outage and restoration
- 4-20ma transmitter to control pumps via PLC input
- Selectable, Auto Timed Alternation (default), Auto Alternation or Manual Alternation
- Hourmeter integrated into OIT
- Pump status indicators integrated into OIT
- General system fault/warning integrated into OIT
- Dry contacts for remote monitoring
- Maintenance screens with adjustable time intervals for tracking critical maintenance items
- UL508A listed NEMA 12 enclosure
- Low vacuum alarm which may be enabled/disabled
- Door mounted Bypass circuit with selector switch, bypasses PLC control and allows continuous operation of all pumps using the motor circuit protector (MCP) disconnects as OFF/ON switches
- Panel mounted vacuum gauge
- StrideLinx cloud management (VPN)
- Ethernet bulkhead for temporary site connection
- 208-230/460/3/60 power input available
- *OPTIONAL: Real Time Automation (RTA) protocol converter for BMS interface available (Modbus TCP/IP-BACnet/IP Client Gateway)*