



Duplex Oil-Less Rotary Vane Laboratory Vacuum System- Stack Mount

System Description:

The *Global Vac & Air* duplex oil-less rotary vane laboratory vacuum system is built as two skids bolted together for ease of transport and installation. One skid consists of two oil-less rotary vane vacuum pumps mounted on a vertical frame stacked over one another and piped to a common manifold. The second skid consists of a mounted and wired duplex PLC control panel and vertical receiver. The system is completely tested before shipment and is built with single point connection for process inlet, discharge, 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-Less Rotary Vane Vacuum Pump:

The vacuum pumps are direct driven by a continuous duty TEFC motor available in 208-230/460/3/60 electrical service. Additional electrical supply options available upon request. Each pump is air cooled and rated for continuous operation at its ultimate pressure without overheating. Each pump contains:

- Integrated and pump mounted check valves
- 5 micron inlet filter with polyester element
- Built in suction filter
- Pump isolation valve
- Self-lubricating graphite composite vanes
- Exhaust high temperature switch
- 100% dry operation
- Inlet & outlet flex connector

Automatic Purge System:

Each pump is equipped with an automatically controlled purge system. The purge system actuates prior to pump shutdown by closing an inlet solenoid valve and opening a separate purge solenoid valve to atmosphere to remove any gases from the pumping chamber thus preventing condensation as the pump cools.

Vacuum Receiver:

The vacuum receiver is ASME coded and rated for 200 PSI and full vacuum. The receiver is equipped with sight glass, drain valve, and single point process inlet valve. The receiver is epoxy lined for corrosion resistance. Multiple receiver size options available.

Duplex Control Panel:

The system is controlled by a UL labeled duplex mounted and wired 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:

- Line Voltage Motor Starter with Overload Protection
- 120 Volt Control Transformer with protected Primary and Secondary Circuits
- PLC controller with HMI with integrated hour meter
- Door mounted emergency stop button
- Vacuum Gauge
- 4-20 mA vacuum transmitter to control pump via PLC input
- Selectable; automatic timed alternation, auto alternation, or manual alternation
- NEMA 12 Enclosure
- Pump status indicators integrated into HMI display
- Ethernet bulkhead for onsite connection
- UL Listed
- Dry contacts for remote monitoring
- *Optional: Real Time Automation (RTA) protocol converter for BMS interface*



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Laboratory Vacuum System-Stack mount**

Model Number*	Pump motor rating (HP)**	Maximum Vacuum (in. HgV)	Nominal Capacity (ACFM/pump)**	System Capacity @ 19" Hg (SCFM/system)**	Receiver size (Gallons)	System BTU/hr**	System FLA @ 460 V / 3 / 60 Hz
VV04D-XXL-12V	4.8	26.6	66	48	120	20,767	14.6
VV06D-XXL-20V-008	6.4	23.6	91	67	200	27,690	19.5
VV06D-XXL-20V	6.4	24	128	94	200	27,690	19.5
VV08D-XXL-20V	8.9	24	169	124	200	38,506	24.9
VV12D-XXL-20V	12.1	27	174	127	200	52,351	33.9

*XX in the model number is a placeholder for system voltage. 43=460V/3/60Hz, 23=230V/3/60Hz, 53=575V/3/60Hz

** All data shown assumes 60 Hz electrical supply