



## Duplex Lubricated Rotary Vane Laboratory Vacuum System-Stack Mount 5 to 15 HP

### System Description:

The *Global Vac & Air* Duplex Lubricated Rotary Vane Laboratory Vacuum System is built as two skids bolted together for ease of transport and installation. One skid consists of two lubricated 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, process discharge, and system power. Inlet and discharge manifolds are supplied with a drip leg and ball valve. 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 Flooded 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 an ultimate pressure of 29.3" HgV + without overheating. Each pump contains:

- Integrated anti suck back valve
- High efficiency oil separator element
- Pump mounted check valve
- 5 micron inlet filter with polyester element
- Pump isolation valve
- Air cooled oil cooler
- Oil sight glass
- Oil drain valve
- Single shaft direct drive
- Exhaust flex connector
- Exhaust high temperature switch
- Inlet 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 vertical 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.

### 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*



**Duplex Lubricated Rotary Vane  
Laboratory Vacuum System-Stack Mount 5 to 15 HP**

| <b>Model Number*</b> | <b>Pump motor rating (HP)**</b> | <b>Maximum Vacuum (in. HgV)</b> | <b>Nominal Capacity (ACFM/pump)**</b> | <b>System Capacity @ 19" Hg (SCFM/system)**</b> | <b>Receiver size (Gallons)</b> | <b>System BTU/hr**</b> | <b>System FLA @ 460 V / 3 / 60 Hz</b> |
|----------------------|---------------------------------|---------------------------------|---------------------------------------|---|--------------------------------|------------------------|---------------------------------------|
| VR05D-XXL-12V-002    | 5                               | 29.9                            | 71                                    | 52  | 120                            | 21,633                 | 15                                    |
| VR05D-XXL-20V        | 5                               | 29.9                            | 103                                   | 75  | 200                            | 21,633                 | 15                                    |
| VR07D-XXL-20V        | 7.5                             | 29.3                            | 141                                   | 103   | 200                            | 32,449                 | 22                                    |
| VR10D-XXL-20V-004    | 10                              | 29.3                            | 177                                   | 130   | 200                            | 43,265                 | 28                                    |
| VR10D-XXL-20V        | 10                              | 29.3                            | 212                                   | 155   | 200                            | 43,265                 | 28                                    |
| VR15D-XXL-20V        | 15                              | 29.3                            | 305                                   | 223   | 200                            | 64,898                 | 42                                    |
| VR15D-XXL-24V        | 15                              | 29.3                            | 305                                   | 223   | 240                            | 64,898                 | 42                                    |

\*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