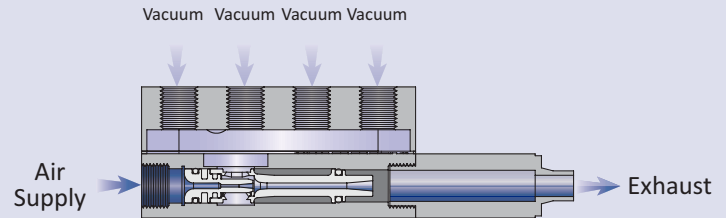


Principles of Operation

Vacuum is produced by forcing compressed air through a limiting orifice (nozzle). As the air exits the orifice it expands, increasing in velocity to supersonic speed before entering the venturi section (diffuser). This creates a vacuum at the vacuum inlet port located between the nozzle and diffuser. The nozzle and diffuser combine to create a venturi vacuum cartridge.

The precise fit of the nozzle to the diffuser is critical to the pump functioning properly. In the Multi-Port vacuum pump models, the compressed air is distributed to the multiple manifold ports (four on the VP20-MP and VP80-MP and six on the VP90-MP), the gauge port, and the optional blow-off port if installed.



Operating and Installation Instructions:

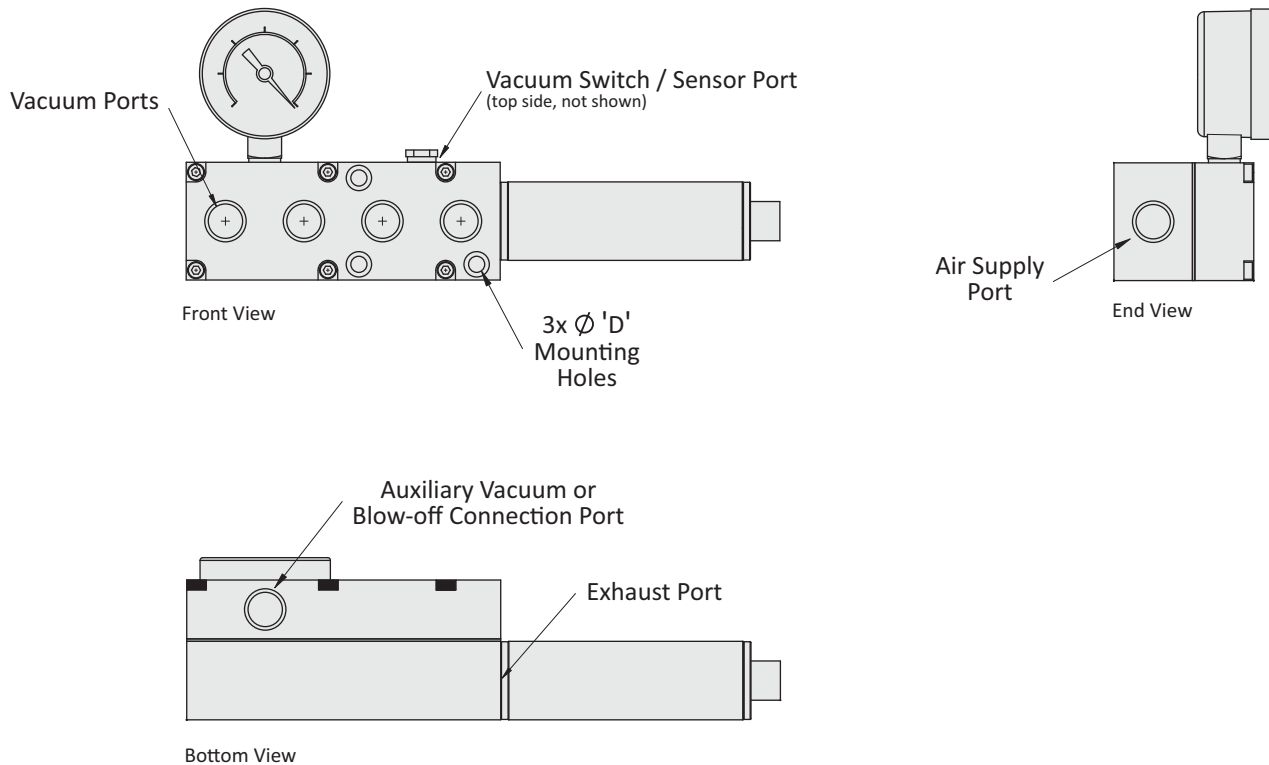
The Multi-Port Series vacuum pumps have an integral manifold system that offers 4 or 6 vacuum ports for “Home Run” plumbing lines, connecting one pump to multiple connections, eliminating the need for additional manifolds. The streamlined design minimizes flow loss, maximizes vacuum flow and allows faster cycle times for safe, efficient operation.

- 1: Mount pump to your mounting hardware, end-of-arm-tool, extrusion, etc. All Multi-Port pumps have three mounting holes that accept 10-32 (M5) screws (screws not supplied). Pumps operate in any orientation.
2. Attach air line to air supply port. Attach vacuum line to vacuum port(s) and plug any unused ports with supplied plugs. See chart on page 2 for minimum recommended sizes (tubing outer diameters are listed). If the pump is configured with a blow-off port for ejecting parts, attach air line to blow-off port on the bottom of the unit.
3. Turn on compressed air and regulate to specified pressure (80 PSI standard, models with “-60” designation to 60 PSI – set regulator while pump is operating). The MP pump will generate vacuum immediately.



Operating / Installation Instructions: VP 10-20-80-90 Multi-port Modular Venturi Vacuum Pump

Additional Information



VP Multi-Port Series Model	Air Supply Port Threads	Recommended Air Supply Line (outer diameter)	Vacuum Port Threads	Recommended Vacuum Line (outer diameter)	Number of Ports
VP10-(60,90) MP Series	¼ NPT	¼" [6 mm]	⅛ NPT	¼" [6 mm]	4
VP10-(100,150) MP Series	¼ NPT	⅜" [10 mm]	⅛ NPT	¼" [6 mm]	4
VP20-(60,90) MP Series	¼ NPT	¼" [6 mm]	¼ NPT	¼" [6 mm]	4
VP20-(100,150) MP Series	¼ NPT	⅜" [10 mm]	¼ NPT	⅜" [10 mm]	4
VP80-200 MP Series	¼ NPT	⅜" [10 mm]	⅜ NPT	⅜" [10 mm]	4
VP80-250 MP Series	¼ NPT	½" [12 mm]	⅜ NPT	⅜" [10 mm]	4
VP90-300 MP Series	⅜ NPT	½" [12 mm]	½ NPT	½" [12 mm]	6
VP90-350 MP Series	⅜ NPT	½" [12 mm]	½ NPT	¾" [19 mm]	6

The recommended tubing sizes are based on polyethylene or polyurethane tubing with 0.062" [$1/16$ ", 1.5 mm] wall thickness
Note: Vaccon discourages the use of quick disconnect fittings on all connections