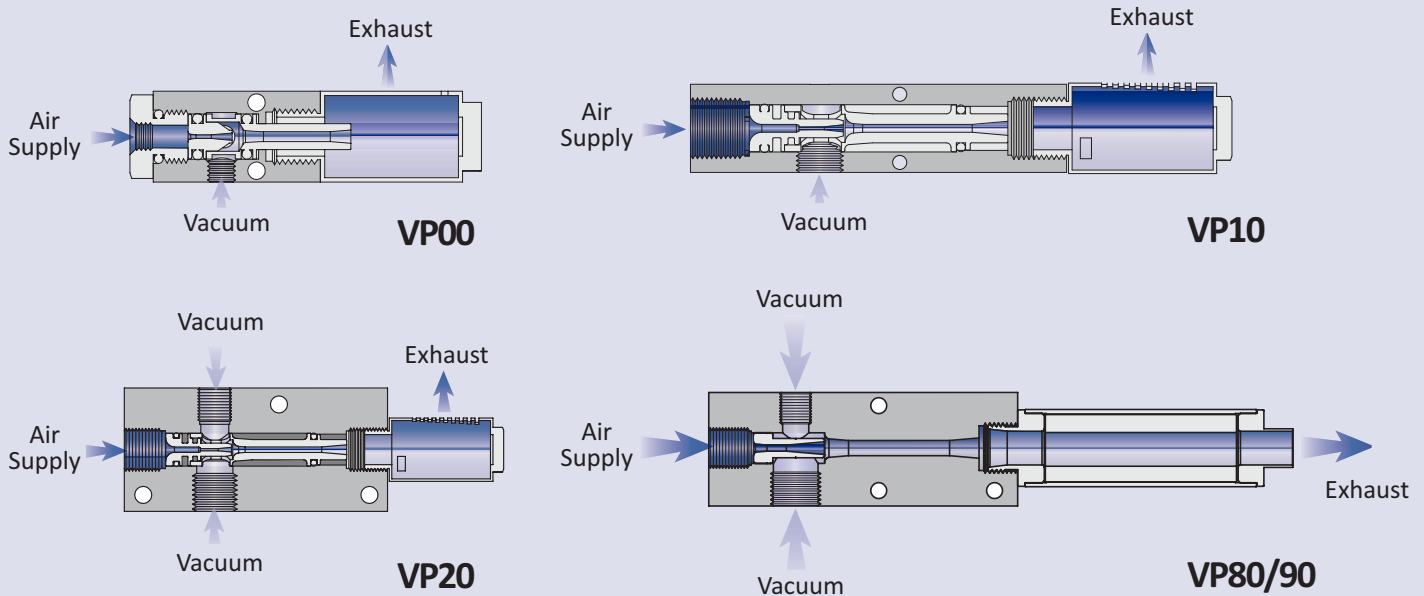


### Principles of Operation

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.



Drawings not to scale

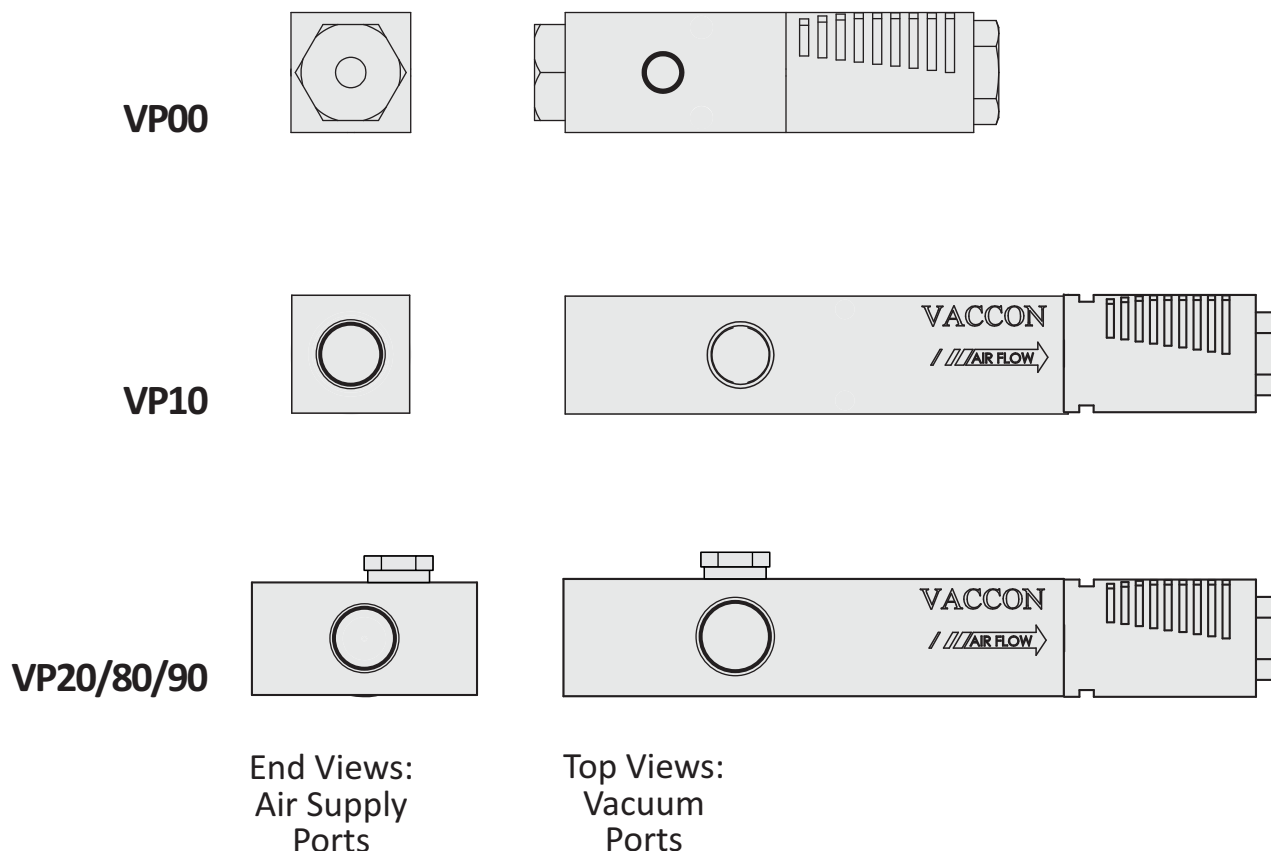
### Operating and Installation Instructions:

1. Mount pump to your mounting hardware, end-of-arm-tool, extrusion, etc. VP00 and VP10 model pumps have two mounting holes that accept 4-40 (M3) screws. VP20, VP80, and VP90 pumps have three mounting holes that accept 10-32 (M5) screws (screws not supplied). Pumps work in any orientation.
2. Attach air line to air supply port. Attach vacuum line to vacuum port if not directly attaching a vacuum cup to the port. See chart on page 2 for minimum recommended sizes (tubing outer diameters are listed).
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 VP pump will generate vacuum immediately.



# Operating / Installation Instructions: VP 00-10-20-80-90 Modular Venturi Vacuum Pump Series

## Additional Information



VP Series Model	Air Supply Port Threads	Recommended Air Supply Line (outer diameter)	Vacuum Port Threads	Recommended Vacuum Line (outer diameter)
VP00-60 (M,H) Series	10-32 UNC Female	¼" [6 mm]	10-32 UNC Female	¼" [6 mm]
VP10-(60,90) (L,M,H) Series	¼ NPT	¼" [6 mm]	⅝ NPT	¼" [6 mm]
VP10-(100,150) (L,M,H) Series	¼ NPT	⅜" [10 mm]	⅝ NPT	⅜" [10 mm]
VP20-(60,90) (L,M,H) Series	¼ NPT	¼" [6 mm]	¼ NPT	¼" [6 mm]
VP20-(100,150) (L,M,H) Series	¼ NPT	⅜" [10 mm]	¼ NPT	⅜" [10 mm]
VP80-200 (L,M,H) Series	¼ NPT	⅜" [10 mm]	⅝ NPT	⅜" [10 mm]
VP80-250 (L,M,H) Series	¼ NPT	⅜" [10 mm]	⅝ NPT	½" [12 mm]
VP90-300 (L,M,H) Series	⅜ NPT	½" [12 mm]	½ NPT	½" [12 mm]
VP90-350 (L,M,H) Series	⅜ NPT	½" [12 mm]	½ NPT	½" [12 mm]

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