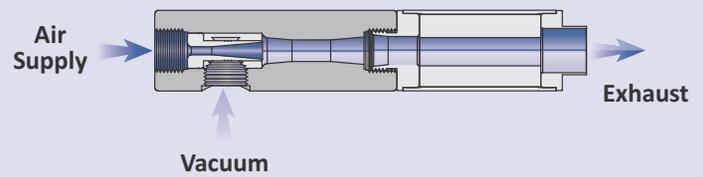


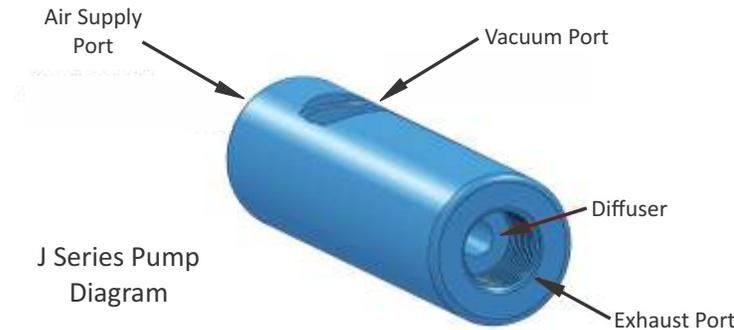
Principles of Operation

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.



Operating and Installation Instructions:

1. Mount pump to your mounting hardware, end-of-arm-tool, extrusion, etc.
2. Attach air line to air supply port. Attach vacuum line to the 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 J Series pump will generate vacuum immediately.



J Series Model	Air Supply Port Threads	Recommended Air Supply Line (outer diameter)	Vacuum Port Threads	Recommended Vacuum Line (outer diameter)	Exhaust Port Threads
JS-40UM	10-32 UNC Female	¼" [6 mm]	10-32 UNC Female	¼" [6 mm]	10-32 UNC Female
J(F,D,S)-(-60,90)M	¼ NPT	¼" [6 mm]	¼ NPT	¼" [6 mm]	¼ NPT
J(F,D,S)-(-100,150)M	¼ NPT	⅜" [10 mm]	¼ NPT	⅜" [10 mm]	¼ NPT
J(F,D,S)-(-100,150,200,250)	¼ NPT	½" [12 mm]	⅜ NPT	½" [12 mm]	⅜ NPT
J(F,D,S)-300	⅜ NPT	½" [12 mm]	⅜ NPT	¾" [18 mm]	⅜ NPT
J(F,D,S)-350	½ NPT	½" [12 mm]	½ NPT	¾" [18 mm]	½ NPT

Notes:

1. Fittings or connections should only be threaded 3 to 4 turns - do not force.
2. Over-tightening fittings or connections will disturb the spatial relationship of the inner nozzle and diffuser assembly – diminishing performance or worst case, render the pump inoperable. Vaccon discourages the use of quick disconnect fittings on all connections.
3. The recommended tubing sizes are based on polyethylene or polyurethane tubing with 0.062" [1/16", 1.5 mm] wall thickness. All NPT threads are tapered.