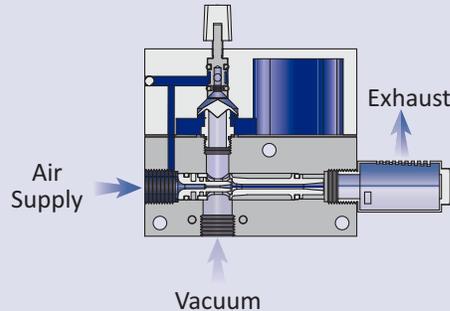


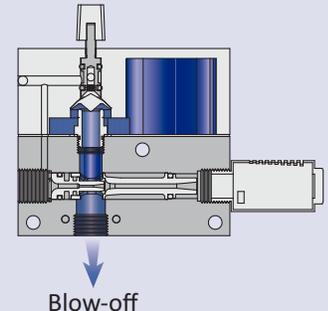
## Principles of Operation

Fastbreak pumps provide both suction and blow-off with a single supply of compressed air controlled by a pneumatic valve.

Utilizing quick exhaust valve technology, Fastbreak pumps store compressed air in the upper chamber while simultaneously generating vacuum. The quick exhaust diaphragm seals the compressed air chamber from the vacuum line.



To release the part, deactivate the air supply. The vacuum stops and the rapid drop in pressure shifts the quick exhaust diaphragm into the up position, allowing the stored compressed air to vent into the vacuum line.



When handling small and lightweight parts, choose the adjustable version (-ADJ) shown to control the blow-off intensity.

\*Note: The (customer supplied) solenoid valve controlling the compressed air to the Fastbreak pump must vent to atmosphere for the quick exhaust valve to actuate properly.

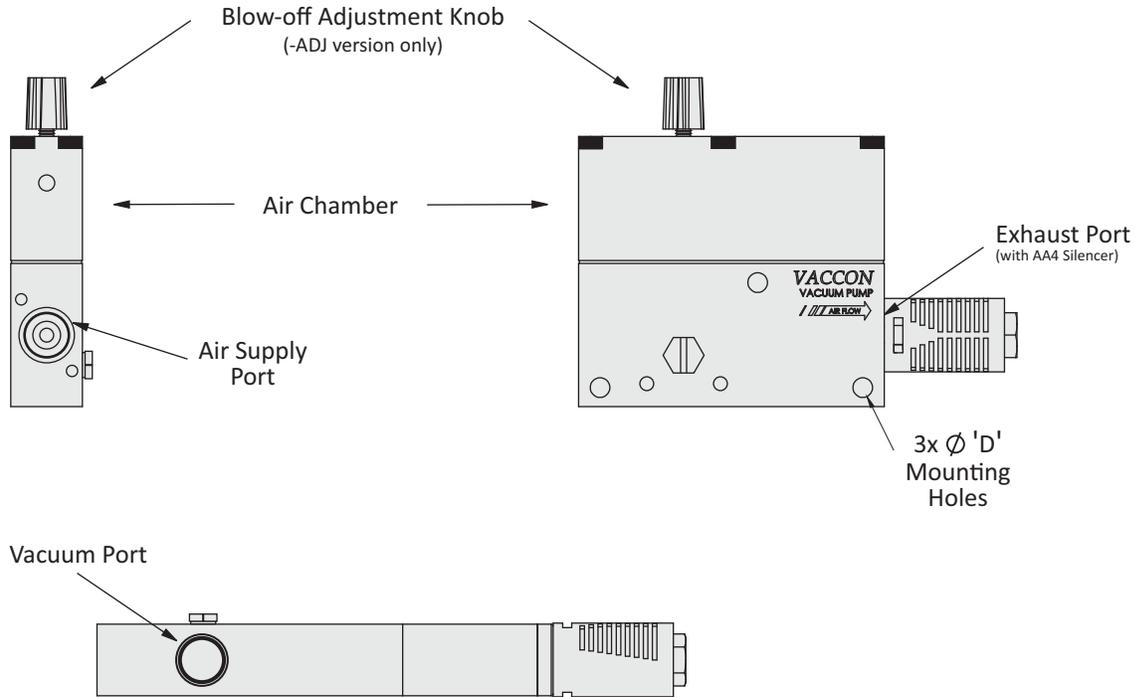
## Operating and Installation Instructions:

- 1: Mount pump to your mounting hardware, end-of-arm-tool, extrusion, etc. VP0X and VP1X model pumps have two mounting holes that accept 4-40 (M3) screws. VP2X and VP8X, 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: Attach a solenoid valve to the air supply line upstream of the pump (not supplied). A solenoid valve is required to shut off the air supply, allowing the quick exhaust valve to actuate properly so the air chamber vents the stored air in order to blow-off the held parts. The solenoid valve must be a 3-way normally closed (NC) directional control valve with open exhaust port (vent to atmosphere).
- 4: 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.
- 5: De-energize the solenoid valve (stop the compressed air) when the part is to be released. The vacuum stops and the rapid drop in pressure shifts the internal quick exhaust diaphragm allowing the stored compressed air to vent into the vacuum line.
- 6: For models with -ADJ (adjustable blow-off) option, turn the top adjusting knob clockwise to reduce blow-off intensity, counter-clockwise to increase blow-off intensity.



# Operating / Installation Instructions: VP 0X-1X-2X-8X 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)
VPOX-60H Series-(ADJ)	10-32 UNC Female	¼" [6 mm]	10-32 UNC Female	¼" [6 mm]
VP1X-(60,90) (L,M,H)-(ADJ) Series	¼ NPT	¼" [6 mm]	⅝ NPT	¼" [6 mm]
VP1X-(100,150) (L,M,H)-(ADJ) Series	¼ NPT	⅜" [10 mm]	⅝ NPT	⅜" [10 mm]
VP2X-(60,90) (L,M,H)-(ADJ) Series	¼ NPT	¼" [6 mm]	¼ NPT	¼" [6 mm]
VP2X-(100,150) (L,M,H)-(ADJ) Series	¼ NPT	⅜" [10 mm]	¼ NPT	⅜" [10 mm]
VP8X-200 (L,M,H)-(ADJ) Series	¼ NPT	⅜" [10 mm]	⅜ NPT	⅜" [10 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