LDA Solutions for Life
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MILLIBAR ROBOTICS
EOAT INNOVATION

Compact Venturi Vacuum Pump

P10-1.5-.8H

The P10 is a compact venturi vacuum pump with an integral straight through silencer. There are 2 models available (high vacuum and medium vacuum) to match your application requirements. A second vacuum port allows easy plumbing for an optional miniature adjustable vacuum switch, AP10.

Performance Level Designations:	
"M"	0-20"Hg [0 to 667mbar] for medium vacuum/ high flow applications
"H"	0-28"Hg [0 to 948mbar] for high vacuum/high flow applications

Ideal Applications:

- Pick and place small parts
- End-of-Arm-Tooling/Robotic systems
- Vessel evacuation
- Vacuum clamping/holding fixtures

Features/Benefits:

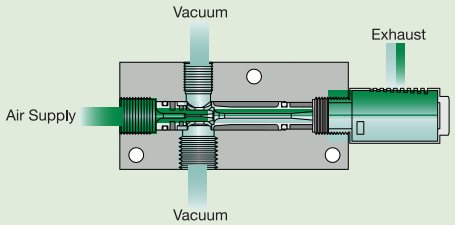
- Small footprint for tight spaces
- Mounts easily—square body, compact and lightweight
- Fast response—installs close to vacuum point
- Reliable—trouble-free operation
  - Straight-through design, non-clogging
  - No moving parts to wear or clog
  - No flap valves to stick open
  - No maintenance
  - No downtime

Pump Options:

- Vacuum sensors/switches with quick disconnect provide electrical signal for vacuum achieved/part present, will interface with PLC's and computerized control systems
- Silencers—S4M (straight-through) silencer won't clog.
- G port threads for metric machines—an"I" prefix designates products with metric threads
- Choice of operating pressures to meet machine and factory air supply 80 PSI [5.5 bar] standard, 60 PSI [4.1 bar] optional

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.



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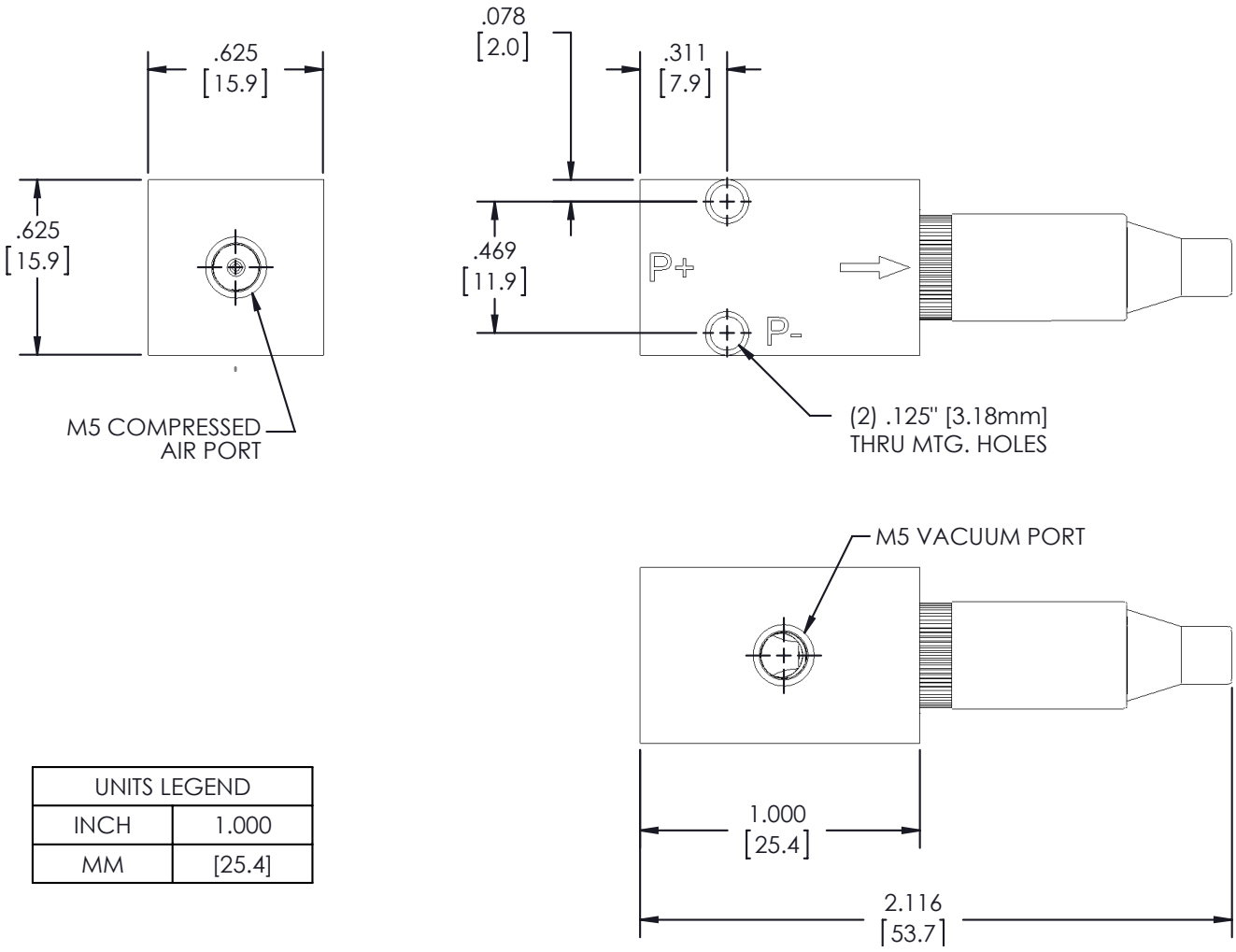
P10-1.5-.8H Dimensions



UNITS LEGEND	
INCH	1.000
MM	[25.4]

Model #	Air Consumption SCFM (l/min)	Vacuum Flow - SCFM (l/min) vs. Vacuum Level - % Vacuum										
P10-1.5-.8H	0.8 (22.7)	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	93%
		0.5 (14.2)	0.38 (10.8)	0.32 (9.1)	0.3 (8.5)	0.27 (7.6)	0.23 (6.5)	0.2 (5.7)	0.13 (3.7)	0.05 (1.4)	0.02 (0.6)	0
Model #	**Air Consumption SCFM (l/min)**	**Evacuation Time in Seconds based on 1 Cubic Foot Volume (1 Liter Volume) vs % Vacuum**										
P10-1.5-.8H		0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	93%
		0	15 (0.5)	29.8 (1.1)	50.6 (1.8)	74.5 (2.6)	102.8 (3.6)	135.9 (4.8)	183.2 (6.5)	245.9 (8.7)	410.2 (14.5)	790.8 (27.9)

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