

Multi-port Venturi Vacuum Pumps with Silencers

Multi-port Pumps: Mid Series VP10-MP



*VP10-100H-MP
with manifold
blocks and cups
removes injection
molded parts.*



VP10-90M-MP

Vaccon's new Multi-port venturi vacuum pumps combine a venturi with a manifold to distribute vacuum to multiple locations. The result is a compact vacuum generation and distribution system for End-of-Arm Tools and applications where one pump powers multiple cups.

VP10-MP pumps have 4 vacuum ports that distribute vacuum equally to 4 locations with "Home-Run" plumbing. The streamlined design minimizes vacuum loss, maximizes vacuum flow and speeds cycle times for safe, efficient lifting operations.

In addition to the 4 topside vacuum ports, there is an additional port that can be plumbed to a compressed air source to provide a blow-off. The manifold design allows the one compressed air connection to feed blow-off air to all vacuum locations simultaneously, saving the need to plumb a separate blow-off line to each location.

An M5 threaded port allows you to connect a Vaccon miniature vacuum sensor/switch to provide an electrical signal for vacuum achieved/part present and to alert failures.

Ideal Applications:

- End-of-Arm Tooling/Robotics
- Pick and place
- Flexible manufacturing
- Packaging – carton erecting, robotic palletizing
- Automation assembly

Features/Benefits

- High performance – vacuum up to 28"Hg [948mbar]
- High production – fast cycle times with shot to shot consistency
- High flow – maintains strong holding force, overcomes leakage
- Home Run plumbing – saves compressed air
- Easy mounting – fractional and metric T-slot compatible
- Time saving – pre-designed, factory assembled, quick installation
- Safe operation – no electricity needed at pump
- Reliable – non-clogging, trouble free operation

Performance Level Designations:

"L" 0-10"Hg [0 to 339mbar] for low vacuum/high flow applications

"M" 0-20"Hg [0 to 677mbar] for medium vacuum/high flow applications

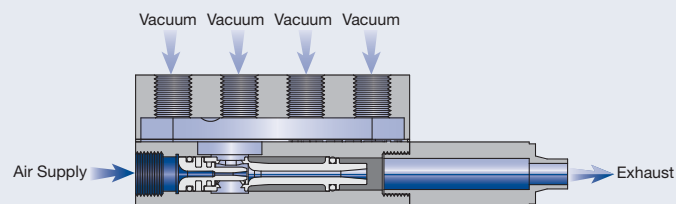
"H" 0-28"Hg [0 to 948mbar] for high vacuum/standard flow applications

Pump Options:

- Interchangeable venturi cartridges – 11 different performance levels (VP10 & VP20 Series only)
- Silencers - ST4 (straight-through) silencers won't clog, STAA4 silencers for ultra quiet operation
- Miniature sensors or switches with optional quick disconnects
- 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 [4.0 BAR] option)

Principles of Operation:

Vacuum is produced by supplying compressed air to a Mid series venturi cartridge and is distributed to the vacuum manifold ports, the switch/sensor port and the optional blow-off port if required.



Eliminate the Guesswork: Contact Us!

Vacuum technology isn't an exact science. To ensure proper product selection, Vaccon offers free application engineering assistance, a 30 Day Test & Evaluation Program or you can send sample products to our in-house test facility and we will test and size a pump for you.

To download a complete set of drawings in 13 different CAD formats, please visit our website at www.vaccon.com

For more information or technical assistance, please call 508-359-7200 or 800-848-8788 or email engineering@vaccon.com

Multi-port Venturi Vacuum Pumps

VP10- (60, 90, 100, 150) (L, M, H) -MP Series Configurations and Options:

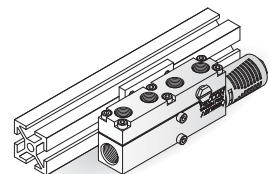
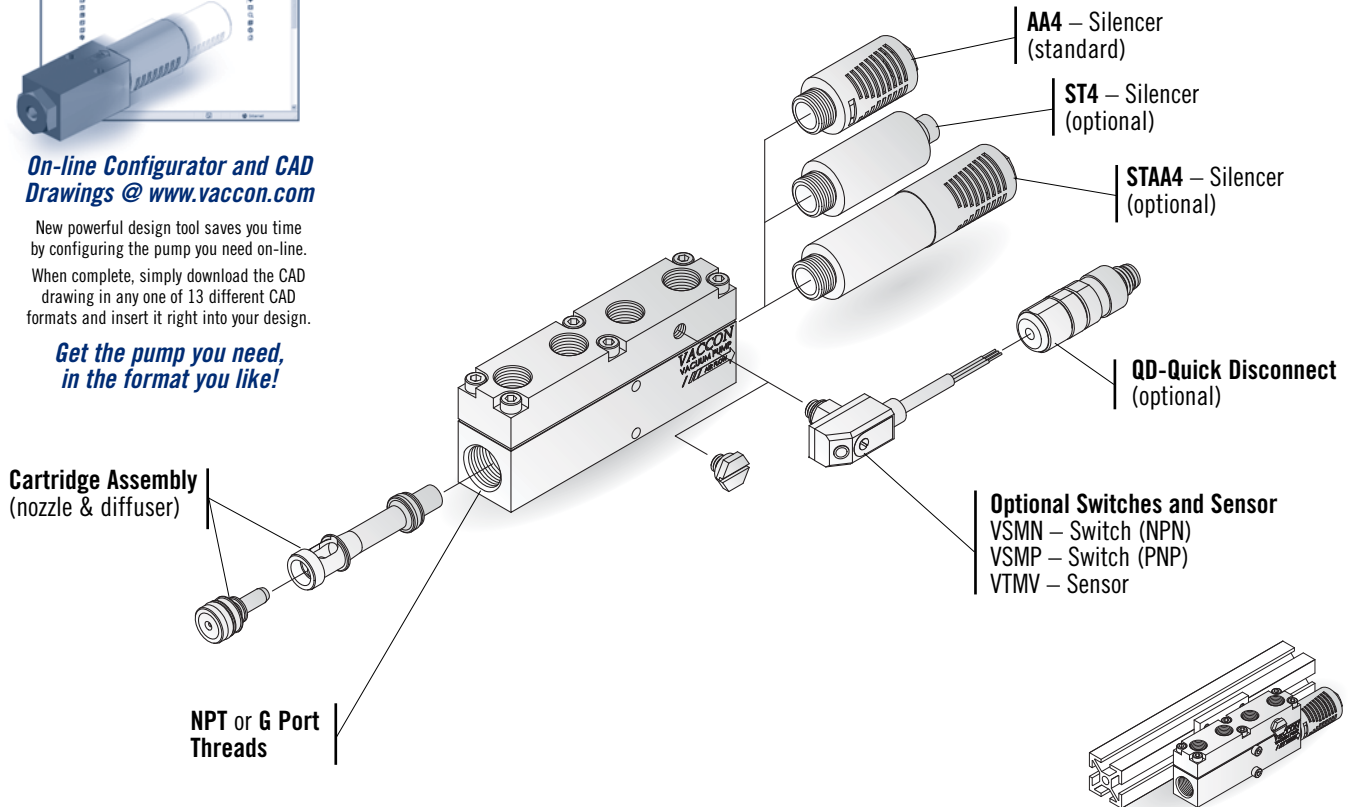
All Vaccon pumps offer a variety of options and accessories to meet your specific requirements. Please configure your pump from the options listed below.



On-line Configurator and CAD Drawings @ www.vaccon.com

New powerful design tool saves you time by configuring the pump you need on-line. When complete, simply download the CAD drawing in any one of 13 different CAD formats and insert it right into your design.

Get the pump you need, in the format you like!



VP10-MP pumps are Fractional and Metric T-Slot compatible. See EOAT Section.

How to Specify:

VP10 - 60 H - 60 - MP - ST4 - VSMP - QD

P/N	Thread
VP10	NPT
I-VP10	G Port

P/N	Max. Flow Level
60	
90	
100	
150	

P/N	Max. Vac Level
L	10"Hg [339mbar]
M	20"Hg [677mbar]
H	28"Hg [948mbar]

P/N	Switch/Sensor
	None (Standard)
VSMN	Switch – NPN
VSMP	Switch – PNP
VTMV	Sensor – 0-5VDC Output
VSMN-QD	Switch – w/Quick Disconnect
VSMP-QD	Switch – w/Quick Disconnect
VTMV-QD	Sensor – w/Quick Disconnect

P/N	Silencer
	AA4 Closed-End (Standard)
ST4	Straight -Through
STAA4	Hybrid Silencer

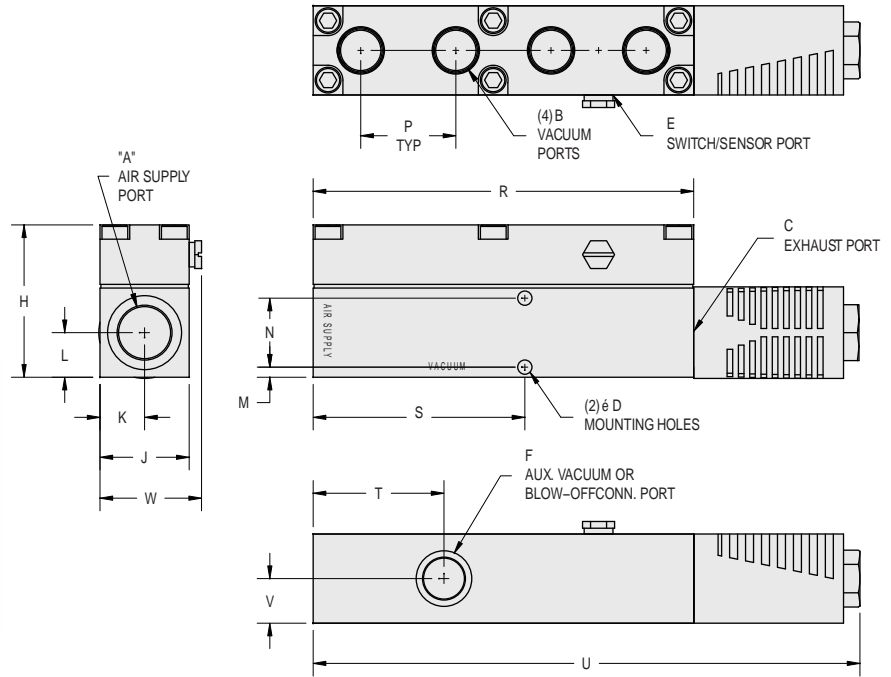
P/N	Operating Pressure
60	80 PSI [5.5 Bar] (Standard)
	60 PSI [4.0 Bar]

For complete Performance Data, see page 150.

Standard Pump: VP10- (60, 90, 100, 150) (L, M, H)- MP



VP10-90H-MP



Specifications:

Weight 4.1 oz [115g]
Noise Level 62 dB

Model #	Imperial Dimensions (in.)																			
VP10-MP w/AA4	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	
	1/4 NPT F	1/8 NPT F	1/4 NPT F	0.13	M5	1/8 NPT F	1.28	0.75	0.38	0.38	0.085	0.58	0.80	3.20	1.78	1.10	4.60	0.38	0.86	
Model #	Metric Dimensions (mm)																			
I-VP10-MP w/AA4	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	
	G 1/4	G 1/8	G 1/4	3.2	M5	G 1/8	32.5	19.1	9.5	9.5	2.16	14.7	20.3	81.3	45.2	27.9	116.8	9.5	21.7	

VP10-MP Pump Standard Specifications:

Pump Material: Anodized Aluminum (For silencer material, see pages 235-239)
Cartridge Material: Nylon, Buna-N O-ring (Other materials available, see page 7)
Medium: Filtered (50 Micron) un-lubricated, non-corrosive dry gases
Operating Temperature: -30°~250° F [-34°~121°C]
Operating Pressure: 80 PSI [5.5 BAR] standard or 60 PSI [4.0 BAR] – Consult Factory for other operating pressures

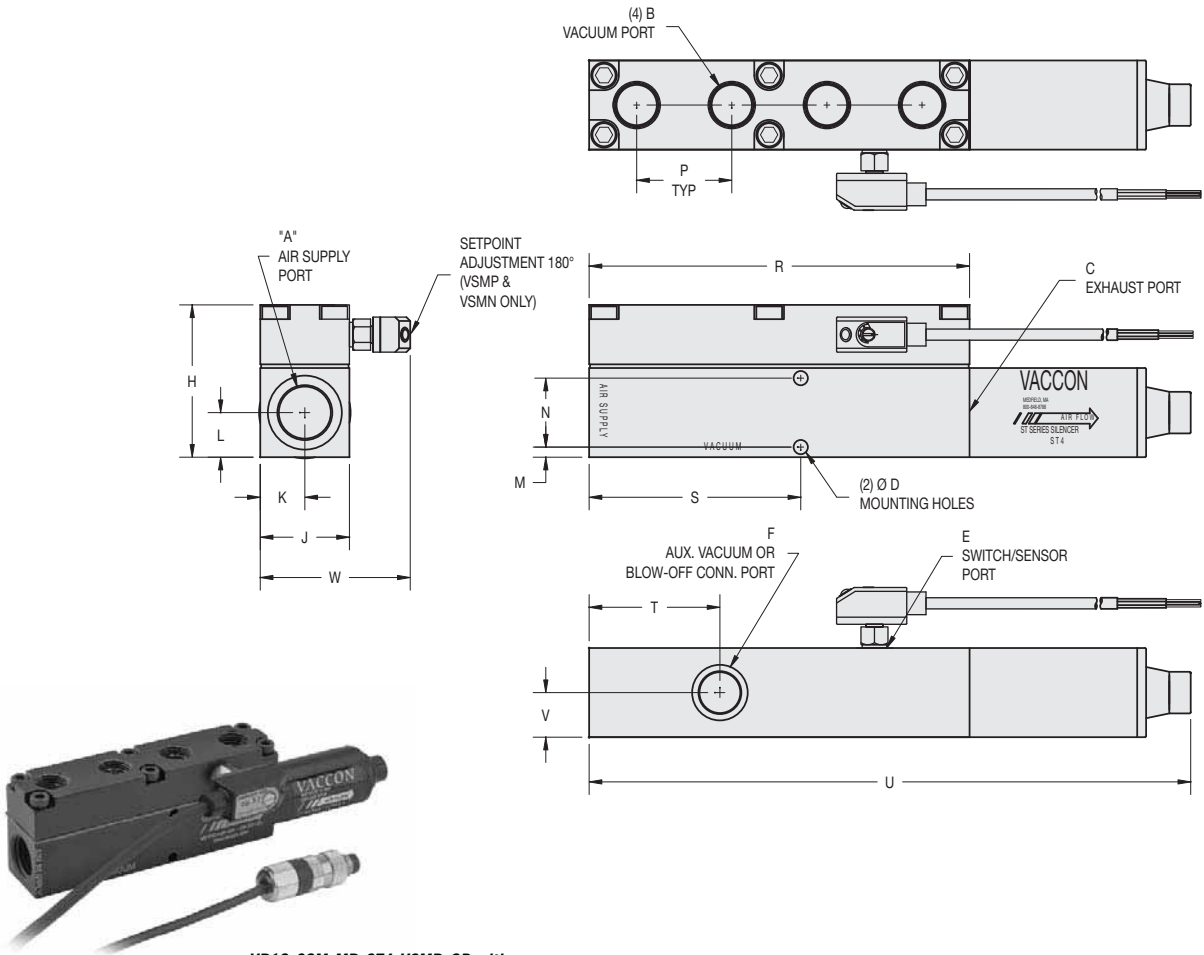
VP10-MP Operating and Installation Instructions:

Cartridge size: C60 (M, H) and C90 (L, M, H) C100 (L, M, H) and C150 (L, M, H)
Supply Line: 1/4" O.D. [6mm] tube recommended 3/8" O.D. [10mm] tube recommended
Vacuum Line: 1/4" O.D. [6mm] tube recommended 3/8" O.D. [10mm] tube recommended
Vacuum Line Filtration: Typically filters are not required, if desired Vaccon recommends – VF125LPM. See page 282.
Control Valve: 3 way/2 position (faster part release), minimum orifice – 0.125" [3mm]
Mounting Holes: Mounting holes accept 4-40 [M3] screws

Multi-port Venturi Vacuum Pumps

VP10-(60, 90, 100, 150) (L, M, H) -MP Optional ST4 Silencer, Ultra-Mini Switch/Sensor and QD-Quick Disconnect

Vacuum Pumps - Multi-port



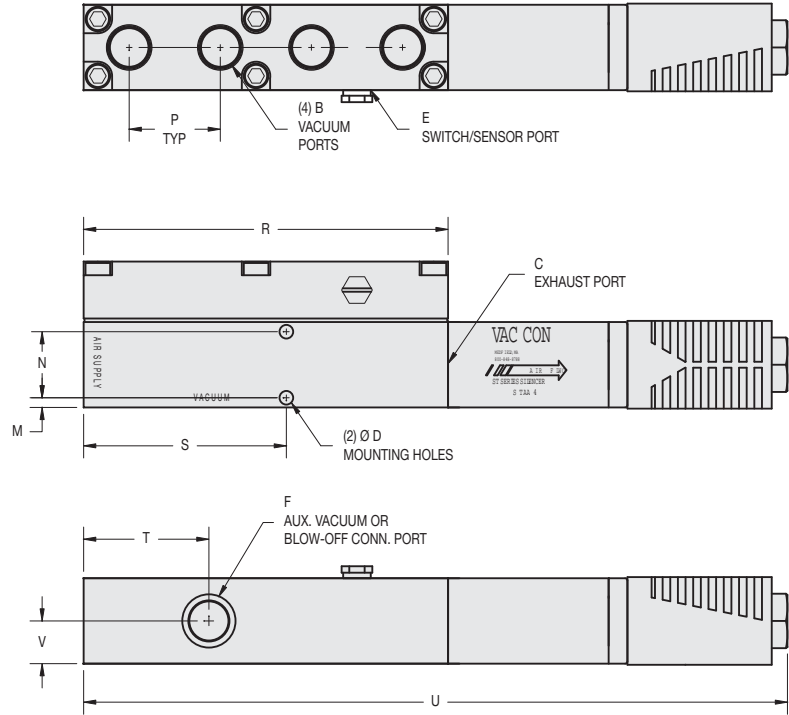
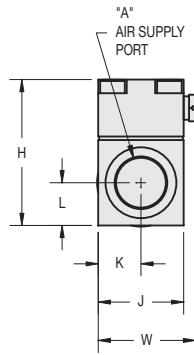
VP10-60M-MP-ST4-VSMP-QD with optional ST4 silencer, and vacuum switch with Quick Disconnect.

Specifications:

Weight 4.6 oz [131g]
Noise Level 68 dB

Model #	Imperial Dimensions (in.)																		
VP10-MP w/ST4, VSMP-QD	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
	1/4 NPT F	1/8 NPT F	1/4 NPT F	0.13	M5	1/8 NPT F	1.28	0.75	0.38	0.38	0.085	0.58	0.80	3.20	1.78	1.10	5.06	0.38	1.26
Model #	Metric Dimensions (mm)																		
I-VP10-MP w/ST4, VSMP-QD	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
	G 1/4	G 1/8	G 1/4	3.2	M5	G 1/8	32.5	19.1	9.5	9.5	2.16	14.7	20.3	81.3	45.2	27.9	128.5	9.5	32.0

VP10-(60, 90, 100, 150) (L, M, H) -MP – Optional STAA4 Silencer



VP10-60M-MP-STAA4 with optional STAA4 silencer.

Specifications:

Weight 4.5 oz [128g]
 Noise Level 64 dB

Model #	Imperial Dimensions (in.)																		
VP10-MP w/STAA4	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
	1/4 NPT F	1/8 NPT F	1/4 NPT F	0.13	M5	1/8 NPT F	1.28	0.75	0.38	0.38	0.085	0.58	0.80	3.20	1.78	1.10	6.20	0.38	0.86
Model #	Metric Dimensions (mm)																		
I-VP10-MP w/STAA4	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
	G 1/4	G 1/8	G 1/4	3.2	M5	G 1/8	32.5	19.1	9.5	9.5	2.16	14.7	20.3	81.3	45.2	27.9	157.5	9.5	21.7

