



VACCON

VACUUM PRODUCTS

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**ACCELERATING AUTOMATION
WITH VACUUM TECHNOLOGY**

Inline Venturi Vacuum Pump

VPI-90H Pump



VPI-90H densely populated robotic arm with vacuum cups for material handling applications



VPI-90H

Standard Pump:

Unlike standard venturi vacuum pumps where the vacuum port is 90° from the supply port, Vaccon's air-powered VPI-90H inline venturi vacuum pumps feature an air supply port and vacuum port on the same axis to consolidate space.

VPI-90H pumps vertically mount to robotic arms to create single or densely populated arrays of pump/cup combinations to accommodate and lift products of any size, shape, or weight.

Internal threads on the vacuum port enable vacuum cups to connect directly to the pump while the external threads attach directly to the end of arm tool. VPI-90H's feature an additional vacuum port for a vacuum switch/sensor to ensure accurate part detection or for a connection to an externally supplied blow-off.

Ideal Applications:

- Pick & place
- Bottling
- Packaging
- Palletizing
- Robotic/End-of-Arm tooling

Features/Benefits:

- High performance – powerful vacuum up to 28" Hg [948mbar]
- Push-to-connect air supply fitting
- Allows multi-populated boards – dense formations
- Fast response – installs close to vacuum point
- Efficient – minimal air consumption
- Easy to install – compact & lightweight, simple mounting, saves plumbing
- Safe operation – no electricity needed at the pump
 - ~ No moving parts to wear
 - ~ No flap valves to stick open
 - ~ No maintenance
 - ~ No downtime
- Reliable, trouble-free operation:

Performance Level Designations:

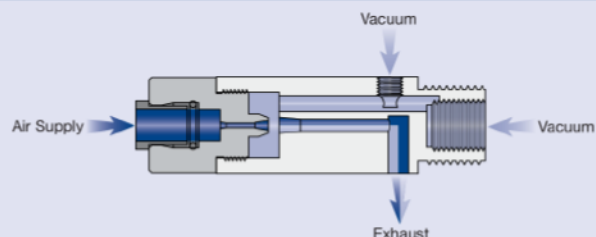
"H" 0-28"Hg, [0 to 948mbar] for high vacuum/standard flow applications

Pump Options:

- Choice of operating pressures to meet machine and factory air requirements (80 PSI [5.5 bar] standard, 60 PSI [4.1 bar] optional).
- Auxiliary port for optional vacuum sensor or switch with quick disconnect
- Auxiliary port for optional externally supplied blow-off
- Optional jam nut for ease of mounting

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. Combined, the nozzle and diffuser create a venturi vacuum cartridge.



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.

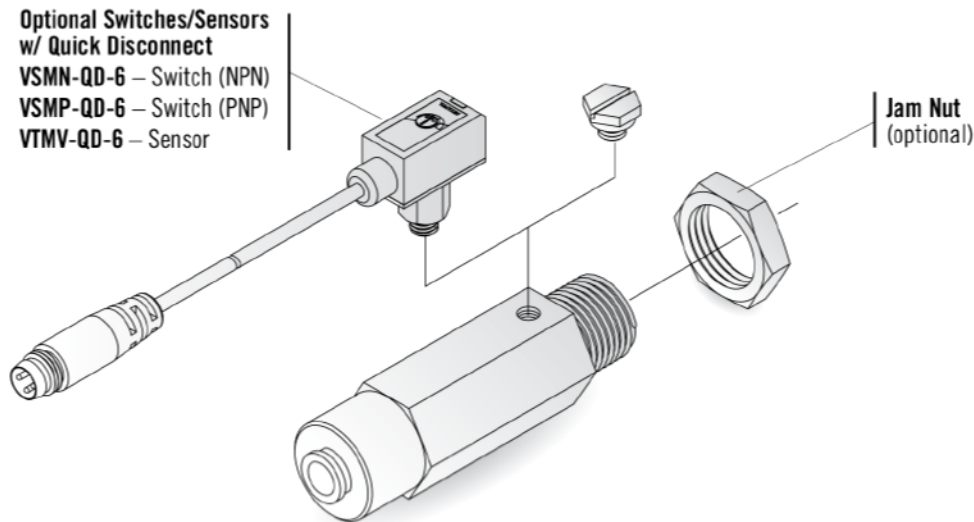
To download a complete set of drawings in 13 different CAD formats, please visit our website at www.vaccon.com

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



VPI-90H 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.



How to Specify:

VPI-90H - 60 - JN - VSMP-QD-6

P/N	Thread	Max Vac Level
VPI-90H	NPT	28"Hg [948 mbar]

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

P/N	Jam Nut
None	(Standard)
JN	Jam Nut

P/N	Switch/Sensor
None	(Standard)
VSMN-QD-6	Switch – NPN with QD
VSMP-QD-6	Switch – PNP with QD
VTMV-QD-6	Sensor – 1-5VDC Output w/QD

For complete Performance Data, see page 96 – Equivalent to a VP10-90H.

VPI-90H Inline Pump Standard Specifications:

Pump Material:	Anodized Aluminum Buna-N O-ring, Nylon
Medium:	Filtered (50 Micron) un-lubricated, non-corrosive dry gases
Operating Temperature:	-30° to ~250° F [-34° to ~121°C]
Operating Pressure:	80 PSI [5.5 bar] or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

VPI-90H Inline Pump Operating and Installation Requirements:

Supply Line:	Preferred 1/4" OD tubing [6mm]
Control Valve:	3-way/2 position (faster part release) – minimum orifice - 0.125" [3mm]
Vacuum Line:	Preferred 1/4" OD tubing [6mm]
Vacuum Line Filtration:	Typically filters are not required, if desired Vaccon recommends – VF125LPM. See page 254.
Mounting:	5/8-18 male thread (optional jam nut – P/N: -JN)

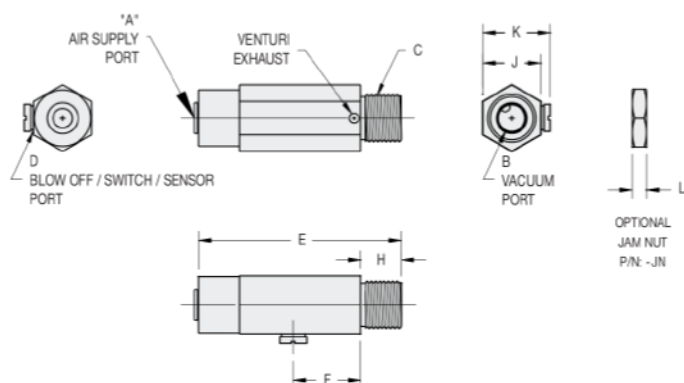


Inline Venturi Vacuum Pump

Standard Pump: VPI-90H Inline Venturi Vacuum Pump



VPI-90H



Specifications:

Segment Weight: 1.7 oz [48g]
Noise Level: 76 dB

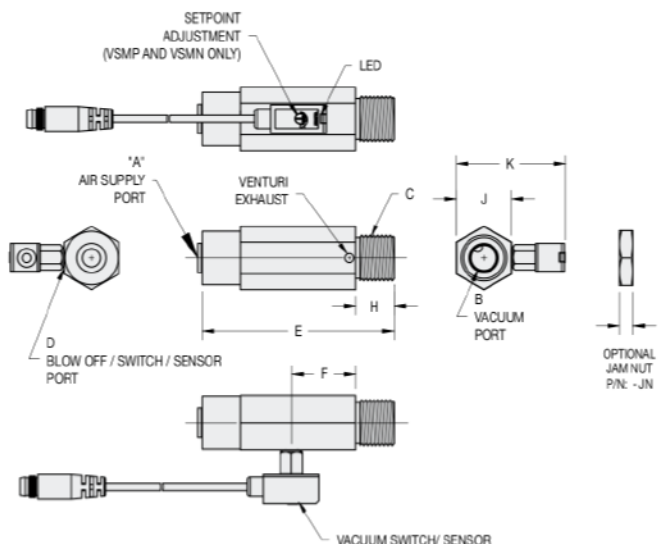
Model #	Imperial Dimensions (in.)									
VPI-90H	A	B	C	D	E	F	H	J	K	L
	1/4 PTC	1/8 NPT F	5/8-18 UNF	M5	2.63	0.32	0.53	0.75	0.91	0.19

Consult factory for metric availability.

VPI-90H with Optional Sensor/Switch (VSMN, VSMP, VTMV)



VPI-90H with VSMP-QD-6 vacuum switch.



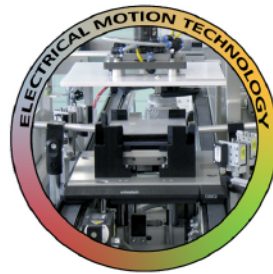
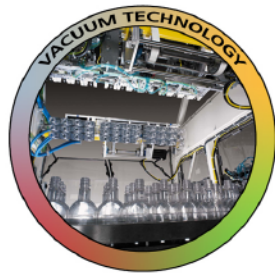
Specifications:

Segment Weight: 2.7 oz [76.5g]
Noise Level: 76 dB

Model #	Imperial Dimensions (in.)									
VPI-90H (VSMN, VSMP, VTMV)	A	B	C	D	E	F	H	J	K	L
	1/4 PTC	1/8 NPT F	5/8-18 UNF	M5	2.63	0.32	0.53	0.75	1.50	0.19

Consult factory for metric availability.





***Vous avez l'idée, nous la concrétisons.
Wij verheugen ons op uw aanvraag.
We look forward to your application.***



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