

Max-size Venturi Vacuum Pump with Silencer

VP Max Series: VP90-300 & 350



Standard Pump:

The VP90-300 & 350 Max Series air-powered venturi vacuum pumps provide high vacuum flow rates for the rapid evacuation of large volumes of air or for overcoming leakage in order to sustain high vacuum levels while handling porous materials.

Highly efficient, capable of reaching 28"Hg [948mbar], the VP90's are dirt tolerant and include a silencer for quiet operation. Unlike the Mid series pumps that use interchangeable cartridge assemblies, the Max series pumps (VP80 & VP90's) use a non-removable press-fit venturi assembly.

Performance Level Designations:

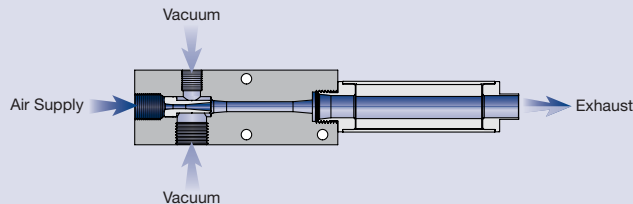
"L" 0-10"Hg [0 to 339mbar] for low vacuum/high flow applications

"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

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.



Ideal Applications:

- Pick & place of large/heavy/porous objects
- Rapid evacuation of large volumes of air
- Vacuum filling
- Vessel evacuation
- One pump powers multiple suction cups
- End-of-Arm Tooling/Robotics
- Packaging – bag/box/carton folding and handling
- Vacuum clamping/holding – fixtures, veneers

Features/Benefits:

- High performance – powerful vacuum up to 28"Hg [948mbar]
- Compact & lightweight, rugged body construction
- Fast response – mounts close to vacuum point
- Efficient – minimal air consumption
- Safe operation:
 - ~ No electricity needed at the pump
 - ~ High flow overcomes leakage – maintains a strong holding force
- 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 gauge
- Silencers: ST-8B – straight through silencer allows dirt to pass through, without clogging
- 90° elbow attachment for silencers for compact space requirements
- G port threads for metric machines – products with an "I" prefix designates metric threads
- Choice of operating pressures to meet machine and factory air supply 80 PSI [5.5 bar] standard, 60 PSI [4.0 bar] optional.

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.

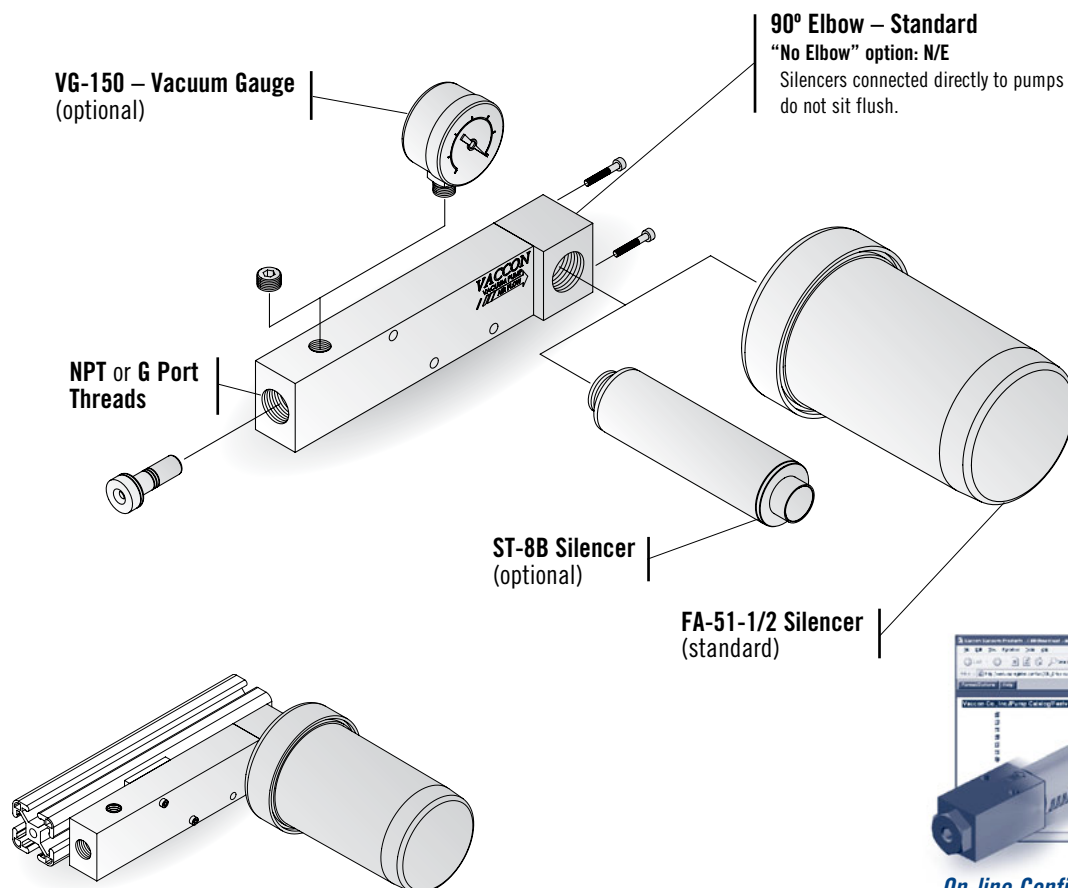
To download a complete set of drawings in 13 different CAD formats, please visit our website at www.vaccon.com

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

Modular Venturi Vacuum Pumps – Max Series

VP90-300 & 350 (L, M, H) Max 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.



VP90-300 & 350 pumps are Fractional and Metric T-Slot compatible. See EOAT Section.



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!

How to Specify:

VP90-300 - M - 60 - ST8B

P/N Imperial Thread

VP90-300	NPT
VP90-350	NPT

P/N Metric Thread

I-VP90-300	G Port
I-VP90-350	G Port

P/N Max. Vac Level

L	10"Hg [339 mbar]
M	20"Hg [677 mbar]
H	28"Hg [948 mbar]

P/N Silencer

FA-51-1/2	High Flow (Standard)
N/E	FA-51-1/2 - No Elbow
ST-8B	Straight-Through With Elbow
N/E-ST-8B	Straight-Through Without Elbow

P/N Operating Pressure

80 PSI [5.5 bar]	(Standard)
60	60 PSI [4.1 bar]

P/N Vacuum Gauge

VG-150	Vaccon does not recommend shipping gauges attached to pumps. Please specify as a separate line item.
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For complete Performance Data, see page 136.

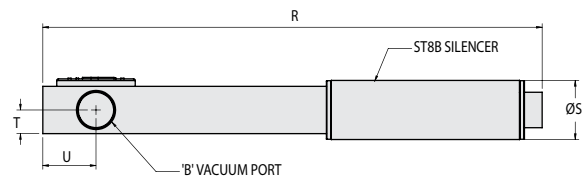
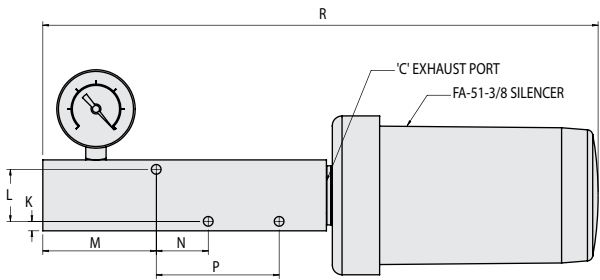
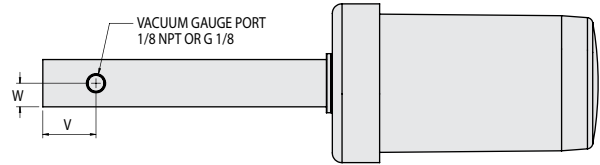
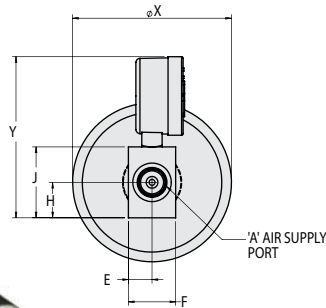
Standard: VP90-300 & VP90-350 (L, M, H) Pump



VP90-350H with ST-8B silencer and VG-150 vacuum gauge.



VP90-350H includes FA-51-1/2 silencer.



Specifications:

Weight VP90-300/350 with ST-8B: 1lb 3 oz [539g]
 Noise Level VP90-300/350 with ST-8B: 73dB

VP90-300/350 WITH FA-51-1/2 SILENCER: 1lb 12 oz [794g]
 VP90-300/350 WITH FA-51-1/2 SILENCER: 70dB

Model #	Imperial Dimensions (in.)																				
VP90-300/ 350 w/	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y
FA-51-3/8	3/8 NPT F	1/2 NPT	1/2 NPT	0.21	0.5	1.00	0.75	1.5	0.2	1.10	2.40	1.10	2.60	11.75	1.25	0.5	1.13	1.13	0.5	3.36	3.41
ST-8B														10.56							
														N/A							
Model #	Metric Dimensions (mm)																				
I-VP90-300/ 350 w/	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y
FA-51-3/8	G 3/8	G 1/2	G 1/2	5.3	12.7	25.4	19.1	38.1	5.1	27.9	61.0	27.9	66.0	298.45	31.8	12.7	28.6	28.6	12.7	85.3	86.6
ST-8B														268.22							
														N/A							

VP90 Pump Standard Specifications:

Pump Material:	Anodized Aluminum (For silencer material, see page 244 - 248)
Medium:	Filtered (100 Micron) un-lubricated, non-corrosive dry gases
Operating Temperature:	-100° to ~ +400° F [-73° to ~ +204°C]
Operating Pressure:	80 PSI [5.5 bar] or 60 PSI [4.0 bar] – Consult Factory for other operating pressures

VP90 Operating and Installation Instructions:

Supply Line:	Minimum recommended – 1/2" O.D. [12mm] OD tubing
Vacuum Line:	Minimum recommended – 1/2" O.D. tubing – Preferred – 3/4" [22mm] for vacuum lines exceeding 3' [1M]
Vacuum Line Filtration:	Typically vacuum filters are not required. If desired, Vaccon recommends – VF500F. See page 254.
Mounting:	Mounting holes accept #10-32 or M5 screws