

Mid Series Venturi Vacuum Pump with 3-way Integral Solenoid Valve and Silencer

Fastvac Mid Series: VP30



VP30-100H/24vDC with optional ST4 silencer and VG-150 vacuum gauge

Standard Pump:

VP30 Fastvac Mid Series pumps are solenoid-controlled venturi vacuum pumps that generate vacuum only when needed, minimizing compressed air consumption. The integral solenoid valve provides instantaneous response for high speed assembly and pick and place applications.

Design flexibility is further increased with our interchangeable venturi cartridge system. Choosing from 11 different venturi cartridges, designers optimize performance to meet their needs.

Lightweight and compact, VP30 pumps are placed at the point of use to eliminate plumbing between components and to ensure high cycle rates for increased productivity. Extremely dirt tolerant, filters are not required. Push-to-connect air supply and vacuum lines save space and assembly time.

Add a Vaccon ultra-miniature vacuum switch or sensor for a vacuum achieved/part present signal.

Product Update 1: The VP31 Series has been discontinued.
The VP30 Series is an equivalent pump.

Ideal Applications:

Pick and place for applications requiring accurate part placement:

- Automated assembly
- Robotics
- Material Handling

Features/Benefits:

- High productivity – fast part release with high cycle rates up to 2700/min
- Minimal air consumption – provides instantaneous vacuum as needed
- Reliable part detection – factory-installed miniature vacuum switches or sensors
- Fast Response – installs close to vacuum point – no delay due to long plumbing lines
- Easy installation – modular design speeds installation and minimizes assembly
- Reliable, trouble-free operation
 - ~ No moving parts to wear
 - ~ Straight-through design, non-clogging
 - ~ No maintenance
 - ~ No downtime

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

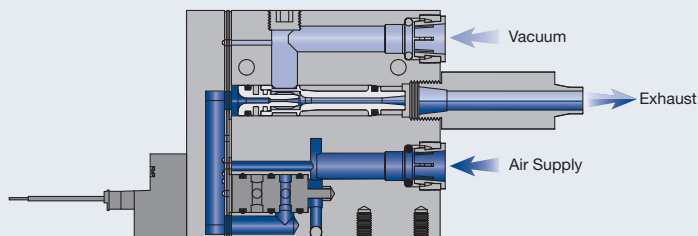
“H” 0-28"Hg, [0 to 948mbar] for high vacuum/standard flow applications

Pump Options:

- Interchangeable venturi cartridges – 11 different performance levels
- Choice of valve voltage – 24vDC or 110vAC
- Factory-installed miniature vacuum switches or sensors for reliable part detection
- AA4 silencer and STAA4 hybrid silencer for ultra-quiet operation
- Push-to-connect fittings, threads optional, contact factory
- Choice of operating pressures to meet machine and factory air supply 80 PSI [5.5 BAR] standard, 60 PSI [4.0 BAR] optional.

Principles of Operation: VP30

To create vacuum, supply compressed air to a N.C. solenoid valve and energize the valve. Compressed air flows to the miniature venturi cartridge producing instant vacuum at the vacuum port. To release the part, de-energize the solenoid valve. The flow of air to the venturi stops instantly, and the rush of incoming atmospheric air breaks the vacuum.



Shown with solenoid valve energized.

VP30 Standard Pump Specifications:

Body Material:	Anodized Aluminum, Buna-N, Brass, Acetal (For silencer material, see pages 233-237)
Cartridge Material:	Nylon, Buna-N (Other materials available, see page 7)
Medium:	Filtered (50 Micron) un-lubricated, non-corrosive dry gases
Operating Temperature:	-23°~122° F [-5°~50°C]
Operating Pressure:	80 PSI [5.5 BAR] or 60 PSI [4.0 BAR] – Consult Factory for other operating pressures

3-Way Pilot Valve Specifications

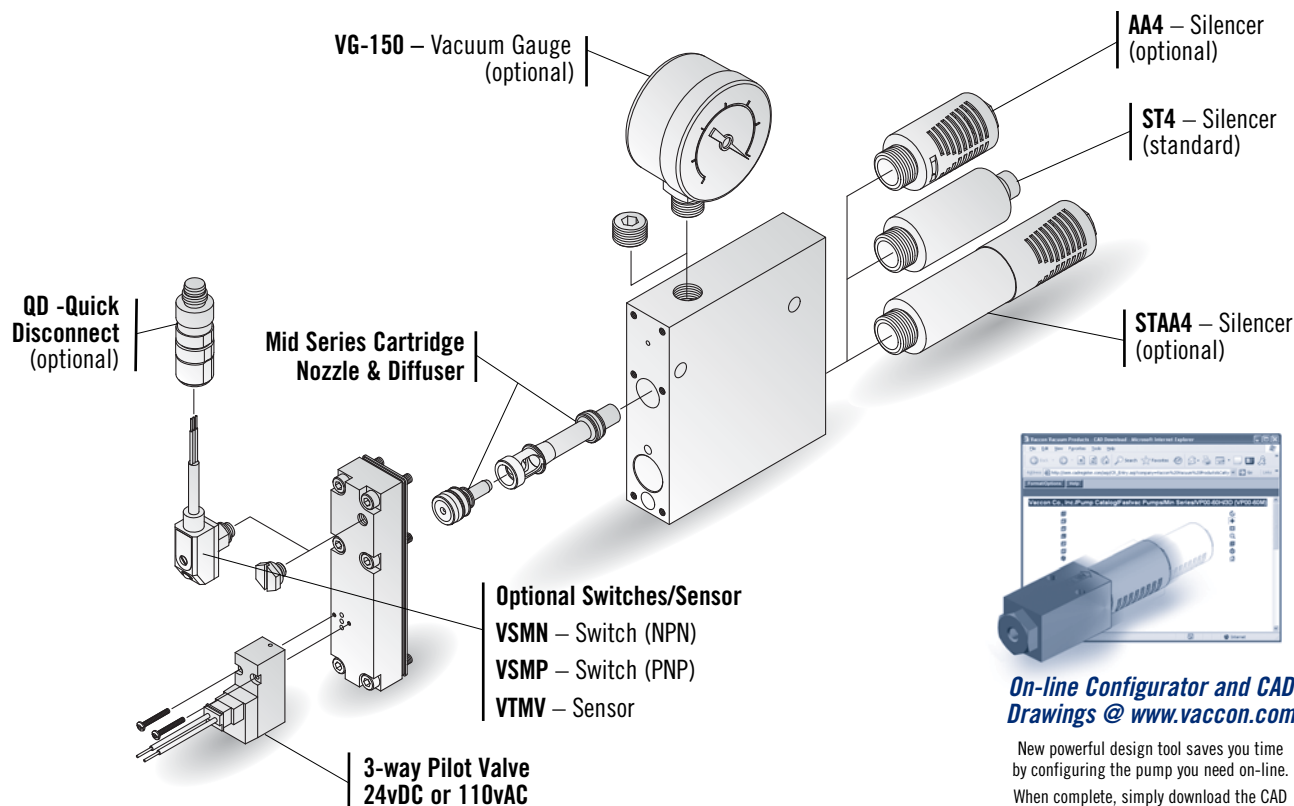
Valve Type:	Integral 3-way solenoid, 24vDC or 110vAC, Normally closed
Valve Body Material:	Copper, Nylon, Stainless Steel
Valve Seal Material:	Buna-N
Valve Operating Pressure:	0 to 100 PSI [0 to 7 BAR]
Average Life:	50 million cycles
Power Consumption:	24vDC: 1.3 watts, 110vAC: 1.0 watts
Response Time:	8 milliseconds
Cycle Rate:	45 cycles per second
Electrical Connection:	2 pole plug-in cable with 24 AWG, 3' [1M] flying leads
Manual Override:	Yes, non-locking, spring return

VP30 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:	3/8" O.D. [10mm] tube recommended	3/8" O.D. [10mm] tube recommended
Vacuum Line Filtration:	Typically filters are not required, if desired Vaccon recommends – VF250F. See page 282.	
Mounting Holes:	Mounting holes accept 10-32 [M5] screws	

VP30 Fastvac Mid 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.



How to Specify:

VP30 - 60 H - 24vDC - 60 - - VTMV

P/N	Thread
VP30	NPT

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	Voltage
24vDC	24vDC
110vAC	110vAC

P/N	Vacuum Gauge
VG-150	Vaccon does not recommend shipping gauges attached to pumps. Please specify as a separate line item.

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

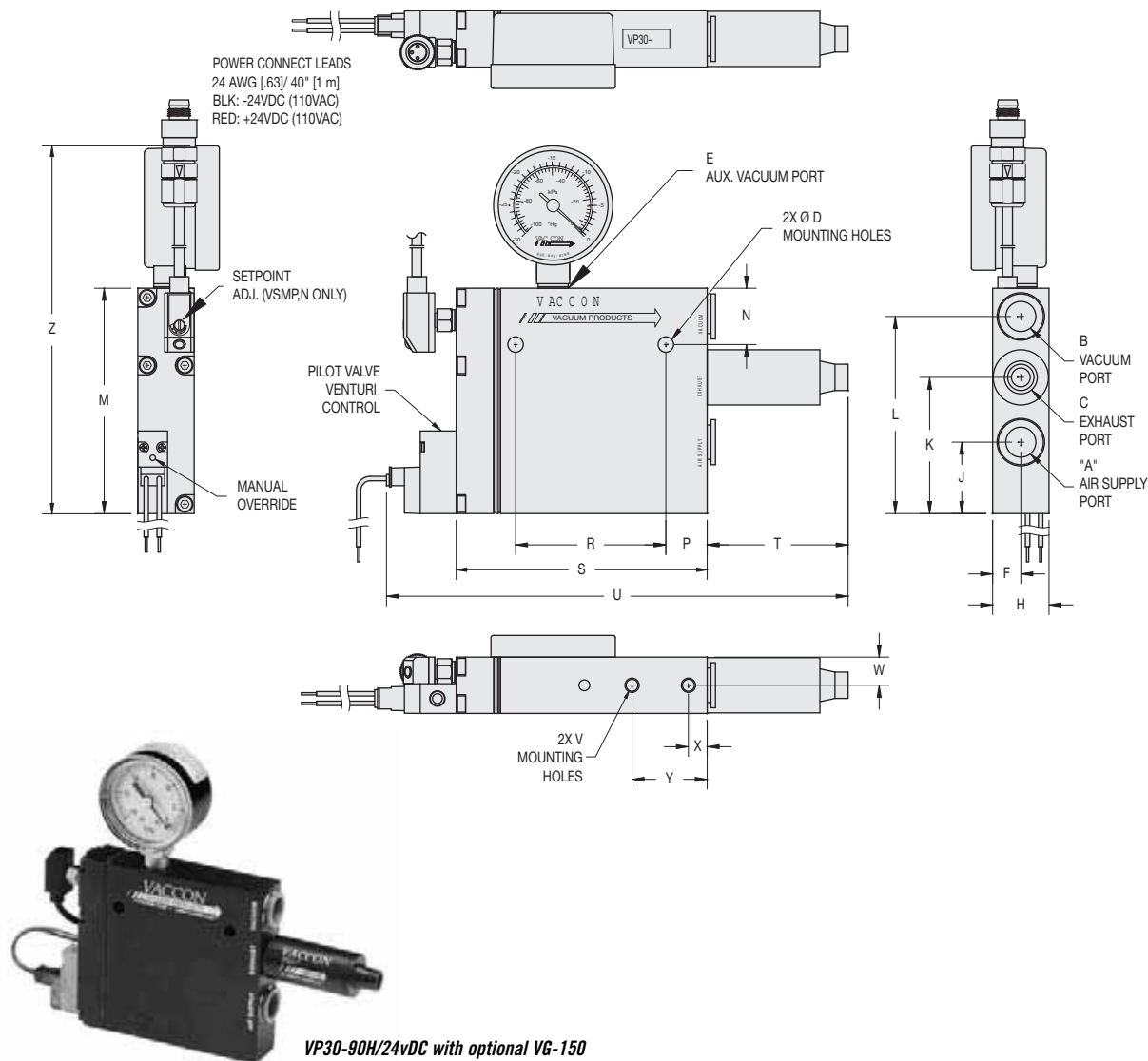
P/N	Silencers
	ST4 – Straight-Through (Std)
AA4	Closed End
STAA4	Hybrid

P/N	Operating Pressure
	80 PSI [5.5 BAR] (Std)
60	60 PSI [4.0 BAR]

For complete Performance Data, see page 150.

Modular Venturi Vacuum Pumps - Solenoid Operated

VP30- (60, 90, 100, 150) (L, M, H)/24vDC or 110vAC: Optional Vacuum Gauge VG-150, Vacuum Sensor/Switch and Quick Disconnect - QD



Specifications:

Weight: 11 oz [312g]
Noise Level: 66 dB

Model #	Imperial Dimensions (in.)																					
VP30 w/ VG-150, VSMP-QD	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z
	3/8 PTC*	3/8 PTC*	1/4 NPT F	0.21	1/8 NPT F	.038	0.75	0.95	1.81	2.62	3.00	0.75	0.55	2.00	3.34	1.88	6.14	10-32	0.38	0.25	1.00	4.90
Model #	Metric Dimensions (mm)																					
I-VP30 w/ VG-150, VSMP-QD	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z
	10mm	10mm	G 1/4	5.2	G 1/8	9.5	19.1	24.1	46.1	66.6	76.2	19.1	14.0	50.8	84.8	47.6	156.0	M5	9.5	6.4	25.4	124.5

*PTC – Push-to-connect. Consult factory for NPT threaded connections.