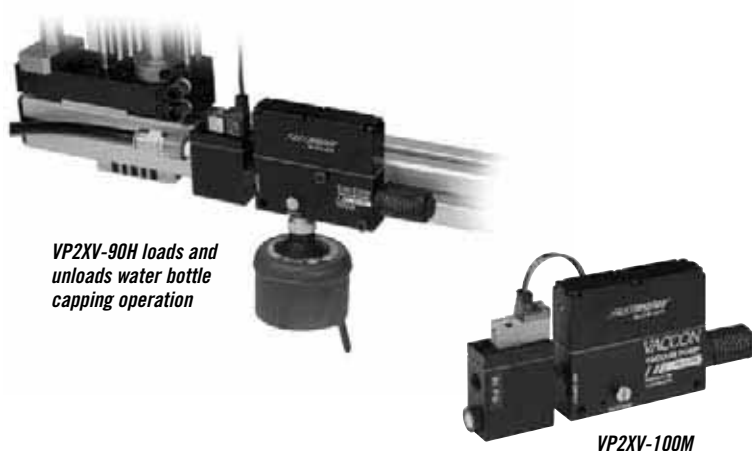


Mid Series Venturi Vacuum Pump, Solenoid Operated with Pneumatic Blow-off and Silencer

Mid Series: VP2XV & VP2XV-ADJ



Standard Pump:

VP2XV and VP2XV-ADJ air-powered venturi vacuum pumps are the solution for the accurate part placement and rapid part release operations requiring a solenoid-operated pump with pneumatic blow-off.

To provide a complete, compact system, the VP2XV & VP2XV-ADJ pumps include a pre-plumbed and pre-sized solenoid-operated control valve.

The reliable VP2XV pump provides both vacuum and blow-off in one pump, using only one compressed air line and one electric signal, minimizing the number of outputs required. The integrated pneumatic high speed blow-off provides a fixed-duration blow-off based on the volume of the chamber.

With the VP2XV-ADJ, you can control the intensity of the blow-off using one fingertip adjustment knob.

For applications where you need to control the duration of the blow-off, please see VP30QR Series on page 135.

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

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

Ideal Applications:

Pick and place for applications requiring accurate part placement and rapid part release:

- Integrated circuits
- Packaging machines
- High speed labeling machines
- Sheet feeders
- Robotic end effectors
- Automated assembly

Features/Benefits:

- Easy installation – includes a solenoid-operated control valve; no assembly required, pre-plumbed and pre-sized to fit the pump
- Reliable part detection – factory-installed miniature vacuum switches or sensors
- High Productivity – rapid part release, cycle rates up to 900/min
- Fast Response – compact, lightweight, and installs close to vacuum point
- Trouble free operation
 - ~ No moving parts to wear
 - ~ Automatically cleans vacuum lines
 - ~ No downtime
- Modular design – add vacuum sensors, solenoid valves and blow off capability to create a complete vacuum system
- Multiple functions from just one output – requires fewer outputs, less costly, easy to program and easy to plumb

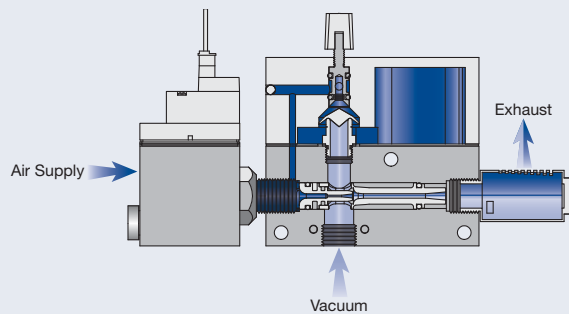
Pump Options:

- ADJ version allows the user to set the intensity of the blow-off from no blow-off to full blow-off
- Choice of valve voltage – 24vDC or 110vAC
- Interchangeable venturi cartridges – 11 different performance levels
- Factory-installed or field mounted miniature vacuum switches or sensors for reliable part detection
- Silencers – ST4 – straight-through silencer won't clog, or STAA4 silencers for ultra quiet operation
- 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] optional

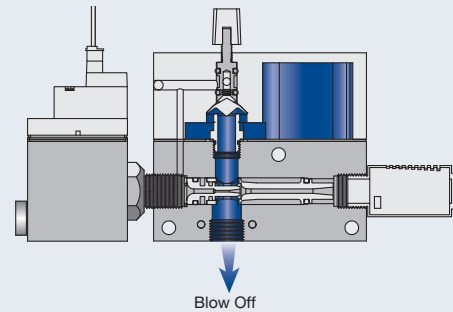
Modular Venturi Vacuum Pumps, Solenoid Operated with Pneumatic Blow-Off

Principles of Operation: Blow-off Technology – VP2XV, VP2XV-ADJ

Fastbreak pumps provide both suction and blow-off with a single supply of compressed air controlled by a solenoid valve.



Utilizing quick exhaust valve technology, Fastbreak pumps store compressed air in the upper chamber while simultaneously generating vacuum. The quick exhaust diaphragm seals the compressed air chamber from the suction line.



To release the part, the solenoid valve is de-energized. The vacuum stops and the rapid drop in pressure shifts the quick exhaust diaphragm into the up position allowing the store compressed air to vent into the vacuum line.

When handling small and lightweight parts, choose the adjustable version (-ADJ) shown above, to control the blow-off intensity.

VP2XV & VP2XV-ADJ Pump Specifications:

Body Material:	Anodized Aluminum, Nebar, Buna-N, Brass, Vinyl, Nylon, Alloyed Steel (For silencer material, see pages 233-237)
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:	+32°~125° F [-0°~52°C]
Operating Pressure:	80 PSI [5.5 BAR] Standard or 60 PSI [4.0 BAR] – Consult Factory for other operating pressures
Cycle Rates:	Up to 900 cycles per minute
Blow-off Response Time:	Instantaneous
Orientation:	Any position
Blow-off Duration:	100 milliseconds (based on system design)

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:	Up to 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

VP2XV & VP2XV-ADJ 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 – VF-125LPM – See page 282	Typically filters are not required, if desired Vaccon recommends – VF-250F – See page 282
Mounting Holes:	Mounting holes accept 10-32 [M5] screws	

Modular Venturi Vacuum Pumps, Solenoid Operated with Pneumatic Blow-Off

VP2XV & VP2XV-ADJ Fastbreak Mid Series Configurations and Options:

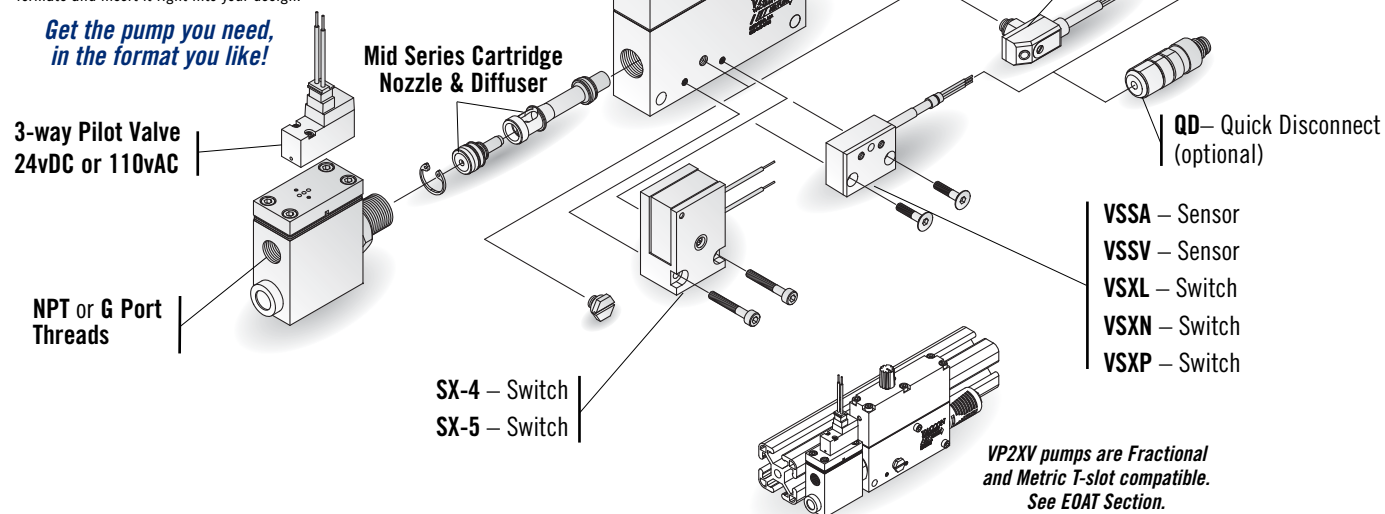
All Vaccon pumps offer a variety of options and accessories to meet your specific requirements. Please configure your pump from the options listed below.



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:

VP2XV - 60 H - 110vAC - - ADJ - ST4 - VSMP

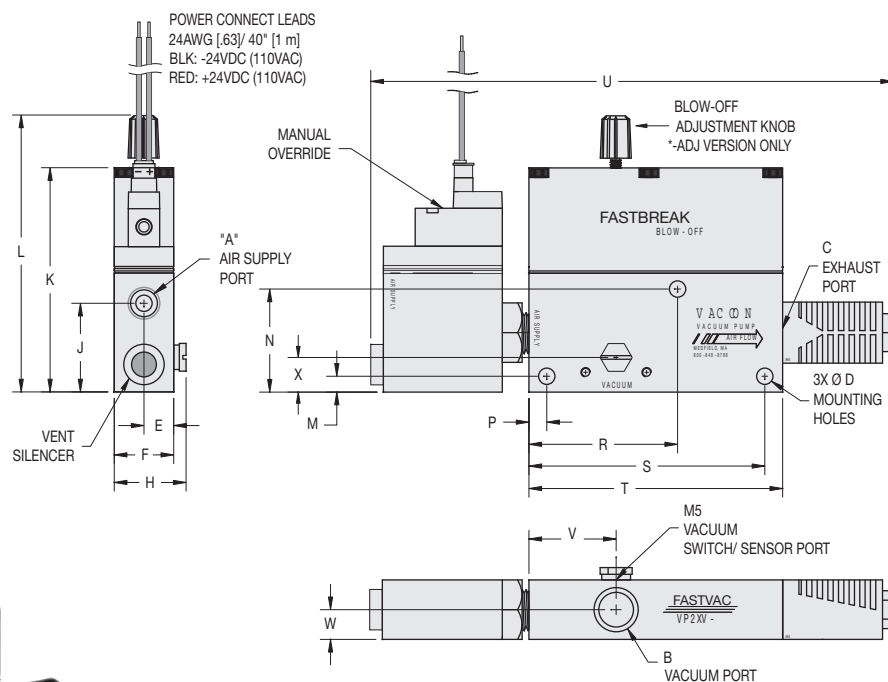
P/N	Thread
VP2X	NPT
I-VP2X	G-Port
P/N	Max. Flow Level
-60	
-90	
-100	
-150	
P/N	Max. Vac Level
L	10"Hg [339mbar]
M	20"Hg [677mbar]
H	28"Hg [948mbar]
P/N	Voltage
24vDC	24vDC
110vAC	110vAC
P/N	Operating Pressure
60	80 PSI [5.5 BAR] (Std)
	60 PSI [4.0 BAR]

P/N	Switch/Sensor	w/Quick Disconnect
	None (Standard)	
VSMN	Switch – NPN	-QD
VSMP	Switch – PNP	-QD
VTMV	Sensor – 0-5VDC Output	-QD
VSSA	Sensor – 4-20mA Output	-QD
VSSV	Sensor – 0-5VDC Output	-QD
VSXL	Switch – Sinking	-QD
VSXN	Switch – Sinking	-QD
VSWP	Switch – Sourcing	-QD
SX-4	Switch – 2-14.8"Hg	N/A
SX-5	Switch – 7.4-30"Hg	N/A
P/N	Silencer	
AA4	AA4 – Closed end (Standard)	
ST4	Straight-Through	
STAA4	Hybrid	
P/N	Adjustable Blow-off	
	Not Adjustable (Standard)	
ADJ	Adjustable Blow-off	

For complete Performance Data, see page 150.

Modular Venturi Vacuum Pumps, Solenoid Operated with Pneumatic Blow-Off

Standard Pump: VP2XV - (60, 90, 100, 150) (L, M, H) (-ADJ)



VP2XV-90H-ADJ with AA4 Silencer



VP2XV-100M with AA4

Specifications:

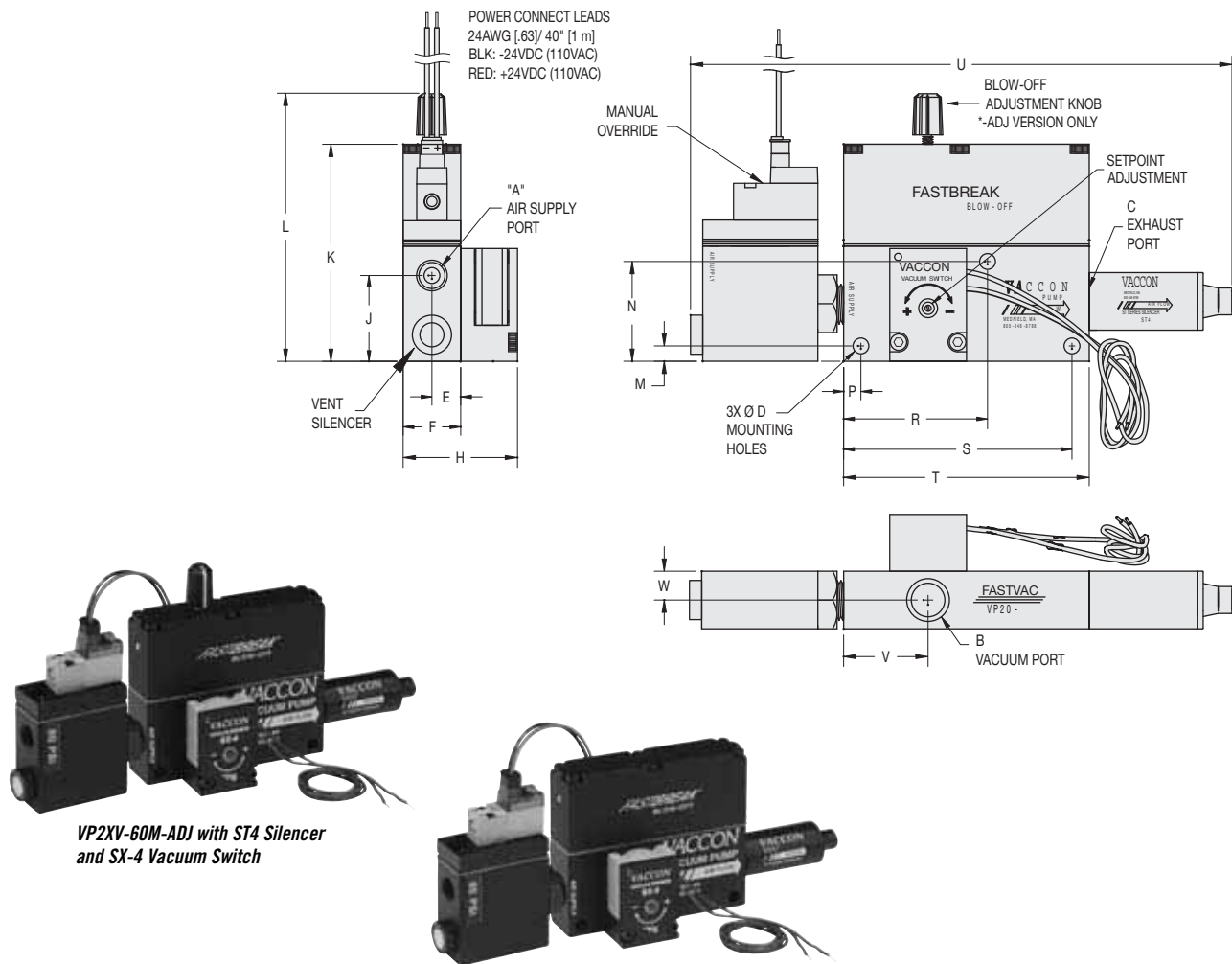
Weight 12 oz [340g]
Noise Level 64 dB

Model #	Imperial Dimensions (in.)																			
VP2XV w/AA4	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W	X
	1/8 NPT F	1/4 NPT F	1/4 NPT F	0.21	0.38	0.75	0.91	1.12	2.83	3.49	0.20	1.30	0.23	1.88	2.98	3.20	6.60	1.10	0.38	0.44
Model #	Metric Dimensions (mm)																			
I-VP2XV w/AA4	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W	X
	G 1/8	G 1/4	G 1/4	5.2	9.5	19.1	23.0	28.4	71.8	88.5	5.1	33.0	5.7	47.6	75.6	81.3	167.6	27.9	9.5	11.1

*-ADJ Version Only

Modular Venturi Vacuum Pumps, Solenoid Operated with Pneumatic Blow-Off

VP2XV - (60, 90, 100, 150) (L, M, H) (-ADJ) Pump - Optional ST4 Silencer and Vacuum Switch



VP2XV-60M-ADJ with ST4 Silencer and SX-4 Vacuum Switch

VP2XV-90M with ST4 Silencer and SX-4 Vacuum Switch

Specifications:

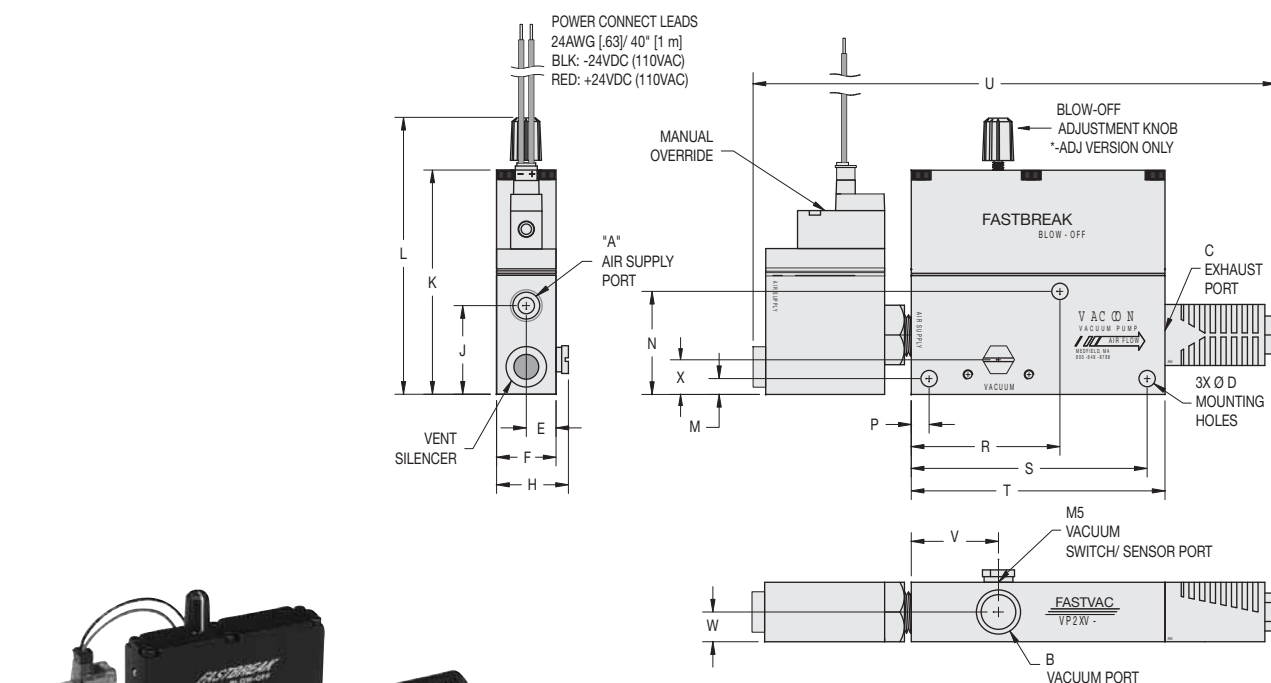
Weight 15 oz [425g]
Noise Level 66 dB

Model #	Imperial Dimensions (in.)																		
VP2XV w/ST4, SX4	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W
	1/8 NPT F	1/4 NPT F	1/4 NPT F	0.21	0.38	0.75	1.49	1.12	2.83	3.49	0.20	1.30	0.23	1.88	2.98	3.20	7.06	1.10	0.38
Model #	Metric Dimensions (mm)																		
I-VP2XV w/ST4, SX4	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W
	G 1/8	G 1/4	G 1/4	5.2	9.5	19.1	37.8	28.4	71.8	88.5	5.1	33.0	5.7	47.6	75.6	81.3	179.2	27.9	9.5

*-ADJ Version Only

Modular Venturi Vacuum Pumps, Solenoid Operated with Pneumatic Blow-Off

VP2XV - (60, 90, 100, 150) (L, M, H) (-ADJ) Pump - Optional STAA4 Silencer and Ultra-Mini Vacuum Switch



VP2XV-150H-ADJ with STAA4 Silencer and VSMP Vacuum Switch



VP2XV-100H with STAA4 Silencer and VSMP Vacuum Switch

Specifications:

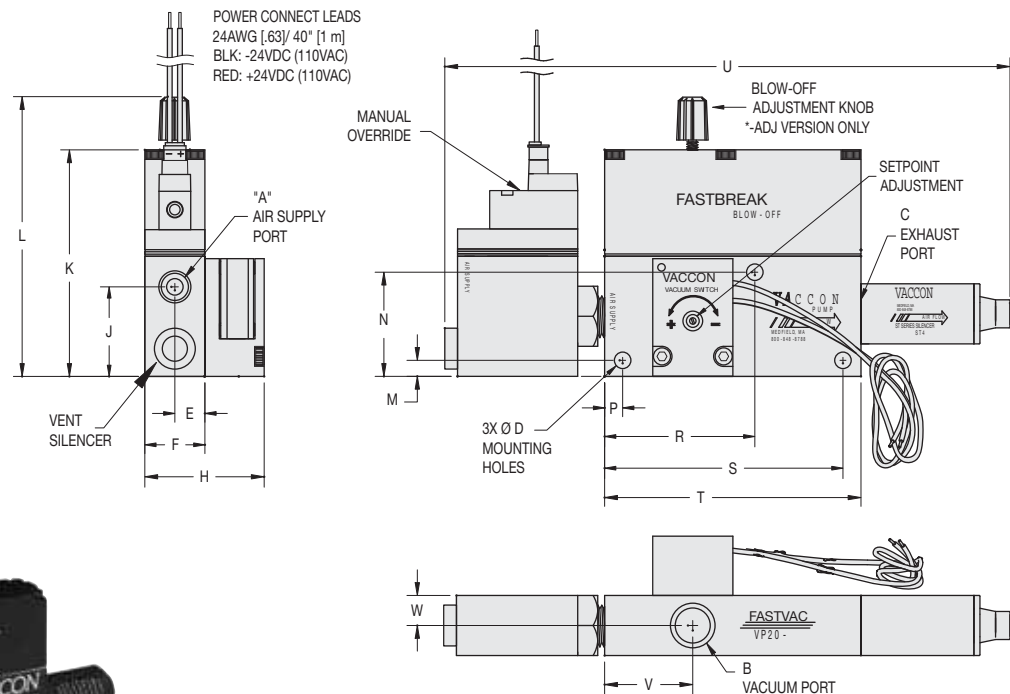
Weight 14 oz [397g]
Noise Level 58 dB

Model #	Imperial Dimensions (in.)																			
VP2XV w/STAA4	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W	X
	1/8 NPT F	1/4 NPT F	1/4 NPT F	0.21	0.38	0.75	1.43	1.12	2.83	3.49	0.20	1.30	0.23	1.88	2.98	3.20	8.19	1.10	0.38	0.44
Model #	Metric Dimensions (mm)																			
I-VP2XV w/STAA4	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W	X
	G 1/8	G 1/4	G 1/4	5.2	9.5	19.1	36.4	28.4	71.8	88.5	5.1	33.0	5.7	47.6	75.6	81.3	208.0	27.9	9.5	11.2

*-ADJ Version Only

Modular Venturi Vacuum Pumps, Solenoid Operated with Pneumatic Blow-Off

VP2XV - (60, 90, 100, 150) (L, M, H) (-ADJ) Pump - Optional Mini Switch/Sensor and Quick Disconnect



VP2XV-150H-ADJ with VSXN-QD
Vacuum Switch and Quick Disconnect



VP2XV-100H with VSXN-QD Vacuum Switch
and Quick Disconnect

Specifications:

Weight 13 oz [369g]
Noise Level 64 dB

Model #	Imperial Dimensions (in.)																		
VP2XV w/VSXN-QD	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W
	1/8 NPT F	1/4 NPT F	1/4 NPT F	0.21	0.38	0.75	1.18	1.12	2.83	3.49	0.20	1.30	0.23	1.88	2.98	3.20	6.60	1.10	0.38
Model #	Metric Dimensions (mm)																		
I-VP2XV w/VSXN-QD	A	B	C	D	E	F	H	J	K	L*	M	N	P	R	S	T	U	V	W
	G 1/8	G 1/4	G 1/4	5.2	9.5	19.1	30.1	28.4	71.8	88.5	5.1	33.0	5.7	47.6	75.6	81.3	167.2	27.9	9.5

*-ADJ Version Only