



**Modular Venturi
Vacuum pumps
Max Series**

VACCON

VACUUM PRODUCTS

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**ACCELERATING AUTOMATION
WITH VACUUM TECHNOLOGY**

Max-size Venturi Vacuum Pump with Silencer

VP Max Series:

VP80-200/VP80BV-200



VP80-200M transfers boxes for palletizing operation



VP80BV-200H-VG-150

Standard Pump:

The VP80-200 and VP80BV-200 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. The VP80BV-200 Max Series pumps offer an integrated valve for increased production cycles.

Highly efficient, capable of reaching 28"Hg [948mbar], the VP80's are dirt tolerant and include a straight-through 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:

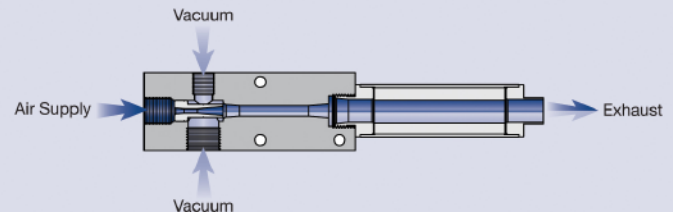
"L" 0-10"Hg, [0 to 339mbar] for low vacuum/high flow applications

"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 medium to large size objects
- End-of-Arm Tooling/Robotics
- Vessel evacuation – molds/tanks/bottles/drums
- Packaging – bag/box/carton folding and handling
- Vacuum clamping/holding – fixtures, veneers
- Vacuum filling/bottling operations

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: STAA6 for ultra-quiet operation, FA-51-3/8 for high flow applications
- Integrated 2-way valve - 24 VDC, normally closed
- 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 [4.1 bar] optional

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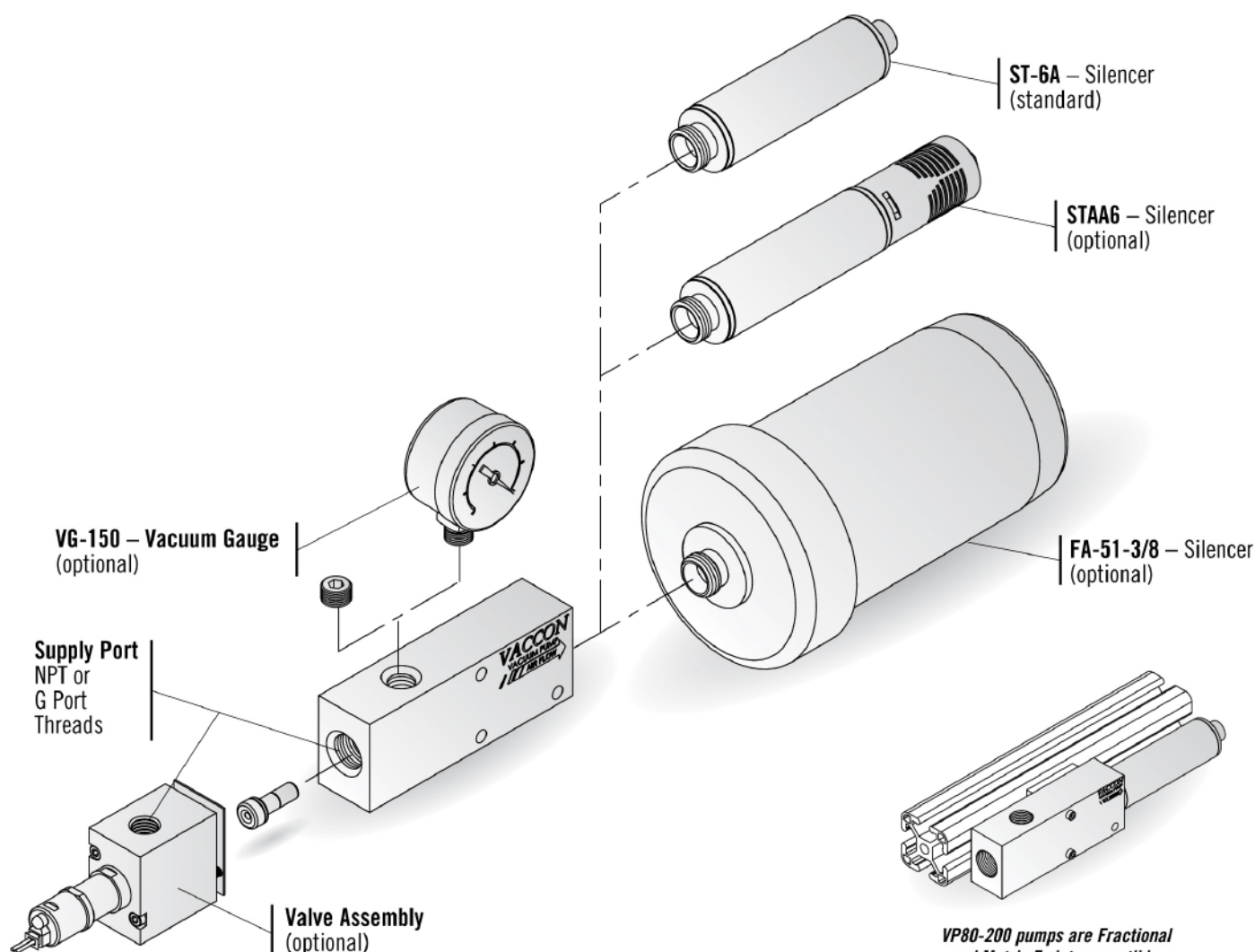
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VP80-200 (L, M, H) Max Series Configurations and Options:

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



VP80-200 pumps are Fractional and Metric T-slot compatible. See EOAT Section.

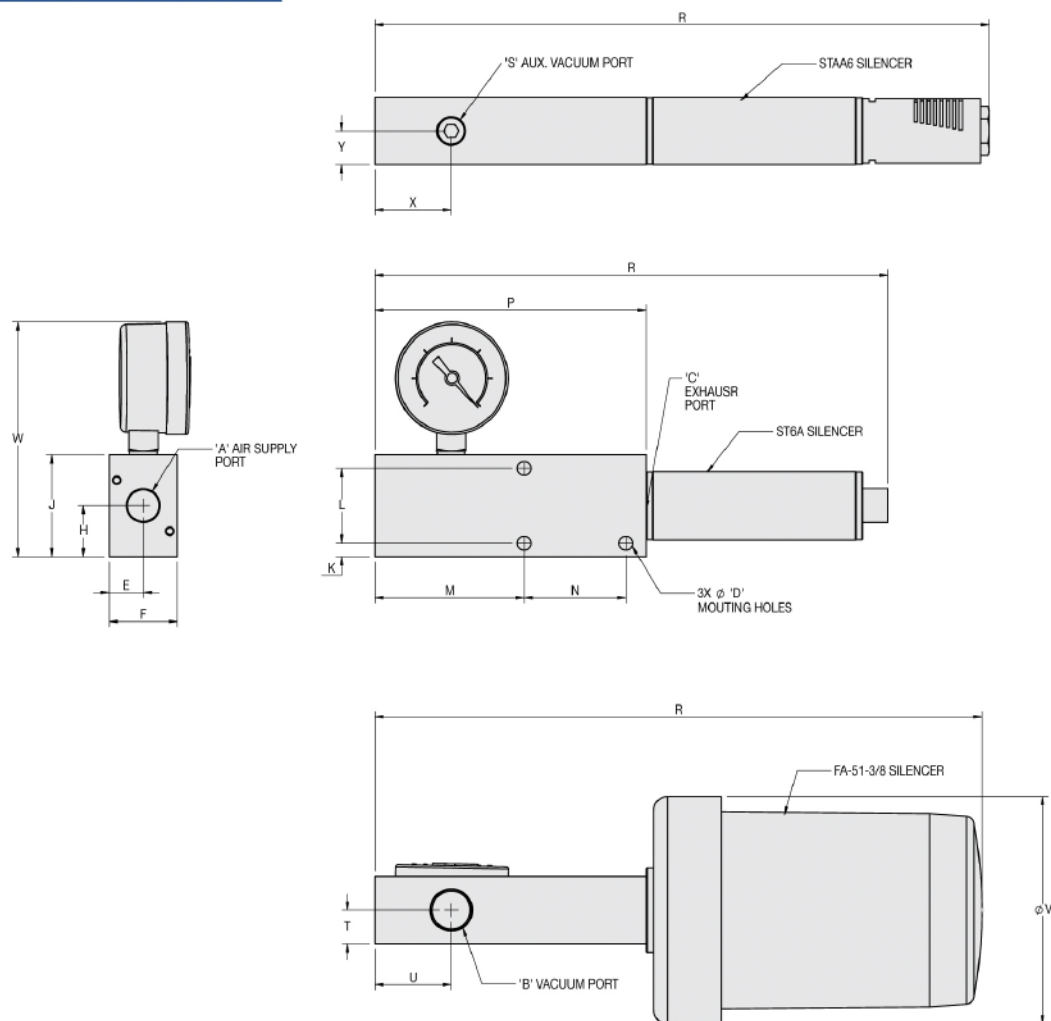
How to Specify:

VP80-200 - H -			
P/N	Imperial Thread-NPT	P/N	Silencer
VP80-200	No Valve	ST-6A	Straight-Through (Standard)
VP80BV-200	with Valve Assy	STAA6	Hybrid
P/N	Metric Thread-G Port	FA-51-3/8	High Flow
I-VP80-200	No Valve	P/N	Operating Pressure
I-VP80BV-200	with Valve	80	80 PSI [5.5 bar] (Standard)
P/N	Max. Vac Level	60	60 PSI [4.0 bar]
L	10"Hg [339 mbar]	P/N	Vacuum Gauge
M	20"Hg [677 mbar]	VG-150	Vaccon does not recommend shipping gauges attached to pumps. Please specify as a separate line item.
H	28"Hg [948 mbar]		

For complete Performance Data, see page 136.

Modular Venturi Vacuum Pumps w/ Optional Solenoid Valve – Max Series

Standard Pump: VP80-200 (L, M, H)



VP80-200H with ST-6A silencer



VP80-200M with STAA6silencer



VP80-200H with FA51-3/8 optional silencer and VG-150 vacuum gauge

Specifications:

Weight:

10.2 oz [290g]

10.5 oz [298g]

1 lb 5 oz [595g]

Noise Level:

72dB

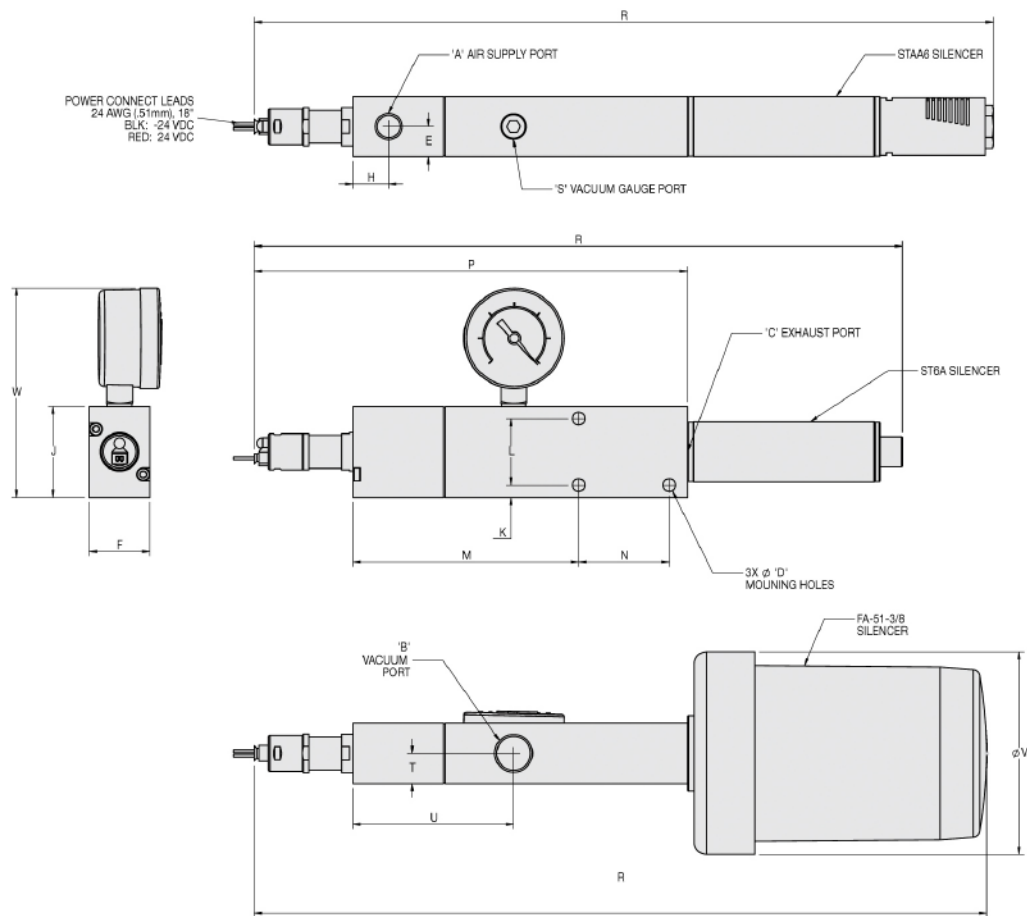
65dB

72dB

Model #	Imperial Dimensions (in.)																				
VP80-200	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y
W STAA6	1/4 NPT F	3/8 NPT F	3/8 NPT F	0.21	0.50	1.00	0.75	1.50	0.20	1.10	2.20	1.50	4.00	9.05	1/8 NPT F	0.50	1.13	3.36	3.46	1.12	0.50
W ST-6A														7.57							
W FA-51-3/8														9.74							
Model #	Metric Dimensions (mm)																				
I-VP80-200	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y
W STAA6	G 1/4	G 3/8	G 3/8	5.3	12.7	25.4	19.1	38.1	5.1	27.9	55.9	38.1	101.6	229.9	G 1/8	12.7	28.7	85.3	87.9	28.4	12.7
W ST-6A														192.3							
W FA-51-3/8														247.4							

Modular Venturi Vacuum Pumps w/ Optional Solenoid Valve – Max Series

Standard Pump: VP80BV-200 (L, M, H)



Specifications: VP80BV-200H with ST-6A silencer

Weight: 14.3 oz [404.2g]

Noise Level: 72dB



Specifications: VP80BV-200H with optional STAA6 silencer

Weight: 14.6 oz [413.9g]

Noise Level: 65dB



Specifications: VP80BV-200H with FA51-3/8 optional silencer and VG-150 vacuum gauge.

Weight: 1 lb 9 oz [707.6g]

Noise Level: 72dB

Model #	Imperial Dimensions (in.)																		
VP80BV-200	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
W STAA6	1/8 NPT F	3/8 NPT F	3/8 NPT F	0.21	0.50	1.00	0.59	1.50	0.20	1.10	3.73	1.50	7.16	12.22	1/8 NPT F	0.50	2.66	3.36	3.46
W ST-6A														10.72					
W FA-51-3/8														16.90					
Model #	Metric Dimensions (mm)																		
I-VP80BV-200	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
W STAA6	G 1/8	G 3/8	G 3/8	5.3	12.7	25.4	15.0	38.1	5.1	27.9	94.7	38.1	181.9	310.4	G 1/8	12.7	67.6	85.3	87.9
W ST-6A														272.3					
W FA-51-3/8														429.3					

Max-size Venturi Vacuum Pump with Silencer

VP Max Series: VP80-250/VP80BV-250



VP80-250H

Standard Pump:

The VP80-250 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 VP80'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. VP80BV-250 pumps offer an integrated valve for increased production cycles.

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

Ideal Applications:

- Rapid evacuation of large volumes of air
- Pick & place medium to large size objects
- End-of-Arm Tooling/Robotics
- Vessel evacuation – molds/tanks/bottles/drums
- Packaging – bag/box/carton folding and handling
- Vacuum clamping/holding – fixtures, veneers

Features/Benefits:

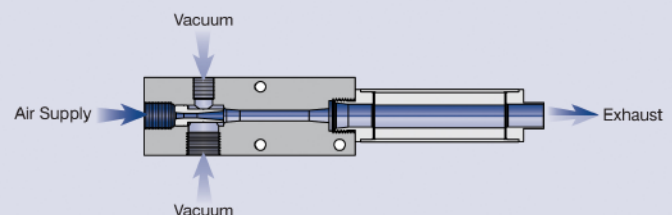
- High performance – powerful vacuum up to 28"Hg [948mbar]
- Compact & lightweight, rugged body construction
- Fast response – mounts close to vacuum point
- Efficient – minimal air consumption
- Safe operation:
 - ~ No electricity needed at the pump
 - ~ High flow overcomes leakage – maintains a strong 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 with 90° elbow attachment for compact space requirements or ST-8A without elbow for ease of mounting, ST (straight-through silencers) allow dirt to pass through and won't clog, FA-51-1/2 silencer with elbow for high flow applications
- 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 [4.1 bar] optional

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.



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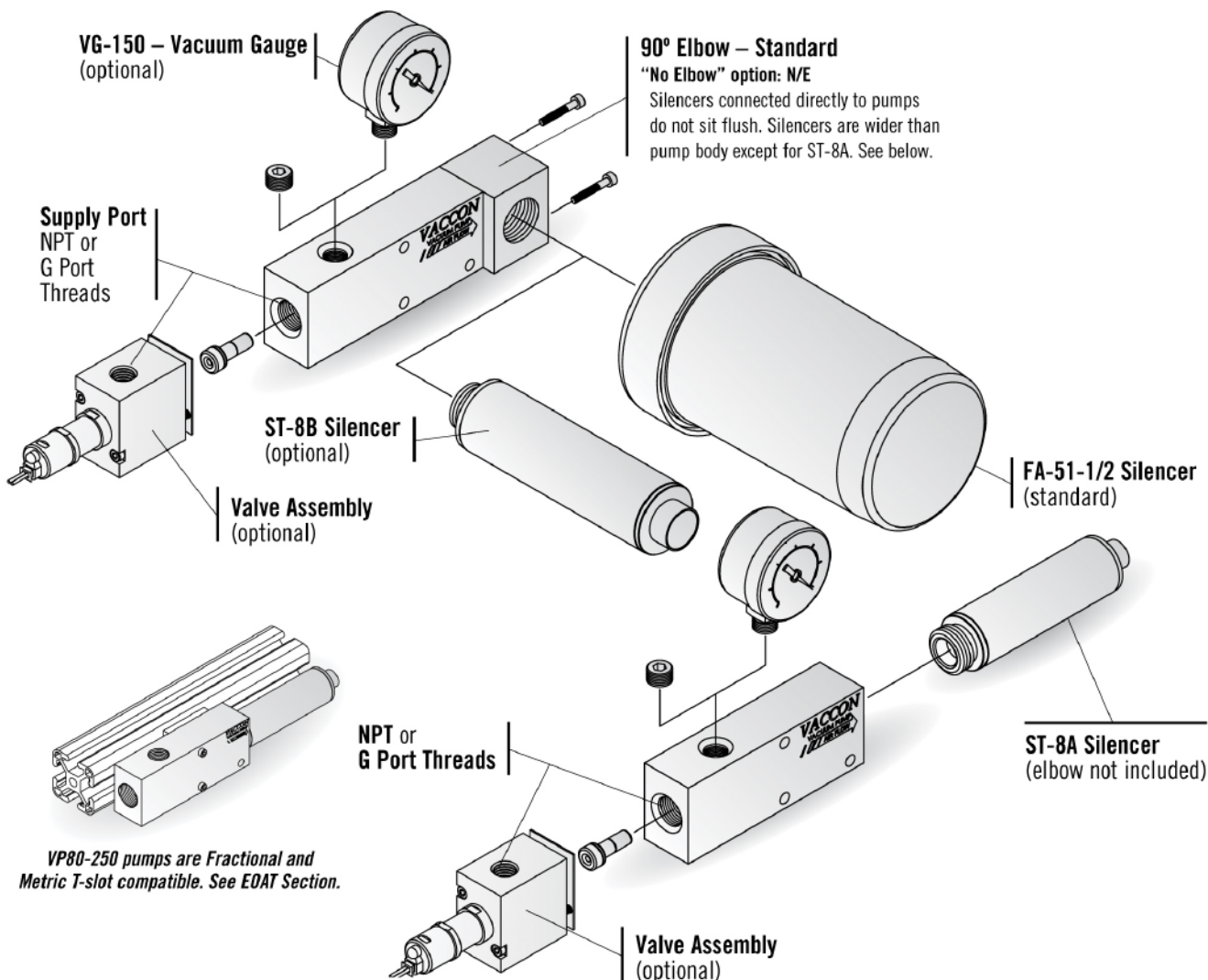
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Modular Venturi Vacuum Pumps w/ Optional Solenoid Valve – Max Series

VP80/VP80BV-250 (L, M, H) Series 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.



How to Specify:

VP80-250 - H - 60 - ST8B

P/N Imperial Thread-NPT

VP80-250 No Valve
VP80BV-250 with Valve Assy*

P/N Metric Thread-G Port

I-VP80-250 No Valve
I-VP80BV-250 with Valve*

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
ST-8A Straight-Through No Elbow

P/N Operating Pressure

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

P/N Vacuum Gauge

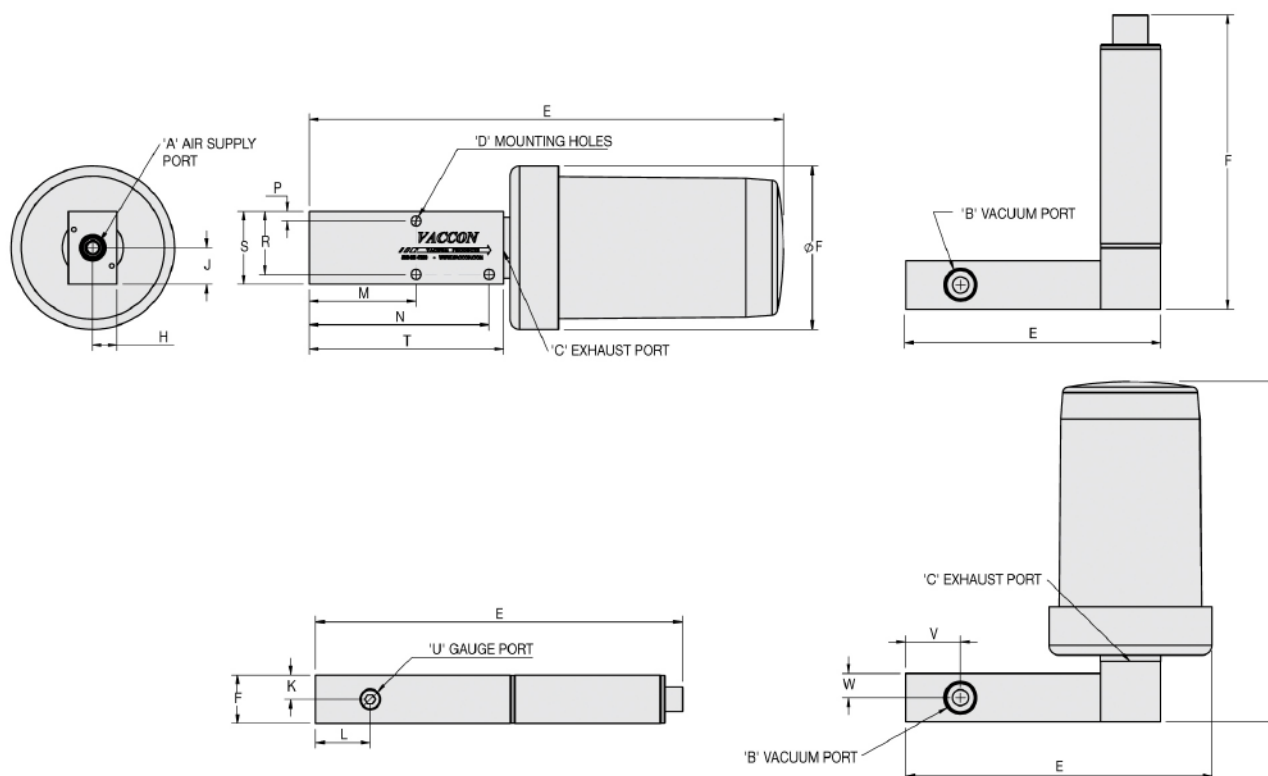
VG-150 Vaccon does not recommend shipping gauges attached to pumps. Please specify as a separate line item.

* Note: Valve Assembly (BV) is not available with the “250-H” version.

For complete Performance Data, see page 136.

Modular Venturi Vacuum Pumps w/ Optional Solenoid Valve – Max Series

Standard Pump: VP80-250 (L, M, H)



VP80-250H with ST-8A silencer



VP80-250H with ST-8B Silencer



Standard VP80-250M includes FA-51-1/2 silencer

Specifications:

Weight: 10 oz [384g]
Noise Level: 75dB

14 oz [397g]
 73dB

1 lb. 8 oz [680g]
 73dB

Model #	Imperial Dimensions (in.)																		
VP80-250	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
STD	1/4 NPT F	3/8 NPT F	1/2 NPT F	0.21	6.30	7.00	0.50	0.75	0.50	1.13	2.20	3.70	0.20	1.30	1.50	4.00	1/8 NPT F	1.13	0.50
N/E					9.75	3.36													
ST-8B					5.24	6.06													
ST-8A					7.54	1.00													
Model #	Metric Dimensions (mm)																		
I-VP80-250	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
STD	G 1/4	G 3/8	G 1/2	5.3	160.0	177.9	12.7	19.1	12.7	28.6	55.9	94.0	5.1	33.0	38.1	101.6	G 1/8	28.6	12.7
N/E					247.7	85.3													
ST-8B					133.1	153.9													
ST-8A					191.5	25.4													

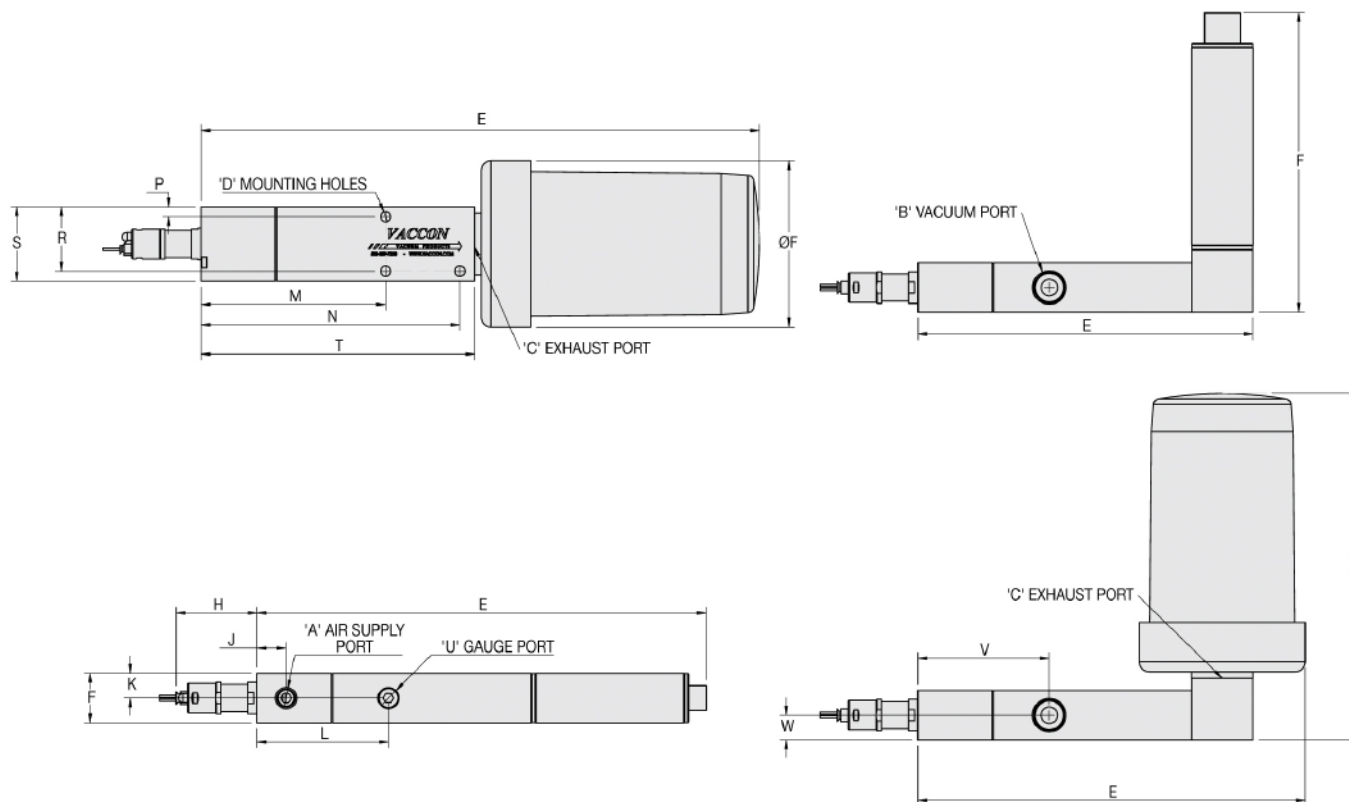
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VP80BV-250 (L, M, H) Pump



Specifications:

Weight: 14.1 oz [399.7g]
Noise Level: 75dB

1 lb 2.4 oz [513.6g]
 73dB

1 lb 10.5oz [751.3g]
 72dB

Model #	Imperial Dimensions (in.)																		
VP80BV-250	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
STD	1/8 NPT F	3/8 NPT F	1/2 NPT F	0.21	7.83	7.00	1.63	0.60	0.50	2.66	3.73	5.23	0.20	1.30	1.50	5.53	1/8 NPT F	2.66	0.50
N/E					11.28	3.36													
ST-8B					6.77	6.07													
ST-8A					9.07	1.00													
Model #	Metric Dimensions (mm)																		
I-VP80BV-250	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W
STD	G 1/8	G 3/8	G 1/2	5.3	198.9	177.9	41.4	15.2	12.7	67.4	94.7	132.8	5.1	33.0	38.1	140.5	G 1/8	67.4	12.7
N/E					286.5	85.3													
ST-8B					172.0	154.1													
ST-8A					230.4	25.4													

VP80-(200, 250)/VP80BV-(200, 250) Pump Standard Specifications:

Pump Body 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 [4.1 bar] – Consult Factory for other operating pressures

Optional 2-Way Valve Specifications:

Valve Type:	Axial 2-Way Solenoid Valve, Normally closed
Valve Body Material:	Brass, Aluminum, Buna-N
Valve Operating Pressure:	Vacuum to 120 PSI [-1 to 8 bar]
Electrical:	24 VDC [-15% to +10% Nominal]
Power Consumption:	4 watts
Response Time:	6 milliseconds
Cycle Rate:	80 cycles/second
Average Life:	100 million cycles or better
Electrical Connection:	2 Pin Connector with 24 AWG, 18" leads [457.2mm]
LED Indicator:	Yes

VP80-(200, 250)/VP80BV-(200, 250) Operating and Installation Requirements:

Supply Line:	3/8" O.D. [10mm] tube recommended
Vacuum Line:	3/8" O.D. [10mm] tube recommended
Vacuum Line Filtration:	Typically vacuum filters are not required. If desired, Vaccon recommends – VF375F. See page 254.
Mounting:	Mounting holes accept #10-32 or M5 screws

Max-size Venturi Vacuum Pump with Silencer

VP Max Series: VP90-300 & 350



VP90-350M-ST8B handles dirty, heavy, irregular shaped products for the stonework industry



VP90-350H

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

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:

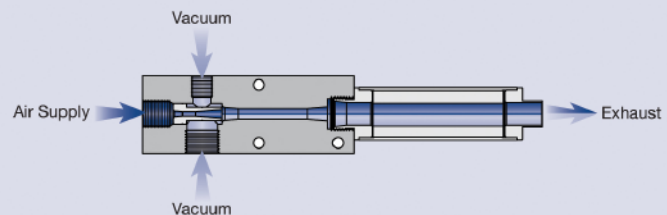
- High performance – powerful vacuum up to 28"Hg [948mbar]
- Compact & lightweight, rugged body construction
- Fast response – mounts close to vacuum point
- Efficient – minimal air consumption
- Safe operation:
 - ~ No electricity needed at the pump
 - ~ High flow overcomes leakage – maintains a strong 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 [4.1 bar] optional.

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.



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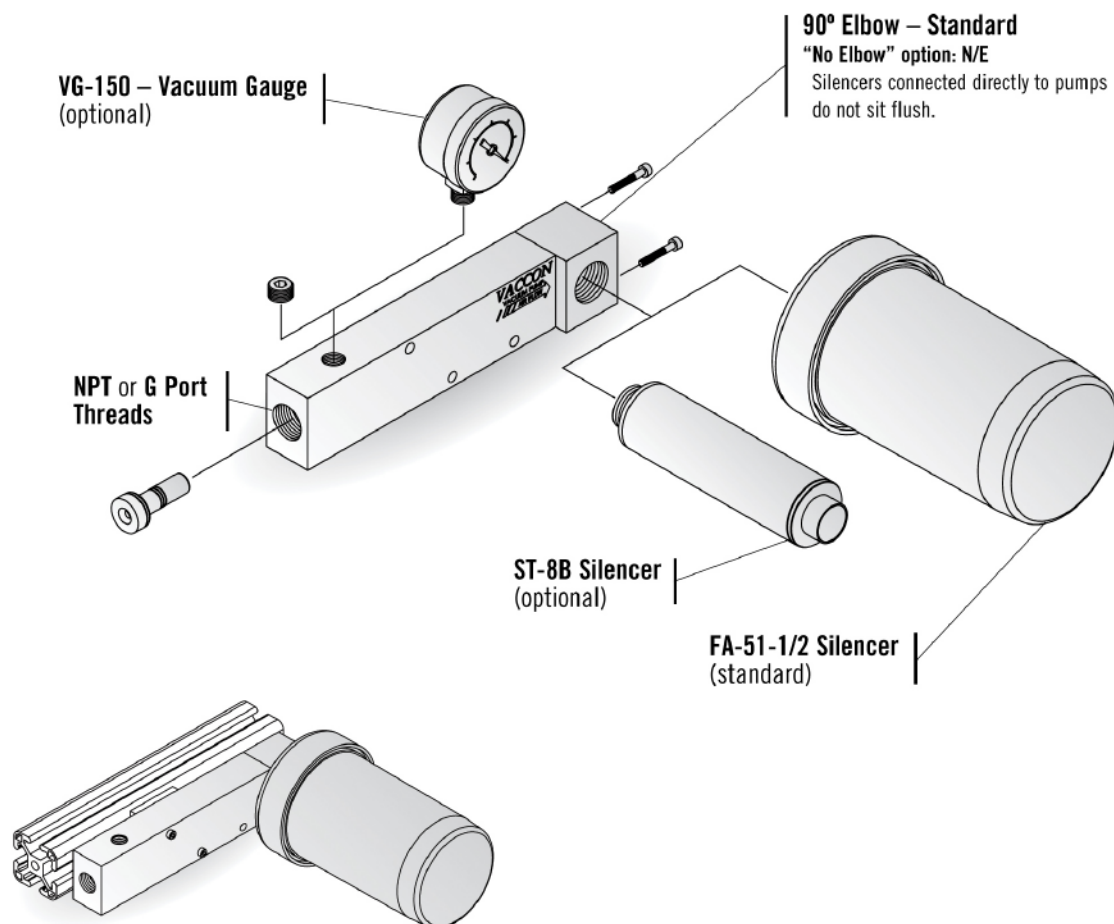
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Modular Venturi Vacuum Pumps – Max Series

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.

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.

For complete Performance Data, see page 136.

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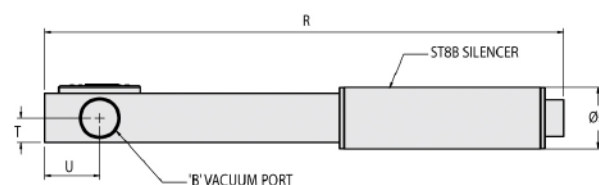
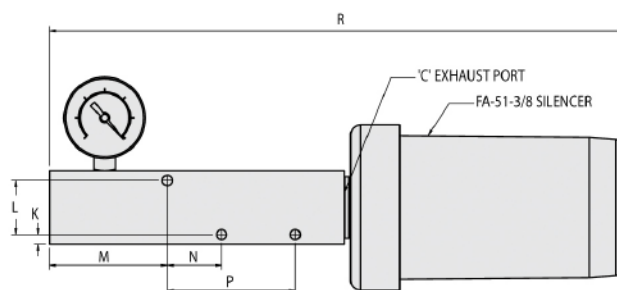
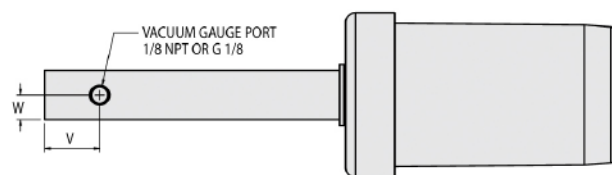
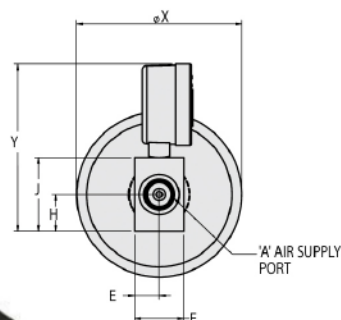
Standard: VP90-300 & VP90-350 (L, M, H) Pump



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

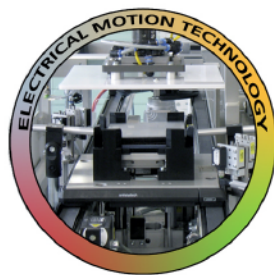
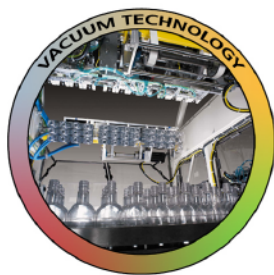
Model #	Imperial Dimensions (in.)																				
VP90-300/ 350 w/	A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y
FA-51-3/8	3/8 NPT F	1/2 NPT	1/2 NPT	0.21	0.5	1.00	0.75	1.5	0.2	1.10	2.40	1.10	2.60	11.75	1.25	0.5	1.13	1.13	0.5	3.36	3.41
ST-8B														10.56							
														N/A							
Model #	Metric 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 [4.1 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



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



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