

Cylindrical Venturi Vacuum Pumps

Max J Series



Standard Pump:

The J-300 & 350 Series cylindrical venturi vacuum pumps offer higher vacuum flows for rapid evacuation of large vessels and to overcome leakage to sustain high vacuum levels while handling porous materials. Choose from 3 models that can generate up to 28"Hg [948mbar] and 28 SCFM [793LPM] of vacuum flow.

These high vacuum flow pumps are ideal for providing vacuum to large cups or a group of cups. When handling non-porous items like sheet metal, the J300 & 350 pumps provide rapid evacuation to reach vacuum quickly for very high-speed handling. When handling porous materials these pumps will overcome leakage and maintain a strong grip.

Lightweight, quiet and cool operating, J Series pumps are ideal for confined spaces, where they can be mounted in-line near the point of use for rapid response. The single-stage design allows ingested contaminants to flow through the pump without clogging ensuring continuous operation.

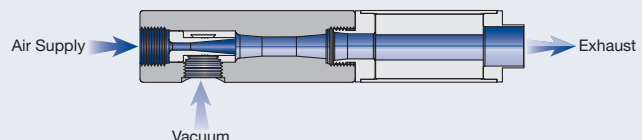
Constructed of a single material, with no seals or moving parts, J Series pumps are virtually indestructible. They can be manufactured in a variety of materials, making them ideal for use in adverse operating conditions.

J Series pumps provide a constant vacuum flow, rather than a fluctuating flow typically associated with diaphragm pumps. They operate with an instantaneous response in pulsed applications or on a continuous basis.

J Series pumps can be powered by alternate media (gases, liquids) etc. For liquid powered pumps please see our JW series on page 183.

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.



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 of large objects
- End-of-Arm Tooling / Robotics
- Vessel evacuation – molds/tanks/bottles/drums
- Packaging – bag/box/carton folding/handling
- Vacuum clamping/holding – fixtures, veneers
- Vacuum filling/bottling operations
- Food processing applications
- High temperature applications
- Caustic applications

Features/Benefits

- High performance – powerful vacuum up to 28"Hg [948mbar]
- Durable – rugged aluminum body construction
- Fast response – Mounts in-line, and installs close to vacuum point
- Efficient – Minimal air consumption, provides instantaneous vacuum as needed
- Safe operation – No electricity needed
- Reliable, trouble-free operation
 - ~ No moving parts to wear
 - ~ No flap valves to stick open
 - ~ No maintenance
 - ~ No downtime

Performance Level Designation:

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

"JD" 0-20"Hg, [0 to 677mbar] for medium vacuum / high flow applications

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

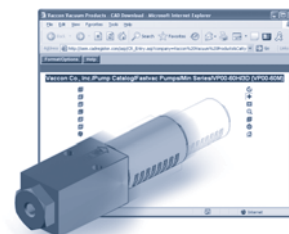
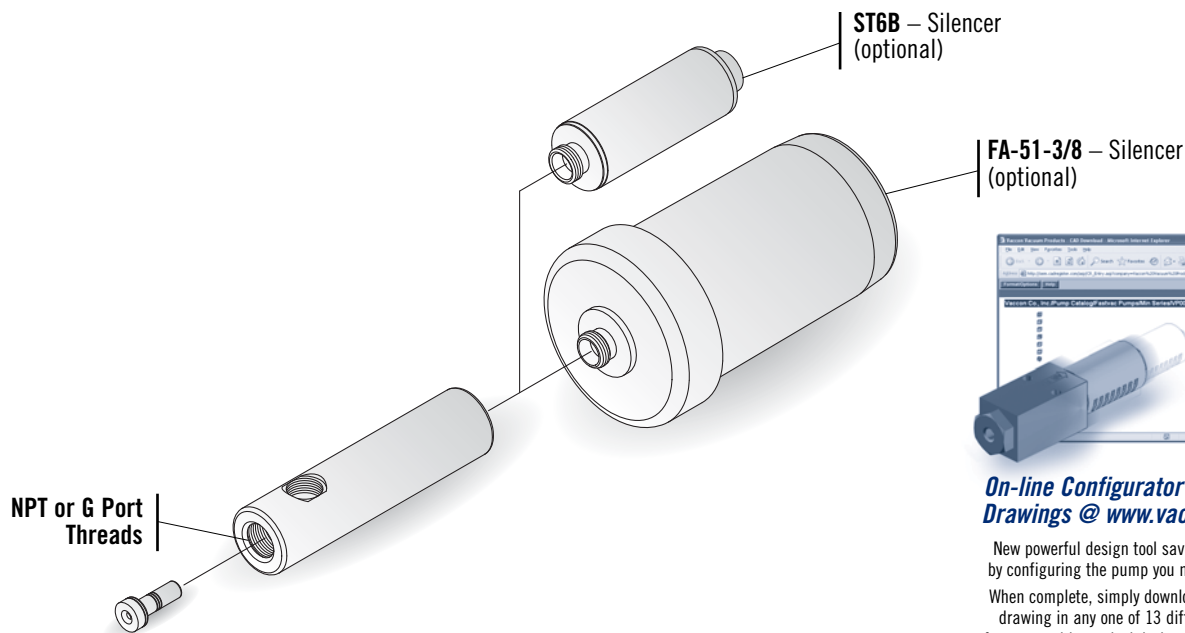
Pump Options:

- Silencers: ST6B & ST8B – straight-through silencer won't clog, and FA-51-3/8 & FA-51-1/2 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 requirements (80 PSI [5.5 BAR] standard, 60 PSI [4.0 BAR] optional).
- For chemical compatibility requirements, high temperature, food, medical and caustic applications, custom materials are available including stainless steel, PEEK, Delrin™, Teflon™, PVC.

Cylindrical Venturi Vacuum Pumps

J (F, D, S)-300 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:

P/N	Thread	Max. Vac Level
JF-300	NPT	10"Hg [339mbar]
JD-300	NPT	20"Hg [677mbar]
JS-300	NPT	28"Hg [948mbar]
I-JF-300	G Port	10"Hg [339mbar]
I-JD-300	G Port	20"Hg [677mbar]
I-JS-300	G Port	28"Hg [948mbar]

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

For complete Performance Data, see page 188.



P/N	Material
	Anodized Aluminum
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
316L	316 Low Carbon Stainless
PVC	PVC
TEF	PTFE
PK	PEEK
DEL	Acetal
P/N	Silencer*
	No Silencer (Standard)
ST6B	ST6B – Straight-Through
FA-51-3/8	FA-51-3/8 High Flow

*Vaccon strongly recommends the use of silencers on all pumps except where the exhaust is plumbed away.

J 300 Cylindrical Vacuum Pump Standard Specifications:

Pump Material:	Anodized Aluminum (For silencer material - See page 235-239)
Medium:	Filtered (50 Micron) un-lubricated, non-corrosive dry gases
Operating Temperature:	-100°F~400°F [-73°~204°C] (without silencer)
Operating Pressure:	80 PSI [5.5 BAR] standard or 60 PSI [4.0 BAR] – Consult Factory for other operating pressures

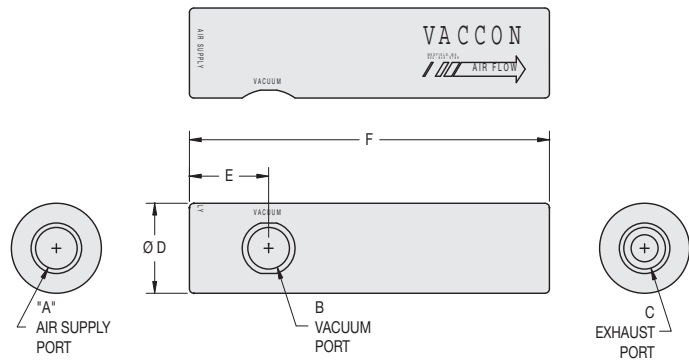
J 300 Cylindrical Vacuum Pump Operating and Installation Instructions:

Supply Line:	Minimum recommended – 1/2" O.D. [12mm] Preferred OD tubing
Vacuum Line:	Minimum recommended – 1/2" O.D. [12mm] Preferred – 3/4" [19mm] OD for vacuum lines exceeding 3' [1M]
Vacuum Line Filtration:	Typically filters are not required, if desired Vaccon recommends – VF500F. See page 282.

Standard Pump: J (F, D, S) – 300



JD-300



Specifications:

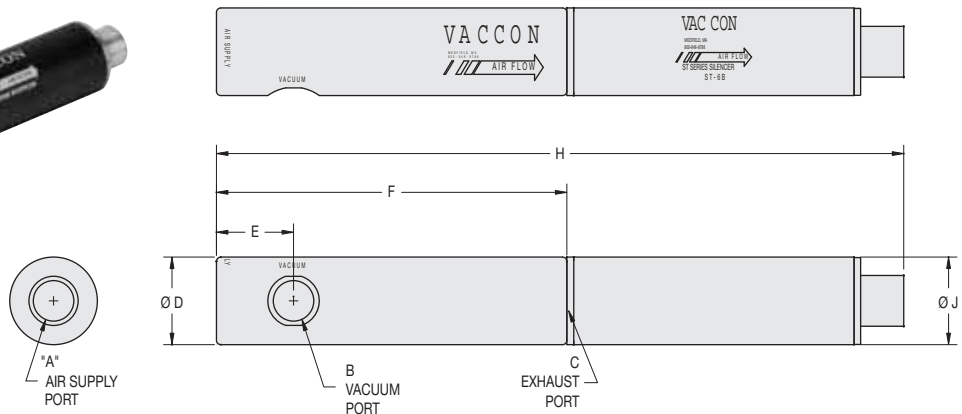
Weight: 8.5 oz [241g]
Noise Level: Vaccon highly recommends the use of silencers on all vacuum pumps unless the exhaust is being plumbed away.

Model #	Imperial Dimensions (in.)					
	A	B	C	D	E	F
J (F, D, S) – 300	3/8 NPT F	3/8 NPT F	3/8 NPT F	1.25	1.10	5.00
Model #	Metric Dimensions (mm)					
	A	B	C	D	E	F
I-J (F, D, S) – 300	G 3/8	G 3/8	G 3/8	31.8	27.9	127.0

J (F, D, S) – 300 Pump – Optional Silencer: ST6B



JS-300-ST6B

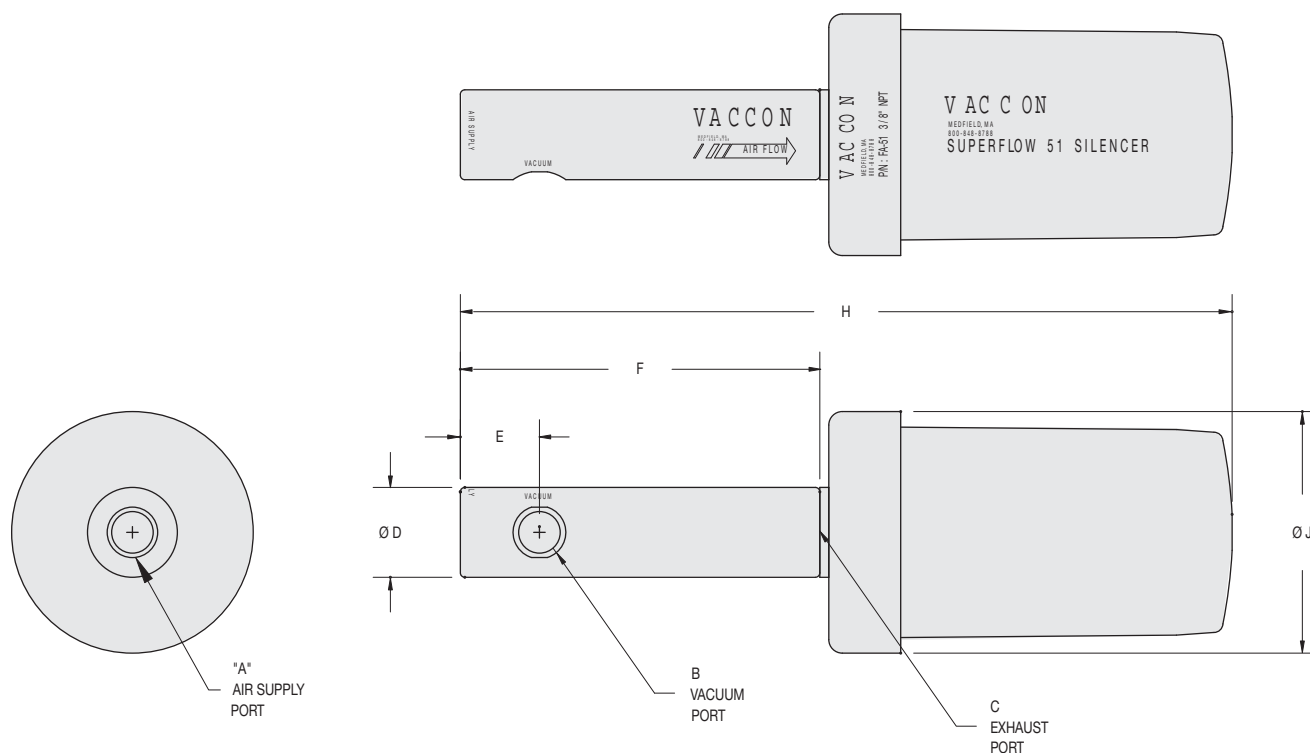


Specifications:

Weight: 12 oz [340g]
Noise Level: 72 dB

Model #	Imperial Dimensions (in.)							
	A	B	C	D	E	F	H	J
J (F, D, S) – 300 - ST6B	3/8 NPT F	3/8 NPT F	3/8 NPT F	1.25	1.10	5.00	9.81	1.25
Model #	Metric Dimensions (mm)							
	A	B	C	D	E	F	H	J
I-J (F, D, S) – 300 - ST6B	G 3/8	G 3/8	G 3/8	31.8	27.9	127.0	249.2	31.8

J (F, D, S) – 300 Pump – Optional Silencer: FA-51-3/8



JD-300-FA-51-3/8

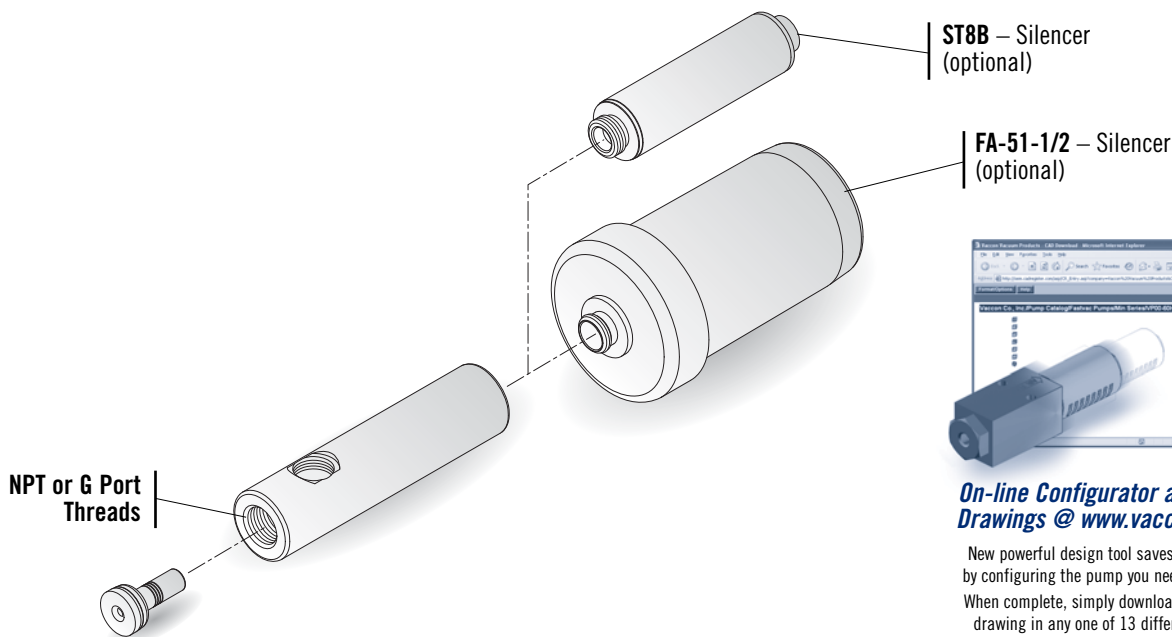
Specifications:

Weight 1 lb. 5 oz [598g]
Noise Level 72 dB

Model #	Imperial Dimensions (in.)							
	A	B	C	D	E	F	H	J
J (F, D, S) – 300 - FA-51-3/8	3/8 NPT F	3/8 NPT F	3/8 NPT F	1.25	1.10	5.00	10.74	3.36
Model #	Metric Dimensions (mm)							
	A	B	C	D	E	F	H	J
I-J (F, D, S) – 300 - FA-51-3/8	G 3/8	G 3/8	G 3/8	31.8	27.9	127.0	272.7	85.3

J (F, D, S)-350 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.



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Get the pump you need, in the format you like!

How to Specify:

P/N	Thread	Max. Vac Level
JF-350	NPT	10"Hg [339mbar]
JD-350	NPT	20"Hg [677mbar]
JS-350	NPT	28"Hg [948mbar]
I-JF-350	G Port	10"Hg [339mbar]
I-JD-350	G Port	20"Hg [677mbar]
I-JS-350	G Port	28"Hg [948mbar]

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

For complete Performance Data, see page 190.

JS-350 - 60 - ST8B -

P/N	Material
	Anodized Aluminum
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
316L	316 Low Carbon Stainless
PVC	PVC
TEF	PTFE
PK	PEEK
DEL	Acetal

P/N	Silencer*
	No Silencer (Standard)
ST8B	ST8B - Straight-through
FA-51-1/2	FA-51-1/2 High Flow

*Vaccon strongly recommends the use of silencers on all pumps except where the exhaust is plumbed away.

J 350 Cylindrical Vacuum Pump Standard Specifications:

Pump Material:	Anodized Aluminum (For silencer material - See pages 235-239)
Medium:	Filtered (50 Micron) un-lubricated, non-corrosive dry gases
Operating Temperature:	-100°F~400°F [-73°~204°C] (without silencer)
Operating Pressure:	80 PSI [5.5 BAR] standard or 60 PSI [4.0 BAR] – Consult Factory for other operating pressures

J 350 Cylindrical Vacuum Pump Operating and Installation Instructions:

Supply Line:	Minimum recommended – 1/2" O.D. [12mm] Preferred OD tubing
Vacuum Line:	Minimum recommended – 1/2" O.D. [12mm] Preferred – 3/4" [19mm] OD for vacuum lines exceeding 3' [1M]
Vacuum Line Filtration:	Typically filters are not required, if desired Vaccon recommends – VF500F. See page 282.

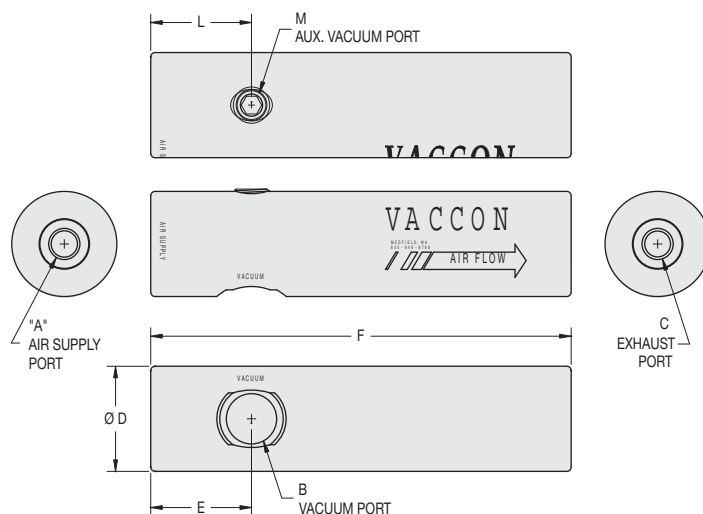
Standard Pump: J (F, D, S) – 350



JS-350

Specifications:

Weight 15 oz [425g]
Noise Level Vaccon highly recommends the use of silencers on all vacuum pumps unless the exhaust is being plumbed away.



Model #	Imperial Dimensions (in.)										
	A	B	C	D	E	F	H	J	K	L	M
J (F, D, S) – 350	1/2 NPT F	1/2 NPT F	1/2 NPT F	1.50	1.44	6.00	—	—	—	1.44	1/4 NPT F
Model #	Metric Dimensions (mm)										
	A	B	C	D	E	F	H	J	K	L	M
I-J (F, D, S) – 350	G 1/2	G 1/2	G 1/2	38.1	36.5	152.4	—	—	—	36.6	G 1/4

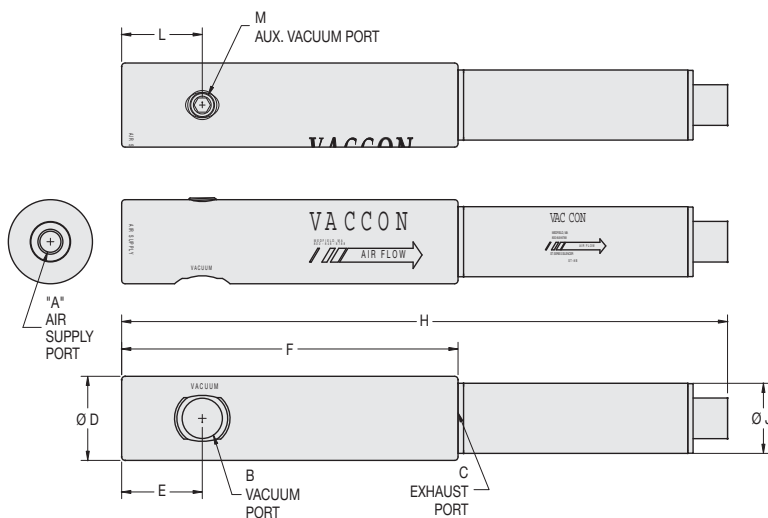
J (F, D, S) – 350 Pump – Optional Silencer: ST8B



JS-350-ST8B

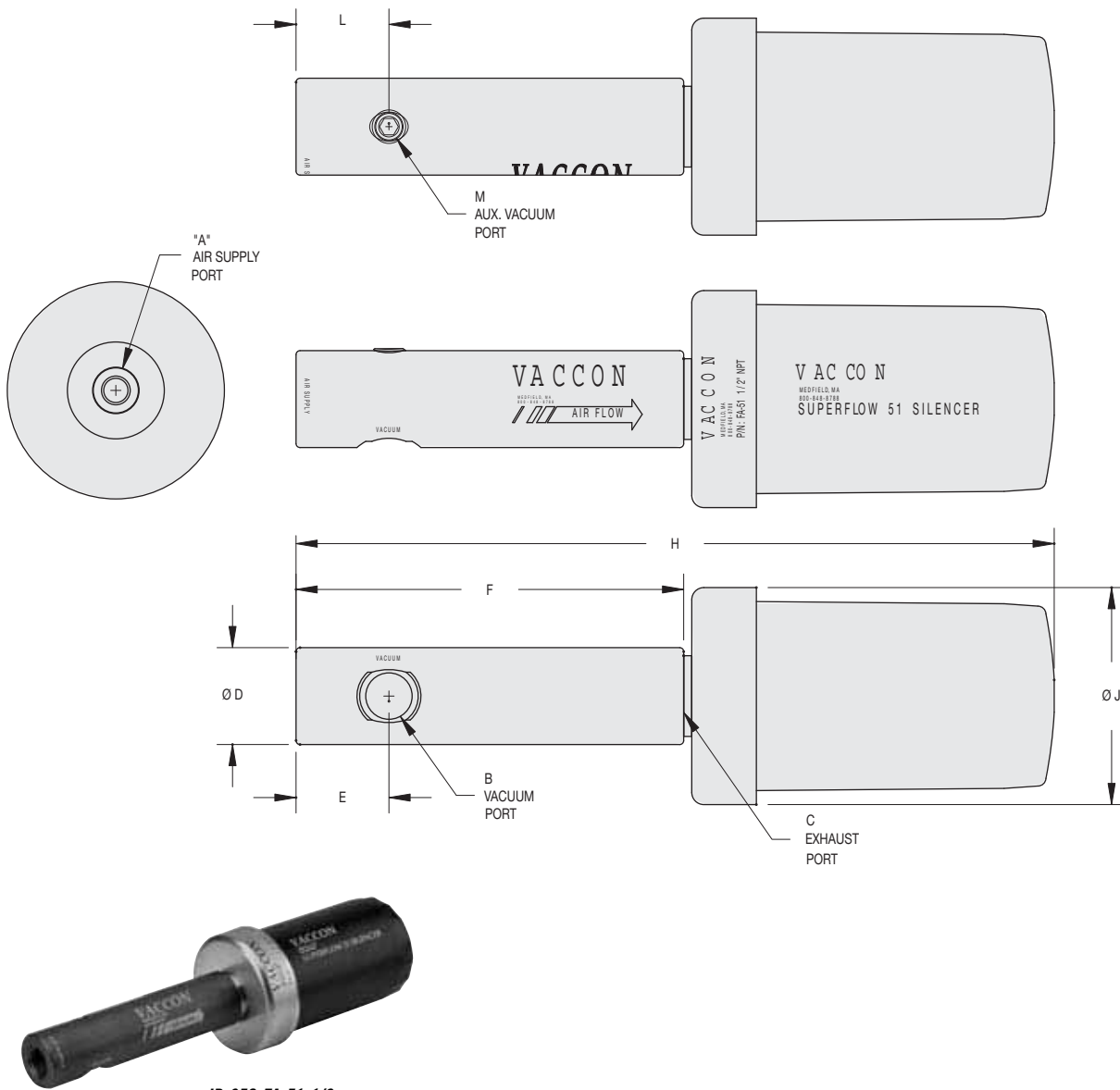
Specifications:

Weight 1 lb 2 oz [510g]
Noise Level 76 dB



Model #	Imperial Dimensions (in.)										
	A	B	C	D	E	F	H	J	K	L	M
J (F, D, S) – 350-ST8B	1/2 NPT F	1/2 NPT F	1/2 NPT F	1.50	1.44	6.00	10.81	1.25	—	1.44	1/4 NPT F
Model #	Metric Dimensions (mm)										
	A	B	C	D	E	F	H	J	K	L	M
I-J (F, D, S) – 350-ST8B	G 1/2	G 1/2	G 1/2	38.1	36.5	152.4	274.6	31.8	—	36.5	G 1/4

J (F, D, S) – 350 Pump – Optional Silencer: FA-51-3/8



Specifications:

Weight 1 lb 11 oz [765g]
Noise Level 74 db

Model #	Imperial Dimensions (in.)										
	A	B	C	D	E	F	H	J	K	L	M
J (F, D, S) – 350 - FA-51-1/2	1/2 NPT F	1/2 NPT F	1/2 NPT F	1.50	1.44	6.00	11.74	3.36	—	1.44	1/4 NPT F
Model #	Metric Dimensions (mm)										
	A	B	C	D	E	F	H	J	K	L	M
I-J(F, D, S) – 350 - FA-51-1/2	G 1/2	G 1/2	G 1/2	38.1	36.5	152.4	298.1	85.3	—	36.5	G 1/4