

# J-Series Cylindrical Venturi Pumps

The J-Series Venturi Vacuum Pumps utilize a fixed cartridge venturi design. J-Series pumps employ a cylindrical design for ease of installation and mounting into in-line pneumatic plumbing. J-Series pumps offer a complete range of venturi vacuum performance.



1.45"

## Ultra-Miniature Venturi Vacuum Pump

Ultra-Small - The JS-40UM (Ultra-Mini) cylindrical venturi vacuum pump is the smallest complete venturi vacuum pump that Vaccon offers. Incredibly compact and powerful – it measures the size of your finger tip and generates up to 27”Hg [914mbar]. Lightweight, quiet and cool operating, JS-40UM pumps are ideal for confined spaces, where they can be mounted in-line near the point of use for rapid response.

See Page ..... **6.2**



3"

## Min J-Series Venturi Vacuum Pumps

Compact Design - The J-Series “M” (Mini) version cylindrical venturi vacuum pumps feature a high power-to-size ratio, measuring only 3” L x 3/4” OD. Choose from 11 models that can generate up to 28”Hg [948mbar] and 3.5 SCFM [99 LPM] of vacuum flow. 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.

See Page ..... **6.6**



4"

## Mid Sized J-100/150/200/250 Series Venturi Vacuum Pumps

Increased Level of Performance - The J-100 and J-150 models offer the same performance as their sister pumps, the J-100M and J-150M on page 6.6, but with larger ports. The J-200 and 250’s offer higher vacuum flows for rapid evacuation of large vessels and to overcome leakage to sustain high vacuum levels while handling porous materials.

See Page ..... **6.9**



5"

## Max Sized J-300 Series Venturi Vacuum Pumps

Max Performance - The J-300 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.

See Page ..... **6.13**



6"

## Max Sized J-350 Series Venturi Vacuum Pumps

Max Performance - The J-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.

See Page ..... **6.16**



## J-Series Liquid Powered Venturi Vacuum Pumps

All of the pumps above can be powered by liquid. These pumps generate vacuum levels up to 29.5”Hg [990mbar] at pressures as low as 45 PSI [3.1 Bar]. Generating near perfect vacuum, liquid powered J-Series pumps are recommended for degassing, reverse osmosis water columns, mixing liquids with fruit juice concentrates or chemicals for dilution, blending liquids and slurries, extracting solvents, producing emulsions, elevating water, cleaning liquid transfer lines, evacuating liquids from wells or sumps and to circulate pump solutions.

See Page ..... **6.18**

## Ultra-Mini Cylindrical Venturi Vacuum Pumps

### JS-40UM



*JS-40UM generates 27"Hg [914mbar] and weighs less than 1 oz*



*Vaccon's JS-40UM Ultra-miniature pump for drip control in dispensing applications*

### Standard Pump:

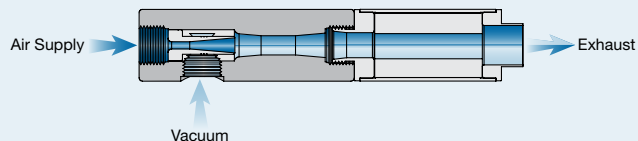
The JS-40UM (Ultra-Mini) cylindrical venturi vacuum pump is the smallest complete venturi vacuum pump that Vaccon offers. Incredibly compact and powerful – it measures the size of your finger tip and generates up to 27"Hg [914mbar]. Lightweight, quiet and cool operating, JS-40UM pumps are ideal for confined 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.

### 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 diffuser. This creates a vacuum at the vacuum inlet port located between the nozzle and diffuser.



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### Ideal Applications:

- Gas sampling and analysis
- Leak testing
- Portion/ drip control (suck-back) for dispensing liquids
- Liquid transfer
- Pick & place for small, non porous parts
- Small vessel evacuation
- Used as vacuum source for vacuum pencil kit (see page 11.35)

### Features/Benefits

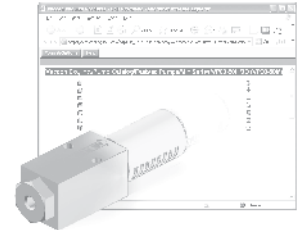
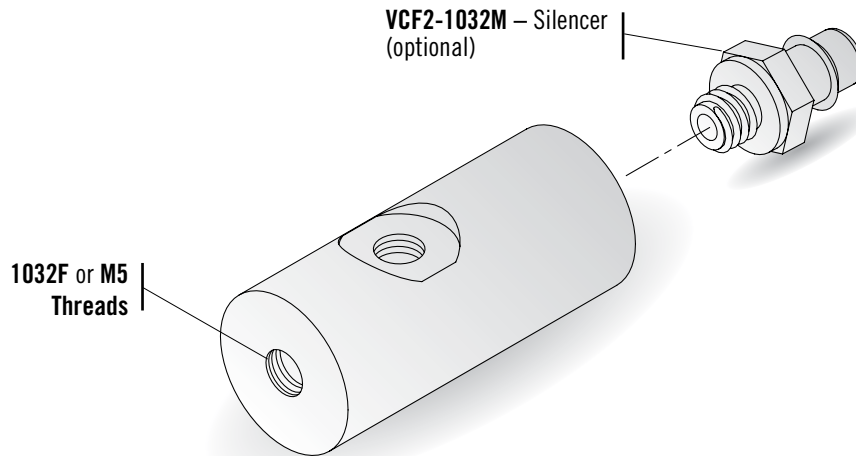
- High performance - powerful vacuum up to 27"Hg [914mbar]
- Lightweight – less than 1 oz. [28.3g]
- Compact – 1.45" x .56"OD [36.83mm x 14.22 mm OD]
- Input pressure from 5 PSI [0.34 bar]
- Fast response – Mounts in-line, and installs close to vacuum point – no delay due to long plumbing lines
- Efficient – 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

### Pump Options:

- Optional Silencer: VCF2-1032M
- Choice of operating pressures to meet machine and factory air supply 80 PSI [5.5 bar] standard, 60 PSI [4.1 bar] optional
- G port threads for metric machines – an "I" prefix designates products with metric threads
- For chemical compatibility requirements, high temperature, food, medical and caustic applications, custom materials are available.

## JS-40UM (Ultra Mini) Vacuum Pump – 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](http://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:

**JS-40UM - 60 - VCF2 - 303**

P/N	Imp. Thread	Max. Vac.
JS-40UM	1032F	27"Hg [914 mbar]

P/N	Metric Thread	Max. Vac.
I-JS-40UM	M5	27"Hg [914 mbar]

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

For complete Performance Data, see page 6.5.

P/N	Material
	Anodized Aluminum (Standard)
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
PVC	PVC
PEEK	PEEK
DEL	Acetal, black
WDEL	Acetal, white
P/N	Silencer*
	No Silencer (Standard)
VCF2	VCF2-1032M (Straight-through)

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

### JS-40UM Pump Standard Specifications:

<b>Pump Material:</b>	Anodized Aluminum Standard (Silencer material – Brass)
<b>Medium:</b>	Filtered (50 Micron) unlubricated, non-corrosive dry gases
<b>Operating Temperature:</b>	-100° to ~400°F [-73° to ~204°C] (without silencer)
<b>Operating Pressure:</b>	80 PSI [5.5 bar] or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

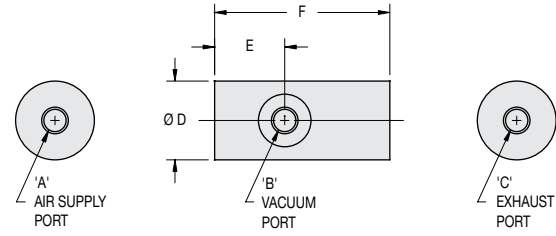
### JS-40UM Pump Operating & Installation Requirements:

<b>Supply and Vacuum Lines:</b>	Min. 5/32" [4mm], 1/4" O.D. [6mm] tube preferred for supply lines exceeding 3' [1M]
<b>Vacuum Line Filtration:</b>	Not required

## Standard Pump: JS-40UM



Standard JS-40UM without silencer.



**Specifications:**

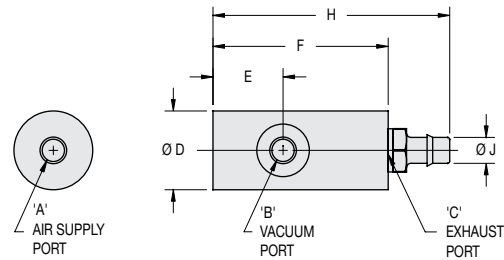
**Weight** 0.3 oz [8.5g]  
**Noise Level** 58 dB

Model #	Imperial Dimensions (in.)					
	A	B	C	D	E	F
JS-40UM	10-32F	10-32F	10-32F	0.56	0.45	1.45
Model #	Metric Dimensions (mm)					
	A	B	C	D	E	F
I-JS-40UM	M5	M5	M5	14.3	11.4	36.8

## JS-40UM: Optional Silencer: VCF2-1032M



JS-40UM-VCF2



**Specifications:**

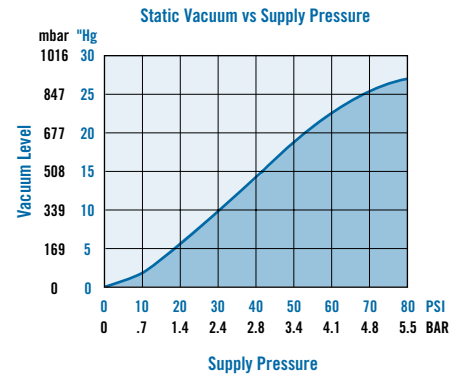
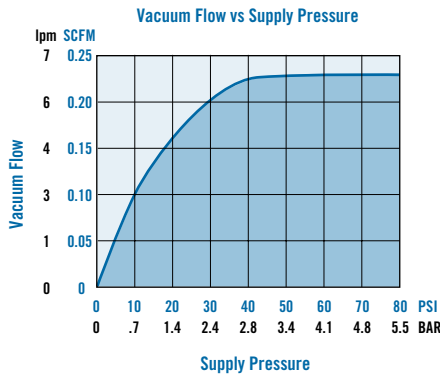
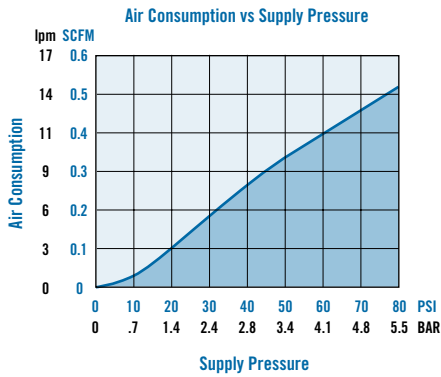
**Weight** 0.4 oz [9.6g]  
**Noise Level** 54 dB

Model #	Imperial Dimensions (in.)							
	A	B	C	D	E	F	H	J
JS-40UM-VCF2	10-32F	10-32F	10-32F	0.56	0.45	1.45	1.90	0.19
Model #	Metric Dimensions (mm)							
	A	B	C	D	E	F	H	J
I-JS-40UM-VCF2	M5	M5	M5	14.3	11.4	36.8	48.3	4.7

## Performance Data – JS-40UM Imperial and Metric

Model #	Air Consumption (SCFM) @ 80 PSI	Imperial - Vacuum Flow (SCFM) vs Vacuum Level ("Hg) @ 80 PSI									
		0"Hg	3"Hg	6"Hg	9"Hg	12"Hg	15"Hg	18"Hg	21"Hg	24"Hg	27"Hg
JS-40UM	0.52	0.23	0.20	0.17	0.15	0.13	0.10	0.08	0.05	0.03	0.00
		Imperial - Evacuation Time (Seconds) Based on 1 cu. ft. Volume ("Hg)									
		0"Hg	3"Hg	6"Hg	9"Hg	12"Hg	15"Hg	18"Hg	21"Hg	24"Hg	27"Hg
		0.00	24.80	54.40	89.50	130.30	178.30	240.40	334.50	516.70	1028.00

Model #	Air Consumption L/min	Metric - Vacuum Flow (L/min) vs Vacuum Level (mbar)									
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	813mbar	914mbar
I-JS-40UM	14.7	6.5	5.7	4.8	4.2	3.7	2.8	2.3	1.4	0.8	0.0
		Metric - Evacuation Time (Seconds) Based on 1 liter Volume (mbar)									
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	813mbar	914mbar
		0.0	0.9	1.9	3.2	4.6	6.3	8.5	11.8	18.2	36.3



**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4.1 bar], 50 PSI [3.4 bar] etc. The values shown on the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft volume will take twice as long to evacuate as a 1 cu. ft. volume.

**Note:** Performance Charts represent average performance data. For reference only.

# Cylindrical Venturi Vacuum Pumps

## Min J-Series: "M"(Mini) Version



*JS-150M-ST4 with mini manifold for pick & place of copper tubing*



*JS-150M-AA4*

### Standard Pump:

The J-Series "M" (Mini) version cylindrical venturi vacuum pumps feature a high power-to-size ratio, measuring only 3" L x 3/4" OD. Choose from 11 models that can generate up to 28"Hg [948mbar] and 3.5 SCFM [99LPM] of vacuum flow. 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.

### Ideal Applications:

- Carton erecting
- Pick & place where one pump powers each cup
- Vessel evacuation
- Medical/pharmaceutical applications
- 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, close to vacuum point – no delay due to long plumbing lines
- 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:

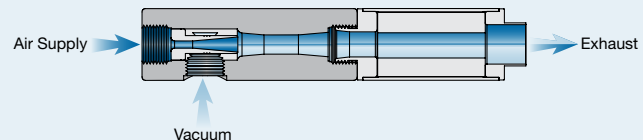
- "JF" 0-10"Hg, [0 to 339mbar] for low vacuum / high flow applications
- "JD" 0-20"Hg, [0 to 677mbar] for medium vacuum / high flow applications
- "JS" 0-28"Hg, [0 to 948mbar] for high vacuum / standard flow applications

### Pump Options:

- Silencers: AA4-closed end silencer, ST4 - straight-through silencer won't clog, 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 [4.1 bar] optional
- For chemical compatibility requirements, high temperature, food, medical and caustic applications, custom materials are available.

### 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 diffuser. This creates a vacuum at the vacuum inlet port located between the nozzle and diffuser.



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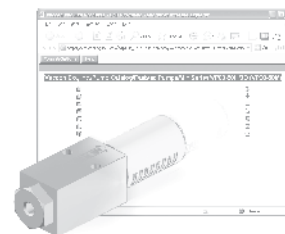
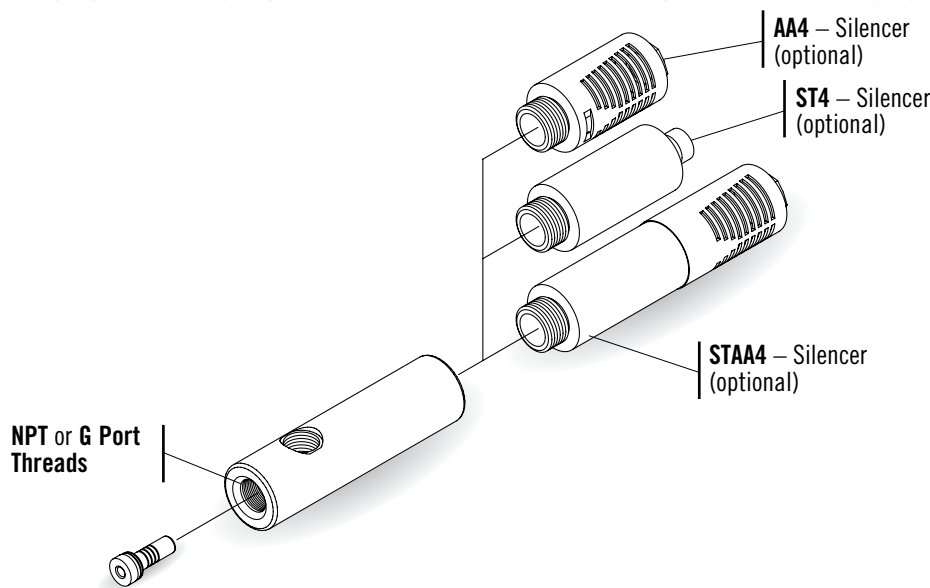
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## J-Series “M” Version Vacuum Pump – Configurations and Options:

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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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	Imp. Thread	Max. Vac.
JF	NPT	10"Hg [339 mbar]
JD	NPT	20"Hg [677 mbar]
JS	NPT	28"Hg [948 mbar]

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

P/N	Max. Flow Level
60M	(N/A in JF Models)
90M	
100M	
150M	

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

**JS - 100M - 60 - ST4 -**

P/N	Material
	Anodized Aluminum (Standard)
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
PVC	PVC
TEF	PTFE
PEEK	PEEK
DEL	Acetal, black
WDEL	Acetal, white

P/N	Silencer*
	No Silencer (Standard)
AA4	AA4 - Closed-End
ST4	ST4 - Straight-Through
STAA4	STAA4 - Hybrid

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

For complete Performance Data, see pages 6.20-25.

### J-Series “M” Version Pump Standard Specifications:

- Pump Material:** Anodized Aluminum Standard (for silencer material - see pages 13.3-6)
- Medium:** Filtered (50 Micron) unlubricated, non-corrosive dry gases
- Operating Temperature:** -100° to ~400°F [-73° to ~204°C] (without silencer)
- Operating Pressure:** 80 PSI [5.5 bar] standard or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

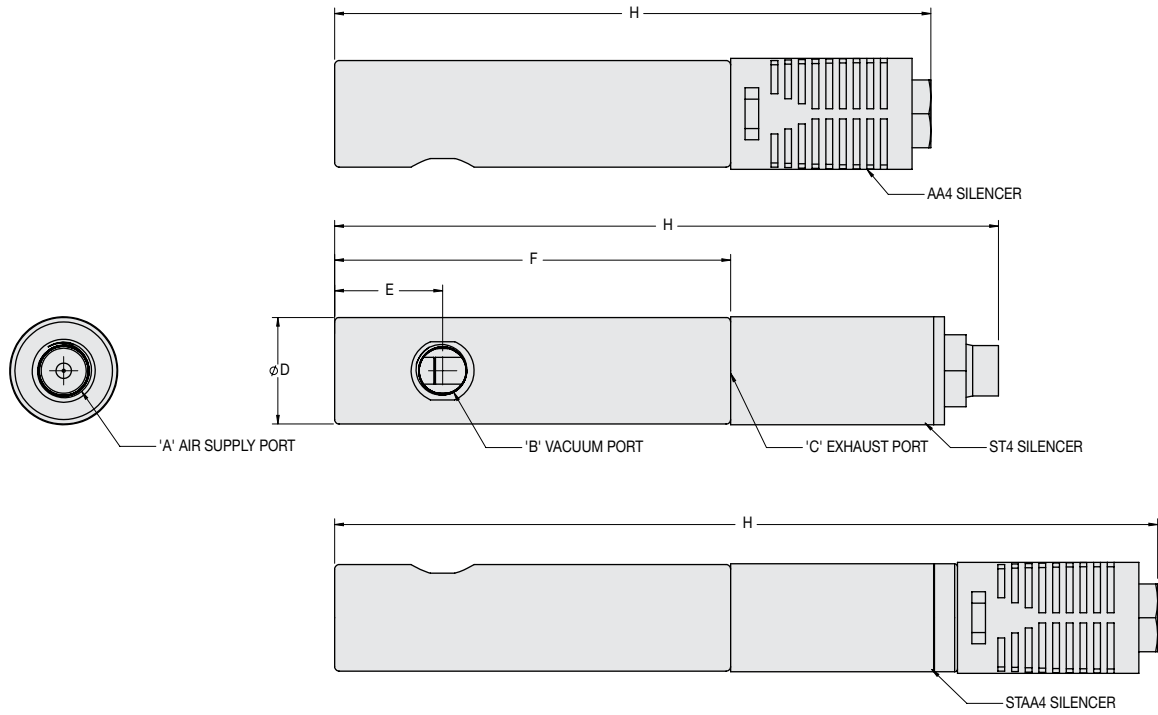
### J-Series “M” Version Pump Operating and Installation Requirements:

- Venturi size:** **60M and 90M**      **100M and 150M**
- 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 13.12      Typically filters are not required, if desired Vaccon recommends – VF-250F – See page 13.12



# Min J-Series Cylindrical Venturi Pumps

## Standard Pumps: J (F, D, S) – (60, 90, 100, 150) M



**Specifications:**

<b>Weight:</b>	1.7 oz [48.2g]	1.9 oz [53.9g]	1.9 oz [53.9g]	2.1 oz [59.5g]
<b>Noise Level:</b>	*	64 dB	66 dB	58 dB

\*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 (F, D, S)-(60-150)M							
NONE							-
w/ AA4	1/8 NPTF	1/8 NPTF	1/4 NPTF	0.75	0.75	2.75	4.20
W/ ST4							4.61
W/ STAA4							5.72
Model #	Metric Dimensions (mm)						
I-J (F, D, S)-(60-150)M	A	B	C	D	E	F	H
NONE							-
w/ AA4	G 1/8	G 1/8	G 1/4	19.1	19.1	69.6	105.2
W/ ST4							117.1
W/ STAA4							145.3



# Cylindrical Venturi Vacuum Pumps

## Mid J-Series



*JS-200-AA6 used in degassing operation for laboratory flasks.*



*JS-200-ST6A*

### Standard Pump:

The J-100 and J-150 models offer the same performance as their sister pumps, the J-100M and J-150M on page 6.6, but with larger ports.

The J-200 and 250's 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 6 models that can generate up to 28"Hg [948mbar], and 9 SCFM [255LPM] of vacuum flow.

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.

### Performance Level Designation:

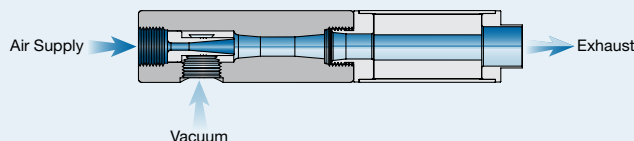
"JF" 0-10"Hg, [0 to 339mbar] for low vacuum / high flow applications

"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

### 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 diffuser. This creates a vacuum at the vacuum inlet port located between the nozzle and diffuser.



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### 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
- Food processing applications
- High temperature applications
- Caustic applications

### Features/Benefits

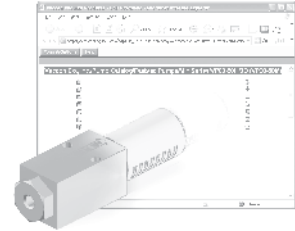
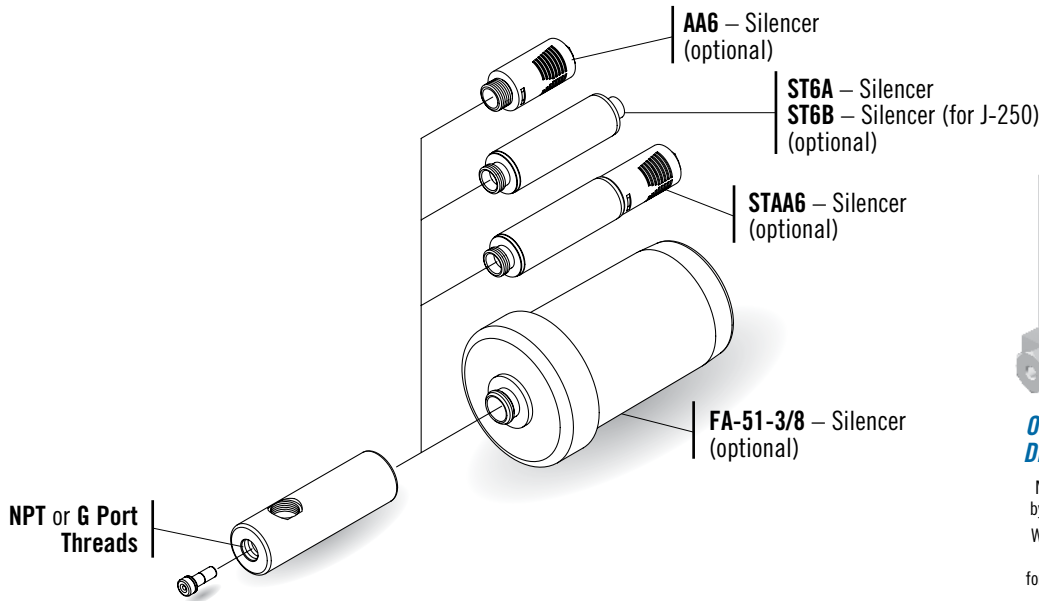
- High performance - powerful vacuum up to 28"Hg [948mbar]
- Durable – rugged aluminum body construction
- Compact & lightweight – easily fits in confined spaces
- Fast response – Mounts in-line, close to vacuum point – no delay due to long plumbing lines
- Efficient – Minimal air consumption, provides 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

### Pump Options:

- Silencers: AA6-closed end silencer, ST6A - straight-through silencer won't clog, STAA6 silencers for ultra quiet operation and FA-51-3/8 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 [4.1 bar] optional).
- For chemical compatibility requirements, high temperature, food, medical and caustic applications, custom materials are available.

## J (F, D, S)-(100, 150, 200, 250) 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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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:

**JS - 200 - 60 - ST6A -**

P/N	Imp. Thread	Max. Vac.
JF	NPT	10"Hg [339 mbar]
JD	NPT	20"Hg [677 mbar]
JS	NPT	28"Hg [948 mbar]

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

P/N	Max. Flow Level
100	
150	
200	
250	

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

P/N	Material
	Anodized Aluminum (Standard)
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
PVC	PVC
TEF	PTFE
PEEK	PEEK
DEL	Acetal, black
WDEL	Acetal, white

P/N	Silencer*
	No Silencer (Standard)
AA6	AA6 – Closed-End
ST6A	ST6A – Straight-Through
ST6B	ST6B – Straight-Through (for J-250 Series)
STAA6	STAA6 – Hybrid
FA-51-3/8	FA-51-3/8 – High Flow

For complete Performance Data, see pages 6.20-25

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

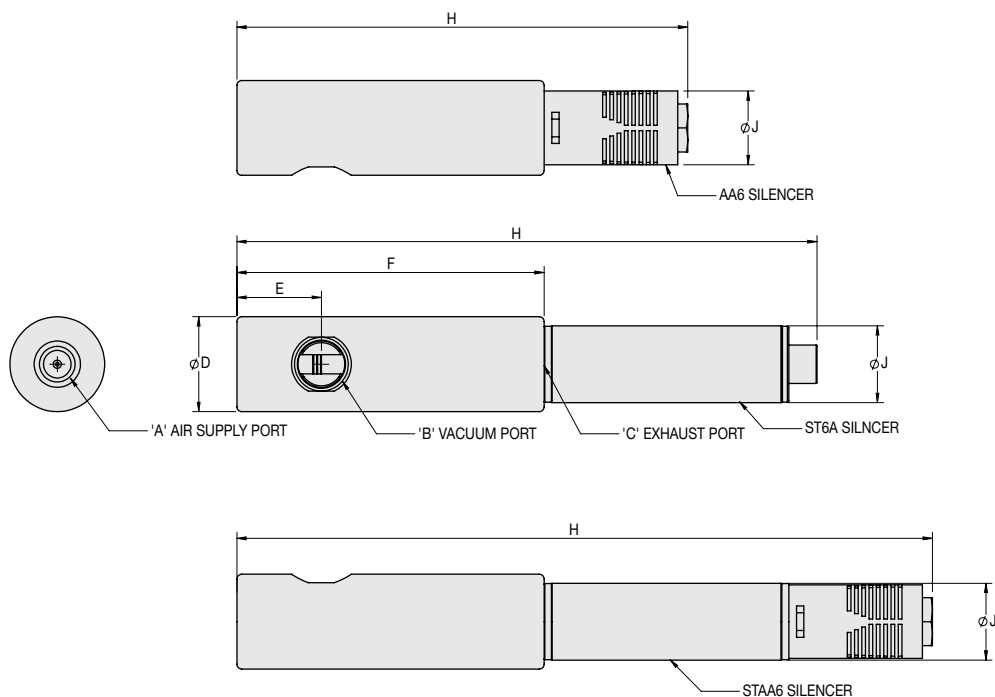
### J-Series 100-250 Cylindrical Vacuum Pump Standard Specifications:

- Pump Material:** Anodized Aluminum Standard (For silencer material - see pages 13.3-7)
- Medium:** Filtered (50 Micron) unlubricated, non-corrosive dry gases
- Operating Temperature:** -100° to ~400°F [-73° to ~204°C] (without silencer)
- Operating Pressure:** 80 PSI [5.5 bar] or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

### J-Series 100-250 Cylindrical Vacuum Pump Operating and Installation Requirements:

- Supply Line:** Minimum recommended – 3/8" O.D. [10mm] Preferred – 1/2" [12mm] OD tubing – for J250's
- Vacuum Line:** Minimum recommended – 3/8" O.D. [10mm] Preferred – 1/2" [12mm] OD tubing – for J250's
- Vacuum Line Filtration:** Typically filters are not required; if desired Vaccon recommends – VF375F. See page 13.12

## Standard Pump: J (F, D, S) – (100, 150, 200, 250)



**JD-100**



**JS-200-AA6**



**JF-150-ST6A**



**JS-200-STAA6**

**Specifications:**

**Weight:** 6.9 oz [195.6g]  
**Noise Level:** \*

7.2 oz [204.1g]  
 70 dB

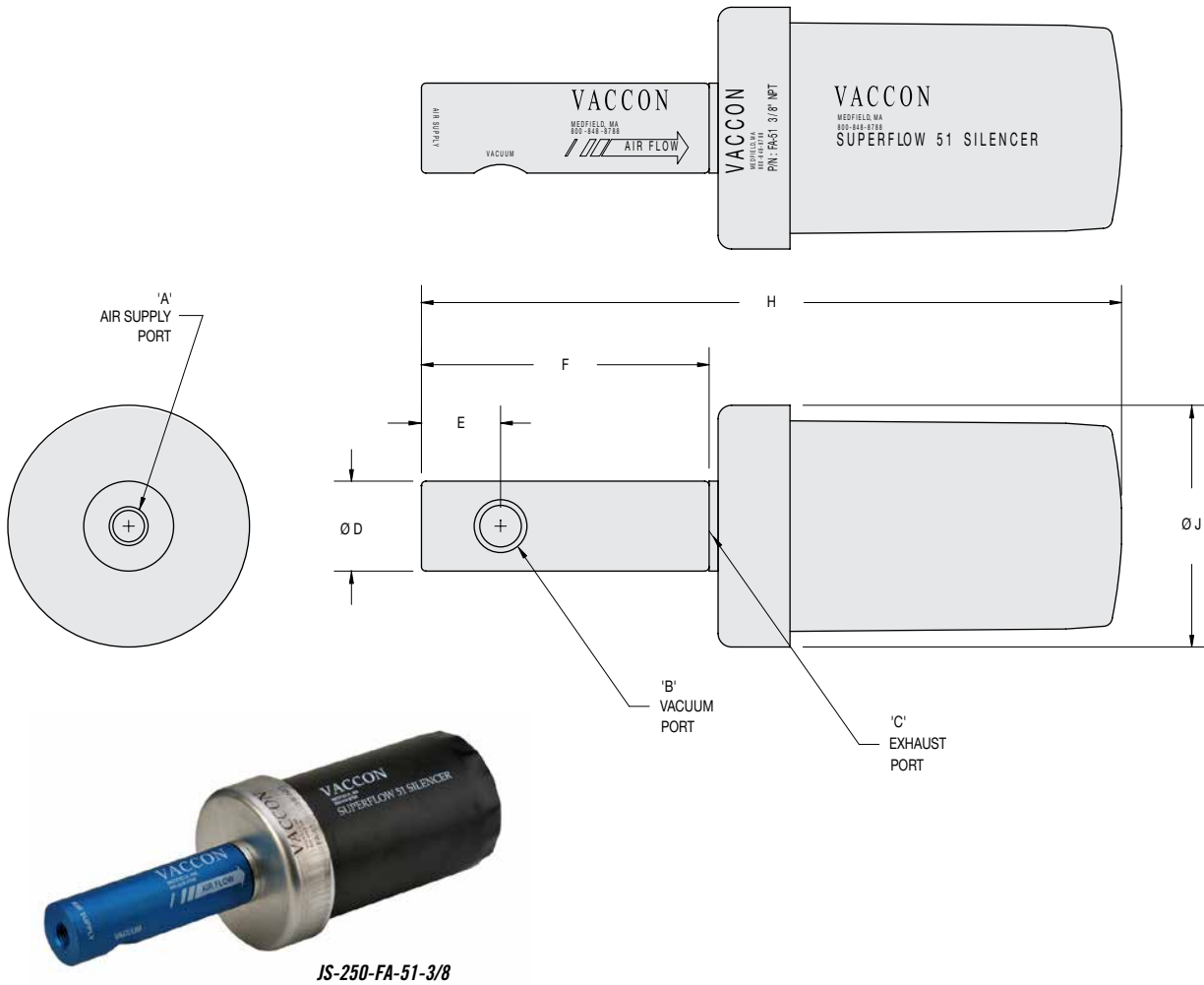
8.6 oz [243.8g]  
 72 dB

8.7 oz [246.6g]  
 66 dB

\*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
<b>J (F, D, S)-(100-250)</b>								
NONE							-	-
w/ AA6	1/4 NPTF	3/8 NPTF	3/8 NPTF	1.25	1.10	4.00	5.87	0.96
W/ ST6							7.55	1.00
W/ STAA6							9.06	1.00
Model #	Metric Dimensions (mm)							
A	B	C	D	E	F	H	J	
<b>I-J (F, D, S)-(100-250)</b>								
NONE							-	-
w/ AA6	G 1/4	G 3/8	G 3/8	31.8	27.9	101.6	149.1	24.4
W/ ST6							191.8	25.4
W/ STAA6							230.0	25.4

## J (F, D, S) – (100, 150, 200, 250) Pump – Optional Silencer: FA-51-3/8



### Specifications:

**Weight:** 1 lb. 4 oz [567g]  
**Noise Level:** 72 dB

Model #	Imperial Dimensions (in.)							
	A	B	C	D	E	F	H	J
J (F, D, S)-(100-250) - FA-51 3/8	1/4 NPT F	3/8 NPT F	3/8 NPT F	1.25	1.10	4.00	9.74	3.36
Model #	Metric Dimensions (mm)							
	A	B	C	D	E	F	H	J
I-J (F, D, S)-(100-250) - FA-51 3/8	G 1/4	G 3/8	G 3/8	31.8	27.9	101.6	247.3	85.3

**Note:** RF-51 - Silencer replacement element available – see page 13.7.

# Cylindrical Venturi Vacuum Pumps

## Max J-Series



JS-300-ST6B Picking up concrete slab in paving application.



### Ideal Applications:

- Pick & 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

### 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 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.

### Performance Level Designation:

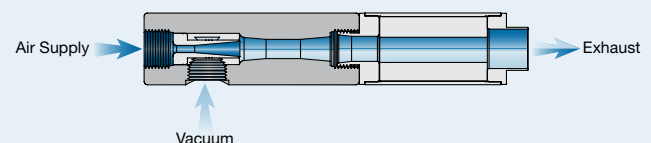
“JF” 0-10”Hg, [0 to 339mbar] for low vacuum / high flow applications  
 “JD” 0-20”Hg, [0 to 677mbar] for medium vacuum / high flow applications  
 “JS” 0-28”Hg, [0 to 948mbar] for high vacuum / standard flow applications

### 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 [4.1 bar] optional).
- For chemical compatibility requirements, high temperature, food, medical and caustic applications, custom materials are available.

### 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 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.

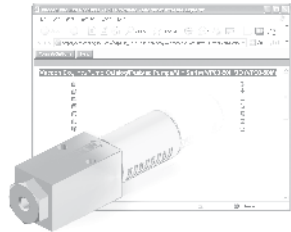
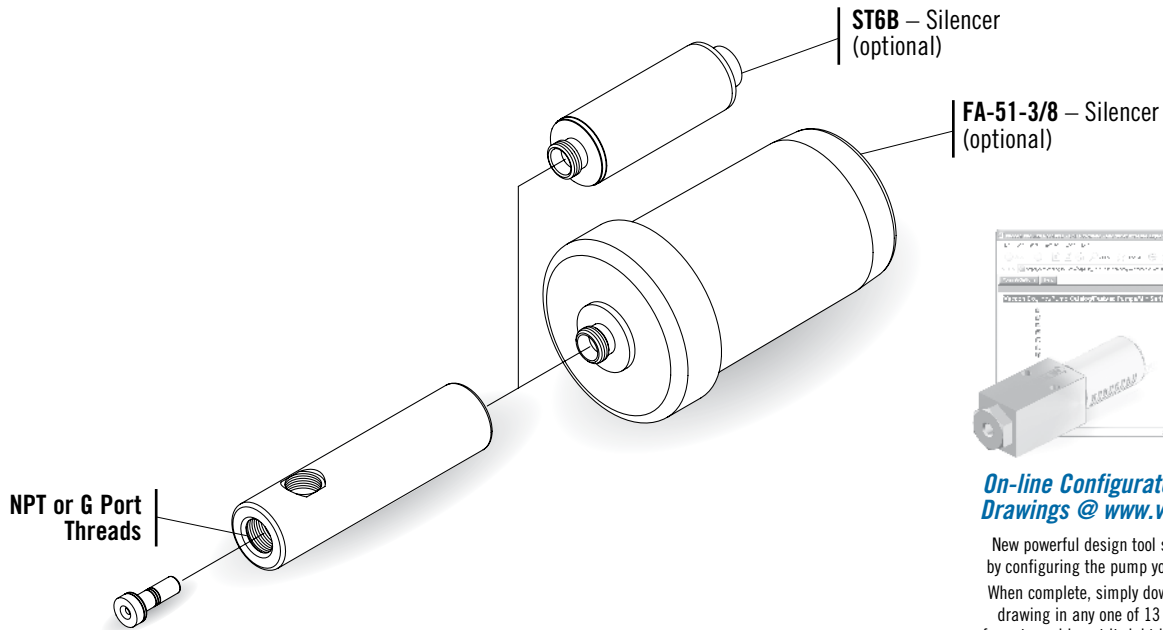
To download a complete set of drawings in multiple CAD formats, please visit our website at [www.vaccon.com](http://www.vaccon.com)

For more information or technical assistance, please call 508-359-7200 or 800-848-8788 or email [engineering@vaccon.com](mailto:engineering@vaccon.com)

# Max J-Series Cylindrical Venturi 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](http://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:

**JS-300 - 60 - ST6B -**

P/N	Imp. Thread	Max. Vac.
JF-300	NPT	10"Hg [339 mbar]
JD-300	NPT	20"Hg [677 mbar]
JS-300	NPT	28"Hg [948 mbar]
P/N	Metric Thread	Max. Vac.
I-JF-300	G Port	10"Hg [339 mbar]
I-JD-300	G Port	20"Hg [677 mbar]
I-JS-300	G Port	28"Hg [948 mbar]
P/N	Operating Pressure	
	80 PSI [5.5 bar] (Standard)	
60	60 PSI [4.0 bar]	

For complete Performance Data, see pages 6.21-25.

P/N	Material
	Anodized Aluminum (Standard)
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
PVC	PVC
TEF	PTFE
PEEK	PEEK
DEL	Acetal, black
WDEL	Acetal, white
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.

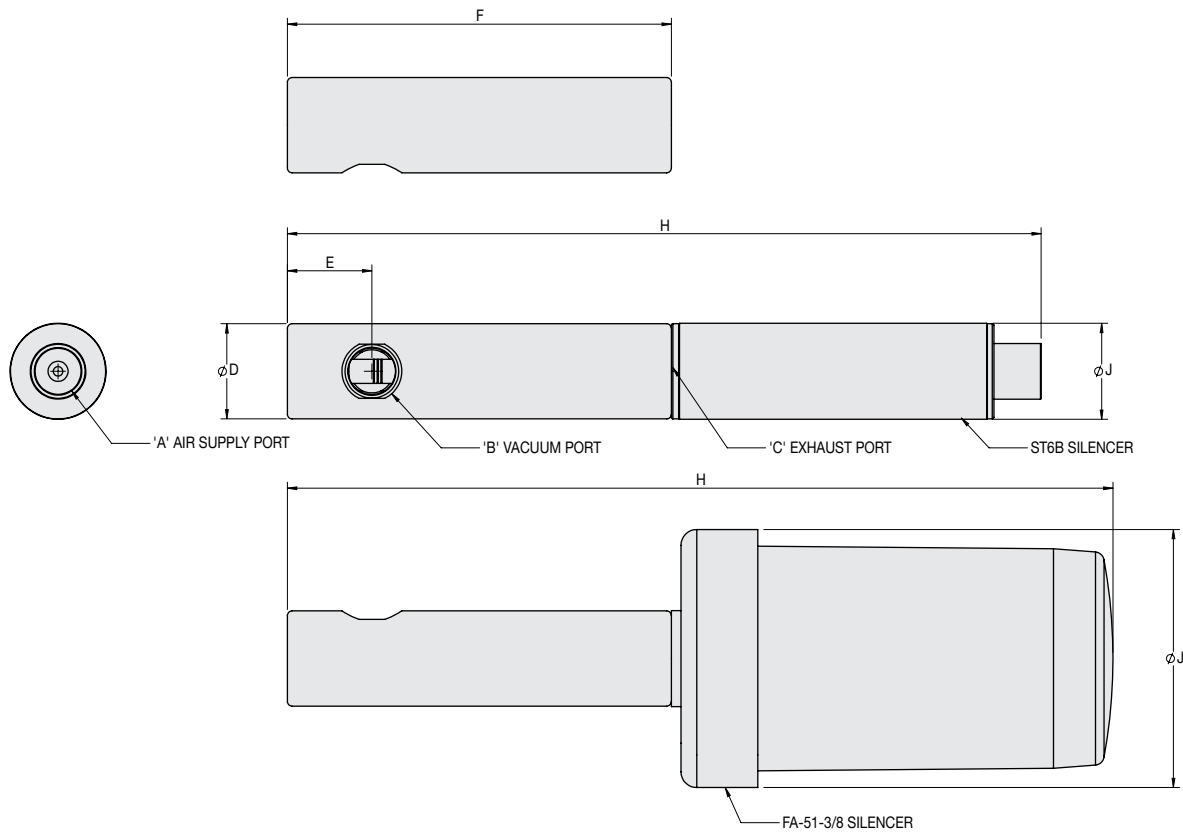
### J 300 Cylindrical Vacuum Pump Standard Specifications:

<b>Pump Material:</b>	Anodized Aluminum Standard (For silencer material see pages 13.5 & 13.7)
<b>Medium:</b>	Filtered (50 Micron) unlubricated, non-corrosive dry gases
<b>Operating Temperature:</b>	-100° to ~400°F [-73° to ~204°C] (without silencer)
<b>Operating Pressure:</b>	80 PSI [5.5 bar] standard or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

### J 300 Cylindrical Vacuum Pump Operating and Installation Requirements:

<b>Supply Line:</b>	Minimum recommended – 1/2" O.D. [12mm] Preferred OD tubing
<b>Vacuum Line:</b>	Minimum recommended – 1/2" O.D. [12mm] Preferred – 3/4" [19mm] OD for vacuum lines exceeding 3' [1M]
<b>Vacuum Line Filtration:</b>	Typically filters are not required; if desired Vaccon recommends – VF500F. See page 13.12

## Standard Pump: J (F, D, S) – 300



**Specifications:**

**Weight:** 8.5 oz [241g]  
**Noise Level:** \*

12 oz [340g]  
 72 dB

1 lb. 5 oz [598g]  
 72 dB

\*Vaccon highly recommends the use of silencers on all vacuum pumps unless the exhaust is being plumbed away.

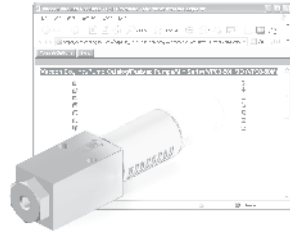
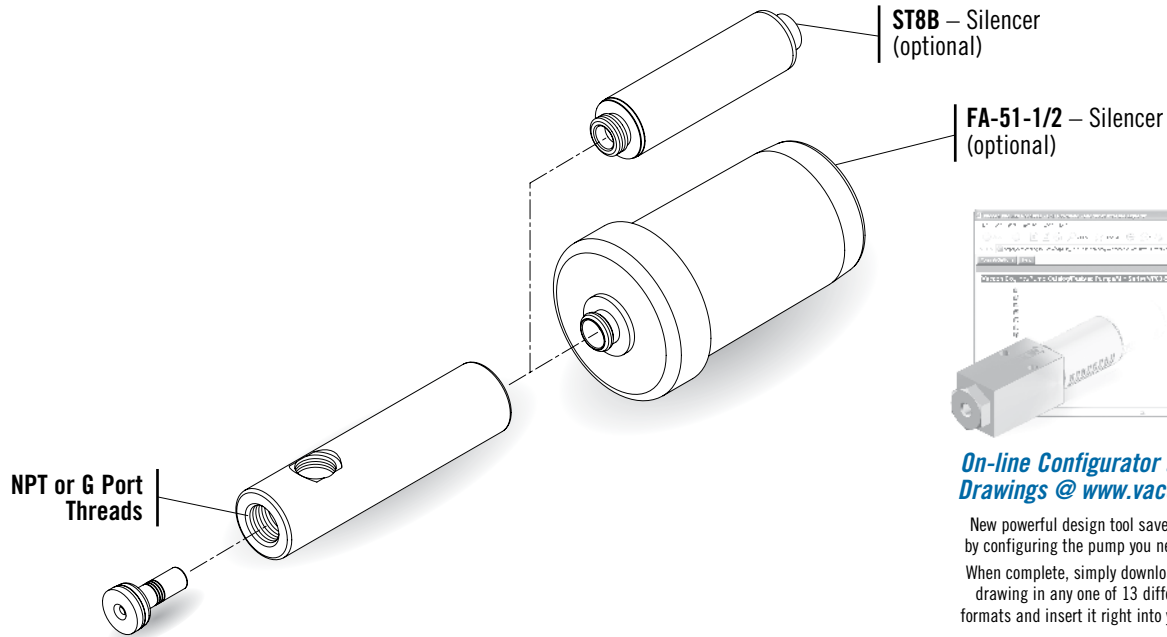
Model #	Imperial Dimensions (in.)							
	A	B	C	D	E	F	H	J
J (F, D, S)-300								
NONE							-	-
w/ ST6B	3/8 NPTF	3/8 NPTF	3/8 NPTF	1.25	1.10	5.00	9.81	1.25
W/ FA-51-3/8							10.74	3.36
Model #	Metric Dimensions (mm)							
I-J (F, D, S)-300	A	B	C	D	E	F	H	J
NONE							-	-
w/ ST6B	G 3/8	G 3/8	G 3/8	31.8	27.9	127.0	249.2	31.8
W/ FA-51-3/8							272.7	85.3



# Max J-Series Cylindrical Venturi Pumps

## 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.



**On-line Configurator and CAD Drawings @ [www.vaccon.com](http://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:

**JS-350 - 60 - ST8B -**

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

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

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

P/N	Material
	Anodized Aluminum (Standard)
303	303 Stainless Steel
304	304 Stainless Steel
316	316 Stainless Steel
PVC	PVC
TEF	PTFE
PEEK	PEEK
DEL	Acetal, black
WDEL	Acetal, white

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

For complete Performance Data, see pages 6.21-6.25.

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

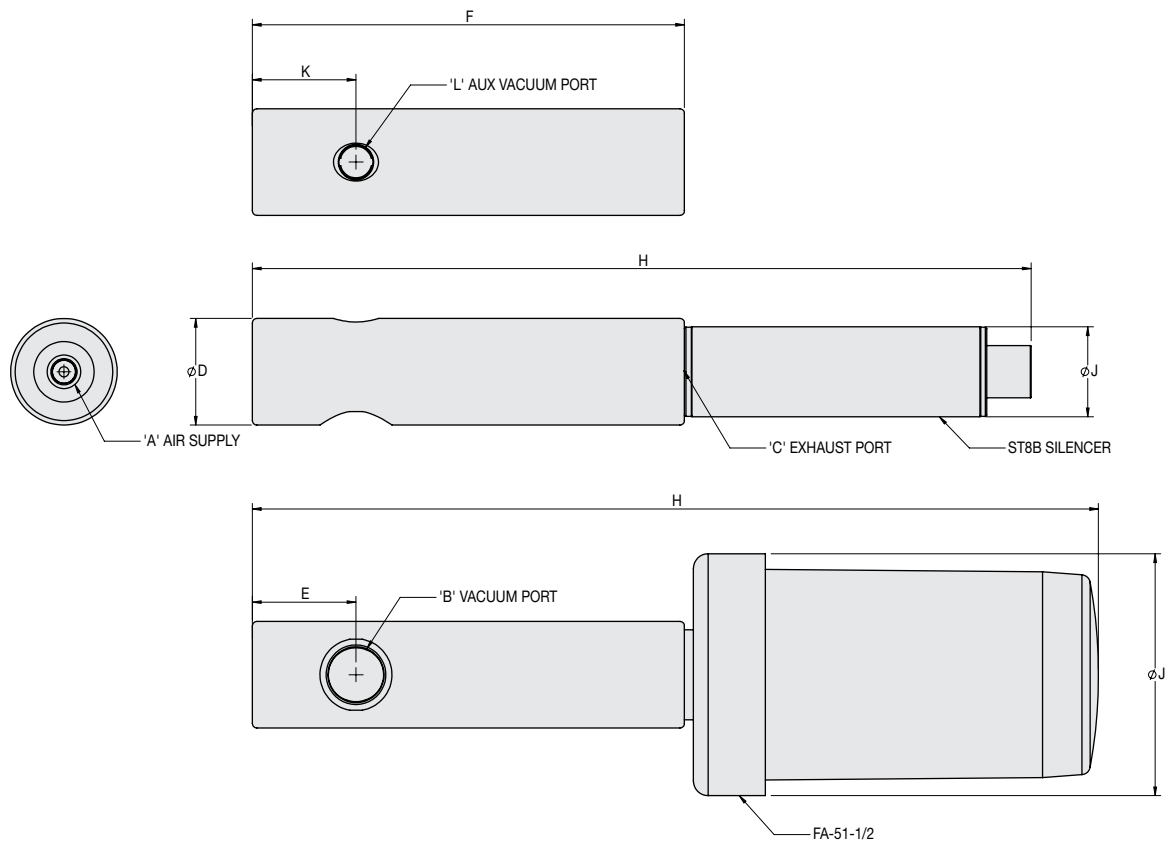
### J 350 Cylindrical Vacuum Pump Standard Specifications:

<b>Pump Material:</b>	Anodized Aluminum Standard (For silencer material see pages 13.5 & 13.7)
<b>Medium:</b>	Filtered (50 Micron) unlubricated, non-corrosive dry gases
<b>Operating Temperature:</b>	-100° to ~400°F [-73° to ~204°C] (without silencer)
<b>Operating Pressure:</b>	80 PSI [5.5 bar] standard or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

### J 350 Cylindrical Vacuum Pump Operating and Installation Requirements:

<b>Supply Line:</b>	Minimum recommended – 1/2" O.D. [12mm] Preferred OD tubing
<b>Vacuum Line:</b>	Minimum recommended – 1/2" O.D. [12mm] Preferred – 3/4" [19mm] OD for vacuum lines exceeding 3' [1M]
<b>Vacuum Line Filtration:</b>	Typically filters are not required; if desired Vaccon recommends – VF500F. See page 13.12

## Standard Pump: J (F, D, S) – 350



**Specifications:**

<b>Weight:</b>	15 oz [425g]	1 lb 2 oz [510g]	1 lb. 5 oz [598g]
<b>Noise Level:</b>	*	76 dB	72 dB

\*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
J (F, D, S)-350										
NONE							-	-		
w/ ST8B	1/2 NPT F	1/2 NPT F	1/2 NPT F	1.50	1.44	6.00	10.82	1.25	1.44	1/4 NPT F
W/ FA-51-1/2							11.75	3.36		
Model #	Metric Dimensions (mm)									
	A	B	C	D	E	F	H	J	K	L
I-J (F, D, S)-350										
NONE							-	-		
w/ ST8B	G 1/2	G 1/2	G 1/2	31.8	36.5	152.4	274.7	31.8	36.5	G 1/4
W/ FA-51-1/2							298.5	85.3		

## Liquid Powered Venturi Vacuum Pumps



JD-300 evacuating liquid from a hopper.



J-Series Pumps

### Ideal Applications:

- Liquid transfer
- Degassing in reverse osmosis filtration
- Mixing
- Extracting solvents
- Dilution
- Well evacuation

### Features/Benefits

- High Performance - powerful vacuum up to 29.5”Hg [990mbar]
- Instantaneous response
- Constant vacuum flow
- Consistent smooth transference
- Safe operation – no electricity needed
- Customized configurations available
- Reliable, trouble-free operation
  - ~ No moving parts to wear
  - ~ No maintenance
  - ~ No downtime

### Standard Pump:

Liquid powered J-Series venturi vacuum pumps generate vacuum levels up to 29.5”Hg [990mbar] at pressures as low as 45 PSI [3.1 Bar].

Generating near perfect vacuum, liquid powered J-Series pumps are recommended for degassing, reverse osmosis water columns, mixing liquids with fruit juice concentrates or chemicals for dilution, blending liquids and slurries, extracting solvents, producing emulsions, elevating water, cleaning liquid transfer lines, evacuating liquids from wells or sumps and to circulate pump solutions.

Using a manual or automatic control valve, J-Series pumps provide an instantaneous response in pulsed applications. They deliver a constant vacuum flow rather than a fluctuating flow typically associated with diaphragm pumps for smooth, consistent liquid transference.

Liquid powered J-Series pumps offer a press-fit nozzle design eliminating o-rings or seals making them ideal for use with corrosive materials and adverse operating conditions.

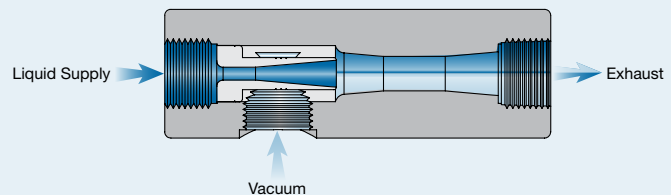
All Vaccon standard J-Series Cylindrical Venturi Vacuum Pumps are ready to operate with liquids. Performance Data for standard J-Series Pumps does not apply to Liquid Powered Pumps. For assistance in determining the correct pump for your application, consult the factory.

### Pump Options:

- G port threads for metric machines – an “I” prefix designates products with metric threads
- For chemical compatibility requirements, high temperature, food, medical and caustic applications, custom materials are available.

### Principles of Operation:

Vacuum is produced by forcing liquid through a limiting orifice (nozzle). As the liquid exits the orifice it increases in velocity at a minimum of 45 PSI [3.1 bar] before entering the 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 multiple CAD formats, please visit our website at [www.vaccon.com](http://www.vaccon.com)

For more information or technical assistance, please call 508-359-7200 or 800-848-8788 or email [engineering@vaccon.com](mailto:engineering@vaccon.com)

## Custom Venturi Vacuum Pumps – J-Series

*Ideal for OEM engineers and designers*

***Creative Engineering • Precision Manufacturing • Extensive Application Experience***

When off the shelf doesn't work, Vaccon's engineering expertise and manufacturing capabilities can provide custom solutions to your specifications.

Whether it's as simple as modifying a standard product, or more complex, requiring new products with specific features, or special materials, Vaccon has the solution.



*All the pumps shown offer the exact same performance but were made to fit a specific application or machine footprint.*



*Custom Materials Available: Brass, Stainless Steel, PVC, Peek, PTFE-(Teflon™), Acetal. Consult factory.*



*Stainless steel pumps used for filling IV bags with de-ionized water, or corrosive materials.*



*Custom designed JS-60M-316 stainless steel with butt weld connection for evacuating argon gas for the semiconductor industry.*

***When size, shape, material and performance matter, it's Vaccon Vacuum Pumps.***

## Performance Data for JF Series Pumps

### F-Series Venturis – Low Vacuum Applications

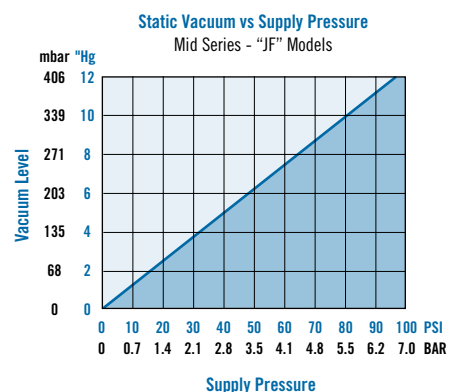
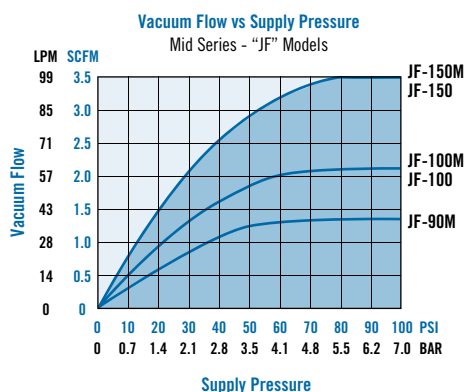
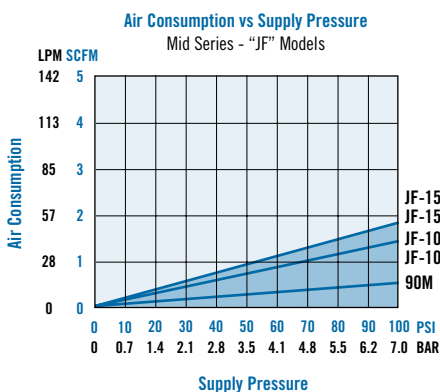
F is for “Low” vacuum levels up to 10”Hg [339mbar] for handling delicate parts, thin walled materials and for process control applications.

Model #	Air Consumption SCFM	Imperial – Vacuum Flow (SCFM) vs. Vacuum Level (“Hg)				
		0”Hg	3”Hg	6”Hg	9”Hg	10”Hg
JF-90M	0.50	1.30	1.10	0.70	0.20	0.00
JF-100M		2.10	1.60	1.10	0.50	0.00
JF-100	1.40	2.10	1.60	1.10	0.50	0.00
JF-150M		3.50	2.50	1.90	0.70	0.00
JF-150	1.80	3.50	2.50	1.90	0.70	0.00
JF-150		3.50	2.50	1.90	0.70	0.00
Model #		Evacuation Time in Seconds based on 1 Cubic Foot Volume/”Hg				
		0”Hg	3”Hg	6”Hg	9”Hg	10”Hg
JF-90M		0.00	3.26	7.93	18.65	39.63
JF-100M		0.00	2.33	4.66	10.88	24.09
JF-100		0.00	2.33	4.66	10.88	24.09
JF-150M		0.00	2.05	4.62	11.80	22.80
JF-150		0.00	2.05	4.62	11.80	22.80

Model #	Air Consumption L/min	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)				
		0mbar	102mbar	203mbar	305mbar	339mbar
I-JF-90M	14.2	36.8	31.1	19.8	5.7	0.0
I-JF-100M	39.6	59.5	45.3	31.1	14.2	0.0
I-JF-100		59.5	45.3	31.1	14.2	0.0
I-JF-150M	51.0	99.1	70.8	53.8	19.8	0.0
I-JF-150		99.1	70.8	53.8	19.8	0.0
Model #		Evacuation Time in Seconds based on 1 Liter Volume/mbar				
		0mbar	102mbar	203mbar	305mbar	339mbar
I-JF-90M		0.0	0.1	0.3	0.7	1.4
I-JF-100M		0.0	0.1	0.2	0.4	0.9
I-JF-100		0.0	0.1	0.2	0.4	0.9
I-JF-150M		0.0	0.1	0.2	0.4	0.8
I-JF-150		0.0	0.1	0.2	0.4	0.8

**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4.1 bar] etc. The values shown in the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft. volume will take twice as long to evacuate as a 1 cu. ft. volume.



**Note:** Performance Charts represent average performance data. For reference only.

## Performance Data for JF Series Pumps

### F-Series Venturis – Low Vacuum Applications

F is for “Low” vacuum levels up to 10”Hg [339mbar] for handling delicate parts, thin walled materials and for process control applications.

Model #	Air Consumption SCFM	Imperial – Vacuum Flow (SCFM) vs. Vacuum Level (“Hg)				
		0”Hg	3”Hg	6”Hg	9”Hg	10”Hg
JF-200	2.80	6.00	5.80	4.30	1.70	0.00
JF-250	4.80	9.50	7.90	5.70	2.20	0.00
JF-300	7.80	20.00	14.00	9.50	3.50	0.00
JF-350	12.50	28.00	18.00	12.30	4.50	0.00

Model #	Evacuation Time in Seconds based on 1 Cubic Foot Volume/”Hg				
	0”Hg	3”Hg	6”Hg	9”Hg	10”Hg
JF-200	0.00	0.77	2.05	4.62	13.34
JF-250	0.00	0.52	1.28	3.08	7.95
JF-300	0.00	0.26	0.77	1.80	4.10
JF-350	0.00	0.00	0.52	1.28	2.82

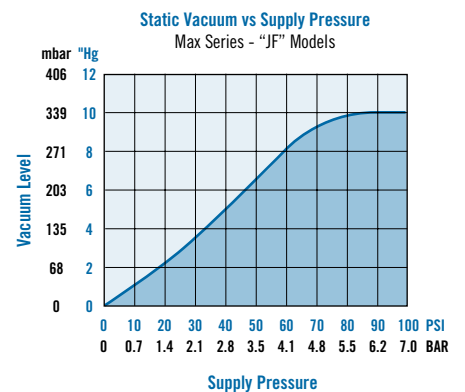
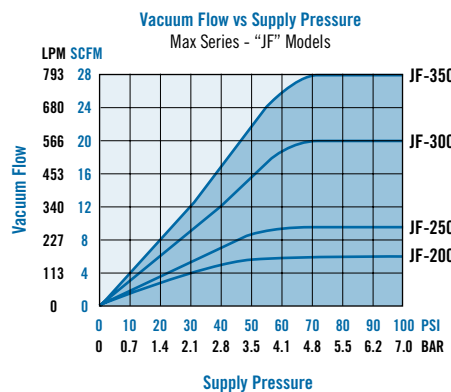
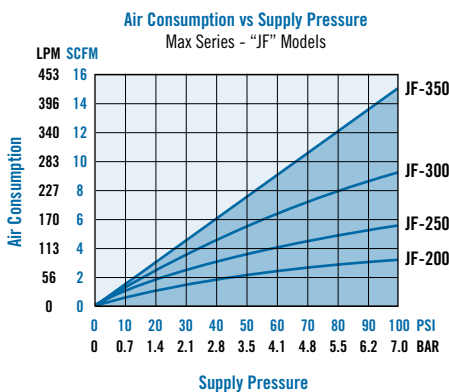
Model #	Air Consumption L/min	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)				
		0mbar	102mbar	203mbar	305mbar	339mbar
I-JF-200	79.3	169.9	164.2	121.8	48.1	0.0
I-JF-250	135.9	269.0	223.7	161.4	62.3	0.0
I-JF-300	220.9	566.3	396.4	269.0	99.1	0.0
I-JF-350	354.0	792.9	509.7	348.3	127.4	0.0

Model #	Evacuation Time in Seconds based on 1 Liter Volume/mbar				
	0mbar	102mbar	203mbar	305mbar	339mbar
I-JF-200	0.0	0.0	0.1	0.2	0.5
I-JF-250	0.0	0.0	0.0	0.1	0.3
I-JF-300	0.0	0.0	0.0	0.1	0.1
I-JF-350	0.0	0.0	0.0	0.0	0.1

**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4.1 bar] etc. The values shown in the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft. volume will take twice as long to evacuate as a 1 cu. ft. volume.



**Note:** Performance Charts represent average performance data. For reference only.

## Performance Data for JD Series Pumps

### D-Series Venturis – Medium Vacuum Applications

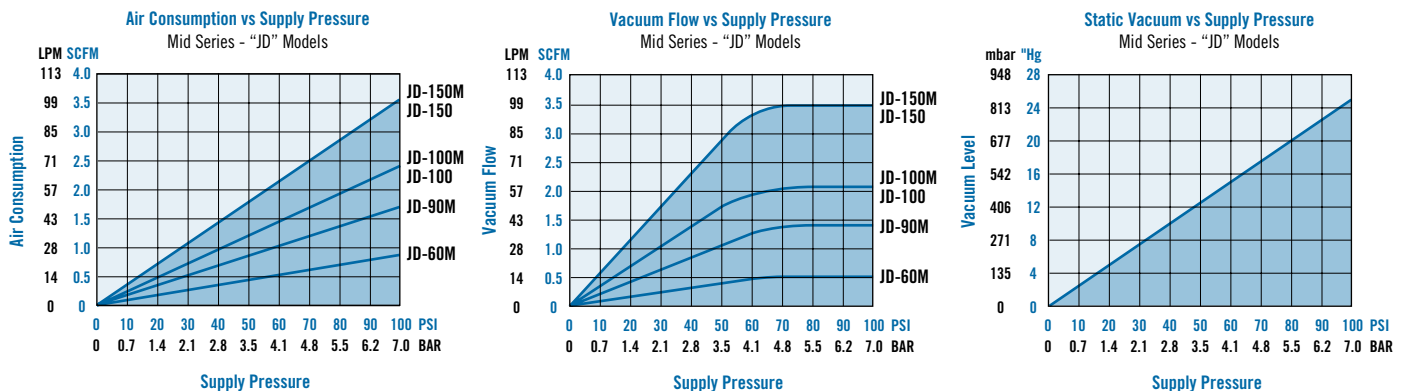
D is for “Medium” vacuum levels up to 20”Hg [667mbar] for applications involving porous materials (cardboard, wood, masonry, baked goods, textiles.)

Model #	Air Consumption SCFM	Imperial – Vacuum Flow (SCFM) vs. Vacuum Level (“Hg)							
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	20”Hg
JD-60M	0.50	0.50	0.40	0.30	0.22	0.15	0.08	0.03	0.00
JD-90M	1.40	1.40	1.25	1.20	1.05	0.85	0.65	0.25	0.00
JD-100M	1.80	2.10	2.00	1.85	1.75	1.60	1.25	0.80	0.00
JD-100									
JD-150M	2.80	3.50	3.20	2.95	2.75	2.50	1.80	0.95	0.00
JD-150									
Model #	Evacuation Time in Seconds based on 1 Cubic Foot Volume/”Hg								
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	20”Hg
JD-60M		0.00	12.50	25.10	43.90	68.60	99.30	153.70	227.00
JD-90M		0.00	3.75	7.20	12.40	19.10	29.90	52.00	104.00
JD-100M		0.00	2.65	5.80	9.90	16.20	22.90	36.20	56.60
JD-100									
JD-150M		0.00	1.35	3.20	5.20	7.70	11.80	23.40	52.00
JD-150									

Model #	Air Consumption LPM	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)							
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	677mbar
I-JD-60M	14.2	14.2	11.3	8.5	6.2	4.2	2.3	0.8	0.0
I-JD-90M	39.6	39.6	35.4	34.0	29.7	24.1	18.4	7.1	0.0
I-JD-100M	51.0	59.5	56.6	52.4	49.6	45.3	35.4	22.7	0.0
I-JD-100									
I-JD-150M	79.3	99.1	90.6	83.5	77.9	70.8	51.0	26.9	0.0
I-JD-150									
Model #	Evacuation Time in Seconds based on 1 Liter Volume/mbar								
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	677mbar
I-JD-60M		0.0	0.4	0.9	1.6	2.4	3.5	5.4	8.0
I-JD-90M		0.0	0.1	0.3	0.4	0.7	1.1	1.8	3.7
I-JD-100M		0.0	0.1	0.2	0.3	0.6	0.8	1.3	2.0
I-JD-100									
I-JD-150M		0.0	0.0	0.1	0.2	0.3	0.4	0.8	1.8
I-JD-150									

**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4.1 bar] etc. The values shown in the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft. volume will take twice as long to evacuate as a 1 cu. ft. volume.



**Note:** Performance Charts represent average performance data. For reference only.



## Performance Data for JD Series Pumps

### D-Series Venturis – Medium Vacuum Applications

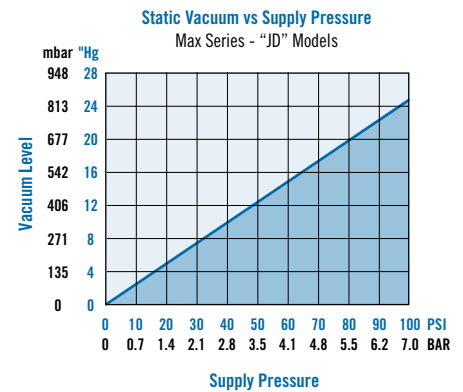
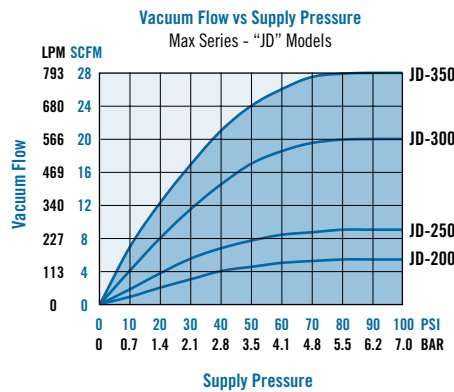
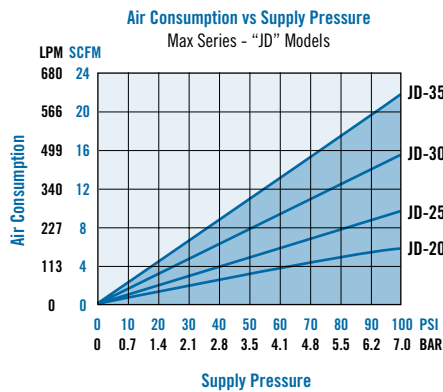
D is for “Medium” vacuum levels up to 20”Hg [667mbar] for applications involving porous materials (cardboard, wood, masonry, baked goods, textiles.)

Model #	Air Consumption SCFM	Imperial – Vacuum Flow (SCFM) vs. Vacuum Level (“Hg)							
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	20”Hg
JD-200	4.80	6.00	5.30	4.90	4.00	3.50	2.50	1.10	0.00
JD-250	7.80	9.50	9.20	8.30	7.00	4.70	3.40	2.20	0.00
JD-300	12.50	20.00	19.00	16.30	13.80	8.10	5.50	3.30	0.00
JD-350	22.00	28.00	24.00	19.40	16.80	14.50	11.20	4.80	0.00
Model #		Evacuation Time in Seconds based on 1 Cubic Foot Volume/”Hg							
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	20”Hg
JD-200		0.00	0.75	1.90	3.20	5.30	8.70	17.10	42.60
JD-250		0.00	0.45	1.10	2.40	3.80	6.00	9.70	15.40
JD-300		0.00	0.00	0.00	1.10	1.80	2.70	4.60	8.70
JD-350		0.00	0.00	0.00	1.00	1.50	2.10	4.30	8.40

Model #	Air Consumption L/min	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)							
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	677mbar
I-JD-200	135.9	169.9	150.1	138.8	113.3	99.1	70.8	31.1	0.0
I-JD-250	220.9	269.0	260.5	235.0	198.2	133.1	96.3	62.3	0.0
I-JD-300	354.0	566.3	538.0	461.6	390.8	229.4	155.7	93.4	0.0
I-JD-350	623.0	792.9	679.6	549.3	475.7	410.6	317.1	135.9	0.0
Model #		Evacuation Time in Seconds based on 1 Liter Volume/mbar							
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	677mbar
I-JD-200		0.0	0.0	0.1	0.1	0.2	0.3	0.6	1.5
I-JD-250		0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5
I-JD-300		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3
I-JD-350		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3

**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4.1 bar] etc. The values shown in the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft. volume will take twice as long to evacuate as a 1 cu. ft. volume.



**Note:** Performance Charts represent average performance data. For reference only.

## Performance Data for JS Series Pumps

### S-Series Venturis – High Vacuum Applications

S is for “High” vacuum levels up to 28”Hg [948mbar] for applications involving non-porous materials (steel, plastic, glass, etc.)

Model #	Air Consumption SCFM	Imperial – Vacuum Flow (SCFM) vs. Vacuum Level (“Hg)										
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	21”Hg	24”Hg	27”Hg	28”Hg
JS-60M	0.80	0.50	0.38	0.32	0.30	0.27	0.23	0.20	0.13	0.05	0.02	0.00
JS-90M	1.80	1.20	1.00	0.95	0.90	0.85	0.75	0.70	0.52	0.47	0.20	0.00
JS-100M	2.80	2.00	1.85	1.75	1.57	1.40	1.25	1.05	0.84	0.70	0.35	0.00
JS-100												
JS-150M	4.80	3.20	2.80	2.50	2.30	2.00	1.60	1.40	1.20	0.80	0.50	0.00
JS-150												

Model #	Air Consumption L/min	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)										
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	813mbar	914mbar	948mbar
I-JS-60M	22.7	14.2	10.8	9.1	8.5	7.6	6.5	5.7	3.7	1.4	0.6	0.0
I-JS-90M	51.0	34.0	28.3	26.9	25.5	24.1	21.2	19.8	14.7	13.3	5.7	0.0
I-JS-100M	79.3	56.6	52.4	49.6	44.5	39.6	35.4	29.7	23.8	19.8	9.9	0.0
I-JS-100												
I-JS-150M	135.9	90.6	79.3	70.8	65.1	56.6	45.3	39.6	34.0	22.7	14.2	0.0
I-JS-150												

Model #	Air Consumption SCFM	Evacuation Time in Seconds based on 1 Cubic Foot Volume/”Hg										
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	21”Hg	24”Hg	27”Hg	28”Hg
JS-60M	0.80	0.00	15.00	29.80	50.60	74.50	102.80	135.90	183.20	245.90	410.20	790.80
JS-90M	1.80	0.00	6.50	12.30	18.90	32.50	47.00	65.40	92.20	130.00	222.20	281.30
JS-100M	2.80	0.00	2.70	6.50	11.20	17.50	25.80	38.40	55.20	79.20	166.70	251.80
JS-100												
JS-150M	4.80	0.00	2.30	3.80	6.50	10.20	14.20	21.30	44.90	55.00	81.00	125.00
JS-150												

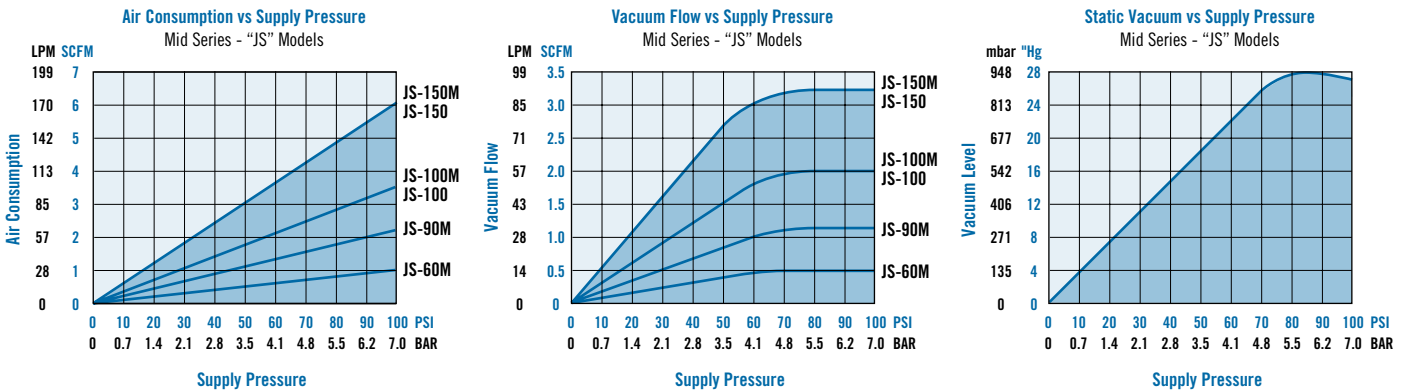
Model #	Air Consumption L/min	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)										
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	813mbar	914mbar	948mbar
I-JS-60M	22.7	14.2	10.8	9.1	8.5	7.6	6.5	5.7	3.7	1.4	0.6	0.0
I-JS-90M	51.0	34.0	28.3	26.9	25.5	24.1	21.2	19.8	14.7	13.3	5.7	0.0
I-JS-100M	79.3	56.6	52.4	49.6	44.5	39.6	35.4	29.7	23.8	19.8	9.9	0.0
I-JS-100												
I-JS-150M	135.9	90.6	79.3	70.8	65.1	56.6	45.3	39.6	34.0	22.7	14.2	0.0
I-JS-150												

Model #	Air Consumption L/min	Evacuation Time in Seconds based on 1 Liter Volume/mbar										
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	813mbar	914mbar	948mbar
I-JS-60M	22.7	0.0	0.5	1.1	1.8	2.6	3.6	4.8	6.5	8.7	14.5	27.9
I-JS-90M	51.0	0.0	0.2	0.4	0.7	1.1	1.7	2.3	3.3	4.6	7.8	9.9
I-JS-100M	79.3	0.0	0.1	0.2	0.4	0.6	0.9	1.4	1.9	2.8	5.9	8.9
I-JS-100												
I-JS-150M	135.9	0.0	0.1	0.1	0.2	0.4	0.5	0.8	1.6	1.9	2.9	4.4
I-JS-150												

**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4.1 bar] etc. The values shown in the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft. volume will take twice as long to evacuate as a 1 cu. ft. volume.



**Note:** Performance Charts represent average performance data. For reference only.

## Performance Data for JS Series Pumps

### S-Series Venturis – High Vacuum Applications

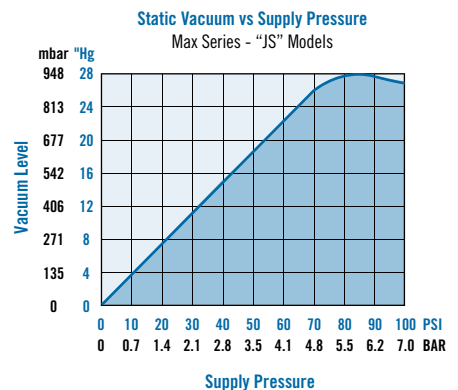
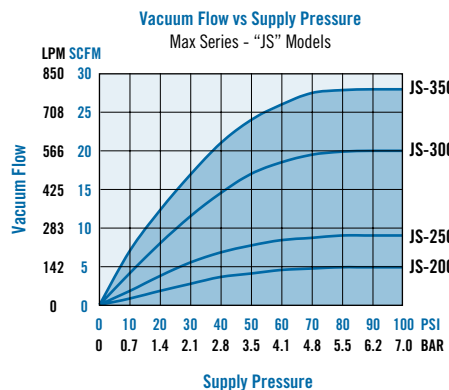
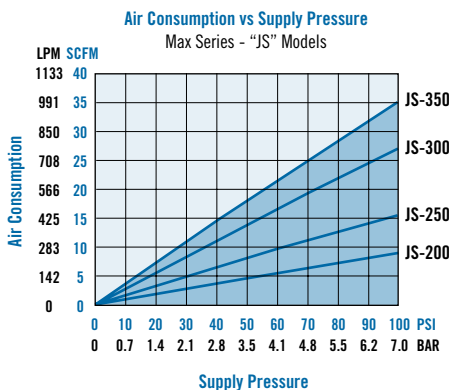
S is for “High” vacuum levels up to 28”Hg [948mbar] for applications involving non-porous materials (steel, plastic, glass, etc.)

Model #	Air Consumption SCFM	Imperial – Vacuum Flow (SCFM) vs. Vacuum Level (“Hg)										
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	21”Hg	24”Hg	27”Hg	28”Hg
JS-200	7.80	5.40	4.70	3.85	3.30	3.00	2.60	2.10	1.60	1.20	0.60	0.00
JS-250	12.50	9.00	8.50	7.85	7.00	6.50	5.30	3.90	2.50	1.80	0.90	0.00
JS-300	22.00	20.00	17.00	14.00	12.70	12.00	10.00	7.40	4.90	2.70	1.30	0.00
JS-350	28.00	28.00	22.00	18.70	15.90	14.50	11.80	8.10	5.70	4.50	2.25	0.00
Model #		Evacuation Time in Seconds based on 1 Cubic Foot Volume/”Hg										
		0”Hg	3”Hg	6”Hg	9”Hg	12”Hg	15”Hg	18”Hg	21”Hg	24”Hg	27”Hg	28”Hg
JS-200		0.00	1.20	2.10	3.40	5.20	7.70	11.50	20.00	33.50	62.60	98.10
JS-250		0.00	0.75	1.30	2.20	3.50	5.60	9.10	17.40	30.10	56.00	76.00
JS-300		0.00	0.00	0.80	1.20	2.00	2.80	3.90	5.90	11.10	32.70	60.00
JS-350		0.00	0.00	0.00	1.20	1.90	2.30	3.40	5.30	8.80	26.00	44.00

Model #	Air Consumption L/min	Metric – Vacuum Flow (L/min) vs. Vacuum Level (mbar)										
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	814mbar	914mbar	948mbar
I-JS-200	220.9	152.9	133.1	109.0	93.4	85.0	73.6	59.5	45.3	34.0	17.0	0.0
I-JS-250	354.0	254.9	240.7	222.3	198.2	184.1	150.1	110.4	70.8	51.0	25.5	0.0
I-JS-300	623.0	566.3	481.4	396.4	359.6	339.8	238.2	209.5	138.8	76.5	36.8	0.0
I-JS-350	792.9	792.9	623.0	529.5	450.2	410.6	334.1	229.4	161.4	127.4	63.7	0.0
Model #		Evacuation Time in Seconds based on 1 Liter Volume/mbar										
		0mbar	102mbar	203mbar	305mbar	406mbar	508mbar	609mbar	711mbar	814mbar	914mbar	948mbar
I-JS-200		0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.7	1.2	2.2	3.5
I-JS-250		0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.6	1.1	2.0	2.7
I-JS-300		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.4	1.2	2.1
I-JS-350		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.9	1.6

**Note 1:** Standard operating pressure for Vaccon pumps is 80 PSI [5.5 bar]. Pumps can be factory modified to run at other operating pressures i.e. 60 PSI [4 bar] etc. The values shown in the performance chart will remain the same for all operating pressures.

**Note 2:** Evacuation speed is linear with volume. A 2 cu. ft. volume will take twice as long to evacuate as a 1 cu. ft. volume.



**Note:** Performance Charts represent average performance data. For reference only.