Threaded Venturi Vacuum Cartridges

for OEM Equipment & Applications

C200M-TH threaded cartridge shown in manifold block - assembled/unassembled.

Mid & Max Series Threaded Cartridges with removable silencers

Ideal Applications:

- Flexible manufacturing environments
- Packaging Machinery
- Food Processing
- Robotics / End-of-Arm Tooling
- Pick & place
- Integrate into blood or gas analysis machines
- Vessel evacuation
- Vacuum filling, vacuum chucking
- Medical Applications – diagnostic equipment, disposal products

Features/Benefits:

- Saves space – eliminates the need for an external pump, install close to vacuum point
- High Productivity – powerful vacuum up to 28"Hg [948mbar], fast response time
- Compact & lightweight – reduces overall equipment weight
- Efficient – minimal air consumption, high performance
- Performance Optimization – precise control of flow and vacuum level
- Reduces plumbing connections
- Available in a range of materials for food handling, chemical, and medical applications

Standard Threaded Cartridges:

Vaccon developed the Mid and Max Series Threaded Vacuum Cartridges at the request of OEM customers looking for a non-clogging alternative to multi-stage pumps. OEM engineers are often challenged with limited space to integrate components in machines and automation systems. Our Threaded Cartridges offer a direct replacement with no or low maintenance

Vaccon Threaded Venturi Vacuum Cartridges offer a wide range of performance levels enabling you to optimize performance based on desired vacuum level, vacuum flow, evacuation speed and air consumption. If the product changes in size, porosity, or weight, you can re-fit the existing equipment with a different cartridge by simply swapping the cartridge. See Performance Data on pages 1.20-25.

Performance Level Designations:

"**L**" 0-10"Hg, [0 to 339mbar] for low vacuum/high flow applications (not available for Min Series)

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

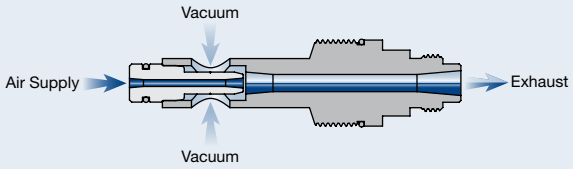
"**H**" 0-28"Hg, [0 to 948mbar] for high vacuum/standard flow applications

Cartridge Options:

- 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, food or medical applications, custom materials and sizes are available. Consult factory.

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. The nozzle and diffuser combine to create a venturi vacuum cartridge.



Eliminate the Guesswork: Contact Us!

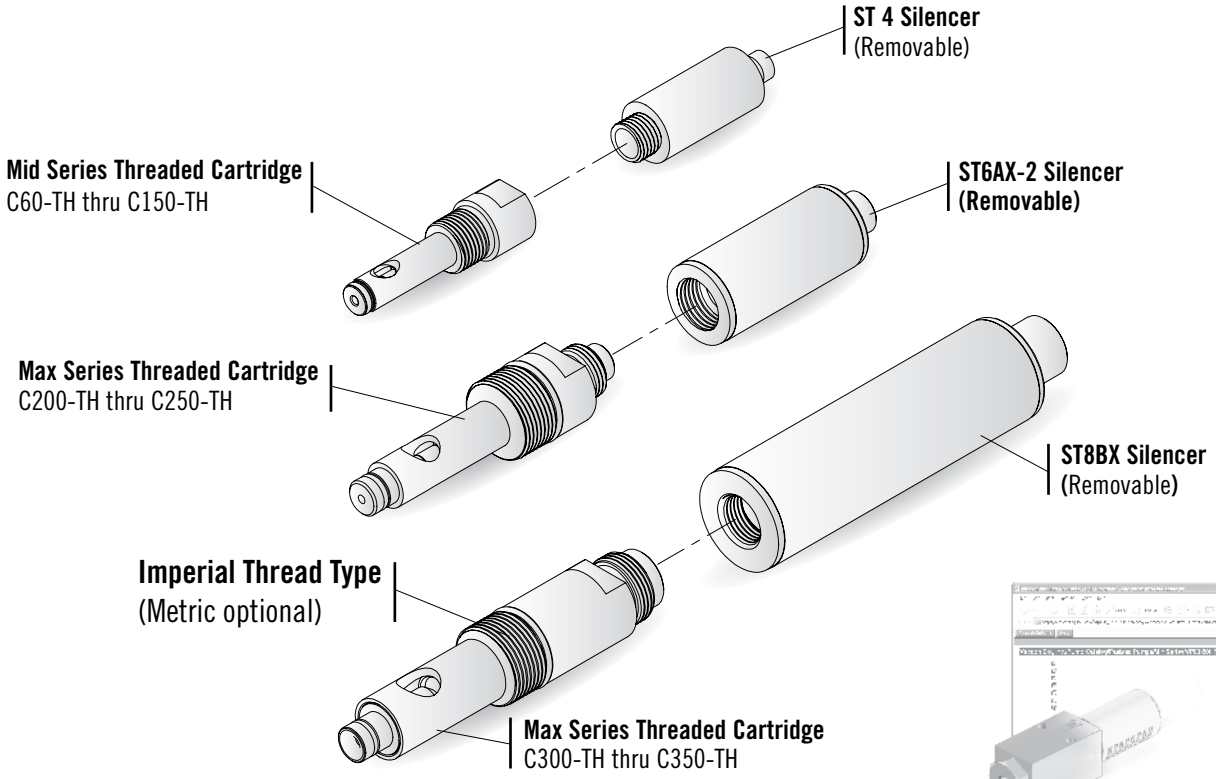
Vacuum technology isn't an exact science. To ensure proper product selection, Vaccon offers free application engineering assistance, a 30 Day Test & Evaluation Program or you can send sample products to our in-house test facility and we will test and size a pump for you.

To download a complete set of drawings in multiple CAD formats, please visit our website at **www.vaccon.com**

For more information or technical assistance, please call **508-359-7200** or **800-848-8788** or email **engineering@vaccon.com**

Threaded Venturi Vacuum Cartridges (Mid and Max Series) Configurations and Options:

Vaccon Mid & Max Series threaded cartridges are standard with removable silencers. Vaccon strongly recommends the use of its ST silencers. The ST Series silencers are designed with a straight through flow path that eliminates clogging by allowing the contaminants to pass directly through the silencer. Each silencer is tuned in proportion to its exhaust flow to minimize noise.



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:

Mid Cartridges I - C60 H - TH - 60

P/N	Thread Type
	Imperial Thread
I	Metric Thread

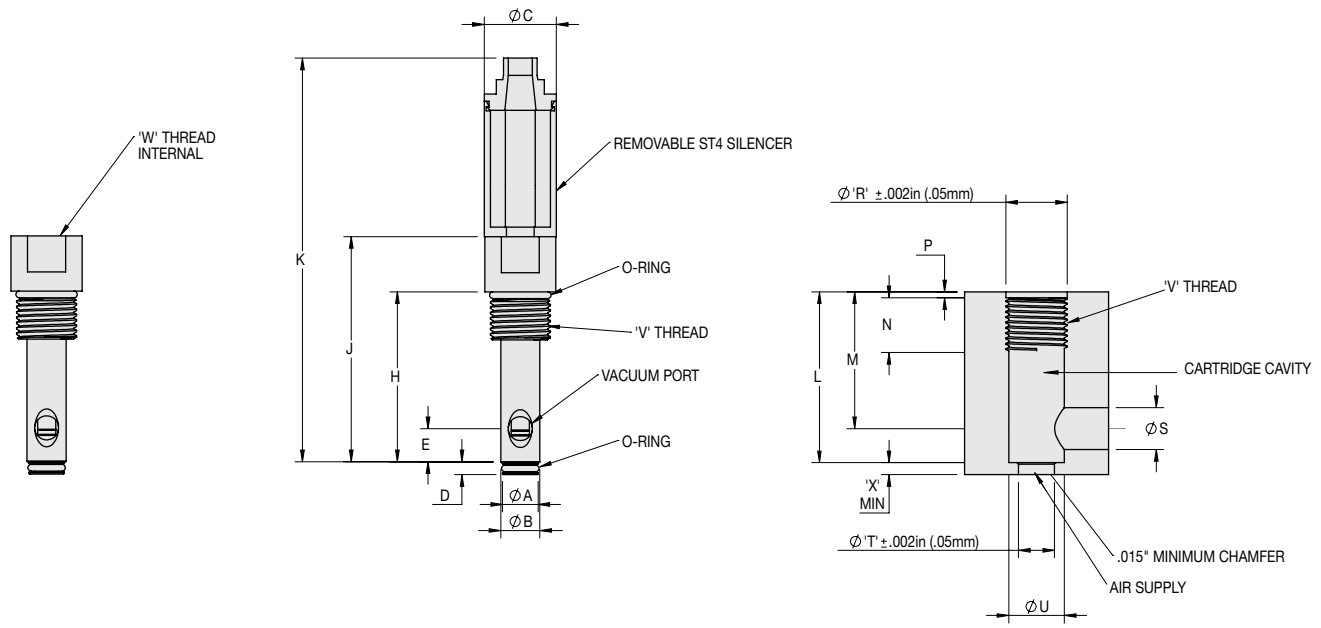
P/N	Max. Flow Level
C60	Mid Series Only
C90	Mid Series Only
C100	Mid Series Only
C150	Mid Series Only
C200	Max Series Only
C250	Max Series Only
C300	Max Series Only
C350	Max Series Only

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

P/N	Max. Vac Level
L	10"Hg [339 mbar] (n/a C60)
M	20"Hg [677 mbar]
H	28"Hg [948 mbar]

For complete Performance Data, see pages 1.20-25

Mid Series Threaded Cartridges C60/150-TH



Part Number: C60M-TH/ C150H-TH

Standard Material: Anodized Aluminum
Weight: 0.069 oz [19.5g]

Model #	Imperial Dimensions (in.)																		
C60/150-TH	A	B	C	D	E	H	J	K	L	M	N	P	R	S	T	U	V	W	X
Cartridge	0.37	0.41	0.75	0.13	0.36	1.78	2.36	4.22	-	-	-	-	-	-	-	-	5/8-18 UNF	1/4-18 NPS	-
Cavity	-	-	-	-	-	-	-	-	1.78	1.43	0.63	0.06	0.64	0.44	0.38	0.58	5/8-18 UNF	-	0.13
Model #	**Metric Dimensions (mm)**																		
I-C60/150-TH	A	B	C	D	E	H	J	K	L	M	N	P	R	S	T	U	V	W	X
Cartridge	9.40	10.36	19.05	3.18	9.14	45.21	59.94	107.06	-	-	-	-	-	-	-	-	M16x1.5	1/4-18 NPS	-
Cavity	-	-	-	-	-	-	-	-	45.21	36.32	16.00	1.60	16.26	11.11	9.53	14.50	M16x1.5	-	3.30

Mid Series Threaded Cartridge Specifications:

Cartridge Material: Standard: Anodized Aluminum, Buna-N O-rings

Optional Materials: Stainless Steel, PVC, Peek, Teflon™, Acetal
O-rings available in additional materials - Consult factory for availability

Medium: Filtered (50 Micron) unlubricated, non-corrosive dry gases

Operating Temperature: -30° to ~250°F [-34° to ~121°C]

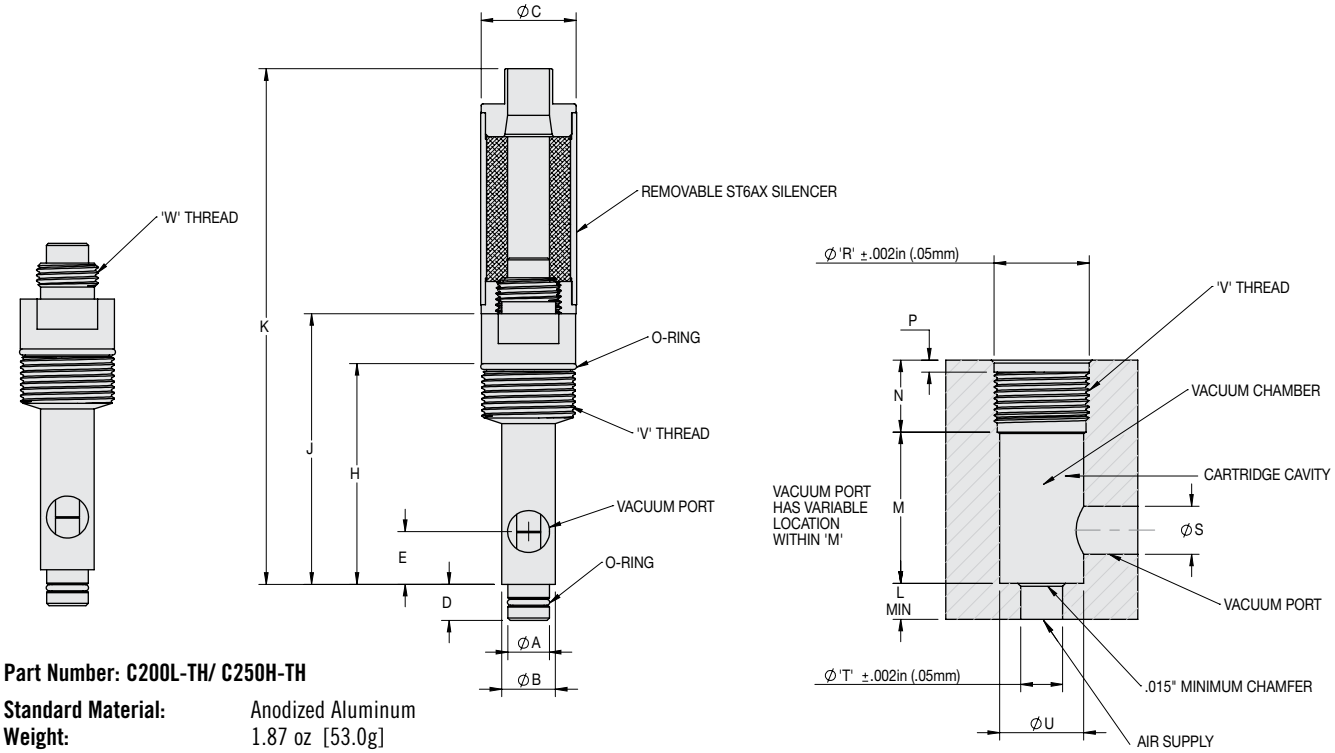
Operating Pressure: 80 PSI [5.5 bar] or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

Mid Series Threaded Cartridge Operating and Installation Requirements:

Cartridge size:	**C60(M, H)-TH and C90(L, M, H)-TH**	**C100(L, M, H)-TH and C150(L, M, H)-TH**
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 vacuum filters are not required; if desired Vaccon recommends – VF125LPM. See Page 13.12

Max Series Threaded Cartridges C200/250-TH



Part Number: C200L-TH/ C250H-TH

Standard Material: Anodized Aluminum
Weight: 1.87 oz [53.0g]

Model #	Imperial Dimensions (in.)																	
C200/ 250-TH	A	B	C	D	E	H	J	K	L	M	N	P	R	S	T	U	V	W
Cartridge	0.43	0.56	1.00	0.38	0.55	2.30	2.82	5.37	-	-	-	-	-	-	-	-	7/8-20 UNEF	3/8-18 NPS
Cavity	-	-	-	-	-	-	-	-	0.38	1.58	0.75	0.13	0.99	0.50	0.44	0.63	7/8-20 UNEF	-
Model #	**Metric Dimensions (mm)**																	
I- C200/ 250-TH	A	B	C	D	E	H	J	K	L	M	N	P	R	S	T	U	V	W
Cartridge	11.00	14.22	25.40	9.65	13.97	58.42	71.63	136.42	-	-	-	-	-	-	-	-	M25x1.5	3/8-18 NPS
Cavity	-	-	-	-	-	-	-	-	9.65	40.13	19.05	3.30	25.15	12.70	11.18	16.00	M25x1.5	-

Max Series Threaded Cartridge Specifications:

Cartridge Material: Standard: Anodized Aluminum, Buna-N O-rings

Optional Materials: Stainless Steel, PVC, Peek, Teflon™, Acetal
O-rings available in additional materials - Consult factory for availability

Medium: Filtered (50 Micron) unlubricated, non-corrosive dry gases

Operating Temperature: -30° to ~250°F [-34° to ~121°C]

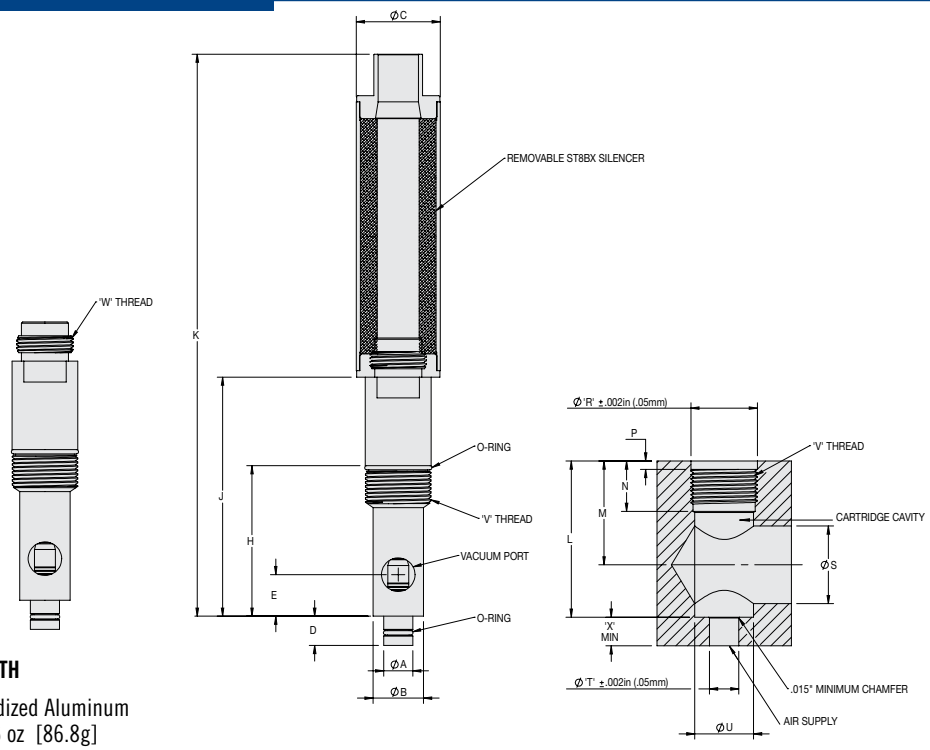
Operating Pressure: 80 PSI [5.5 bar] or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

Max Series Threaded Cartridge Operating and Installation Requirements:

Cartridge size:	**C200(L, M, H)-TH**	**C250(L, M, H)-TH**
Supply Line:	3/8" O.D. [10mm] tube recommended	3/8" O.D. [10mm] tube recommended
Vacuum Line:	3/8" O.D. [10mm] tube recommended	3/8" O.D. [10mm] tube recommended

Vacuum Line Filtration: Typically vacuum filters are not required; if desired Vaccon recommends – VF375F. See Page 13.12

Max Series Threaded Cartridges - C300/350-TH



Part Number: C300L-TH/ C350H-TH

Standard Material: Anodized Aluminum
Weight: 3.06 oz [86.8g]

Model #	Imperial Dimensions (in.)																		
C300/ 350-TH	A	B	C	D	E	H	J	K	L	M	N	P	R	S	T	U	V	W	X
Cartridge	0.43	0.75	1.25	0.44	0.62	2.24	3.56	8.36	-	-	-	-	-	-	-	-	7/8-20 UNEF	1/2-14 NPS	-
Cavity	-	-	-	-	-	-	-	-	2.33	1.55	0.75	0.13	0.99	1.16	0.44	0.81	7/8-20 UNEF	-	0.44
Model #	**Metric Dimensions (mm)**																		
I-C300/ 350-TH	A	B	C	D	E	H	J	K	L	M	N	P	R	S	T	U	V	W	X
Cartridge	11.00	19.05	31.75	11.18	15.70	56.90	90.35	212.39	-	-	-	-	-	-	-	-	M25x1.5	1/2-14 NPS	-
Cavity	-	-	-	-	-	-	-	-	59.06	39.24	19.05	3.18	25.15	29.36	11.11	20.57	M25x1.5	-	22.00

Max Series Threaded Cartridge Specifications:

Cartridge Material: Standard: Anodized Aluminum, Buna-N O-rings

Optional Materials: Stainless Steel, PVC, Peek, Teflon™, Acetal
O-rings available in additional materials - Consult factory for availability

Medium: Filtered (50 Micron) unlubricated, non-corrosive dry gases

Operating Temperature: -30° to ~250°F [-34° to ~121°C]

Operating Pressure: 80 PSI [5.5 bar] or 60 PSI [4.1 bar] – Consult Factory for other operating pressures

Max Series Threaded Cartridge Operating and Installation Requirements:

Cartridge size:	**C300(L, M, H)-TH**	**C350(L, M, H)-TH**
Supply Line:	1/2" O.D. [12mm] tube recommended	1/2" O.D. [12mm] tube recommended
Vacuum Line:	1/2" O.D. [12mm] tube recommended	1/2" O.D. [12mm] tube recommended

Vacuum Line Filtration: Typically vacuum filters are not required; if desired Vaccon recommends – VF500F. See Page 13.12