

- Complete Security
- Low Back Pressure
- Exceptional Life
- Rugged Construction – Easy To Install
- Low Cost, Completely Disposable Elements



At the heart of our Vacuum Pump Exhaust Filter is the completely disposable CS-type coalescing element. Made entirely from borosilicate glass microfiber and silica binder, it is compatible with all compressor lubricants and will operate at temperatures up to 400°F. The CS-type element has a two-layer structure, an inner particle capture-layer and an outer drainage layer. Oil droplets remain mobile once captured and travel through the fine-pored capture-layer, along the intersecting microfibers, growing in size as they progress. These coalesced droplets are transferred to the large-pored drainage layer, from where they drain by gravity into the filter bowl. Oil collected in the filter bowl can then be drained and reused.

CS-type coalescing filters are completely self supporting and are sealed into the filter housing simply by tightening a retaining nut. No end caps, gasketing materials or support cores are required. At element change only the filtering material itself is discarded, and this complete disposability keeps replacement element costs down. Our coalescing filters have an efficiency rating of 99.99% at 0.1 micron and are designed to have an initial dry pressure drop of less than 2 psi. Thereafter the pressure drop will increase only very slowly as solid particles are captured and retained in the capture-layer of the element. We recommend changing filter elements when the pressure drop reaches 10 psig or the pump manufacturers quoted maximum back pressure, whichever is lower.

PFP vacuum pump exhaust filter housings are available in two materials: Anodized Aluminum and Stainless Steel. All housings, other than Model 420, provide a captured outlet for the ducting away of the aerosol-free exhaust if required. The choice between Aluminum and Stainless Steel will depend upon the chemical composition of the exhaust. If the temperature can exceed 250°F or if corrosive chemicals are present, stainless steel should be used. All housings have a maximum pressure rating of 30 psi.

The size of the housing will depend on the maximum free air displacement of the pump. Never specify a housing with a flow rating below that of the pump, or efficiency will be reduced. Standard connections are detailed in the tables below. Alternative connections are available on multi-element housings. For example Model 437 can be supplied with 3" NPT threads (standard) or KF80, DN80, or 3" ASA 150lbs flanges.

Sizing Chart		
Maximum Flow Rate (SCFM)	Anodized Aluminum Housings	Stainless Steel Housings
3	420	420S
9	425	425S
20	430	430S
45	433	433S
90	443	443S
100	437	437S
200	447	447S
450	456	456S

PRINCIPLE SPECIFICATIONS FOR ALUMINUM HOUSINGS

Model Number	420	425	430	433	443	437	447	456
Maximum Flow Rate SCFM	3	9	20	45	90	100	200	450
Port Size (NPT)	1/2"	3/4"	1"	1 1/2" (2)	2" (2)	3" (3)	3" (3)	4" Flanged
Body Diameter	2.00	3.50	3.50	7.00	7.00	9.84	9.84	15.98
Overall Length	3.74	6.10	11.61	17.13	29.13	17.91	29.92	35.83
Element Removal Clearance	N/A	3.15	9.00	N/A	N/A	N/A	N/A	N/A
Materials of Construction (1):								
Body	AL	AL	AL	AL	AL	AL	AL	AL
Element Retainers	--	--	AL	AL	AL	AL	AL	AL
Tie Rods	--	--	--	316 SS	316 SS	316 SS	316 SS	316 SS
Seals	--	BN	BN	BN	BN	BN	BN	BN
Gauge	--	--	--	B	B	B	B	B
Mesh Pad	--	--	--	304 SS	304 SS	304 SS	304 SS	304 SS
Maximum Temperature	250	250	250	250	250	250	250	250
Element Code	25-64-50CS	51-89-50CS	51-230-50CS	51-230-50CS	51-476-50CS	51-230-50CS	51-476-50CS	51-476-50CS
Number of Elements Required	1	1	1	3	3	7	7	16

- Notes: (1) Material abbreviations: AL = Anodized Aluminum, 316 SS = 316L Stainless Steel, BN = Buna-N, B = Brass, 304 SS = 304 Stainless Steel
 (2) Flange options are available including KF40, DN40
 (3) Flange options are available including KF80, DN80

PRINCIPLE SPECIFICATIONS FOR STAINLESS STEEL HOUSINGS

Model Number	420S	425S	430S	433S	443S	437S	447S	456S
Maximum Flow Rate SCFM	3	9	20	45	90	100	200	450
Port Size (NPT)	1/2"	3/4"	1"	1 1/2" (2)	2" (2)	3" (3)	3" (3)	4" Flanged
Body Diameter: (inches)	2.00	3.50	3.50	7.00	7.00	9.84	9.84	15.98
Overall Length: (inches)	3.74	6.10	11.61	17.13	29.13	17.91	29.92	35.83
Element Removal Clearance	N/A	3.15	9.00	N/A	N/A	N/A	N/A	N/A
Materials of Construction (1):								
Body	316 SS	316 SS	316 SS	316 SS	316 SS	316 SS	316 SS	316 SS
Element Retainers	--	316 SS	316 SS	316 SS	316 SS	316 SS	316 SS	316 SS
Tie Rods	--	--	--	316 SS	316 SS	316 SS	316 SS	316 SS
Seals	--	V	V	V	V	V	V	V
Gauge	--	--	--	304 SS	304 SS	304 SS	304 SS	304 SS
Mesh Pad	--	--	--	304 SS	304 SS	304 SS	304 SS	304 SS
Maximum Temperature	250	250	250	250	250	250	250	250
Element Code	25-64-50CS	51-89-50CS	51-230-50CS	51-230-50CS	51-476-50CS	51-230-50CS	51-476-50CS	51-476-50CS
Number of Elements Required	1	1	1	3	3	7	7	16

- Notes: (1) Material abbreviations: AL = Anodized Aluminum, 316 SS = 316L Stainless Steel, V = Viton, 304 SS = 304 Stainless Steel
 (2) Flange options are available including KF40, DN40
 (3) Flange options are available including KF80, DN80

Ordering Guide

Filter Housings:	Please specify the model required, including connections when not standard
	Each housing comes complete with elements.
	Models 433 and larger come complete with back pressure gauge and anti-reintrainment mesh pad.
Replacement Elements:	Elements are sold individually or in box quantities