



"A leading worldwide supplier of high efficiency filters for a variety of industries and applications."

VACUUM PUMP EXHAUST & INLET FILTERS

Our vacuum pump exhaust filter housings are available in two materials: Anodized Aluminum and 316L 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. Stainless steel should be used if temperatures can exceed 250°F or if corrosive chemicals are present.



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 900°F. Our CS coalescing filters have an efficiency rating of 99.99% at 0.01 micron and are designed to have an initial dry pressure drop of less than 2 psi. We recommend changing filter elements when the pressure drop reaches 10 psig or the pump manufacturers quoted maximum back pressure, whichever is lower.

The size of the housing will depend on the maximum free air displacement of the pump. Never specify housing with a flow rating below that of the pump, or efficiency will be reduced.

Our vacuum pump exhaust elements are 100% interchangeable and equivalent to the Balston 371H series of vacuum pump filter elements.

Features:

- Rugged Construction – Easy To Install
- Low Cost, Completely Disposable Elements
- Low Back Pressure, Exceptional Life
- Available In Aluminum And Stainless Steel
- Recover Expensive Lubricating Fluids

Applications:

- Exhaust Directly To Outside Environment
- Ideal For Packaging Industries
- Semiconductor Protection
- Vacuum Pump Process Exhaust Polishing
- Allows Venting Of Exhaust Directly Into Workplace Environment

At the heart of our filter products is the filter element. Choosing the correct element insures proper results for your specific application:

Disposable Microfiber Elements

Disposable Microfiber Elements are most commonly used since they offer exceptional filtration, high flows with minimal pressure drops, and excellent chemical compatibility.

- The 50CS grade is specifically designed for vacuum pump exhaust. We recommend using the 50CS grade which has been specially formulated to capture oil mist while exhibiting low pressure drops, thus protecting the pump from damage.



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TECHNICAL INFORMATION

| Aluminum Housing Model | 420-50CS | 425-50CS | 430-50CS | 433-50CS* |
|---|-------------|-------------|-------------|-------------|
| Stainless Steel Housing Model | 420S-50CS | 425S-50CS | 430S-50CS | 433S-50CS* |
| Port Size (NPT) | 1/2" | 3/4" | 1" | 1 1/2" |
| Maximum Temperature (°F) (1) | 250 | 250 | 250 | 250 |
| Aluminum Maximum Pressure (psig) | 30 | 30 | 30 | 30 |
| Stainless Steel Maximum Pressure (psig) | 100 | 100 | 100 | 100 |
| Maximum Flow Rate (scfm) | 3 | 9 | 20 | 45 |
| Principle Dimensions: (inches) (2) | | | | |
| Body Diameter | 1.97 | 3.50 | 3.50 | 7.00 |
| Cap Diameter | 1.97 | 3.50 | 3.50 | 9.45 |
| Overall Length | 3.64 | 6.02 | 11.61 | 17.13 |
| Element Removal Clearance | 3.15 | 3.15 | 7.87 | N/A |
| Element Code | 25-64-50CS | 51-89-50CS | 51-230-50CS | 51-230-50CS |
| Balston Element Code | 100-12-371H | 200-16-371H | 200-35-371H | 200-35-371H |
| Number of Elements Required | 1 | 1 | 1 | 3 |
| Materials Of Construction: (3) | | | | |
| Body | AL | AL | AL | AL |
| Element Retainers | -- | -- | -- | AL |
| Tie Rods | -- | -- | -- | 316 SS |
| Seals | -- | Buna-N | Buna-N | Buna-N |
| Gauge | -- | -- | -- | Brass |
| Mesh Pad | -- | -- | -- | 304 SS |

- Notes: (1) 400°F Maximum Temperature available with Viton O-Rings
 (2) Material abbreviations: AL = Aluminum, 316 SS = 316 Stainless Steel, 304 SS = 304 Stainless Steel
 (3) Dimensions shown are for Aluminum construction only. Consult factory for Stainless Steel dimensions
 (*) Models 433 and larger come complete with back pressure gauge and anti-reintrainment mesh pad

TECHNICAL INFORMATION

| Aluminum Housing Model | 443-50CS* | 437-50CS* | 447-50CS* | 456-50CS* |
|---|-------------|-------------|-------------|-------------|
| Stainless Steel Housing Model | 443S-50CS* | 437S-50CS* | 447S-50CS* | 456S-50CS* |
| Port Size (NPT) | 2" | 3" | 3" | 4" Flanged |
| Maximum Temperature (°F) (1) | 250 | 250 | 250 | 250 |
| Aluminum Maximum Pressure (psig) | 30 | 30 | 30 | 30 |
| Stainless Steel Maximum Pressure (psig) | 100 | 100 | 100 | 100 |
| Maximum Flow Rate (scfm) | 90 | 100 | 200 | 450 |
| Principle Dimensions: (inches) (2) | | | | |
| Body Diameter | 7.00 | 9.84 | 9.84 | 15.98 |
| Cap Diameter | 9.49 | 12.99 | 12.99 | 19.37 |
| Overall Length | 28.94 | 20.27 | 30.16 | 35.83 |
| Element Removal Clearance | N/A | N/A | N/A | N/A |
| Element Code | 51-476-50CS | 51-230-50CS | 51-476-50CS | 51-476-50CS |
| Balston Element Code | 200-80-371H | 200-35-371H | 200-80-371H | 200-80-371H |
| Number of Elements Required | 3 | 7 | 7 | 16 |
| Materials Of Construction: (3) | | | | |
| Body | AL | AL | AL | AL |
| Element Retainers | AL | AL | AL | AL |
| Tie Rods | 316 SS | 316 SS | 316 SS | 316 SS |
| Seals | Buna-N | Buna-N | Buna-N | Buna-N |
| Gauge | Brass | Brass | Brass | Brass |
| Mesh Pad | 304 SS | 304 SS | 304 SS | 304 SS |

- Notes: (1) 400°F Maximum Temperature available with Viton O-Rings
 (2) Material abbreviations: AL = Aluminum, 316 SS = 316 Stainless Steel, 304 SS = 304 Stainless Steel
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VACUUM PUMP EXHAUST & INLET FILTERS

The IN series of housings is designed to protect small vacuum pumps from liquid and solids in the process stream that may be pulled into the pump. At the heart of the inlet filter is the completely disposable RC-type coalescing element. Made entirely from borosilicate glass fiber and phenolic binder, it is compatible with all compressor lubricants and will operate at temperatures up to 250°F.

The RC-type element has a two-layer structure, inner particle capture-layer and an outer drainage-layer. Liquid 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, where they drain by gravity into the filter bowl. Oil collected in the filter bowl can then be drained and reused. The "RC" reinforced filter element is durable to handle particle build-up. This extra strength provides extra pump protection.

We also offer 4A elements to protect the pump against oil back streaming. Please consult UFS with your specific inlet requirements.

These units are good for service to 2 Torr.



-sizing chart

| Maximum Flow Rate (scfm) | Anodized Aluminum Housings | Stainless Steel Housings |
|-----------------------------|-------------------------------|-----------------------------|
| 3 | IN-DIF-LN-RC | N/A |
| 3 | IN-760NPR-RC | IN-420S-RC |
| 7 | IN-427-RC | N/A |
| 9 | IN-425-RC | IN-425S-RC |
| 12 | IN-380AHP-RC | N/A |
| 20 | IN-430-RC | IN-430S-RC |
| 23 | IN-385A-RC | IN-150-RC |
| 45 | IN-390A-RC | IN-162-RC |