

STAINLESS STEEL, PTFE, AND PEL ELEMENTS

STAINLESS STEEL:

- High Strength/No Media Migration
- Wide Micron Range: 0.5, 1, 3, 10, 25, 50, 100, 200
- Special Order Micron Sizes Available
- Re-Cleanable/Back-Flushed
- Temperature Range of -65 F to 1000 F
- Able To Withstand 1000 PSIG Differential



Stainless Steel elements are recommended for filtration of heavily contaminated gases, liquids, polymers, and steam, since they are re-cleanable by back-flushing or ultrasonic cleaning. The elements consist of five layers of precision-woven 316L stainless steel mesh formed into cylinders and sintered together.

Five layers offer surface area and depth area for removing solids and dropping out liquids. This rigid, durable construction provides precise pore size distribution, flow permeability and lower initial pressure drop. The entire element is then sintered at high temperature in a controlled atmosphere furnace to diffusion bond all the layers at every contact point. This creates a bonded media that is strong, ductile and corrosion resistant.

We offer seven standard grades of filtration, which fit our Headline Filters line of housings, as well as other proprietary brands. Micron Sizes: 0.5, 1, 3, 10, 25, 50, 100, 200 at 98% efficiency in gases and liquids. Grade 25 (25 micron) is widely used to protect pumps and valves while grade 03 (3 micron) is recommended for removal of pipe scale from steam. The SS Elements are environmentally friendly because they are durable and non-absorbent, they can be backwashed, cleaned and reused, thus eliminating a major disposal headache.

This unique construction makes our stainless steel elements a good choice for maintenance free **hospital steam sterilizer** applications. The multiple layers of mesh act as a very effective water condensate filter. The elements come complete with Teflon seals/adaptors, which allow them to be used in Balston, Headline, or UFS Filter Housings.

Non-standard and exotic filters are supplied in sintered metal rather than woven mesh. We can provide down to 0.5 micron in this format.

We offer a wide variety of **Stack Gas Filter Probe** elements built to your specifications. Simply contact us with your details and we will provide a quick and comprehensive quote.

PTFE:

- Corrosion Resistant
- For Use In Our PTFE & Kynar Housings
- Naturally Hydrophobic
- 2, 10, & 25 Micron Available



PTFE filter elements are recommended for compressed gas and liquid filtration where our microfiber and stainless steel elements are unsuitable. They are obviously suggested with our PTFE and Kynar housings. The elements consist of pure PTFE sintered (under pressure) into cylinders. The "PT" elements have outstanding chemical compatibility and extreme hydrophobic characteristics, which make them ideal for liquid sampling applications. No end caps or gasketing materials are required for a positive seal.

Custom units: If you are looking for a custom element, please contact us with your specific needs. We regularly provide the SS elements with male connectors for stack gas monitoring and PTFE elements in other dimensions.



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PEL:

- Excellent Pre-Filters In Compressed Air
- High Strength
- For Use As Diffusers, Mufflers
- Ideal For Wicking Samples
- Protect Final High Efficiency Filters



Our high efficiency PEL filter elements are constructed from virgin polyethylene (H.D.P.E.). The material is in powdered/granular form and then compressed into a sintered tube. This process allows the filter element to be free from foreign binders. Thus, the only compatibility issue is with polyethylene. No end caps or gaskets are necessary to seal the element into place. Axial compression is used to create a seal on the flat surface of the element. The PEL elements are naturally hydrophobic.

In **compressed air/gas applications**, the PEL elements may be utilized as pre-coalescers or initial coarse filters in heavily contaminated systems. The 75-micron grade is recommended for this task since it exhibits the best flow curves.

In **liquid applications**, slight pressure will force liquid through the element while at the same time repelling any dirt "particulate" which is encapsulated in the water. The element uses two filtration techniques, surface area and depth. Typical flow direction is out to in, since dirt is visible on the outside surface area and the outer diameter is larger for increased surface filtration. The elements may be backflushed in place, or cleaned ultrasonically, however their low cost makes it economical to simply dispose of.

The PEL elements are ideally used with our aluminum 300 series and plastic 700 series housings in liquid sampling applications where heavy dirt loading is a problem.

The PEL elements can also be used as end-of line filters, and ultrasonically welded into our disposable in-line filters (DIF).

They are also ideal as **particulate filters and/or bulk liquid knockouts in high-pressure gas systems where dramatic pressure swings occur**. The surface tension along with the depth porosity traps contaminates.

Please consult United Filtration Systems for proper sizing and other applications.



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Stainless Steel Model Number	PTFE Model Number	PEL Model Number	Dimensions I.D. x Length
SS-12-32-	PT-12-32-	PEL-12-32-	0.5" x 1.25"
SS-12-57-	PT-12-57-	PEL-12-57-	0.5" x 2.25"
SS-12-127-	N/A	N/A	0.5" x 5.0"
SS-25-64-	PT-25-64-	PEL-25-64-	1.0" x 2.5"
N/A	N/A	PEL-25-127-	1.0" X 5.0"
SS-25-178-	PT-25-178-	PEL-25-178-	1.0" x 7.0"
SS-38-152-	N/A	PEL-38-152-	1.5" x 6.0"
SS-51-230-	PT-51-230-	PEL-51-230-	2.0" x 9.0"
N/A	N/A	PEL-51-254-	2.0" X 10.0"
SS-51-460- (For Steam Housing)	N/A	N/A	2.0" x 18.11"
SS-51-476-	PT-51-476-	PEL-51-476-	2.0" x 18.75"
N/A	N/A	PEL-63-762-	2.5" X 30.0"
Stainless Steel Microns Available: 0.5, 1, 3, 10, 25, 50, 75, 100, 200 PTFE Microns Available: 2, 10, 25 PEL Microns Available: 10, 25, 75, 100			

Ordering Information:

The stainless steel elements are provided with a PTFE gasket set standard designated by "T", or with a Viton seal designated by a "V" at no additional charge. A grafoil gasket set is also available for temperatures between 500 F and 1000 F and are designated by a "G". There is a nominal charge for grafoil.

Enter the gasket material after part number; example: SS-12-57-25T.

The PTFE elements do not require gaskets.

Maximum temperature of PTFE gaskets and elements is 500 F

Maximum temperature of Viton gaskets and elements is 400 F

Maximum temperature of Grafoil gaskets and elements is 1000 F



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