

# HIGH PERFORMANCE FILTERS AND ELEMENTS

**HYDRAULIC AND  
PROCESS FILTRATION**

TECHNOLOGY  
ESSENTIALS  
TO MEET YOUR  
CUSTOMERS'  
FILTRATION  
REQUIREMENTS

  
**Purolator**<sup>®</sup>



# FILTRATION

**Fil\*tra\*tion (fil-tra-shen) n. The act or process of filtering**

What exactly is filtration and why is it an integral part of today's industries?  
Simply put, filtration is a protection process, protecting manufacturing equipment, or protecting a product being manufactured.

**Hydraulic and Lube** oil systems around the world require filtration to protect pumps and valves for continued operation. Both hydraulic and lube oil systems are closed loop systems, with the same fluid being recirculated through the system for hundreds of hours. During this cycle, contaminant can be introduced by system wear, built-in contamination, environmental contamination, or the addition of new fluid that is not truly clean. Not only can repairs of the system due to contamination be costly, but lost revenue caused by down-time can often exceed the component replacement cost.

**Process** filtration is quite different. Whereas filtration of hydraulic and lube oil allows you to operate machinery to perform a function, process filtration involves the filtration of the actual product being made. The major objective of such single-pass systems is the reduction of contaminant or clarification of the fluid by removing specific sizes of particles in the product.

**At Purolator, filtration is our business. Our total business**



**Purolator**

# HYDRAULIC FILTRATION APPLICATIONS

## High Pressure Filter Applications -

- Servo Valve Protection
- Hydraulic material handling equipment -
  - Mining
  - Logging
  - Paper Mills
- Die Cast machines
- Machining Centers
- Hydraulic power units

## Medium Pressure Filter Applications -

- Test stands
  - Machine tools
    - Presses
    - Motion controls
    - Mobile boom trucks

## Low Pressure Filter Applications -

- Return line filtration
- Machining centers
- Power units
- Filter carts
- Mobile equipment -
  - Farm
  - Construction
  - Fork lifts
  - Log Splitters



*Low-pressure Spin-on Filters*



*High-pressure Filters*



*1" NPT end fitting*

*222 O-ring end fitting*

*DOE end fitting*

*Selected Poromet® Elements*

# PROCESS FILTRATION APPLICATIONS

## Chemical Processing -

- Removal of soft gels
- Hot oven gas applications
- High temperature applications
- Backwashable filters to reduce element replacement costs
- Removal of precious metal catalysts from an organic intermediate stream

## Food & Beverage -

- Removal of iron oxides in steam service

## Water -

- Resin removal from low level radioactive waste water in nuclear plants

## Paper & Pulp -

- Aqueous coatings at paper mills, backwashable system

## Film & Fiber -

- Removal of gels from and black specks in polyethylene, polypropylene, and fluorinated polymers



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# PRODUCT OFFERINGS AND SPECIFICATIONS

## HYDRAULIC FILTRATION: Filter and Element Selection

	Low Pressure Filters 250 Series		Medium Pressure Filters 410, 420, 430, 440, 450 Series				High Pressure Filters 500, 520, 550, 580 Series			
<b>Operating Pressure</b>	Up to 100 PSI		Up to 3,000 PSI				Up to 6,000 PSI			
<b>Flow Rate</b>	94 GPM Return Line 35 GPM Suction Line		3.75 GPM - 12 GPM				Up to 150 GPM			
<b>Temperature Range</b>	-65° to 250°F		-65° to 250°F				-65° to 300°F			
<b>Filter Media</b>	Micropleat*	Microfil* III	Micropleat*	Microfil* III	Hi-Collapse Microfil* III	Poromesh*	Micropleat*	Microfil* III	Hi-Collapse Microfil* III	Poromesh*
<b>Filtration Rating</b>	5, 10, 20, 40 µ NOM	1, 3, 6, 12, 20, 25 µ ABS	5, 10, 20, 40 µ NOM	1, 3, 6, 12, 20, 25 µ ABS	1, 3, 6, 12, 20, 25 µ ABS	2, 5, 10, 20, 40 µ NOM	5, 10, 20, 40 µ NOM	1, 3, 6, 12, 20, 25 µ ABS	1, 3, 6, 12, 20, 25 µ ABS	2, 5, 10, 20, 40 µ NOM

The adjacent chart illustrates how easy it is to select the right filter to meet your requirements. Purolator Facet offers a multitude of options for each filter including: port sizes, bypass valves, indicators, element collapse pressures, seals, types of filter media, and micron ratings. Detailed product literature is available with a part configurator to help you select the filter and element required for your application.

Filters are selected by matching their characteristics against the operating environment.

## PROCESS FILTRATION: Element Selection

MEDIA	POROMESH	POROPLATE	POROFELT
<b>Length</b>	10", 20", 30", 40"	10", 20", 30", 40"	10", 20", 30", 40"
<b>End Fittings</b>	DOE, 1" NPT, 222 O-ring, 226 O-ring	DOE, 1" NPT, 222 O-ring, 226 O-ring	DOE, 1" NPT, 222 O-ring, 226 O-ring
<b>Filtration Rating</b>	5µ, 10µ, 20µ, 40µ 70µ, 100µ, 150µ	5µ, 10µ, 20µ, 40µ 70µ, 100µ, 150µ	5µ, 10µ, 20µ, 40µ 70µ, 100µ, 150µ

Replacement porous metal elements for process filtration are easy to select.

To obtain additional information, or request detailed catalog sheets, please complete the form below.

Cleanable elements don't last forever; Purolator Facet provides the best porous metal elements available. To select your replacement element: specify the length of the element, the end fitting required, the micron rating, and the media type. Poroplate® elements are best for back flushing and easy cleaning, Poromesh® elements have the greatest surface area for longer life between cleaning, and Porofelt® elements have the greatest dirt holding capacity but are more difficult to clean.

## PROCESS FILTRATION MEDIA

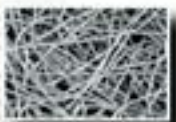
### CLEANABLE FILTRATION MEDIA

- Made from 316/316L stainless steel woven wire cloth
- Excellent for corrosion resistance and high temperature applications up to 850°F
- Offered in standard filtration grades: 5, 10, 20, 40, 70, 100 and 150 microns
- Designed to withstand 250 psid element collapse pressure



#### Poromesh® filter media -

- Multiple layers of individually diffusion-bonded stainless steel wire cloth, pleated to maximize filter area and on-stream life
- Contaminant remains on upstream surface, where it can easily be cleaned by backflushing



#### Porofelt® filter media -

- Microscopic stainless steel fibers are randomly laid and sintered in a proprietary diffusion bonding process
- The stainless steel fibers are diffusion-bonded between two or more layers of wire cloth, then pleated
- This filter media offers greater dirt-holding capacity, acting more as a depth type medium

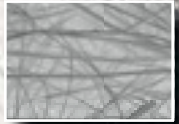


#### Poroplate® filter media -

- Self-supporting media made from multiple layers of stainless steel woven wire cloth, sintered into a rigid laminate porous metal structure
- Poroplate elements are cylindrical, surface-type filters that are perfect for backflushing and repeated cleanings

#### Microfil® III & Hi-collapse Microfil® III filter media -

- Micro-fine glass fibers randomly laid into a multi-layered web
- Offers greatest dirt-holding capacity and longest life
- Offered in standard grades: 1, 3, 6, 12, 20 and 25 micron with efficiency of  $\beta_x \geq 200$
- Designed and tested to withstand 150, 300 and 3,000 psid element collapse pressure



#### Micropleat® filter media -

- Resin-impregnated cellulose material
- Economical
- Offered in standard grades: 5, 10, 20 and 40 micron with efficiency of  $\beta_x = 2$
- Designed and tested to withstand 150 psid element collapse pressure



#### Poromesh® filter media -

- Sintered 316/316L stainless wire cloth, pleated to maximize filter area and on-stream life
- Excellent for corrosion resistance and high temperature tolerance
- Offered in standard grades: 5, 10, 20, 40, 70, 100 and 150 microns
- Designed and tested to withstand 150 psid element collapse pressure



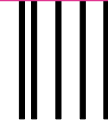
## HYDRAULIC & LUBE OIL FILTER MEDIA

### DISPOSABLE & CLEANABLE

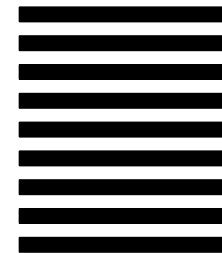




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- Please have a sales representative call me with details.
- Please email me when new products or specials are announced.
- Please send me information about becoming a Purolator distributor.



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