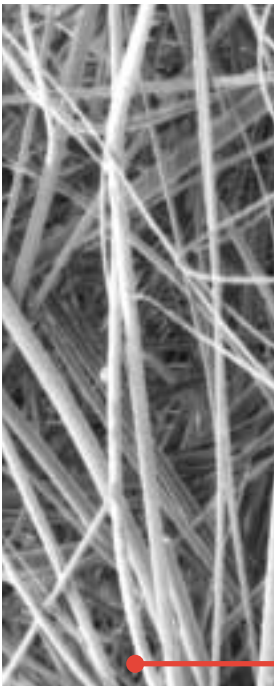




# HIGH PERFORMANCE FILTERS

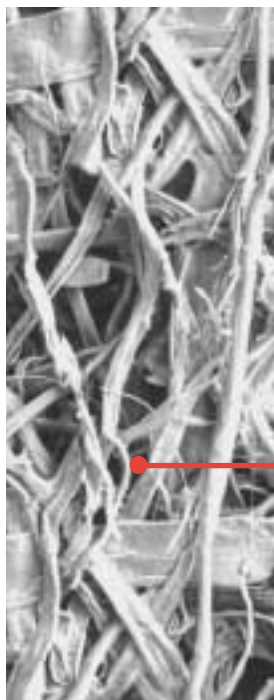
INDUSTRIAL HYDRAULIC AND LUBRICATION APPLICATIONS





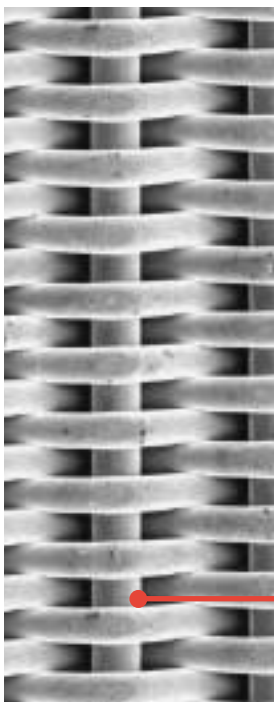
**Microfil® III media** are made from micro-fine glass fibers which are randomly laid into a multilayered web. The media are impregnated with proprietary resins and thermally cured for strength and stability. They are engineered with a tapered pore geometry to provide superior contaminant capacity. Larger pores are located on the upstream surface, with finer and finer pores in the depth of the media. This proven media design philosophy gives Microfil III superior on-stream life versus competitive elements. All Microfil III elements are designed and tested to provide  $\beta_x \geq 200$  filtration efficiency. Microfil III elements are offered in standard grades of 1, 3, 6, 12, 20, and 25 microns. They are designed and tested to withstand 150 and 300 psid collapse pressure, while Hi-Collapse Microfil® III is designed to withstand 3,000 psid.

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**Micropleat® media** are made from resin-impregnated cellulose materials. The media are then pleated and assembled into economical Micropleat disposable elements. Micropleat elements are rated at  $\beta_x \approx 2$  and are available in standard grades of 5, 10, 20, and 40 microns. They are designed and tested to withstand 150 and 300 psid collapse pressure.

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**Poromesh® media** are multiple layers of sintered wire cloth which are pleated to maximize filter area and on-stream life. Our proprietary sintering process metallurgically bonds each woven wire to adjacent wires to maintain the desired micron rating of the media — even under severe pressures. Poromesh media are made from 316L stainless steel wire meshes for excellent corrosion resistance and high temperature tolerance. The elements are electron beam welded - a Purolator exclusive. This process eliminates heat distortion, oxidation, and sensitization, providing superior product quality at reduced costs. Poromesh elements are rated at 2, 5, 10, 20, and 40 microns nominal and are designed to withstand 150, 300 and 4500 psid collapse pressures. For 4500 psid elements please contact Purolator.

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For more than forty years, Purolator Facet has been a leading supplier of hydraulic filters and elements to the aerospace industry. These products were designed and manufactured with space-age materials and processes that provided cost-effective, dependable filter solutions. Along the way, Purolator led the industry in many important ways:

We were the first filter company to employ micro-glass fiber technology to provide extended-life filter media. Today, our Microfil® III media continue to provide superior contaminant capacity and filter element life.

We were the first filter manufacturer to adopt multipass testing as a way to characterize and define filter element performance. These test methods are considered industry standards today.

We developed proprietary mathematical models which we use in the research and development of Microfil® III and other filter media. We continue to use these models to develop superior media for numerous applications.

We pioneered the use of dynamic environmental test chambers to test filters at temperatures to -60° F, simulating flight conditions at extreme altitudes. This equipment is also used to predict filter performance in hostile environments on the ground. We installed a filter media development laboratory which includes a state of the art Fourdrinier media-making machine. We use this laboratory for empirical testing of our proprietary media, models, and designs.

We developed and produced some of the industry's first integrated filter systems, which include filter element bypass valves, differential pressure indicators, and remote electrical switches. Today, our Microdelta® switches and indicators are specified by numerous aerospace and industrial OEMs.

We developed and authored SAE Specification ARP 901, "Bubble-Point Test Method." This specification has become the industry standard specification used to determine a filter media's maximum pore size.

*Now Purolator brings its extensive hydraulic filtration expertise to the industrial fluid power market with a full line of filters, elements, breathers, strainers, and accessories.*

## HIGH PRESSURE FILTERS

*Purolator high pressure filters are designed and tested to withstand pressures up to 6,000 psi (414 bar) and flow rates up to 150 gpm. Temperature range: -65° F to 300° F. Options include port & drain thread sizes, and differential pressure indicators & switches. Filter elements are available in Microfil® III and Hi-Collapse Microfil® III media (1, 3, 6, 12, 20, and 25 micron absolute), Micropleat® media (5, 10, 20, and 40 micron nominal), and Poromesh® media (2, 5, 10, 20, and 40 micron nominal).*

**500 Series "L" type filter assembly.** Conforms to AIAG standards for HF3 hydraulic filters. 6,000 psi (414 bar) rated operating pressure. Rated flow, 150 gpm. Made from ductile iron head castings and forged steel bowls. For detailed information, request bulletin #500S-5/01-2K.

**520 Series "T" type filter assembly.** Conforms to AIAG standards HF3 hydraulic filters. 6,000 psi (414 bar) rated operating pressure. Rated flow, 150 gpm. Made from ductile iron head castings and forged steel bowls. For detailed information, request bulletin #520S-5/01-2K.

**550 Series Inverted "T" type filter assembly.** Conforms to AIAG standards for HF4 hydraulic filters. 5,000 psi (345 bar) rated operating pressure. Rated flow, 125 gpm. Made from ductile iron head castings and machined steel bowls. For detailed information, request bulletin #550S-5/01-2K.



Computerized Multi-Pass Test Stand



Filter Media Development Facility



Environmental Test Chamber



Electro-arc Welding



3D CAD System



# MEDIUM PRESSURE FILTERS

*Purolator medium pressure filters are designed and tested to withstand pressures up to 3,000 psi (205 bar) and flow rates from .75 gpm to 12 gpm. Temperature range: -65° F to 300° F. Options include bypass valves and element collapse pressures. Filter elements are available in Microfil® III and Hi-Collapse Microfil® III media (1, 3, 6, 12, 20, and 25 micron absolute), Micropleat® media (5, 10, 20, and 40 microns nominal), and Poromesh® media (2, 5, 10, 20 and 40 micron nominal).*

All **410-440 series housings** are rated at 3,000 psi (345 bar) operating pressure. Heads are anodized aluminum barstock, bowls are anodized, impact extruded aluminum.

Housing Series	Ports	Flow Rate, gpm
410	1/4" (SAE-4) Straight Thread	1
420	3/8" (SAE-6) Straight Thread	3
430	1/2" (SAE-8) Straight Thread	6
440	3/4" (SAE-12) Straight Thread	12

For more detailed information, request bulletin #410S-5/01-2K.



# LOW PRESSURE FILTERS

**250 Series Tank Top Filter.** Maximum operating pressure 100 psi. Flow rate 94 gpm (return line), 35 gpm (suction line). Cast aluminum housing. Temperature range: -65° F to 250° F. Options include port location and threads and bypass valve settings. Filter elements are available in Microfil® III media (1, 3, 6, 12, 20 and 25 microns absolute), and Micropleat® media (5, 10, 20, and 40 microns nominal). For detailed information, request bulletin #250S-5/01-2K.



# SPIN-ON ELEMENTS

*Purolator invented the spin-on filter and continues to lead the industry today. Our industrial spin-on filters are designed to provide superior filtration performance and convenience. They will fit most existing spin-on heads and are readily interchangeable with most competitive filters. We also offer a full range of die-cast aluminum heads and gauges.*

## **20 Series Particulate removal spin-on filters.**

3.69 inch diameter. Two lengths available (5.27 and 8.64 inches). Three media grades (10 micron paper, 25 micron paper, and 7 micron fiberglass). 100 psi pressure rating, Buna N gasket, 1" - 12 UNF threads. For detailed information, request bulletin #20/21S-5/01-2K.

## **21 Series Particulate and water removal spin-on filters.**

3.69 inch diameter. Two lengths available (5.27 and 8.64 inches). One media grade (6.5 micron, water absorbent fiberglass). 100 psi pressure rating, Buna N gasket, 1" - 12 UNF threads. For detailed information, request bulletin #20/21S-5/01-2K.

## **40 Series Particulate removal spin-on filters.**

5.05 inch diameter. Two lengths available (7 and 11 inches). Three media grades (10 micron paper, 25 micron paper, and 7 micron fiberglass). 100 psi pressure

rating, Buna N gasket, 1 1/2" - 16 UNF threads. For detailed information, request bulletin #40/41S-5/01-2K.

## **41 Series Particulate and water removal spin-on filter.**

5.05 inch diameter. Two lengths available (7 and 11 inches). One media grade (6.5 micron, water absorbent fiberglass). 100 psi pressure rating, Buna N gasket, 1" - 12 UNF threads. For detailed information, request bulletin #40/41S-5/01-2K.

(NOTE: Spin-on elements are shown with spin-on heads which are available separately.)



# BREATHERS & STRAINERS

*Purolator offers a full line of hydraulic reservoir breathers and filler breathers. These products filter the air which breathes into and out of the reservoir, helping to maintain hydraulic fluid purity. For detailed information, request bulletin #FB-5/01-2K.*

## **BRF Series Reservoir Filler Breathers.**

Chrome plated steel cap and flange, with plastic or steel basket. Self-tapping screws to mount filler breather to reservoir. Options include dipstick, locking cap, and basket length. Basket lengths from 3 to 11 inches. Available in 10 or 40 micron air filtration.

**BM Series Metal Breathers.** Zinc plated steel cap. Plastic filter element, 10 or 40 microns. 1.37 to 2.56 inch diameter. 1/8" to 3/4" NPT threads.

**BP Series Plastic Breathers.** Impact resistant Dupont Delrin® construction. Plastic filter element, 10 or 40 microns. 1.52 to 2.59 inch diameter. 1/4" to 3/4" NPT threads. Corrosion resistant.

**BA Series Breather Adapters.** Threaded stud allows the use of spin-on filter element as reservoir breather. Plated steel construction, 3/4" and 1 1/4" NPT threads. Attaches to Purolator 20 Series and 40 Series spin-on filter elements.

*Purolator suction strainers are used as coarse filtration on the suction inlet of the hydraulic pump. They are made of die-cast aluminum endcaps, plated steel cores, and stainless steel filtration mesh. Options include mesh size, length, threads, diameter, and bypass valves. For detailed information, request bulletin #SS-5/01-2K.*



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## FILTER CART

The Purolator filter cart is designed for use in transferring and filtering hydraulic and lube oils at a flow rate of 6.5 gpm. Typical applications include the removal of particulate and water from contaminated hydraulic reservoirs, and the filtration of bulk oil prior to the transfer into hydraulic reservoirs. The filter cart has two filter stages to remove coarse contaminant and fine particulate and water to “polish” the oil in your hydraulic system. The filter cart comes with 10-foot inlet and outlet hoses and a 25-foot retractable power cord for 115V, 20 amp service.

Purolator filter carts are ideal for use in industrial plants and other applications where their portability and efficiency are desirable. For more detailed information, request bulletin # FC-5/01-2K.



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## FLUID ANALYSIS

Purolator's fluid analysis service is the most economical way to monitor fluid cleanliness to verify that contamination control objectives are being met. Each Purolator fluid analysis kit contains a superclean 125 ml oil sample bottle, a mailable packing container, and complete sampling instructions. The fluid analysis results are sent to both the customer and your Purolator representative who assists in recommending the appropriate filtration solution. For more detailed information, request bulletin #FA-5/01-2K.



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*Purolator Facet, Inc. has been a leader in aerospace hydraulic filtration for decades. Our filter system and element technology are now available to the industrial market with a full line of hydraulic filters, elements, and accessories. If you have a hydraulic or lubrication filtration requirement, call Purolator. We have what it takes to keep your project moving.*

