PL Series Bag-Sized Cartridges

Absolute-rated units provide up to 12 times more dirt-holding capacity

Rosedale has combined the best features of filter bags and cartridges into one single unit. Like bags, these bag-sized pleated cartridges are easy to handle and trap contaminant inside, preventing "WASH OFF" when removing spent or dirty cartridges. Like cartridge elements, they provide larger surface areas and greater dirt-holding capacities than standard bags. They are the ideal solution when frequent servicing of filters is a problem.

Construction

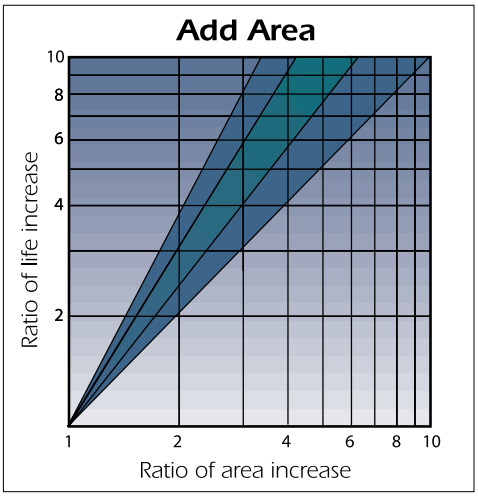
Rosedale bag-sized pleated cartridges are unique. Twenty-five* square feet of high efficiency material is sandwiched between two flow-enhancing, coarse-mesh screens, and then pleated in a supported construction. This supported pleat construction ensures flow cannot be pinched off. It also greatly strengthens the overall integrity of the element. The seams in these units are ultrasonically welded, not sewn, to prevent leakage or contamination bypass. The top sealing ring and cartridge bottom, made of solid molded polypropylene, are sonically welded to the pleated cylinder.

Features

- Eleven micron retention ratings from 1 to 110 at 95% efficiency, are available
- Three different top sealing ring designs - one to fit your needs
- Available in standard bag sizes 1 and 2, to fit housings 8-15 and 8-30
- Low pressure drop

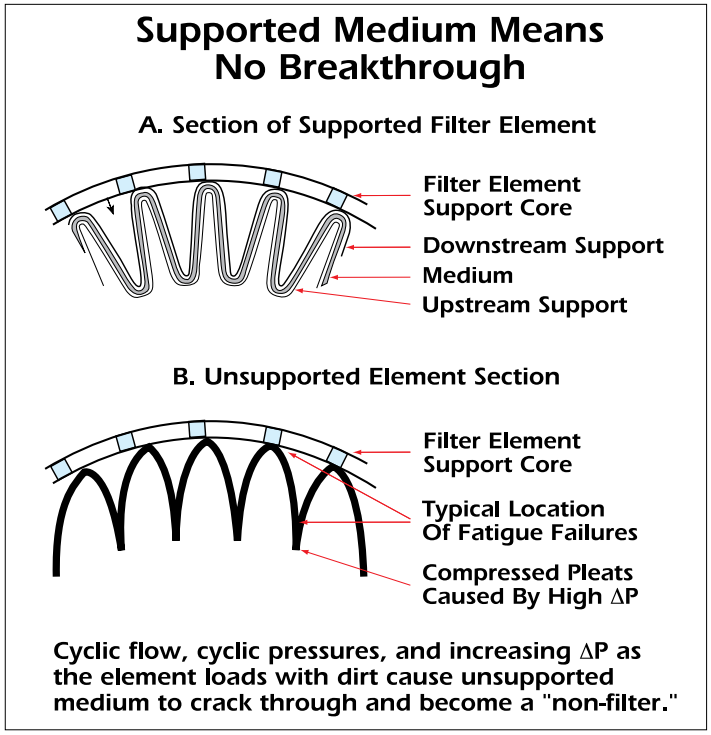
*For Size 2 cartridge, Size 1 cartridge has 13 square feet of material.

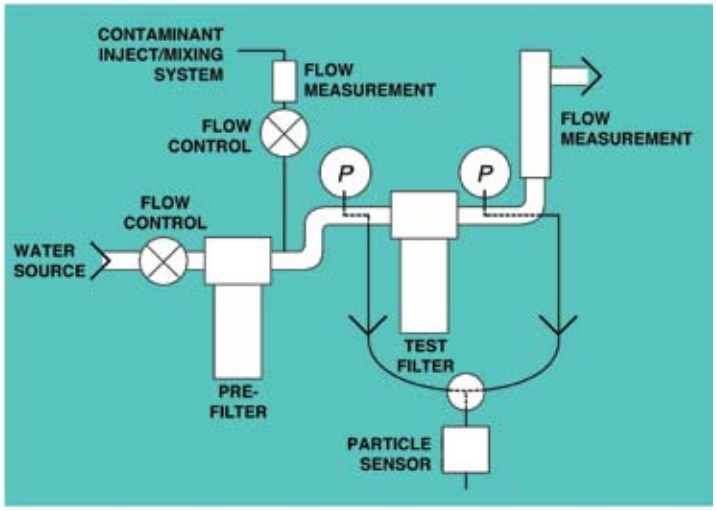
R1 Design - Flared
RPO Rosedale Top (standard)



Materials

These elements use our unique high-efficiency microfiber material. Polyester or polypropylene microfibers and standard fibers are variably calendered to produce a single layer of our high-efficiency microfiber felt. This unique construction provides filtration to 1 micron at 95% efficiency. A real rating for the real world, consistently giving the same level or performance from batch to batch.





Schematic showing single-pass efficiency test

Greater Capacity Means Longer Life

FILTRATION LEVEL

These elements have been tested using the Single-Pass Efficiency Test (see diagram) using water and AC Fine Test Dust. Water is passed through an initial pre-filter (at 0.45 µ), after which contaminant is injected into the water line. An automatic particle counter analyzes the number of particles per milliliter greater than a selected size, before the water enters the filter. The water then passes through the test filter, and the effluent is analyzed for the number of those same-size particles. The number of particles removed provides the efficiency rating. For example, if after the single pass, 95 percent of the particles are removed, then the filter is 95 percent efficient at the specified micron rating.

FILTRATION EFFICIENCY

Using the single pass efficiency test, we've determined the following efficiency ratings for our pleated cartridges. Real ratings are consistently accurate and reliable, time and time again.

MICROFIBER GRADES

Model Number	PL-PEMF-1.0 PL-POMF-1.0	PL-PEMF-3.0 PL-POMF-3.0	PL-PEMF-8.0 PL-POMF-8.0	PL-PEMF-19.0 PL-POMF-19.0
EFFICIENCY	**MICRON RATING**			
95%	**1**	**3.0**	**8.0**	**19.0**
99%	**2**	**5.0**	**19.0**	**25.0**

RECOMMENDED MAXIMUM FLOW RATE (GPM / ELEMENT) AT 1.0 PSID

Element Size	Model Number PL-PEMF 1-19 PL-POMF 1-19	Model Number PL-PE 35-110 PL-PO 35-110	Viscosity
P1	50 GPM	75 GPM	1 CST
P2	100 GPM	150 GPM	1 CST

STANDARD FIBER GRADES

Model Number	PL-PE-35.0 PL-PO-35.0	PL-PE-48.0 PL-PO-48.0	PL-PE-55.0 PL-PO-55.0	PL-PE-65.0 PL-PO-65.0	PL-PE-70.0 PL-PO-70.0	PL-PE-90.0 PL-PO-90.0	PL-PE-110.0 PL-PO-110.0
EFFICIENCY	**MICRON RATING**						
95%	**35.0**	**48.0**	**55.0**	**65.0**	**70.0**	**90.0**	**110.0**

If fluids with viscosities greater than 1 CST are used, use the following correction factor to arrive at the recommended maximum flow rate. Divide the flow determined above by the correction factor obtained below.
If your viscosity is not listed, choose the next highest viscosity from the chart and use that correction factor.

Fluid Viscosity SSU	Fluid Viscosity CPS	Correction Factor
80	15	1.2
160	35	2
240	55	3
320	70	4
400	90	5
480	110	6
560	130	7
640	150	8
720	180	9
800	260	10

For example, to filter a fluid having a viscosity of 55 cps using a PL-PEMF P2 element the equation is as follows:

$$\text{Corrected Flow Rate} = \frac{\text{Max Flow Rate}}{\text{Correction Factor}} = \frac{100}{3} = 33 \text{ GPM}$$

How To Order

Build an ordering code as shown in the example

Example: PL - R1 - PEMF - 1 - P1

BAG-SIZED PLEATED CARTRIDGE = **PL**

TOP SEALING RING DESIGN
Flared Polypropylene (P1 - P2) = **R1**
Solid Polypropylene (P3 - P9) = **R2**

HIGH EFFICIENCY MATERIAL
High-Efficiency Microfiber Polyester = **PEMF**
High-Efficiency Microfiber Polypropylene = **POMF**
High-Efficiency Standard Polyester = **PE**
High-Efficiency Standard Polypropylene = **PO**

BAG SIZE

Symbol	Dia.	x	Length
P1 =	7-1/16	x	11-1/8
P2 =	7-1/16	x	24
P3 =	4-1/8	x	5-1/16
P4 =	4-1/8	x	11-1/16
P7 =	5-5/8	x	10-3/4
P8 =	5-5/8	x	16-1/8
P9 =	5-5/8	x	26-3/4

MICRON RATING
(95% efficiency)

Microfiber Only- PEMF and POMF:
1 = 1.0 Micron
3 = 3.0 Micron
8 = 8.0 Micron
19 = 19.0 Micron

Standard Felt Only- PE and PO:
35 = 35.0 Micron
48 = 48.0 Micron
55 = 55.0 Micron
65 = 65.0 Micron
70 = 70.0 Micron
90 = 90.0 Micron
110 = 110.0 Micron

CHEMICAL COMPATIBILITIES

EXCELLENT GOOD

	Bag Materials (Fiber)	
	Polyester	Polypropylene
Organic Solvents	■	■
Animal Vegetable & Petro Oils	■	■
Micro-organisms	■	■
Alkalies	■	■
Organic Acids	■	■
Oxidizing Agents	■	■
Mineral Acids	■	■

Temperature Limitations, 225°F.

Note: For more complete information on chemical compatibilities, refer to our web site.