



# Liquid Filter Bags



# FSI Filter Bags for Consistent Performance

**Our exclusive advanced design makes the difference**

FSI POLYLOC® bags employ patented design features for added convenience and positive sealing. The POLYLOC top, together with the POLYLOC Snap-fit Ring, creates a hermetic seal within the vessel housing to prevent liquid bypass. The Snap-fit Ring can be installed in any new FSI FSPN/BFN series housing, as well as previously installed FS/FSPN housings. POLYLOC bags are fully combustible. FSI offers a full line of single- and multi-layer bags. Covers and fiber-free finishes are available. Call us for your special applications. Our sales engineers analyze your filtration needs fully before making any product suggestions. And our nationwide distribution network facilitates quick response to your order.

**BUILT-IN HANDLES**

speed and simplify bag installation and removal

**PATENTED POLYLOC**

one-piece molded top heat welded to media to eliminate needle holes

**FSI CONVENTIONAL STEEL RING BAGS**

are manufactured in all popular sizes to fit most vessels

**WELDED SEAMS**

eliminate the possibility of unfiltered liquid bypass common in needle-sewn bags

**SURFACE TREATMENT**

to reduce fiber migration

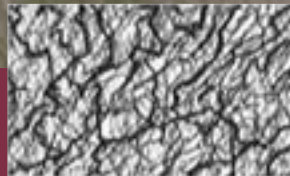
**GLAZED AND SINGED FINISHES**

are available to inhibit fiber migration



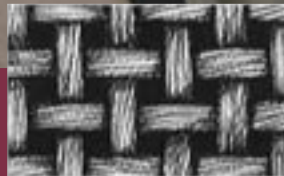
**POLYMICRO MATERIAL**

is a specially designed melt blown polypropylene fiber with excellent oil absorbing characteristics.



**SYNTHETIC FELTS**

provide depth filtration and higher solids loading capacity than comparable mesh fabric bags.



**MULTIFILAMENT MESH**

is a woven fabric. Each thread of the fabric consists of many smaller diameter threads twisted together. Makes a low cost, disposable bag.



**MONOFILAMENT MESH**

is a woven fabric with evenly-spaced holes. Each thread is a single filament. Excellent strength. No fiber migration.

Fiber	Material	Micron Ratings																								
		1	3	5	10	15	25	35	50	65	75	90	100	125	150	175	200	250	300	400	600	700	800	1200	1500	
Polyester/Cotton	Felt	X	X																							
Polyester	Felt	X	X	X	X	X	X		X	X		X					X									
Rayon-Viscose	Felt		X	X	X	X	X																			
Nylon	Felt			X	X	X	X		X			X														
Polypropylene	Felt	X	X	X	X	X	X		X			X														
Teflon®	Felt				X	X	X		X																	
Nylon (Nomex)	Felt			X	X	X	X		X			X														
Polypropylene	Micro-Fiber		X		X	X																				
Nylon	Multifilament Mesh											X		X											X	
Nylon	Monofilament Mesh			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Polypropylene	Monofilament Mesh																X	X	X	X						
Polyester	Multifilament Mesh									X	X	X	X			X	X		X	X			X	X	X	X
Polyester	Monofilament Mesh			X	X		X		X		X	X		X		X	X		X	X			X	X	X	X
Saran	Monofilament Mesh																X		X			X		X		

## Standard Filter Bags



### SIZE 1:

Diameter – 7 inches (17.8 cm)  
Length – 16.5 inches (41.9 cm)  
Compatible with FSI Filter Vessel  
Model FSPN-40, BFN-11



### SIZE 2:

Diameter – 7 inches (17.8 cm)  
Length – 32 inches (81.3 cm)  
Compatible with FSI Filter Vessel  
Model FSPN-85, FSPN-250,  
BFN-12 and all multi-hole vessels.



### SIZE 3:

Diameter – 4 inches (10.2 cm)  
Length – 8.25 inches (20.9 cm)  
Compatible with FSI Filter Vessel  
Model FSPN-20, BFN-13



### SIZE 4:

Diameter – 4 inches (10.2 cm)  
Length – 14 inches (35.5 cm)  
Compatible with FSI Filter Vessel  
Model FSPN-35, BFN-14



## FSI Custom Capability

FSI offers custom-sized and custom-shaped bags in a variety of materials including our polymicro material which is designed specifically to remove tramp oil from liquids. Our experience in designing and manufacturing non-standard bags enables us to give you greater seam strength. You can count on our accuracy, dependability and efficiency in filling your custom order. Contact your FSI representative for details.

## Comparative Particle Size

U.S. Mesh	Inches	Microns
10	.0787	2000
12	.0661	1680
14	.0555	1410
16	.0469	1190
18	.0394	1000
20	.0331	841
25	.0280	707
30	.0232	595
35	.0197	500
40	.0165	420
45	.0138	354
50	.0117	297
60	.0098	250
70	.0083	210
80	.0070	177
100	.0059	149
120	.0049	125
140	.0041	105
170	.0035	88
200	.0029	74
230	.0024	63
270	.0021	53
325	.0017	44
400	.0015	37

## Filter Bag Data

Bag Size Number	1	2	3	4
Surface Area Per Bag - ft <sup>2</sup> /m <sup>2</sup>	2.0/19	4.4/41	0.5/0.5	1.0/0.9
Volume Per Bag - gal*/liter	2.1/7.9	4.6/17.3	.37/1.4	.67/2.5
Bag Diameter - inch/cm	7/17.8	7/17.8	4/10.2	4/10.2
Bag Length - inch/cm	16.5/41.9	32/81.3	8.25/20.9	14/35.5
FSI Filter Vessel Model Number	FSPN-40 BFN-11	FSPN-85 FSPN-250 BFN-12 and all multi-hole vessels	FSPN-20 BFN-13	FSPN-35 BFN-14

\*1 Gal. = 0.1337 cu. feet = 3.785 x 10<sup>-3</sup> cu. meters

## Ordering Information

To order, use the abbreviations from the charts shown on this page. The charts are color coded for your convenience.

### EXAMPLE:

<b>1</b>	<b>2</b>	<b>3*</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>PONG</b>	<b>10</b>	<b>P</b>	<b>2</b>	<b>P</b>	<b>R</b>
<b>PENG</b>	<b>50</b>	<b>PEM</b>	<b>1</b>	<b>S</b>	<b>AUTO</b>

These codes describe the following bags:

1. Polypropylene Non-inserted Glazed Felt – 10 Micron – Plain – #2 Size – Polyloc Collar Design – Reverse Collar Construction.

2. Polyester Non-inserted Glazed Felt – 50 Micron – Polyester Multifilament Cover – #1 Size – Snap Collar Design – Inside Seams.

\* Customer to specify micron rating if cover is used.

## Filter Fabric Properties Physical – Chemical – Temperature

Fabric	Specific Gravity	Tensile Strength	Abrasion & Flex	Weak Acids	Strong Acids	Weak Alkali	Strong Alkali	Solvents	Temperature °F
Cotton	1.55	44-109	Fair	Poor	Poor	Excellent	Excellent	Good	200° - 240°
Polyester	1.38	64-124	Very Good	Very Good	Good	Good	Poor	Good	275° - 325°
Glass	2.56	200-215	Poor	Excellent	Good	Fair	Poor	Excellent	500° - 600°
Nylon	1.14	58-128	Excellent	Fair	Poor	Excellent	Excellent	Good	275° - 300°
Nomex	1.14	58-128	Very Good	Fair	Poor	Excellent	Excellent	Good	400° - 450°
Polypropylene	0.91	50-85	Very Good	Excellent	Excellent	Excellent	Excellent	Fair	200° - 220°
Saran	1.69	15-44	Good	Excellent	Excellent	Excellent	Excellent	Poor	160° - 185°
Teflon	2.30	47	Poor	Excellent	Excellent	Excellent	Excellent	Very Good	450° - 500°

THIS GUIDE CONTAINS GENERAL INFORMATION. ACTUAL USE OR SUAK TESTS SHOULD BE PERFORMED WHEREVER POSSIBLE.

Unlike other bag manufacturers, we make all of our felts in-house. This ensures better quality control of your finished product. FSI's "comprehensive manufacturing control" philosophy insures that we will maintain our status as the industry leader in all phases of the filter business. For more information, technical consultation, or details about our custom design capability, contact your FSI representative or our headquarters in Michigan City, Indiana.

TO LEARN MORE ABOUT FILTER SPECIALISTS, INC. PRODUCTS, CONTACT OUR OFFICE OR VISIT OUR WEB PAGE: <http://www.fsifilters.com>



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Polyloc® is a registered trademark of Filter Specialists, Inc.  
Teflon® is a registered trademark of Dupont.

There are no expressed or implied warranties, including the implied warranty of merchantability and fitness for a particular purpose not specific herein respecting this agreement or the product being sold hereunder or the service provided herein.

## Filter Bags

1 Fiber & Media	2 MicronRating
PEIF -polyester inserted	1, 3, 5, 10, 15, 25, 50, 75, 100, 200
PENF -polyester non-inserted	5, 10, 15, 25, 50, 75, 100
PEIG -polyester inserted glazed	1, 3, 5, 10, 15, 25, 50, 75, 100, 200
PENG -polyester non-inserted glazed	5, 10, 15, 25, 50, 75, 100
V -rayon-viscose felt	3, 5, 10, 15, 25
TFE -teflon felt	10, 25, 50
N -nylon felt	5, 10, 25, 50, 100
POIF -polypropylene inserted	1, 3, 5, 10, 25, 50, 100
POIG -polypropylene inserted glazed	1, 3, 5, 10, 25, 50, 100
PONG -polypropylene non-inserted glazed	5, 10, 25, 50, 100
POMF -polypropylene micro-fiber	2A, 10A, 25A, 0A
HT -nylon nomex felt	5, 10, 25, 50, 100
PEM -polyester multifilament mesh	75, 100, 125, 150, 200, 250, 400, 600, 800
PEMO -polyester monofilament mesh (special order)	5, 10, 25, 50, 75, 100, 150, 200, 250, 400, 600, 800
NM -nylon multifilament mesh	100, 150, 800
NMO -nylon monofilament mesh	5, 10, 25, 35, 50, 65, 75, 90, 100, 125, 150, 175, 200, 250, 300, 400, 600, 800
PMO -polypropylene monofilament mesh	250, 300, 400, 600, 800
S -saran monofilament mesh	300, 600, 800

3 Bag Cover
P – plain (no cover)
PEM – polyester multifilament cover
G – fiber free finish
NMO – nylon monofilament cover
NM – nylon multifilament cover
Cerex – spun bonded nylon
M – muslin cover

4 Bag Size Number
1 – #1 size bag
2 – #2 size bag
3 – #3 size bag
4 – #4 size bag
7 – #7 size bag
8 – #8 size bag
9 – #9 size bag

5 Bag Design
P – Polyloc
S – metal retaining ring-snap collar design
PC1 – fits #1 cuno housing
PC2 – fits #2 cuno housing
CO – fits Commercial filter housing
RP – fits Ronnigen-Petter housing
RPP – plastic ring for above

6 Suffix
SS – 316 SS ring
PVC – PVC coated ring
R – reverse collar
TN – triple needle seam
A – adapter head
AUTO – inside seams
CH – cotton handle
L – loops
WE – welded seam

