

FILTER VESSELS



Bag Filter Housings	2-23
Cartridge Filter Housings	24-27
Plastic Filter Housings	28-33
Specialty Filter Housings	34-35

Innovative Solutions. Clear Results.

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FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



Slides: • FSPN Multi-Hole Vessel

- FSPN 20
- FSPN 35
- FSPN 85
- FSPN 250
- FSPN Cross Section

BAG FILTER HOUSINGS FSPN Vessels

Introduction

The FSPN line of filters covers nearly every fluid application need. From the compact FSPN-20 miniature single bag filter vessel to the large multi-bag designs, we have exactly what your flow demands require. The FSPN vessels can also be equipped with a variety of lid opening styles including manual, hydraulic, spring assist and Easy Open.

FSPN filter vessels using size 1 and 2 filter bags are designed, built and stamped to meet code requirements in our own ASME Code manufacturing facilities. Standard equipment features like the single-gasket seal, with sturdy perforated metal baskets provide durable and consistent performance.

- Stock, Standard and Custom designs available
 - Stock: 1-8 bags
 - Custom: Available up to 99 bags
- ASME Code
- NPT or flange connections
- Positive bag seating without the use of a manual hold-down device
- Single gasket lid seal
- Full ports for unrestricted flow





FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

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Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS

Specifications				
Number of Bags	1-99			
Filter Bag Size	Single Bag Design: 1, 2, 3, 4			
	Multi-Bag Design: 1, 2			
Maximum Operating Pressure	150 PSI (10.34 Bar)			
Design Temperature Range	Carbon Steel: 20 to 500°F (-6 to 260°C)			
	Stainless Steel: -20 to 250°F (-28 to 121°C)			
Materials of Construction	Carbon Steel, 304 & 316 Stainless Steel			
Non-Wetted Parts	Carbon Steel: Carbon Steel			
	Stainless Steel: May contain some plated			
	Carbon Steel materials			
Connections	Flange or NPT			
Surface Finish	Carbon Steel: Acrylic enamel painted exterio			
	Stainless Steel: Light sand blast			
Code Stamp (Size 1, 2 only)	ASME Sect VIII, Div 1, "U" or "UM" stamp			
Gasket Material	Buna, EPR, Viton, Viton Teflon Encapsulated,			
	Buna White FDA			
PolyLoc [®] Bag Seal	Positive Bag Seal without manual hold down			
Lid Opening	Hinged or swing bolt with manual davit lid lift			

C Locate Your Sales Representative

Options

- Lid Opening types
 - Hydraulic Lid Lift with swing bolts
 - Spring Assist with swing bolts
 EZ Open lid
- 100 & 300 PSI designs available (available on most models)
- CRN & CE code designs
- NSF 61 Certification available with FSPN Size 2 Vessels in 304 SS and 316 SS
- Solid Teflon or flat-gasket design
- Partial heat jacket or full jacket
- Corrosion allowance
- Mesh lined and heavy-duty rim baskets
- Hastelloy C, Alloy 20, 2205 Duplex (other materials by request)
- Sanitary or Victaulic connections (other connection types by request)

FILTER VESSELS

FILTER BAGS

FILTER CARTRIDGES

SPECIALTY PRODUCTS



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

FSPN VESSELS ~ HOW TO ORDER





Vessel Material

- A = Carbon Steel
- B = 304 Stainless Steel
- C = 316 Stainless Steel
- F = Alloy 20
- G = Hastelloy C-276
- T = Titanium
- S = Special

Vessel Pressure Rating (PSI)

0100,0150,0300 Per customer specification

Coating/Lining Material

- N = None (Standard)
- A = Electropolish
- F = Paint finish/prep
- Kynar or Halar J =
- M = Prime electropolish
- = Plasite (epoxy) (10 mil) Ρ
- S = Special
- T = Teflon
- X = Passivation

F	Inlet Size
2	(Example $4'' = 04$)

Inlet Type

- C = Sanitary fitting
- D = Flange, din
- E = **European EN Flange** F
 - = Flange, slip-on, raised face, std.
- H = Flange, weld neck,
- raised face
- K = Flange, lap joint
- M = Male NPT
- N = Female NPT
- = Plain pipe Ρ
- S = Special
- T = Plain OD Tube
- W = Socket weld

Outlet Size

(Example 4" = 04)



9

Outlet Type See Inlet Type for code letter

Nozzle Configuration See the nozzle configuration chart (at the end of the filter vessel section)

Internal Usage

(10

- A = Removable grate
- B = Modified basket seat
- F = Fixed grate
- Steel ring bag only N = (no Polyloc®)
- R = Snap fit rings
- S = Special
- X = Machined collar for Polyloc® (Std.)

Lid Opening Type

- 1 = Hinge
- 2 = Manual davit
- 3 = Hydraulic davit
- 4 = Clamshell
- 5 = E-Z Open
- 6 = Spring Assist
- = Other 9

Jacket Type

- N = None
- = Partial Ρ
- F = Full
- **Jacket Pressure Rating** 13

065 (Standard), 100, 150 Per customer specifications

Jacket Material See Vessel Material group for code letters

Locate Your Sales Representative

FILTER VESSELS

SPECIALTY PRODUCTS



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

Standard FSPN Vessel Models

Model Number	FSPN 20	FSPN 35	FSPN 40	FSPN 85	FSPN 250	FSPN 355	FSPN 800	FSPN 1100	FSPN 2000	FSPN 2500	FSPN 3000	FSPN 3500	FSPN 4000	FSPN 4200	FSPN 4500	FSPN 4800	FSPN 5000
No. of Bags	1	1	1	1	2	3	4	6	8	10	12	14	16	18	20	22	24
Bag Size No.	3	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Surface Area per Bag, Ft	0.5	1.0	2.0	4.4	4.4	4.4	4.4	4.4.	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Surface Area per Vessel, Ft ²	0.5	1.0	2.0	4.4	8.8	13.2	17.6	26.4	35.2	44.0	52.8	61.6	70.4	79.2	88.0	96.8	105.6
Inlet and Outlet Size	1″	1″	2″	2″	3-4″	3-4″	4-6″	4-6″	6-8″	8-10″	8-10″	10- 12″	10- 12″	10- 14″	10- 14″	10- 14″	10- 14″
Max Flow Rate, GPM	15	30	60	120	240	360	480	720	960	1200	1440	1680	1920	2160	2400	2640	2880

NOTE: The maximum flow rate GPM is the MAXIMUM FLOW RATE recommended through the vessel using a 10 micron felt filter bag (PONG10) filtering water. Any change in the micron rating, the type of filter, viscosity or specific gravity of the fluid may affect the maximum GPM calculation significantly. Please consult your FSI Representative when sizing these vessels.



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

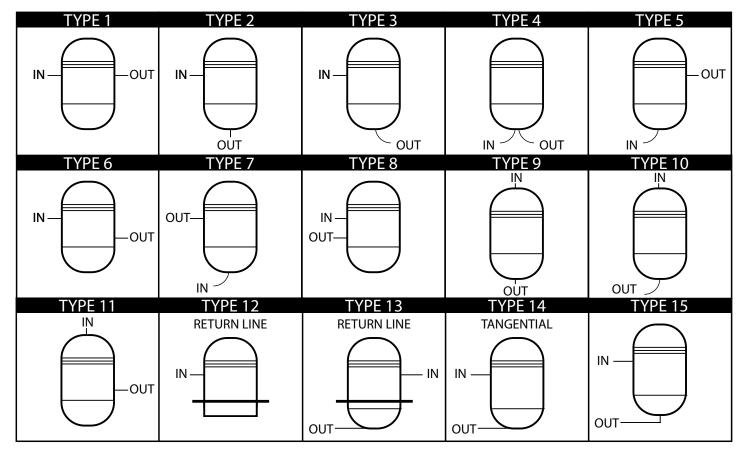
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

FSPN Inlet-Outlet Configurations



NOTE: Inlet and outlet nozzles are shown in general positions. They can be rotated or relocated to meet customer requirements.



FILTER VESSELS

Bag Filter Housings

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Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



Slides: • FSPN E-Z Open • FSPN E-Z Open (closed)

BAG FILTER HOUSINGS FSPN E-Z Open

Introduction

The FSI answer to time-saving operations is the patented FSPZ Easy Open Lid Vessel, the innovative alternative to manually opening and closing a filter vessel. Utilizing a unique sliding bracket retaining system, it's operated simply by using the lid activator handle. The Easy Open Lid rotates and raises to a locked position in the time it normally takes to loosen one or two eyebolts on a conventional vessel.

The Easy Open Lid is available on bag filter models holding 4 to 24 bags. It can be fully opened in under 30 seconds which significantly lowers the cost of operating your vessels, and makes the change-out procedure easier and safer.

- Innovative lid closure system opens in 30 seconds or less—no tools required, for faster change-outs with less effort
- Hydraulic opening and lifting device offers improved ergonomics to avoid repetitive-use injuries
- Splash shield, pressure relief valve, indicator lock pin and alignment pins assure safe operation
- Standard design pressure rating of 150 PSI



FILTER VESSELS

Bag Filter Housings

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QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS

pecifications	
Number of Bags	4-24
Filter Bag Size	Multi-Bag Design: 2
Maximum Operating Pressure	150 PSI (10.34 Bar)
Design Temperature Range	Carbon Steel: 20 to 500°F (-6 to 260°C) Stainless Steel: -20 to 250°F (-28 to 121°C)
Materials of Construction	Carbon Steel, 304 & 316 Stainless Steel
Non-Wetted Parts	Carbon Steel: Carbon Steel Stainless Steel: May contain some plated Carbon Steel materials
Number of Gaskets	1
Connections	Flange or NPT
Surface Finish	Carbon Steel: Acrylic enamel painted exterior Stainless Steel: Light sand blast
Code Stamp (Size 1, 2 only)	ASME Sect VIII, Div 1, "U" stamp
Gasket Material	Buna, EPR, Viton, Buna White FDA
PolyLoc [®] Bag Seal	Positive Bag Seal without manual hold down
Lid Opening	EZ Open

Locate Your Sales Representative

Options

- 100 & 300 PSI designs (available on most models)
- CE code designs
- Partial heat jacket or full jacket
- Corrosion allowance
- Mesh lined and heavy-duty rim baskets
- Sanitary or Victaulic connections (other connection types by request)

U.S. Patent No. 8,083,087



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

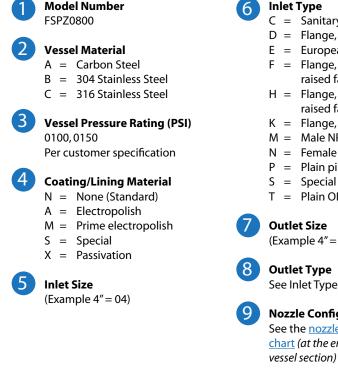
X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

FSPN E-Z OPEN VESSELS ~ HOW TO ORDER





Inlet Type

- C = Sanitary fitting
- D = Flange, din
- E = European EN Flange
- = Flange, slip-on, raised face, std.
- H = Flange, weld neck, raised face
- K = Flange, lap joint
- M = Male NPT
- N = Female NPT
- P = Plain pipe
- S = Special
- T = Plain OD Tube

Outlet Size

(Example 4" = 04)

Outlet Type

See Inlet Type for code letter

Nozzle Configuration See the nozzle configuration chart (at the end of the filter

Internal Usage				
Fixed grate				
Steel ring bag only				
(no Polyloc®)				
Snap fit rings				
Special				
Machined collar for				
Polyloc [®] (Std.)				
pening Type				
E-Z Open				

Jacket Type

10

11

- N = NoneP = Partial
 - F = Full
- **Jacket Pressure Rating** 13) 065 (Standard), 100, 150 Per customer specifications
- 14 **Jacket Material** See Vessel Material group for code letters

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FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



BAG FILTER HOUSINGS CBFP 11, 12 Vessels

Introduction

When looking for a cost-effective single-bag filter vessel that is both durable and reliable, look to the FSI CBFP series vessels. Although the standard CBFP series vessels do not carry an ASME Code stamp, you can still realize the benefits of an economic filter vessel that is manufactured to the same high standards and engineering expertise that characterizes all of our other FSI vessels.

- Offset, Side Inlet with Side Outlet (same side or opposite), or Side Inlet with Bottom Outlet configuration available
- Positive bag seating without the use of a manual hold-down device
- Single gasket cover seal
- Connections sizes available in either 2" or 3" NPT or flange



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS

Specifications		
Number of Bags	1	
Filter Bag Size	1,2	
Maximum Operating Pressure	150 PSI (10.34 B	ar)
Design Temperature Range	Carbon Steel: Stainless Steel:	20 to 500°F (-6 to 260°C) -20 to 250°F (-28 to 121°C)
Materials of Construction	Carbon Steel, 30	04 & 316 Stainless Steel
Non-Wetted Parts	Carbon Steel: Stainless Steel:	Carbon Steel May contain some plated Carbon Steel materials
Number of Gaskets	1	
Connections	Flange or NPT	
Surface Finish	Carbon Steel: Stainless Steel:	Acrylic enamel painted exterior Light sand blast
Code Stamp	None	
Gasket Material	Buna, EPR, Viton Buna White FDA	, Viton Teflon Encapsulated
PolyLoc [®] Bag Seal	Positive Bag Sea	al without manual hold down
Lid Opening	Swing bolt	

Care Your Sales Representative

Options

- Available with extra length legs and evacuation floats
- ASME Code upgrade available
- NSF 61 Certification available with CBFP12 304SS and 316SS
- Mesh lined and heavy duty rimmed basket available
- Sanitary and Victaulic connections (available upon request)



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

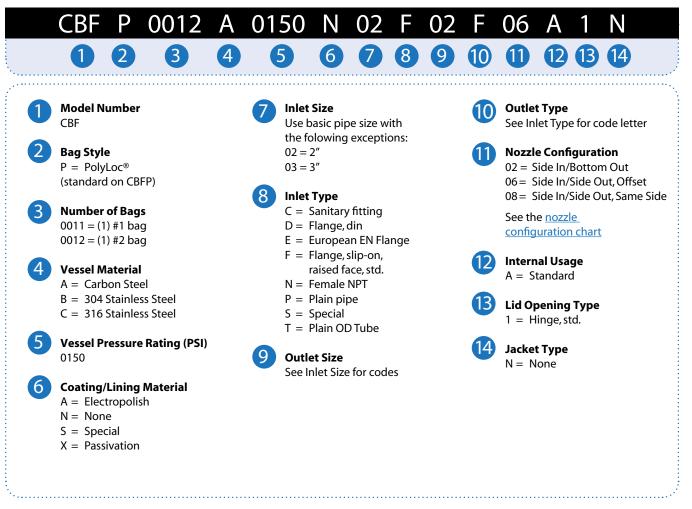
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

CBFP 11, 12 Vessels ~ HOW TO ORDER





FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

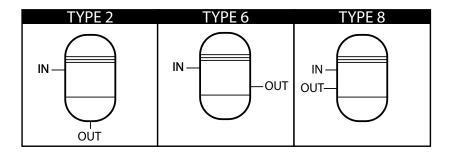
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

CBFP Inlet-Outlet Configurations



CBFP 11, 12 Flow Rate Chart

Model Number	CBFP 11	CBFP 12
No. of Bags	1	1
Bag Size No.	1	2
Surface Area per Bag, Ft.	2.0	4.4
Surface Area per Vessel, Ft2	2.0	4.4
Inlet and Outlet Size	2″	2″
Max Flow Rate, GPM	60	120

NOTE: The maximum flow rate GPM is the MAXIMUM FLOW RATE recommended through the vessel using a 10 micron felt filter bag (PONG10) filtering water. Any increase in fluid viscosity will reduce the maximum GPM figures significantly. Please consult your FSI representative when sizing these vessels.

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FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



BAG FILTER HOUSINGS CBFP 13, 14 Vessels

Introduction

The CBFP 13 & 14 are cost effective bag filter vessels that are durable and reliable for low flow applications using a size 3 or 4 filter bag.

- Offset, Side Inlet with Side Outlet (same side or opposite), or Side Inlet with Bottom Outlet configuration available
- Positive bag seating without the use of a manual hold-down device
- Single gasket cover seal
- Connections sizes available in either 1" or 2" NPT



FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS

PolyLoc® Bag Seal	Positive Bag Sea	al without manual hold down
Gasket Material	Buna, EPR, Viton	, Buna White FDA
Code Stamp	None	
Surface Finish	Carbon Steel: Stainless Steel:	Acrylic enamel painted exterior Light sand blast
Connections	NPT	
Number of Gaskets	1	
		Carbon Steel materials
Non-wetted Parts	carbon breen.	Carbon Steel May contain some plated
Non-Wetted Parts	Carbon Steel	Carbon Steel
Materials of Construction	Carbon Steel, 30	04 & 316 Stainless Steel
	Stainless Steel:	-20 to 250°F (-28 to 121°C)
Design Temperature Range	Carbon Steel:	20 to 500°F (-6 to 260°C)
Maximum Operating Pressure	150 PSI (10.34 B	ar)
Filter Bag Size	3,4	
Number of Bags	1	
Specifications		

Care Your Sales Representative

Options

- Mesh lined and heavy duty rimmed basket available
- Flange, Sanitary and Victaulic connections (available upon request)
- Adjustable clamp-on legs in
 Carbon Steel or 304 Stainless Steel



FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

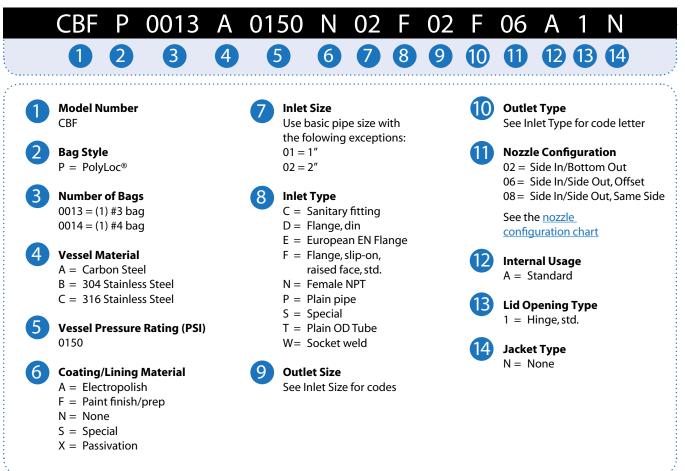
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

CBFP 13, 14 Vessels ~ HOW TO ORDER





FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

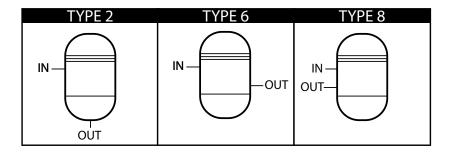
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

CBFP Inlet-Outlet Configurations



CBFP 13, 14 Flow Rate Chart

Model Number	CBFP 13	CBFP 14
No. of Bags	1	1
Bag Size No.	3	4
Surface Area per Bag, Ft.	0.5	1.0
Surface Area per Vessel, Ft2	0.5	1.0
Inlet and Outlet Size	1″	1″
Max Flow Rate, GPM	15	30

NOTE: The maximum flow rate GPM is the MAXIMUM FLOW RATE recommended through the vessel using a 10 micron felt filter bag (PONG10) filtering water. Any increase in fluid viscosity will reduce the maximum GPM figures significantly. Please consult your FSI representative when sizing these vessels.

(Second Second



FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



Slides: • QX4 Filter Vessel • QX4 Filter Vessel Cutaway

BAG FILTER HOUSINGS QX4 Filter Vessel

Introduction

(Uses Bags, ClearPleat PC Cartridge or NMO Welded Seam Bag)

The patented quick change QX4 filter vessel is designed to improve filtration efficiency, while saving time and production costs. Filter bags forming a positive seal in this vessel are available in polyester and polypropylene felt, along with polyester and nylon mesh. The new FSI ClearPleat PC absolute rated filter cartridge seals in this lightweight filter vessel providing absolute rated filtration in low flow industrial applications.

The QX4 is ideal for applications including gravure ink, flexographic ink, hydraulic fluid, cutting oil, coolants, parts washers, injection molding, spray nozzle protection, pre RO systems, pump seal protection, glue applications, and other low flow industrial applications.

- Quick change in less than 30 seconds
- Easy disassembly, no tools required
- Lightweight less than 8 lbs.
- PolyLoc[®] bags available in nylon monofilament, polyester multifilament, polypropylene and polyester felt for use with standard basket
- Flat bottom basket designed for use with ClearPleat PC, FSI's absolute rated pleated cartridge, or welded seam nylon monofilament filter bags



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS

QX4 Filter Vessel	
Specifications	
Filter Bag Size	#4 size
Filter Cartridge	ClearPleat PC — Absolute Rated Pleated Cartridge
Maximum Operating Pressure	150 PSI (10.34 Bar)
Design Temperature Range	-20 to 250°F (-28 to 121°C)
Materials of Construction	304 Stainless Steel
Connections	1″NPT
Surface Finish	304SS w/Bead Blast
Code Stamp	Non-Code
Gasket Material	Teflon Encapsulated, Buna
PolyLoc® Bag Seal	Positive Bag Seal without manual hold down

QX4 Filter Vessels ~ HOW TO ORDER

Please reference Part Number		
VB434985N	QX4 Filter Vessel with Standard Basket and Teflon Encapsulated Gasket	
VB431971Z	QX4 Filter Vessel with Flat Bottom Basket and Teflon Encapsulated Gasket	
VB436604N	QX4 Filter Vessel with Standard Basket and Buna Gasket	
N		

Locate Your Sales Representative

Options

- Standard Basket (uses standard Size 4 filter bags)
- Flat Bottom Basket (uses ClearPleat PC or NMO Welded Seam bag)

U.S. Patent No. 7,857,144



FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



BAG FILTER HOUSINGS SBF Compact Bag Vessels

Introduction

When space is an issue, look to FSI's compact bag filter. The SBF-75 is a reduced-size filter made with the same attention to detail that is in all of our larger designs. With dimensions of less than 10" high by 2 7/8", you get a full-featured bag filter that provides a full range of micron ratings.

- Compact housing allows for filtering applications where space is limited
- Single bag filter is ideal for low flow systems
- Top-mounted lid swings away for easy access for easy cleaning and bag changes
- Nylon monofilament filter bags, available in micron ratings 1-400, offer broad range of chemical resistance, are unaffected by metal fatigue and corrosion, and do not release fibers into fluid flow
- Welded seam construction of the filter bags eliminates fluid bypass



FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

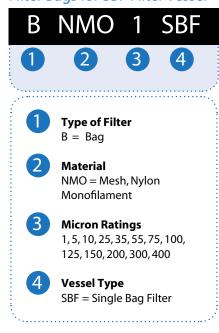
BAG FILTER HOUSINGS

pecifications	
Number of Bags	1
Filter Bag Size	SBF
Maximum Operating Pressure	300 PSI (20.68 Bar)
Design Temperature Range	-20 to 250°F (-28 to 121°C)
Materials of Construction	316 Stainless Steel
Non-Wetted Parts	Stainless Steel: May contain some plated Carbon Steel materials
Surface Finish	Light sand blast
Code Stamp	None
Gasket Material	Lid Gasket: Teflon Basket & Bag Gasket: Buna
Bag Seal Positive Bag Seal without manual hold	
Lid Opening	Swing bolt

HOW TO ORDER SBF Compact Bag Vessel

Item Number VB019792S

HOW TO ORDER Filter Bags for SBF Filter Vessel





FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS FMC Drum Filters

Introduction

For filling lines, FSI offers the answer for the final filtration stage with the FMC-22, a light weight, easily maneuvered, quick-disconnect filter. It has a bag filter, positive gasket seal, restrainer basket, coupling and directional nozzle in one self-contained vessel. The unit even features built-in stops to limit insertion depth into closed head drums.

FSI offers this final stage drum filter in Stainless Steel or Carbon Steel, for applications ranging from chemicals, paints, inks, solvents and resins, to oil, petrochemicals and more viscous products as well.

- FMC 1¹/₂" quick connect female coupling and Buna-N gaskets offered standard; optional 1¹/₂" male connector also available
- Nylon monofilament (NMO) bag features molded plastic seal to prevent fluid bypass
- Filter vessel made from 316 Stainless Steel or Carbon Steel.
- Overall length is only 91/4"
- Positive gasket seal available in Buna-N (standard), EPDM
- Shell, collar, coupling, stop pins and all parts included (also available without stop pins)





FILTER VESSELS

Bag Filter Housings

- FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |
 - QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

BAG FILTER HOUSINGS

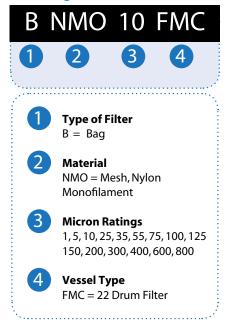
pecifications		
Number of Bags	1	
Filter Bag Size	FMC	
Maximum Operating Pressure	Open System	
Design Temperature Range	Carbon Steel: 20 to 500°F (-6 to 260°C) Stainless Steel: -20 to 250°F (-28 to 121°C)	
Materials of Construction	Is of Construction Carbon Steel, 316 Stainless Steel	
Non-Wetted Parts	Stainless Steel: May contain some plated Carbon Steel materials	
Number of Gaskets	1	
Connections	1½" Quick Connect	
Surface Finish	Carbon Steel: Acrylic enamel paint Stainless Steel: Light sand blast	
Code Stamp	None	
Gasket Material	Buna-N, EPDM	
Bag Seal	Positive Bag Seal without manual hold dowr	
Lid Opening	Ouick Connect	

Locate Your Sales Representative

HOW TO ORDER FMC Drum Filters

Item Number VB403831S

HOW TO ORDER Filter Bags for FMC Drum Filters



FILTER CARTRIDGES

SPECIALTY PRODUCTS



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



Slides: • FSMC (view 1) • FSMC (view 2)

CARTRIDGE FILTER HOUSINGS FSMC Cartridge Filter Vessels

Introduction

The FSMC Series is an industrial cartridge filter vessel from FSI. The filter vessels are available in standard sizes to hold from three (3) to eighty-one (81) cartridges, with standard 2.5" OD, either DOE or 222 end cap SOE captive spring.

FSMC filter vessels are rated at 150 PSI (10.34 Bar) and standard materials include CS, 304 SS and 316 SS. All FSMC vessels are manufactured by FSI and meet ASME Code requirements.

- Accommodates from three (3) to eighty-one (81) cartridges
- Standard Cartridges:
 - 1.0" ID x 2.5" OD (2.7 cm x 6.35cm)
 - 20" (50.8cm) Length
 - 30″ (76.2 cm) Length
- 40" (101.6 cm) Length
- Double Open End
- Single Open End Captive Spring Cartridges with 222 End Cap
- Available in Carbon Steel, 304 Stainless Steel, or 316 Stainless Steel
- Flange connections
- Meets ASME Code ASME "UM" Stamp Standard, ASME "U" Stamp optional
- Elimination of sump disassembly with top-loading design



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

CARTRIDGE FILTER HOUSINGS

Specifications		
Number of Cartridges	3-81 (3, 6, 12, 18, 27, 36, 42, 50, 59, 70, 81)	
Filter Cartridge Size	1.0″ ID x 2.5″ OD (2.7 cm x 6.35 cm)	
	20″ (50.8 cm) Length	
	30″ (76.2 cm) Length	
	40" (101.6 cm) Lengths	
Maximum Operating Pressure	150 PSI (10.34 Bar)	
Design Temperature Range	Carbon Steel: 20 to 500°F (-6 to 260°C)	
	Stainless Steel: -20 to 250°F (-28 to 121°C)	
Materials of Construction	Carbon Steel, 304 & 316 Stainless Steel	
Non-Wetted Parts	Carbon Steel: Carbon Steel	
	Stainless Steel: May contain some plated	
	Carbon Steel materials	
Number of Gaskets	1	
Connections	Flange	
Surface Finish	Carbon Steel: Acrylic enamel paint	
	Stainless Steel: Light sand blast	
Code Stamp	ASME Sect VIII, Div. 1, "U" or "UM" stamp	
Gasket Material	Buna, EPDM, Viton Teflon Encapsulated,	
	Viton, White Buna FDA	
Lid Opening	Hinge or swing bolt with manual davit lid lift	

Locate Your Sales Representative

Options

- Lid Opening Types: Hydraulic Lid Lift with swing bolts
- 100 & 300 PSI designs available on most models (other pressures upon request)
- CRN & CE code designs
- NSF 61 certification available with FSMC 304 SS and 316 SS
- Solid Teflon or flat-gasket design
- Partial Heat Jacket or Full Jacket
- Corrosion allowance
- NPT connection



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

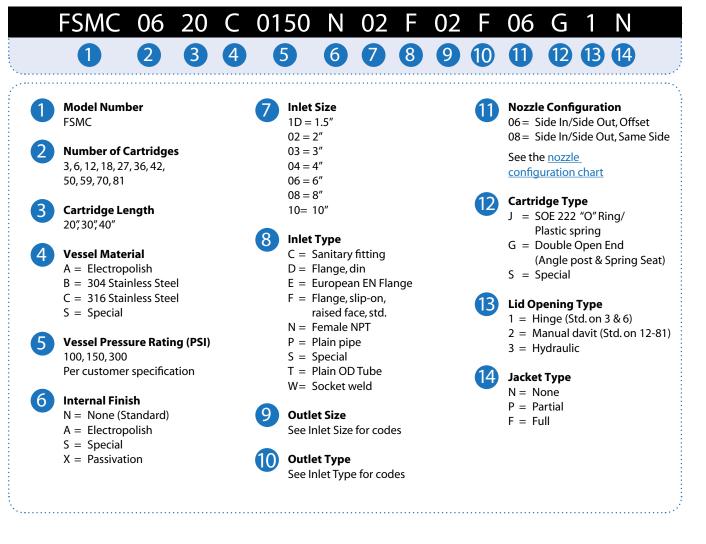
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

FSMC Cartridge Filter Vessels ~ HOW TO ORDER





FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

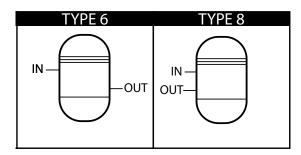
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

FSMC Inlet-Outlet Configurations





FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



PLASTIC FILTER HOUSINGS X100 Convertible Filter Housing

Introduction

Different industrial applications can have different requirements in terms of equipment and filter media. The X100 filter housing is highly adaptable to precisely fit your particular needs. This strong, light weight and economical filter vessel is resistant to a wide range of chemicals, and converts easily from filter bag usage to cartridge filters. It allows the user to choose the filter media and construction to precisely fit their particular needs.

The X100 is manufactured from polypropylene, with a UV inhibitor for all-weather durability. The specially designed, threaded lid allows for sealing and unsealing without the need of tools.

Features

- 100% Polypropylene Construction
- UV inhibitor for long-lasting, all-weather operation and durability
- Easily convertible between bag filter and cartridge filter housing
- Filtration media available in 1-800 micron ratings
- Twist-off lid design requires no tools for quick and easy change-out
- Clean wall design provides easy access for manual cleaning or in-place flushing
- Side inlet/bottom outlet eliminates sump to reduce waste
- Hermetic sealing bag and cartridge filters result in no fluid by-pass
- X100 bag and X100 with X20 cartridge are FDA compliant

Slides: • X100

- · X100-X3 Cartridge
- X100 Stand Tri-Pod Legs
- X100 Plastic Legs
- X100 Conebase



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

PLASTIC FILTER HOUSINGS

pecifications		
Filter Bag Size for X100B Filter	X01 bag is 6" dia. x 20" long (2 sq. ft. of surface a	
Filter Cartridge Size for X100C Filter	X20 cartridge is 1.625″ ID x 5.5″ OD x 23.25″ L (total volume 500 cubic inches)	
Filter Cartridge Size for X100X3 Filter Use 3 standard DOE 20" cartridges		
Operating Pressure	100 PSI (6.89 Bar) @ 110°F (43°C)	
Design Operating Temperature	110°F (43°C)	
Material of Construction	100% Polypropylene	
Connection	2"NPT	
Certifications	CE Mark	
FDA Compliance	X100B and X100C are FDA Compliant	
Gasket Material	Buna or Viton	
Seal	Hermetic Sealing of both Bags and Cartridges	

Options

- **Bag Filter Vessel using X01 filter bag** (see chart for filter bag material and micron ratings)
- Cartridge Vessel using X20 polypropylene microfiber filter cartridge (1.625" ID x 5.5" OD x 23.25"L) 1-100 microns
- Cartridge Vessel using 3 standard polypropylene 20" filter cartridges either Vorex® cartridges or Vorex® HP absolute rated cartridges (see chart for micron ratings)
- Stands: Standard with Plastic Legs 304SS Tri-Pod Legs Cone Stand with 2" NPT fitting either 90° elbow or T-pipe configuration

Item Numbers for How to Order Chart

416014B

x100B - Bag Filter

416014C

X100C - Cartridge Filter designed for use with X20 cartridge

416014X3

X100X3 - Cartridge Filter designed for use with 3 standard 2" cartridges



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

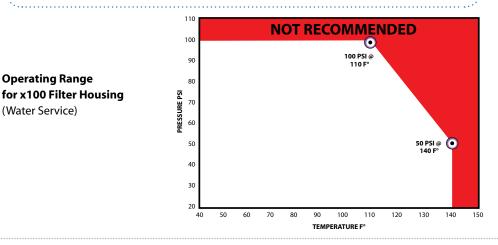
Specialty Filter Housings

Basket Strainers

PLASTIC FILTER HOUSINGS

X100 Convertible Filter Housing

Specifications		
Bags for X100B	Model	Microns
Polypropylene Felt	PONG () X01	1, 5, 10, 25, 50, 100
Polypropylene Monofilament Mesh	PMO () X01	100, 150, 200, 300, 600, 800
Polypropylene Microfiber	POMF () AX01	1, 2, 10, 25, 90, 0*
* BPOMFOAX01 filter bag is a special purpos Cartridges for X100C	e oil-adsorbent bag Model	with a micron rating of 25
100% Polypropylene Microfiber	CMMF() X20	1, 5, 10, 25, 50, 75, 100
Cartridges for X100X3	Model	Microns
100% Polypropylene Microfiber - Nominal Rated	CMMF () 20	1, 3, 5, 10, 25, 50, 75, 100
100% Polypropylene Microfiber w/polypropylene core and polyfoam end gasket - Absolute Rated	CMHP () 20EP	1, 3, 5, 10, 25, 35, 50, 75, 100



Locate Your Sales Representative

FILTER VESSELS

SPECIALTY PRODUCTS



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers



Slides: • XL234 Modular Filters

- XL234 Top
- EZLoc Patented Filter Ring
- XL234 Polypropylene Basket
- XL234 Filter Cartridge Assembly

Cartridge System:

- Vessel is 100% nonmetallic including cartridge carrier and holds seven standard 20", 30" or 40" cartridges
 – Double Open End
 - Single Open End 222 "O" Ring with Bayonet
- Uses Standard Vorex or Vorex HP (absolute rated) cartridges
- Increased surface area for flow rate of up to 140 GPM

PLASTIC FILTER HOUSINGS XL234 Modular Filter Housing

Introduction

XL234 Modular Filter System makes change-outs faster and easier than ever with its unique twist-off lid. You can choose from a 7-cartridge system or our new patented EZLoc filter bag with a built-in polypropylene ring that makes filter bypass a thing of the past. Either choice offers long service life and can be changed in minutes without tools!

Features

- Sturdy vessel construction glass-filled polypropylene with UV inhibitors for durability and compatibility with a broad range of chemicals
- Corrosion and Rust Resistant
- Quick and easy lid system requires no tools for opening and closing
- Molded legs for easy installation
- Sacrificial vent grommet safety feature to indicate filter is completely closed, preventing accidents

Bag System:

- Vessel is 100% nonmetallic with 100% polypropylene basket
- Bag has 20% more surface area than standard #2 filter bag for flow rates up to 160 GPM
- EZLoc patented filter ring snaps in easily to form a hermetic seal, preventing bypass
- Variety of materials available including: (see chart for micron ratings)
 Polypropylene Felt
 - Polypropylene Microfiber
 - Polypropylene Monofilament Mesh

FILTER CARTRIDGES

SPECIALTY PRODUCTS



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

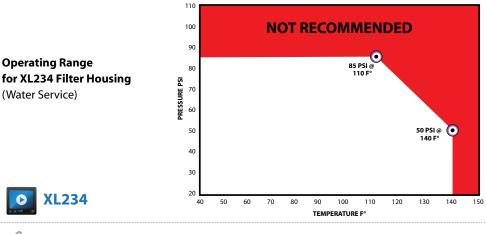
X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

PLASTIC FILTER HOUSINGS

Specifications	
Bag Vessel (30") Filter Bags	Bag filter takes one (1) proprietary size filter bag, with 20% more surface area than a std. size 2 filter bag
Cartridge Vessel (20", 30" or 40") Filter Cartridges	Cartridge filter takes seven (7) standard 20", 30",40 cartridges with either DOE or SOE 222 "O" Ring with Bayonet
Maximum Operating Pressure	85 PSI (5.86 Bar) @ 110°F (43°C)
Design Operating Temperature	110°F (43°C)
Material of Construction	Glass Filled Polypropylene
Gasket Material	Buna or Viton
Connections	2" (5.08cm) NPT or 3" (7.62cm) Flange
EZLoc*	Hermetically seals bag to filter



Locate Your Sales Representative

Options

- **2" NPT, Style 6 Standard** Inline side in, side out
- 2" NPT, Style 8 Optional Same side - side in, side out
- **3'' Flange, Style 2 Standard** Side in, bottom out
 - Extended legs available for units not being skid-mounted

*U.S. Patent No. 6,966,444



FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

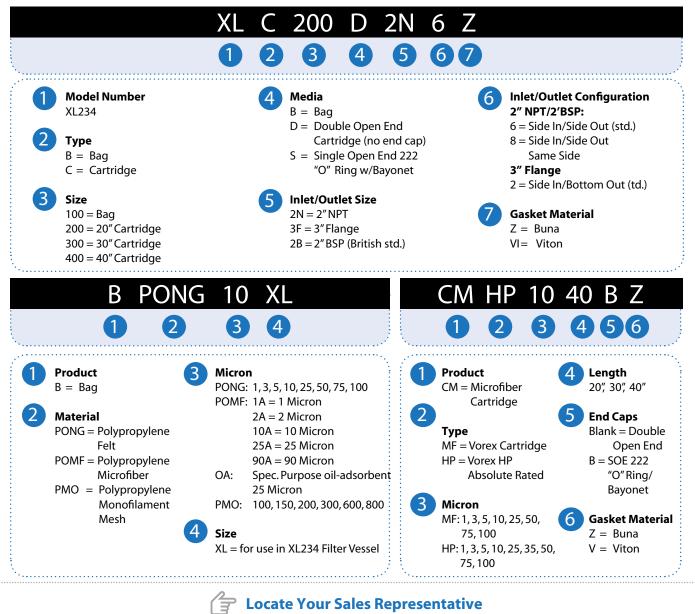
Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

XL234 Modular Filter Housings ~ HOW TO ORDER





FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

SPECIALTY FILTER HOUSINGS **Basket Strainers**

Introduction

FSI strainers are designed and built to the same standards as other FSI vessels. Durable, ASME Code construction, an efficient in-line and offset style design, and inlet/outlet ports from 2" up to 16" provide the economical solution to most industrial straining requirements. Typical applications include water and waste treatment industries, power generation plants, and the marine, paper, pharmaceutical and food industries.

An important design element to consider in a basket strainer are the free open areas. This is the ratio of open area through the strainer basket to the cross sectional area of the pipeline. FSI strainers provide at least an 8 to 1 ratio. Anything less may cause additional pressure drop.

- Single basket strainers up to 8" pipe size available
- Standard 150 PSI ASME Code construction
- Compact multi-basket designs eliminate tall, difficult-to-remove baskets to save space and for ease of cleaning
- Standard Stainless Steel basket material has 9/64" diameter perforations, offering 50% open area (mesh lined also available)
- Easy-to-remove baskets and quick opening, swing-type head cover, promote fast cleaning • and filter change-out (hydraulic lid lifter also available)
- Up to 6000 GPM flow rate





FILTER VESSELS

Bag Filter Housings

FSPN Vessels | FSPN E-Z Open | CBFP 11, 12 Vessels | CBFP 13, 14 Vessels |

QX4 Filter Vessel | SBF Compact Bag Vessels | FMC Drum Filters

Cartridge Filter Housings

FSMC Cartridge Filter Vessels

Plastic Filter Housings

X100 Convertible Filter Housing | XL234 Modular Filter Housings

Specialty Filter Housings

Basket Strainers

SPECIALTY FILTER HOUSINGS

Basket Strainers		
Specifications		
Number of Baskets	Single or Multi-Basket	
Maximum Operating Pressure	150 PSI (10.34 Bar)	
Design Temperature Range	Carbon Steel: 20 to 500°F (-6 to 260°C) Stainless Steel: -20 to 250°F (-28 to 121°C)	
Material of Construction	Carbon Steel, 304 & 316 Stainless Steel	
Non-Wetted Parts	Carbon Steel: Carbon Steel Stainless Steel: May contain some plated Carbon Steel materials	
Number of Gaskets	1	
Connections	2" to 16" Flange	
Surface Finish	Carbon Steel: Acrylic enamel painted exterior Stainless Steel: Light sand blast	
Code Stamp	ASME Sect VIII	
Gasket Material	Buna-N, EPR, Viton	