




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.

Features


- 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





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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)

BAG FILTER HOUSINGS

FSPN Vessels

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 exterior 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 See options for alternate set-up




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FSPN VESSELS ~ HOW TO ORDER

FSPN0800 A 0150 N 04 F 04 F 04 X 2 P 065 A

1 2 3 4 5 6 7 8 9 10 11 12 13 14

1 Model Number
FSPN0800

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

3 Vessel Pressure Rating (PSI)
0100, 0150, 0300
Per customer specification

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

5 Inlet Size
(Example 4" = 04)

6 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
P = Plain pipe
S = Special
T = Plain OD Tube
W = Socket weld

7 Outlet Size
(Example 4" = 04)

8 Outlet Type
See Inlet Type for code letter

9 Nozzle Configuration
See the [nozzle configuration chart](#) (at the end of the FSPN vessel section)

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

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

12 Jacket Type
N = None
P = Partial
F = Full

13 Jacket Pressure Rating
065 (Standard), 100, 150
Per customer specifications

14 Jacket Material
See Vessel Material group for code letters



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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.



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FSMC Cartridge Filter Vessels

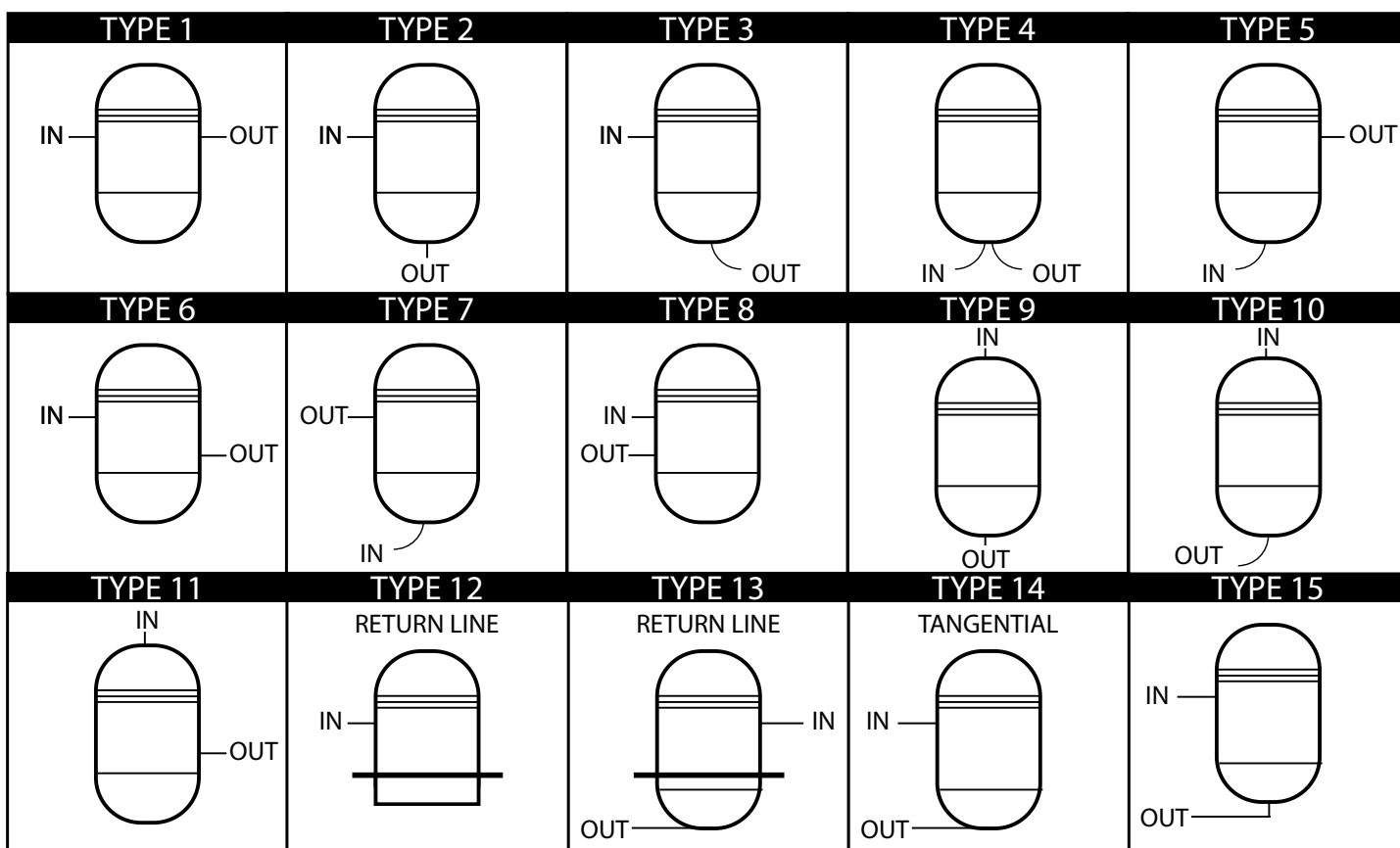
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FSPN Inlet-Outlet Configurations



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



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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.

Features

- 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



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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

BAG FILTER HOUSINGS

FSPN E-Z Open

Specifications

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



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FSPN E-Z OPEN VESSELS ~ HOW TO ORDER

FSPZ0800 A 0150 N 04 F 04 F 04 X 5 P 065 A

1 2 3 4 5 6 7 8 9 10 11 12 13 14

1 Model Number
FSPZ0800

2 Vessel Material
A = Carbon Steel
B = 304 Stainless Steel
C = 316 Stainless Steel

3 Vessel Pressure Rating (PSI)
0100, 0150
Per customer specification

4 Coating/Lining Material
N = None (Standard)
A = Electropolish
M = Prime electropolish
S = Special
X = Passivation

5 Inlet Size
(Example 4" = 04)

6 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
P = Plain pipe
S = Special
T = Plain OD Tube

7 Outlet Size
(Example 4" = 04)

8 Outlet Type
See Inlet Type for code letter

9 Nozzle Configuration
See the [nozzle configuration chart](#) (at the end of the FSPN vessel section)

10 Internal Usage
F = Fixed grate
N = Steel ring bag only (no Polyloc®)
R = Snap fit rings
S = Special
X = Machined collar for Polyloc® (Std.)

11 Lid Opening Type
5 = E-Z Open

12 Jacket Type
N = None
P = Partial
F = Full

13 Jacket Pressure Rating
065 (Standard), 100, 150
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