

SS WIRE SCREENS

Description

Fine screens are used to protect orifices and other critical components from the occasional particles that enter the fluid during installation or otherwise. They are not intended to replace normal filtration equipment, but rather to augment the protection of critical components in fluid control systems.

Four sizes of screen particle retention are offered; 10, 15, 25 and 100 microns. The stainless steel wire screens do not introduce loose particles into the fluid stream. The screens are thoroughly cleaned to prevent inadvertent introduction of contaminants.

Applications

In-line screens are suitable for use with liquids or gases compatible with the materials of construction. The screens protect critical components such as orifices from clogging or reducing flow rate.

Applications for in-line screens include protection of:

- Precision Orifices
- Pneumatic Transducers
- Gas and Liquid Flow Instruments
- Medical Devices
- Filling and Purging Systems
- Pneumatic Timers
- Transmitters
- Pneumatic Transmission Lines
- Hydraulic Controls
- Leak Test Equipment
- Flow Measurement Devices

Features

The in-line screen products are all metal; the screen material is made from fine stainless steel wire.

- Particle retention size as small as 10 microns
- Miniature fittings and screens
- Clean assemblies
- No loose fibers or particles
- Long life screen material
- Well defined flow characteristics
- Compatible with standard 10-32 and NPT fittings

General Specifications

Body Materials – Brass or 303 SS
 – Viton Seal on Type FMS

Screen Material – 304 SS

Maximum Operating Pressure
 – Brass (NPT) – 2000 psig
 – 304 SS (NPT) – 4000 psig
 – 10-32 Threads – 100 psig

Maximum Pressure Differential Across Screen (MOPD) – 100 psid

Flow – See C_v in chart on page 39

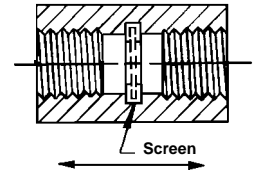
Fluids – Use with liquids or gases compatible with materials of construction

Dimensions – See drawings on page 39

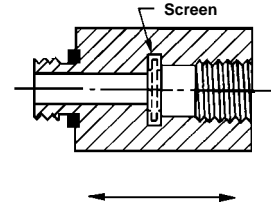
Screen Ratings – 10, 15, 25 and 100 microns
 See chart below

Construction

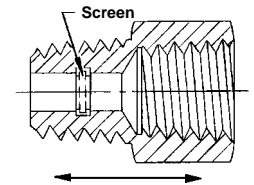
Type FFS



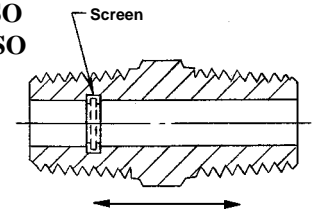
Type FMS



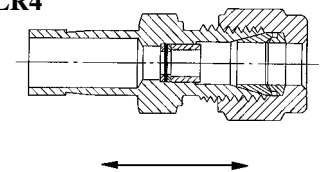
Type DSO
GSO



Type BSO
ESO



Type SLR4



Part Numbers

The part number consists of Type, Screen Size Number, and Body Material.

EXAMPLES

Type	Screen Size Number	Body Material	Part Number
FMS	2 (15 micron)	SS	FMS-2-SS
DSO	20 (100 micron)	SS	DSO-20-SS
SLR4	5 (25 micron)	SS	SLR4-5-SS
ESO	1 (10 micron)	Brass	ESO-1-BR

Screen Filter Ratings

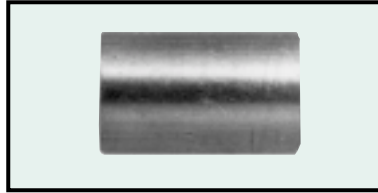
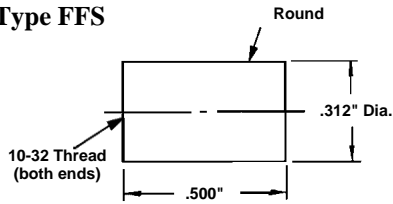
Particle Retention Micron	Inch	Screen Size Number
10	.0004	1
15	.0006	2
25	.0010	5
100	.0040	20

SS WIRE SCREENS

Dimensions

Specifications

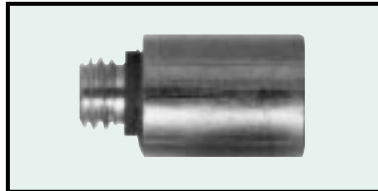
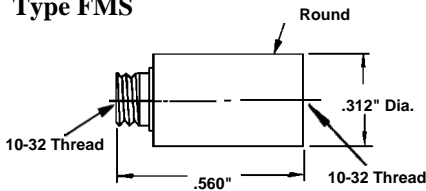
Type FFS



COUPLER

Threads – 10-32 UNF
Body – Brass or 303 SS
Screen – 304 SS
Maximum Operating Pressure – 100 psig
MOPD² – 100 psid
C_v – See chart at bottom of page

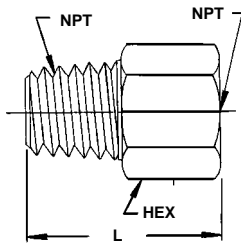
Type FMS



ADAPTER

Threads – 10-32 UNF
Body – Brass or 303 SS
Seal – Viton
Screen – 304 SS
Maximum Operating Pressure – 100 psig
MOPD² – 100 psid
C_v – See chart at bottom of page

Type DSO GSO

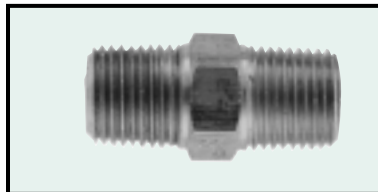
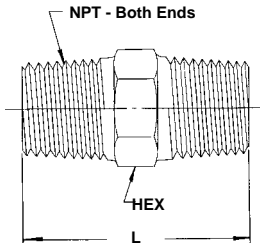


ADAPTER

Threads – See chart at left
Body – Brass or 303 SS
Screen – 304 SS
Maximum Operating Pressure –
 Brass – 2000 psig
 303 SS – 4000 psig
MOPD² – 100 psid
C_v – See chart at bottom of page

Type	Dim. L	HEX	NPT
DSO	.880"	9/16"	1/8"
GSO	1.250"	3/4"	1/4"

Type BSO ESO

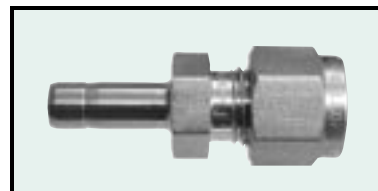
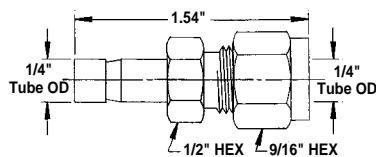


NIPPLE

Threads – See chart at left
Body – Brass or 303 SS
Screen – 304 SS
Maximum Operating Pressure –
 Brass – 2000 psig
 303 SS – 4000 psig
MOPD² – 100 psid
C_v – See chart at bottom of page

Type	Dim. L	HEX	NPT
BSO	.97	7/16"	1/8"
ESO	1.38	9/16"	1/4"

Type SLR4



TUBE CONNECTOR

1/4" OD Tubing
Body – 316 SS
Screen – 304 SS
Maximum Operating Pressure – 4000 psig
MOPD² – 100 psid
C_v – See chart at bottom of page

2. MOPD – Maximum Pressure Differential Across Screen

Recommended Screen/Orifice Sizing Chart Shows Maximum Orifice Diameter (Inch)¹

1. When used with precision orifices, it is important that the screen not have a major influence on the flow through the orifice. The recommended maximum orifice when used with a screen will have less than 1% change in the orifice flow.
 * MOD – Maximum Orifice Diameter (inch)
 ** Do not use this screen for liquid flow.

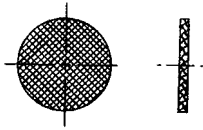
Screen Size No.	Particle Retention Micron	Inch	Types FMS, FFS, DSO, BSO, SLR4			Types ESO, GSO		
			Gas Flow MOD*	Liquid Flow MOD*	Screen C _v	Gas Flow MOD*	Liquid Flow MOD*	Screen C _v
1	10	.0004	.0064	**	.009	.011	**	.028
2	15	.0006	.0105	**	.025	.018	**	.068
5	25	.0010	.0165	**	.055	.028	**	.180
20	100	.0040	.0195	.0195	.090	.033	.033	.250

Miniature In-Line Screens

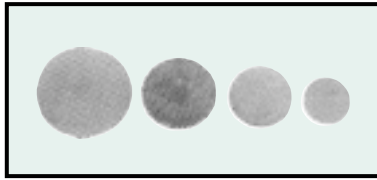
SS WIRE INSERTS

Construction

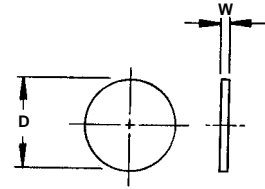
Type XS



PLAIN SCREEN

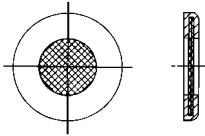


Dimensions

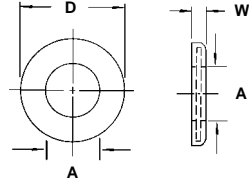
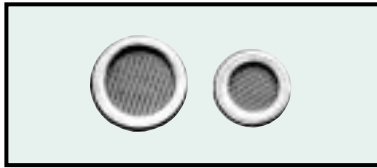


Type	D	W	Type	D	W
XSA	.211"	.005"/.010"	XSF	.375"	.005"/.010"
XSB	.254"	.005"/.010"	XSG	.500"	.005"/.010"
XSC	.312"	.005"/.010"	XSH	.750"	.005"/.010"
XSD	.165"	.005"/.010"			

Type SS

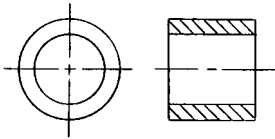


BOUND SCREEN

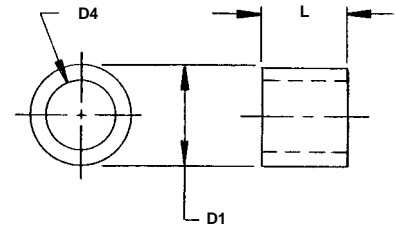
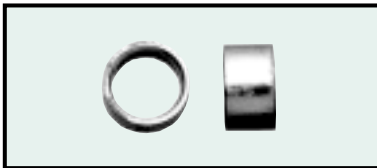


Type	D	W	A
SSB	.254"	.030"	.15"
SSC	.312"	.030"	.22"

Type PF

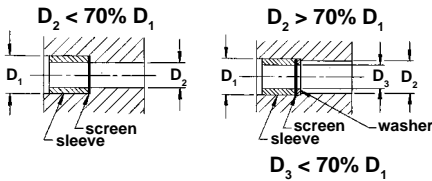


SCREEN SLEEVE



Part Number	L	D1	D4	Press Fit Bore
PFA-SS	.188"	.222"	.156"	.219/.220"
PFC-SS	.188"	.323"	.250"	.320/.321"

Installation Methods



To install a press fit sleeve for securing a screen in position, it is good practice to have the shoulder diameter D_2 less than 70% of the press fit diameter D_1 . The inner diameter of the sleeve should also be less than 70% of D_1 .

To install a screen where D_2 is greater than 70% of diameter D_1 first install a washer in which the inner diameter D_3 is less than 70% of D_1 and then secure the screen with a sleeve which has an inner diameter that is less than 70% of D_1 .

Specifications

Screen Material – 304 SS
 Screen Construction – Wire Mesh
 Maximum Operating Pressure
 Differential Across Screen – 100 psid
 Fluid Media – Air, Water, Gases and Liquids compatible with 304 SS
 Sleeve Material – 303 SS

Screen Micron Rating

Particle Retention Micron	Inch	Designation In Part Number
10	.0004	1
15	.0006	2
25	.0010	5
100	.0040	20

Part Numbers

Screens – Screen part numbers consist of type and micron designation.

EXAMPLES

Type	Micron Designation
XSC (Plain Screen)	2 (15 micron)
SSB (Bound Screen)	20 (100 micron)

Sleeves – Part numbers for sleeves are listed above for Type PF.

SS WIRE SCREENS

Description

Fine screen breathers provide an air passage into equipment, enclosures, and pneumatic controls while preventing the ingestion of solid particles. Miniature fine screen breathers are rated at 10, 15, 25 or 100 microns and are available in either brass or stainless steel fittings. Connection sizes are 10-32, 1/8" or 1/4" NPT.

Applications

The fine screen breathers are used where there is a requirement to insure that only clean fluid enters into a component or system. Typical applications include:

- Equipment enclosures
- Vented control components
- Small 3- or 4-way valves
- Small 2-way vacuum valves
- Air purge equipment
- EMI or RFI shield

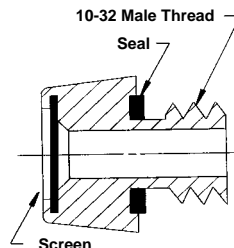
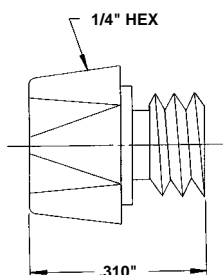
Specifications

- **Materials**
Body – Brass or 303 SS
Screen – 304 SS
Seals – Viton (10-32 only)
- **Maximum Operating Pressure**
Brass (NPT) – 2000 psig
303 SS (NPT) – 4000 psig
10-32 threads – 100 psig
- **Maximum Pressure Differential Across Screen** – 100 psid
- **Flow** – See C_v data in chart at right.
- **Fluids** – Use with liquids or gases compatible with materials of construction.
- **Dimensions** – See drawings this page.

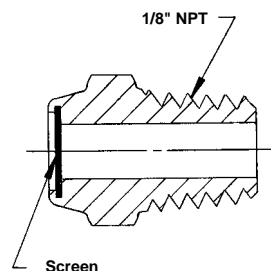
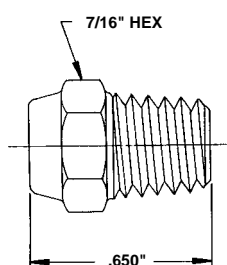
Ordering Information

- Select the part number from the chart at right.
- Indicate quantity and part number on order.

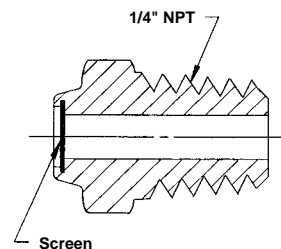
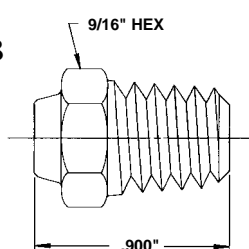
Type
QSB



Type
BMB



Type
EMB



Part Numbers – Breathers

Filter Rating (Microns)	Connection Size	Part Number		Flow C_v
		Brass	Stainless Steel	
10	10-32	QSB-1-BR	QSB-1-SS	.009
15	10-32	QSB-2-BR	QSB-2-SS	.025
25	10-32	QSB-5-BR	QSB-5-SS	.055
100	10-32	QSB-20-BR	QSB-20-SS	.090
10	1/8" NPT	BMB-1-BR	BMB-1-SS	.009
15	1/8" NPT	BMB-2-BR	BMB-2-SS	.025
25	1/8" NPT	BMB-5-BR	BMB-5-SS	.055
100	1/8" NPT	BMB-20-BR	BMB-20-SS	.090
10	1/4" NPT	EMB-1-BR	EMB-1-SS	.028
15	1/4" NPT	EMB-2-BR	EMB-2-SS	.068
25	1/4" NPT	EMB-5-BR	EMB-5-SS	.180
100	1/4" NPT	EMB-20-BR	EMB-20-SS	.250