



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



12S Series

High Pressure Filters



ENGINEERING YOUR SUCCESS.

12S Series

Applications

- Offshore – High pressure and aggressive environment
- DI Water – Water fogging
- Food Processing – Caustic washdown (poultry, etc.)
- Test Stands – High pressure

Feature	Advantage	Benefit
Lightweight	Ease of service and installation	Reduced installation cost
Porting	Flexibility	Reduction in piping and use of adaptors
Multipass tested elements (per ANSI/NFPA T3.10.8.8 R1-1990)	Filter performance backed by recognized and accepted laboratory test standards	Filters you select have known performance levels
Optional visual and electrical indicators	Know exactly when to service elements	Keeps system clean
Drain port	Drain all oil from assembly prior to servicing	Eliminates cross contamination
Optional upstream & downstream sensing ports	Add additional instrumentation	Product flexibility
High strength Microglass III elements	2000 psid collapse strength Multi-layer media Wire reinforced pleats	High capacity with high efficiency No performance loss from pleat bunching
100% pressure tested	Quality	Reliability

12S Series

Specifications

12SMP (10,000 psi)

Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP): 10,000 psi (690 bar)
 Proof: 15,000 psi (1035 bar)

Operating Temperatures:

Fluorocarbon (FKM) -15°F (-26°C) to 275°F (-135°C)
 Ethylene Propylene (EPR) -40°F (-40°C) to 225°F (-107°C)
 Perfluoroelastomer (FFKM) 5°F (-15°C) to 536°F (280°C)*

* Consult factory when requesting this seal. A special element may be required to withstand operating temperature.

Element Collapsing Rate:

High Collapse "H" option: 2,000 psi (138 bar)

Materials:

Head: Stainless Steel 316L
 Bowl: Stainless Steel 316L

Weight (approximate):

Model	Single Length	Double Length
12SMP	14 lbs. (6.35 kg.)	17 lbs. (7.71 kg.)

12SHP (20,000 psi)

Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP): 20,000 psi (1,380 bar)
 Proof: 30,000 psi (2,070 bar)

Operating Temperatures:

Fluorocarbon (FKM) -15°F (-26°C) to 275°F (-135°C)
 Ethylene Propylene (EPR) -40°F (-40°C) to 225°F (-107°C)
 Perfluoroelastomer (FFKM) 5°F (-15°C) to 536°F (-280°C)*

* Consult factory when requesting this seal. A special element may be required to withstand operating temperature.

Element Collapsing Rate:

High Collapse "H" option: 2,000 psi (138 bar)

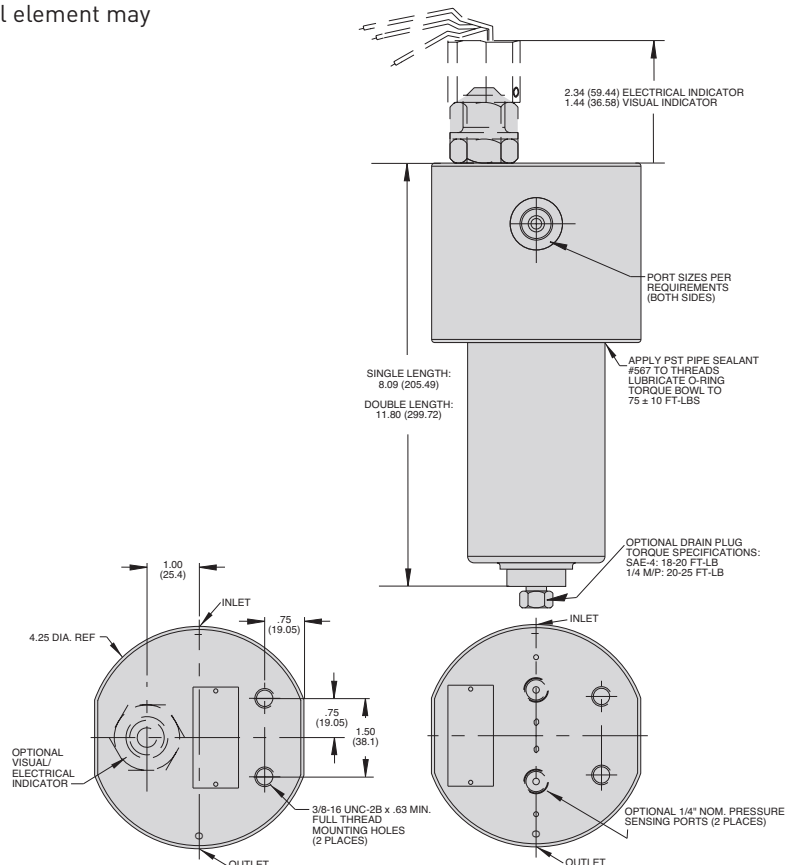
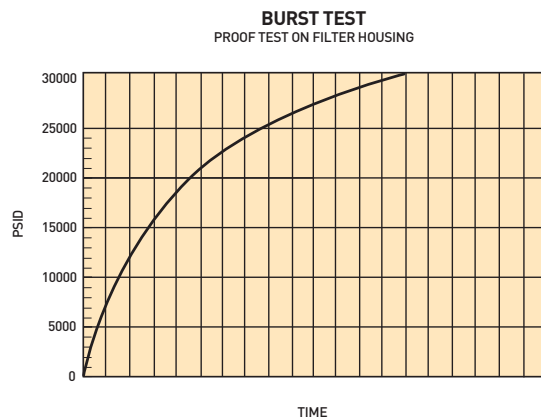
Materials:

Head: Stainless Steel 17-4
 Bowl: Stainless Steel 17-4

Weight (approximate):

Model	Single Length	Double Length
12SHP	14 lbs. (6.35 kg.)	17 lbs. (7.71 kg.)

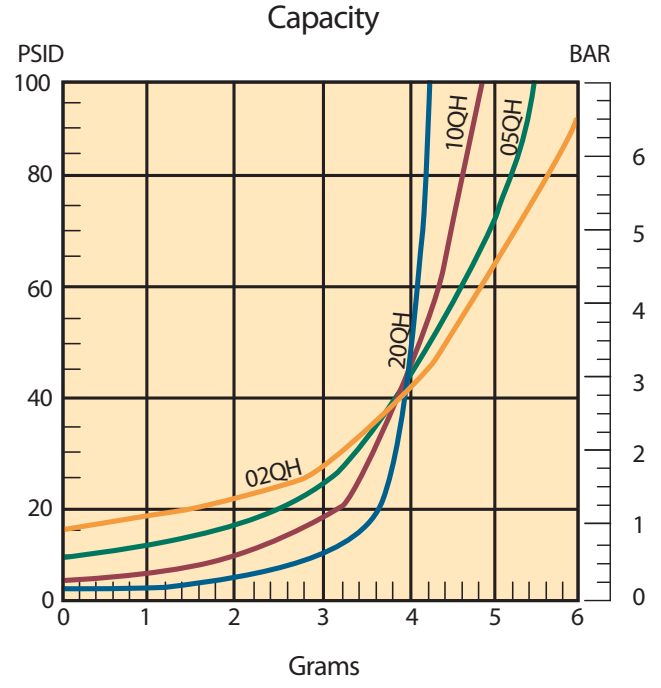
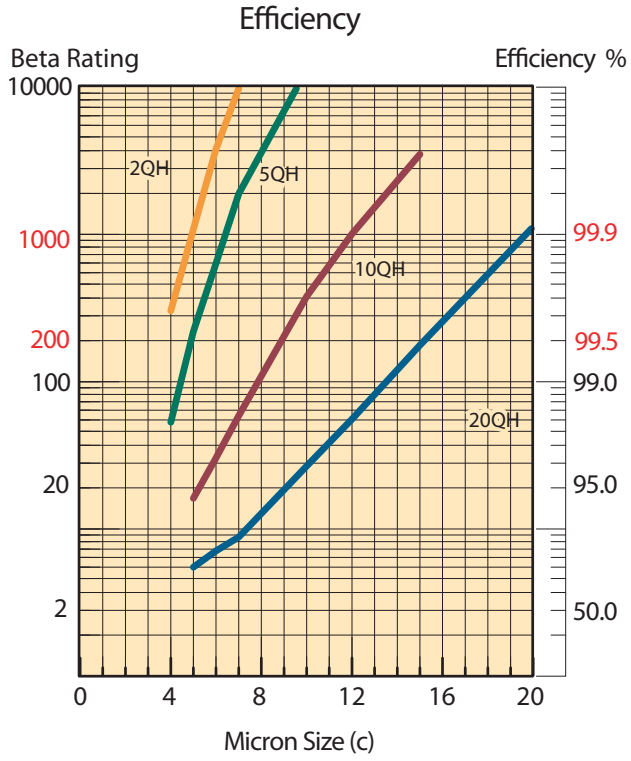
Dimensions



Drawings are for reference only.
 Contact factory for current version.

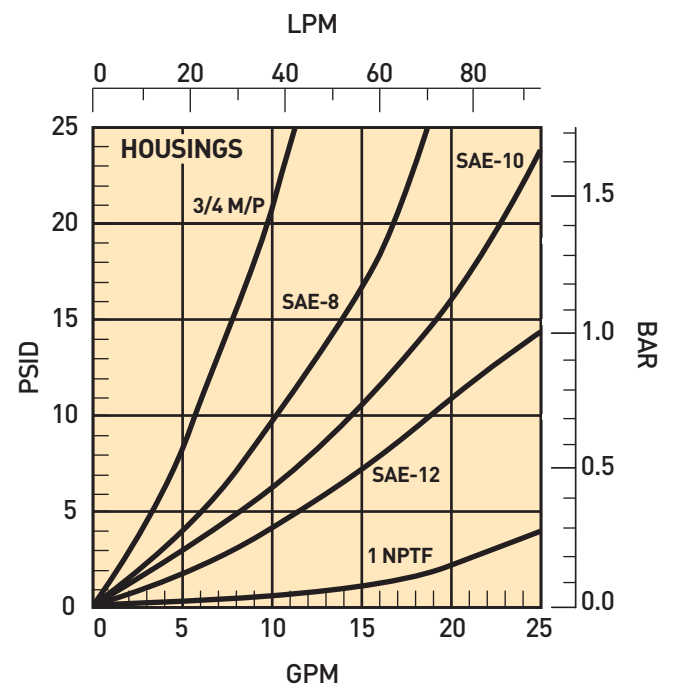
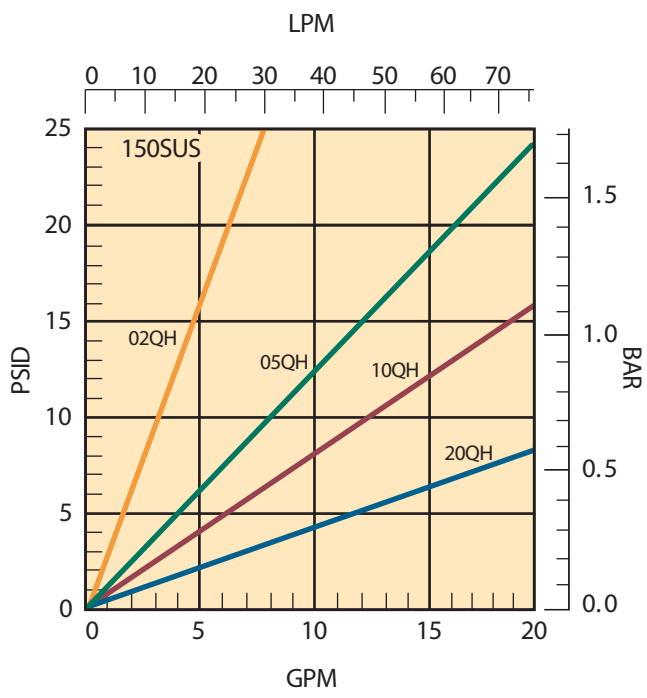
12S Series

12S-1 Element Performance



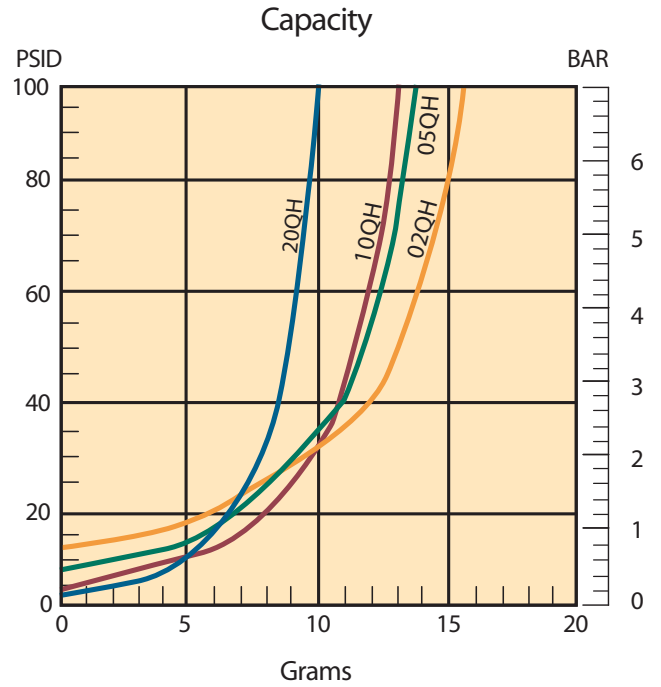
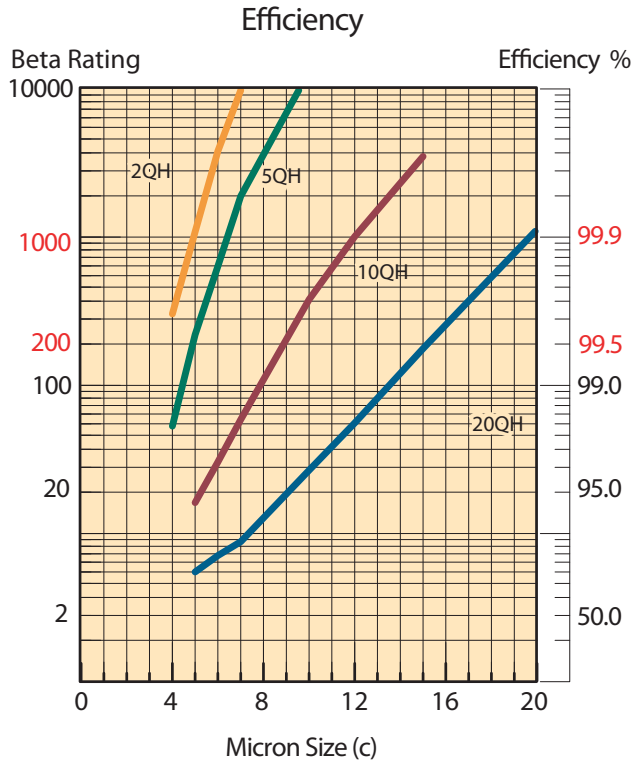
Multipass tests run @ 10 gpm to 100 psid terminal - 5mg/L BUGL

Flow vs. Pressure Loss



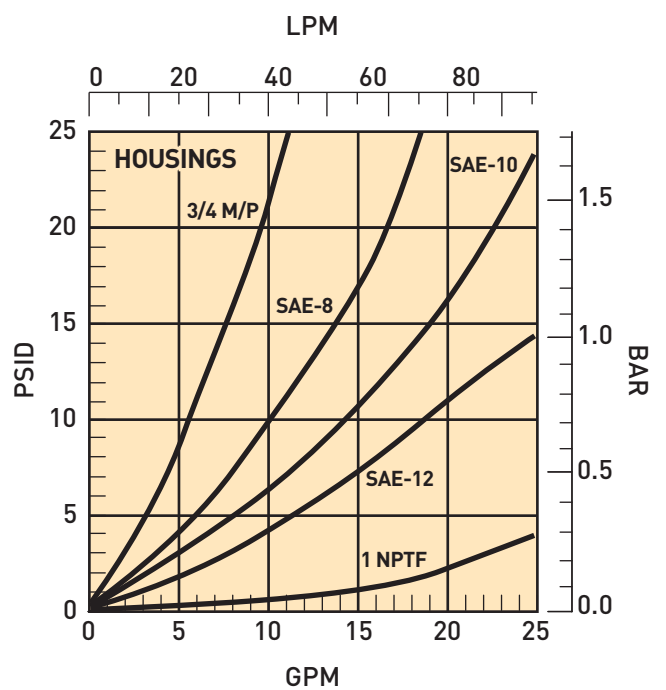
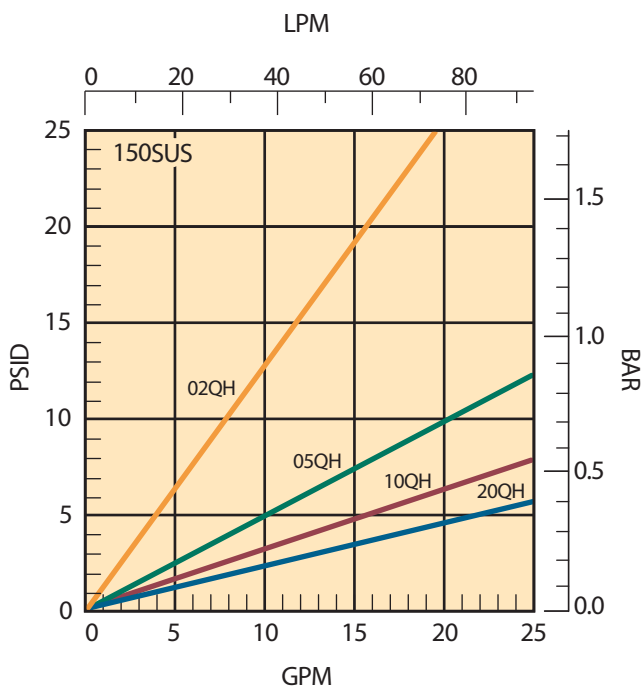
12S Series

12S-2 Element Performance



Multipass tests run @ 15 gpm to 100 psid terminal - 5mg/L BUGL

Flow vs. Pressure Loss



12S Series

How to Order

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
12SHP	1	10QH	V	SP	HP	10	11

BOX 1: Basic Assembly	
Symbol	Description
12SMP	10,000 psi MAOP (316 S.S.)
12SHP	20,000 psi MAOP (17-4 S.S.)

BOX 2: Length	
Symbol	Description
1	Single
2	Double

BOX 3: Element Media	
Symbol	Description
20QH	20µm Microglass III, 2000 psid collapse
10QH	10µm Microglass III, 2000 psid collapse
05QH	5µm Microglass III, 2000 psid collapse
02QH	2µm Microglass III, 2000 psid collapse

BOX 4: Seals	
Symbol	Description
V	Fluorocarbon (FKM)
E ¹	Ethylene Propylene (EPR)
P	Perfluorocarbon (FFKM)

Note: 1.Recomended for DI Water applications

BOX 5: Indicator	
Symbol	Description
N	No Indicator, no pressure port
SP ¹	1/4" pressure ports only
4L35 ²	Visual manual reset, 50 psid setting
5T35 ²	Electrical (DIN 43650-A/ISO 4400), 50 psid setting

Note: 1.Pressure ports will match port type selected in BOX 6
2.Available for operating pressure <10,000 psi only

BOX 6: Port Type ¹	
Symbol	Description
S ²	SAE O-ring port
N ³	NPTF port
MP	Medium pressure Autoclave (M/P) type port
HP	High pressure Autoclave (H/P) type port

Notes: 1. For other options, please contact HFD
2. Available for operating pressure <6,000 psi only
3. Available for operating pressure <10,000 psi only

BOX 7: Port Size	
Symbol	Description (Port Type Options)
4	1/4" Nominal (N, MP)
6	3/8" Nominal (N, MP)
8	1/2" Nominal (N)
10	9/16" Nominal (MP, HP)
12	3/4" Nominal (S,N)
16	1" Nominal (S,N)

BOX 8: Options	
Symbol	Description
1	Bypass (60 psid)
11	No Bypass (standard)
19 ¹	Bypass with 1/4" drian port
21 ¹	No bypass with 1/4" drain port

Note: 1.Drain port will be SAE or M/P Autoclave plug as required. Plug is included.

REPLACEMENT ELEMENTS

	Media	Microglass III (Fluorocarbon)		Microglass III (Ethylene Propylene -EPR)	
		Single	Double	12SMP-1 / 12SHP-1	12SMP-2 / 12SHP-2
No-Bypass	20QH	403400	403404	403485	403488
	10QH	403399	403403	403484	403487
	05QH	403398	403402	403483	403486
	02QH	403397	403401	403482	403417
Bypass	20QH	937442	937446	937474	937478
	10QH	937441	937445	937473	937477
	05QH	937440	937444	937472	937476
	02QH	937439	937443	937471	937475