



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)

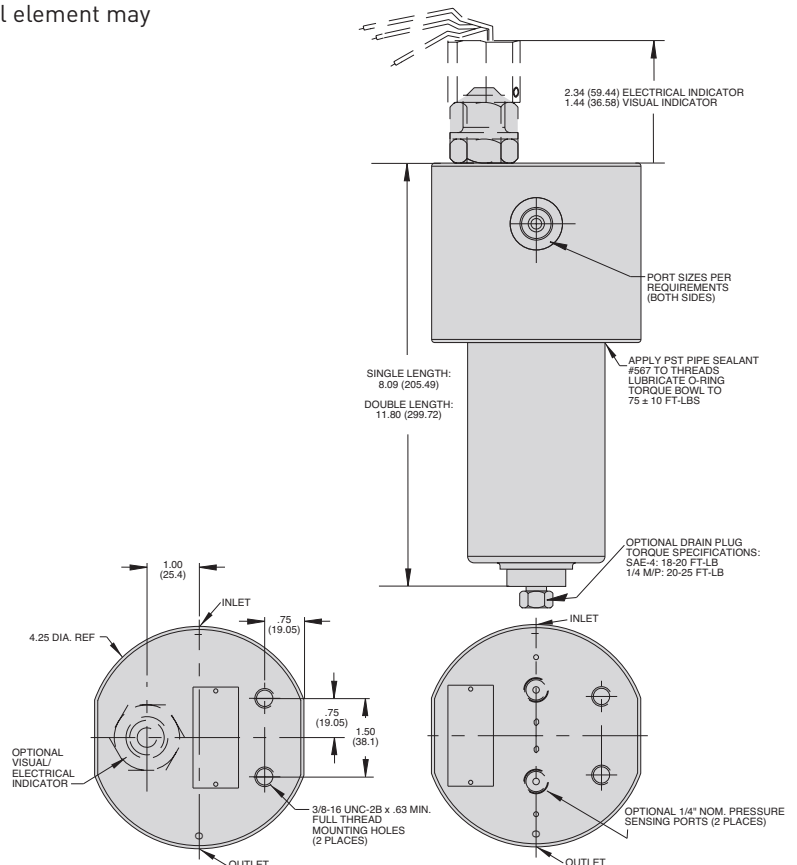
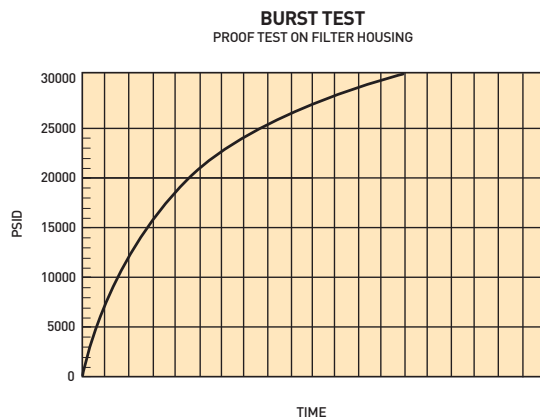
Materials:

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.) |

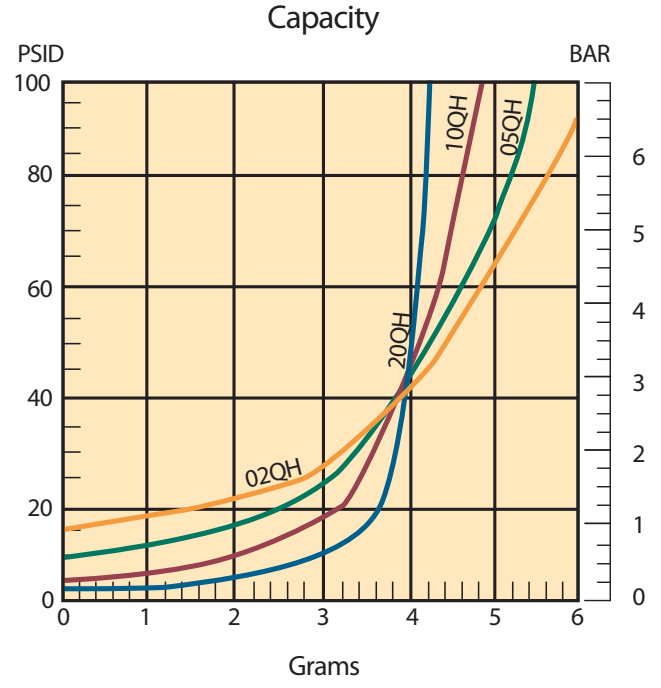
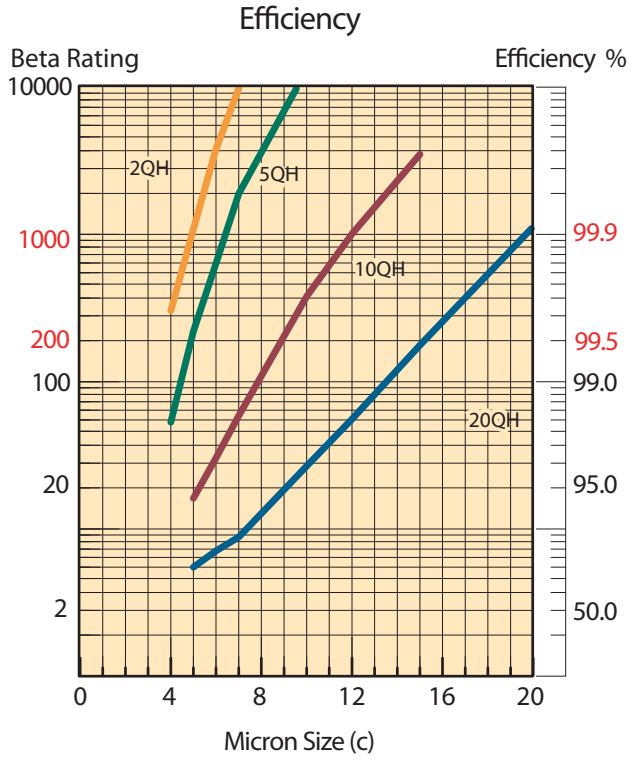
Dimensions



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

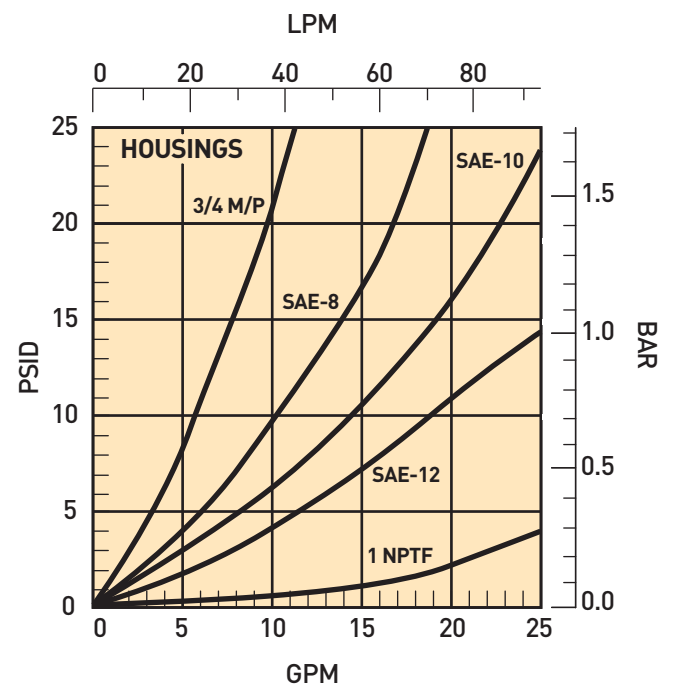
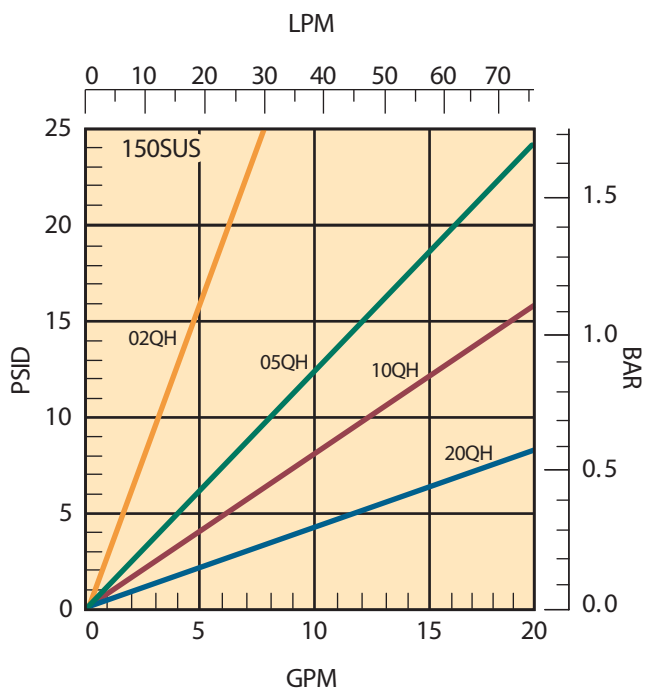
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12S-1 Element Performance



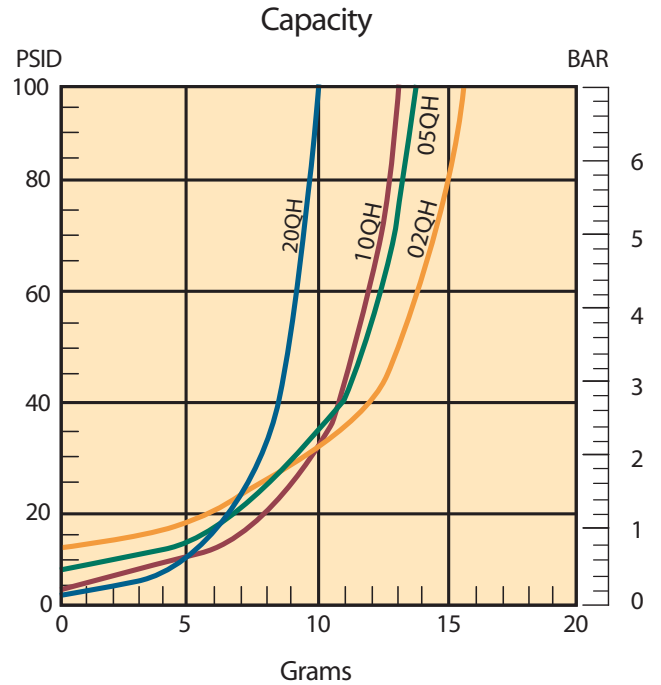
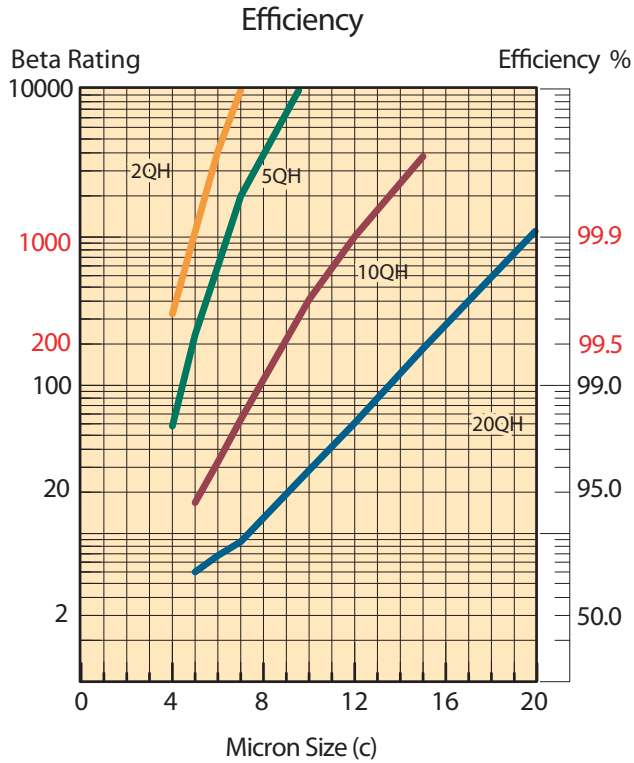
Multipass tests run @ 10 gpm to 100 psid terminal - 5mg/L BUGL

Flow vs. Pressure Loss



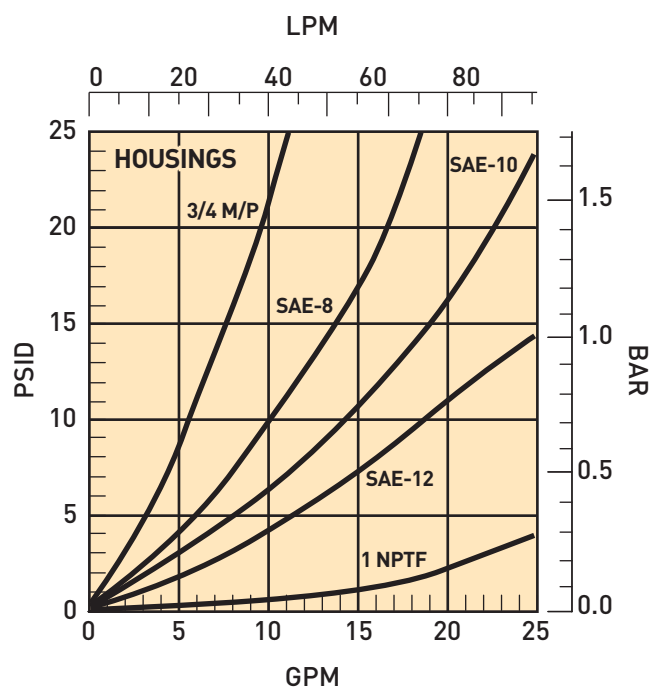
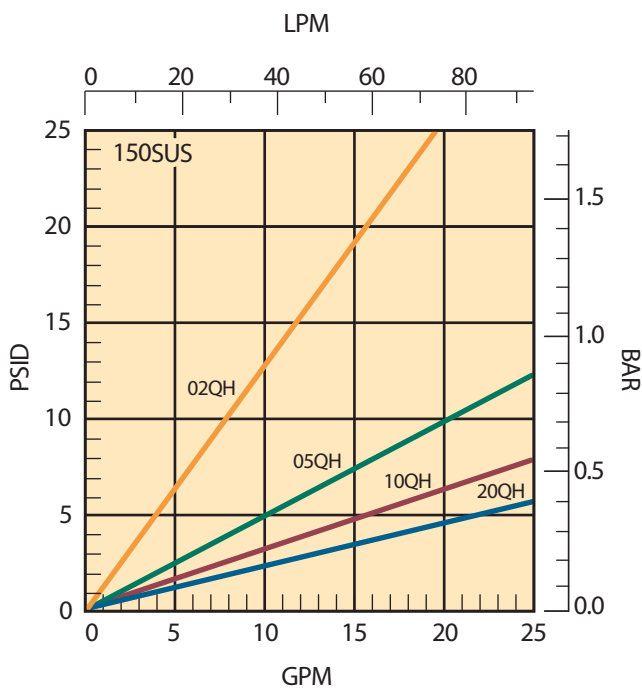
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12S-2 Element Performance



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 |
| | | | | | |