



High Pressure Filter Assemblies



- Up to 20,000 PSI (1378 bar)
- All stainless steel construction
- Stainless steel metal felt filter elements



High Pressure T-Type Filter Assemblies

- Greater service life than other filter materials
- Easy to clean to restore original performance
- High particle removal efficiency with low flow resistance
- Ability of filter elements to withstand differential pressure of 4,500 PSID (310 bar)
- Exceptionally high surface area filter elements
- All stainless steel construction; standard 304 stainless steel. (316, 17-4PH, Hastelloy® and others are available)
- Four standard sizes
- Up to 20,000 PSI (1378 bar) operating pressures
- Δp and mounting hardware available
- Available with and without internal bypass
- Flow rates up to 120 gpm (454 l/min)
- Temperatures from -100°F to 500°F (-73°C to 260°C) with appropriate seals

The Filter of Choice for Extreme Environments



High pressure filter assemblies from Swift-JB International have been proven for over 25 years in applications in the extreme environments of the offshore oil/subsea industry. The all stainless steel housing and stainless steel metal felt filter elements offer clear advantages over other filter assemblies for demanding applications.

- longer service life
- easy cleanability
- high particle removal with low flow resistance

Hastelloy is a registered trademark of Haynes International, Inc.

Applications for High Pressure T-Type Filters

Swift-JB International filters are designed to perform over a wide spectrum of industrial and chemical applications where precise and reliable filtration is critical within an operating pressure range of 0 - 20,000 PSI (1378 bar).



These highly versatile filters are used in:

OIL/GAS

Topside, Subsea, Land-Based

CHEMICAL PROCESS

Viscous Fluids, Corrosive Fluids,
High & Low Temperature Fluids

HYDRAULICS

Aerospace & Defense, Mobile & Marine,
Industrial

POWER GENERATION

Fuel Processing, Demineralizer Protection,
Gas Purification, Gas Filtration

AUTOMOTIVE

Viscous Fluids



Accessories Available

A wide range of accessories is available to make these filters more versatile.

Differential Pressure Gauge—provides a direct reading of pressure drop for constant monitoring in the range of 0 - 250 PSID (17.24 bar)

Bypass Relief Valve—allows fluid to bypass the filter element when the element is clogged and restricting flow. Normal relief pressure is 500 PSID (34.47 bar) differential with other settings available on special order.

Differential Pressure Indicator—visual and electrical indication when the filter element needs cleaning.



Differential Pressure Gauge



Bypass Relief Valve



High Pressure Four-2-One™ Metal Felt Filter Elements

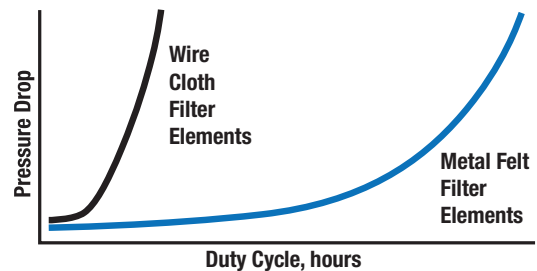
- Four times the dirt-holding capacity*
- Long service life
- Minimal resistance to flow (low pressure drop)
- High strength
- Cleanable

SWIFTFELT™ filter media (random metal fiber) filtration is at the core of Swift-JB International high pressure elements. Random metal felt provides high quality filtration technology below 60 microns. It provides absolute particle retention, very long life and exceptionally high dirt-holding capacity.

Compared to other filter media such as wire cloth, sintered metal and non-metallic filters, SWIFTFELT media provides up to a fourfold advantage.

Although more expensive, random metal felt offers clear advantages over other media. Its high temperature, high pressure and corrosion resistance, combined with almost unending cleanability, makes it highly economical for hostile environments.

SWIFTFELT™ metal felt filter media is made with thin filaments of nonwoven stainless steel. These porous felt filter elements are also ideal for highly corrosive or highly viscous applications. They feature extremely high porosity (up to 85%), high flow rates (up to 20 times higher than other media types), and very long on-stream life.



- Filtration ratings are:
 - for liquids — 1 to 80 μm
 - for air & gases — below 0.1 μm is possible
- Temperature ratings up to 500° F (260° C)**
- Highly chemical-resistant

* Compared to other filter media of the same micron rating ** Limited by seal selection

SWIFTLOC™ Construction

These elements are constructed using the SWIFTLOC™ process with a mechanical lock that leaves no heat history, which means no tendency to carbonize in high temperature applications or during severe cleaning procedures — a problem of earlier manufacturing techniques. The SWIFTLOC assembly process employs a compression joint, permanently clamping the pleated cylinder to the end fittings.

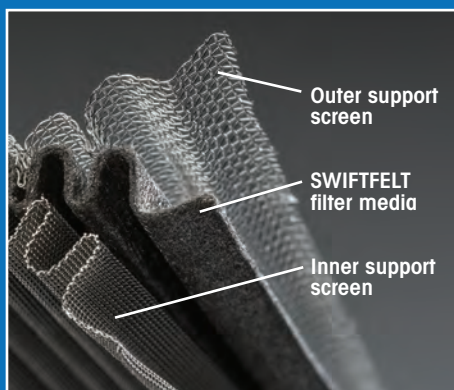
SWIFFELT™ metal felt filter elements have a random matrix of 316L stainless steel filaments with diameters from 4 to 25 microns. The finer the micron, the more open area is provided in a pure crosshatch pattern. When sinter bonded, this random matrix can provide:

- **Extreme high porosity** (up to 85%)
 - high flow rates: up to 20 times higher than other media types
 - long on-stream lifetime
 - excellent flow distribution
- **Low pressure drop:** The high porosity of our metal fiber media allows a very low pressure drop (and thus lower energy cost), even at high filtration velocities
- **High strength:** The sintering process creates strong fiber bonds and guarantees a high strength filter medium. Combined with an appropriate inner core, our filter elements can withstand thermal shock and high differential pressures, up to 4500 PSID (310 bar).
- **Heat and corrosion resistance:** Our filter media can be used in high temperature (up to 500° F) and in corrosive fluid applications
- **Can be used for surface or depth filtration:** Our filter media enables you to achieve high efficiencies through a cake build-up (surface filtration) and also offer high dirt holding capacity for depth particles capture (depth filtration)

- **Stainless steel and other alloys available:** not brittle, chemical cleaning is possible, weldable, low thermal expansion, maintains structure (no thermal shock). Depending on the performance you require, we select the proper alloy to provide the required resistance and strength

A Cleanable Element

SWIFFELT elements can be cleaned and re-used. Ultrasonic, solvent or high temperature methods can all be used and are selected based on element service conditions.



Compatible with

- High temperature fluids
- High viscous fluids
- Corrosive fluids
- Foods, drugs, beverages
- Polymer and monomers
- Gases



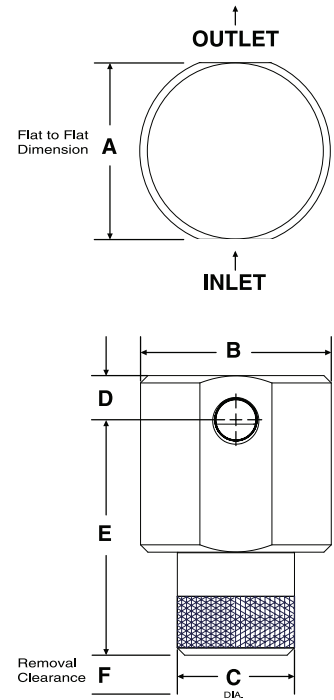
Dimensional & Pressure Drop Data

Reference Dimensions (Inches)

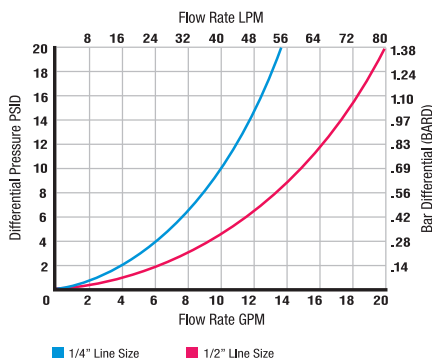
FJV Series	Line Size (NPT) [†]	A	B DIA.	C MAX.	D MAX.	E MAX.	F	Weight in lbs (304 SS)	Bowl Length
FJV-3	1/4"	3.00"	3.25"	2.00"	.750"	4.00"	0.68"	10	Standard
	1/2"	3.00"	3.25"	2.00"	.750"	10.75"	7.68"	12	Extended
FJV-3N	1/4"	3.13"	3.49"	3.13"	.750"	4.75"	0.75"	10	Standard
	1/2"	3.13"	3.49"	3.13"	.750"	10.75"	7.68"	10	Standard
FJV-4	3/4"	4.50"	5.00"	3.00"	1.20"	6.00"	2.10"	25	Standard
	1"	4.50"	5.00"	3.00"	1.20"	11.30"	7.60"	32	Extended
FJV-5	1-1/2"	6.00"	7.00"	4.00"	2.00"	8.25"	3.60"	55	Standard
	2"	6.00"	7.00"	4.00"	2.00"	12.12"	7.40"	62	Extended
FJV-5N	1-1/2"	6.00"	7.00"	4.50"	2.00"	8.25"	3.60"	60	Standard
	2"	6.00"	7.00"	4.50"	2.00"	12.12"	7.40"	67	Extended
FJV-8*	3/4"	3.00"	3.25"	2.50"	.875"	19.00"	15.00"	18	Standard
	1"	3.00"	3.25"	2.50"	.875"	19.00"	15.00"	18	Standard

* Technical data not listed, consult factory for more information.

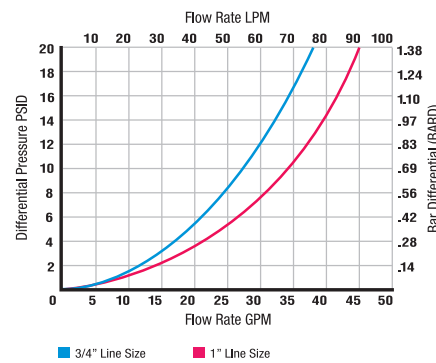
† Other line sizes available, consult factory.



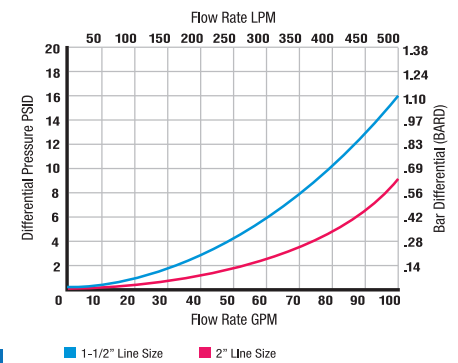
FJV-3 Series Housing



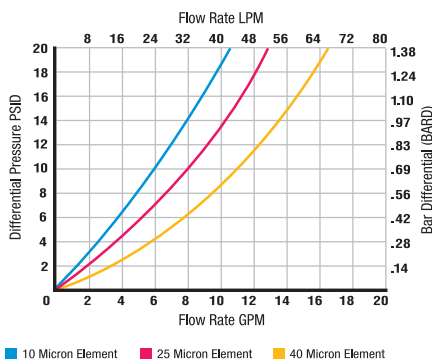
FJV-4 Series Housing



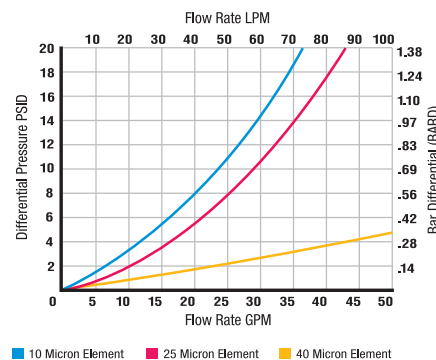
FJV-5 Series Housing



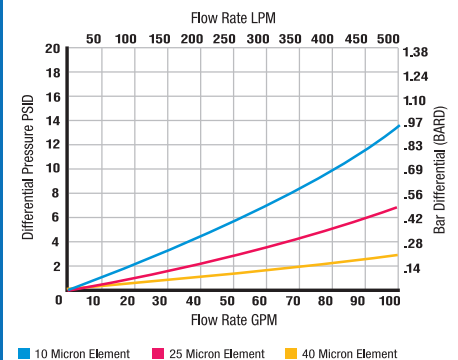
FJE-3 Series Element



FJE-4 Series Element



FJE-5 Series Element

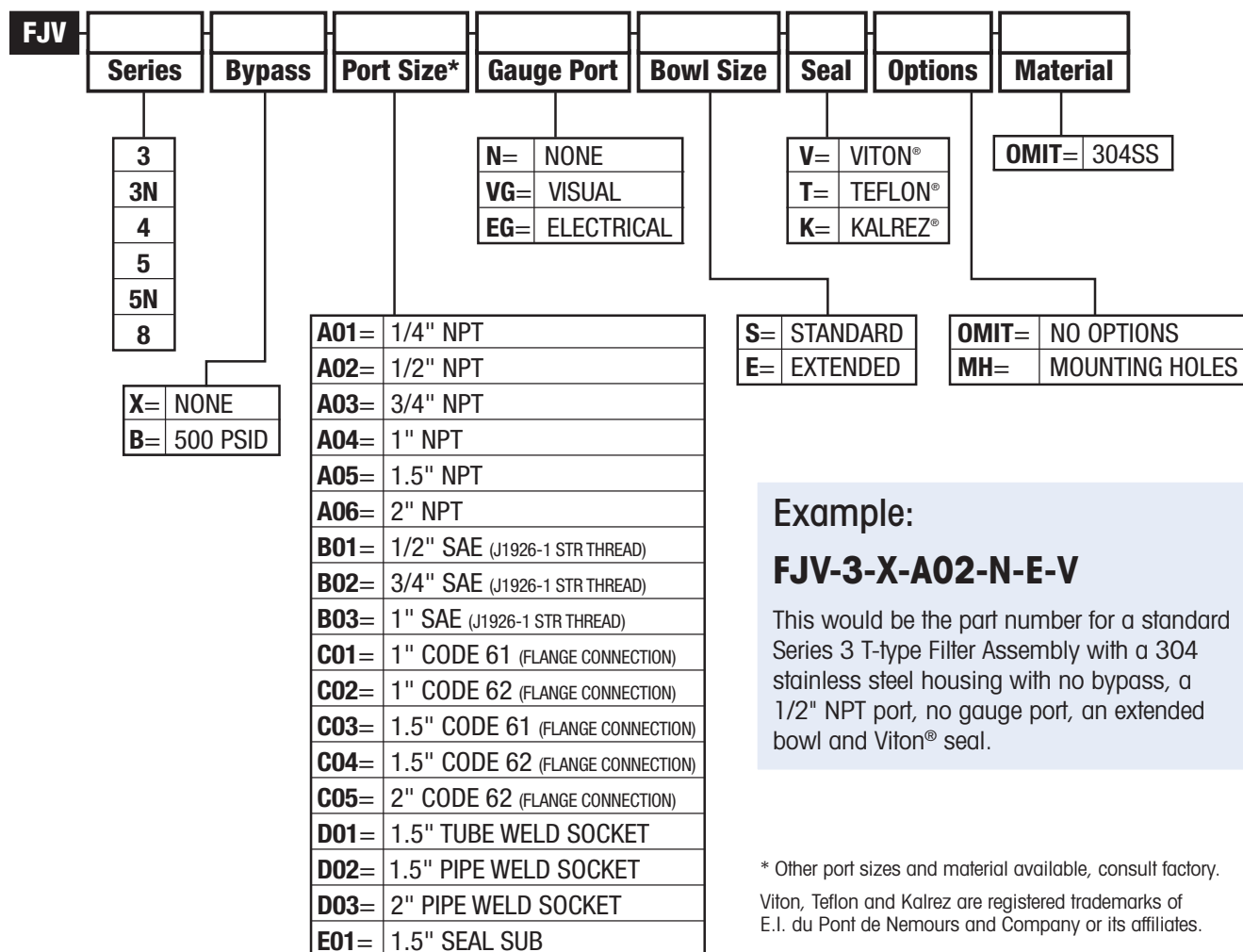


Notes: Pressure drop through a complete filter assembly is comprised of housing loss plus filter element loss. Total pressure drop at a given flow rate with a given fluid may be determined by taking pressure drop from "Housing Only" chart, making any needed corrections for specific gravity, and adding the value to the pressure drop found on the "Element Only" chart.

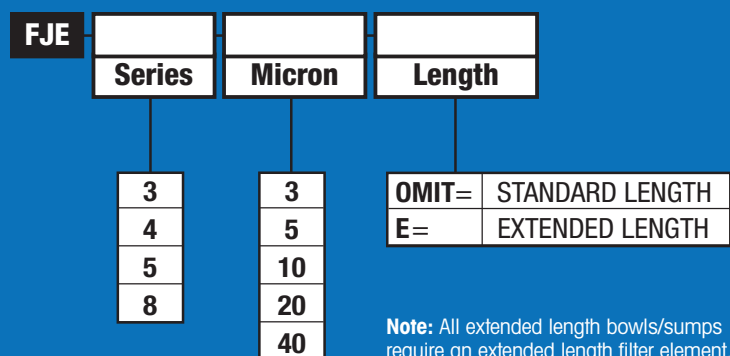
"Housing Only" chart based on fluid with specific gravity of 1.0. For other fluids, multiply pressure drop by the specific gravity of the fluid.

"Element Only" chart based on fluid with an absolute viscosity of 10 centipoise. For other fluids, multiply pressure drop by the absolute viscosity in centipoise and divide by 10.

Ordering Information for Standard High Pressure T-Type Filter Assemblies



Ordering Information for High Pressure Filter Elements



Example:

FJE-3-10E

This would be the part number for a Metal Felt Filter Element made with 316L stainless steel filament with 10 micron media to fit a Series 3 T-type Housing with an extended length bowl.



New manufacturing facility. Swift Filters holds
ISO 9001:2008 with Design Certification.
Swift-JB International, LLC is a division
of Swift Filters, Inc.



www.swift-jbinternational.com

4560 Kendrick Plaza Dr., Suite 140
Houston, TX 77032
Tel 281.227.0298
Fax 281.227.0299
Email info@swift-jbinternational.com

www.swiftfilters.com

24040 Forbes Road, Oakwood Village, OH 44146
Tel 440.735.0995 **Fax** 440.735.0996
Email info@swiftfilters.com
Toll Free 1.877.88SWIFT
(1.877.887.9438)



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