



Heated Particulate Filters

Auto/Diesel Stack Petrochemical Process Monitoring
Available in a variety of sizes and configurations

Atmo-Seal Engineering, Inc.^(tm) manufactures heated filters for use in gas and diesel sampling to remove unwanted particulate before it enters your analyzer. Our typical operating range is 500 F (250 C) but ranges in excess of **1000 F** are available.



Heated Emissions Filters

- Choice of AC 50-60 HZ or DC operation in a wide range of voltages
- Choice of Thermocouple, RTD, Internal Thermostat or other sensors
- Housings are available for common filter element sizes (1X7, 1X2.5, 1/2 x2.25, 1/2 x 1 inches)
- Made with high-temp phenolics to provide the best thermal isolation in the industry
- Tube ports and the filter housing may be easily removed or replaced by the user
- Easily disassembled and repaired in situ if needed
- Filter element may be changed easily by the user in seconds

Tough and Adaptable

At Atmo-Seal, Inc. we know how dangerous life can be for equipment in a test cell. We kept that in mind when designing our heated filters.

Our housing exteriors are constructed of high-temperature phenolics and rugged aluminum exteriors. All wetted parts are stainless steel and seals are either Viton^(tm), Teflon^(tm), Kalrez^(tm), Silicone or other materials.

Another unique advantage of our design is the easy removal and replacement of the filter housing and the port fittings. The entire filter assembly may be removed from the heater in seconds, allowing for quick repairs in the field. Port sizes and types are easily changed as well.

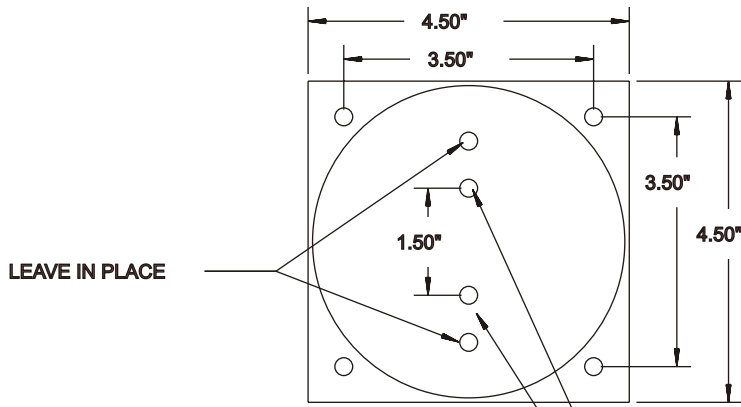
We also offer exotic coatings such as Sulfinert^(tm), SilcoNert^(tm), Teflon^(tm), chemical passivation and electro-polishing.

Our filters carry a full 24 month limited warranty.

Options

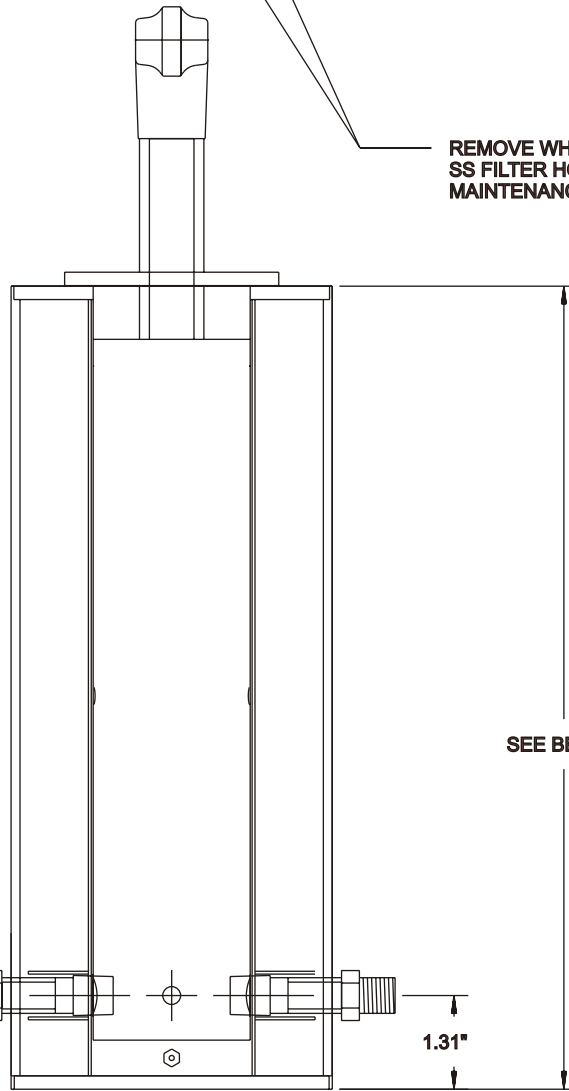
As always, Atmo-Seal, Inc., will customize your filter to your exacting specifications WITHOUT jeopardizing your delivery schedule.

"Timely Quality" It's more than just a saying at Atmo-Seal, Inc., it's our success, and yours.



LEAVE IN PLACE

REMOVE WHEN EXTRACTING
SS FILTER HOUSING FOR
MAINTENANCE

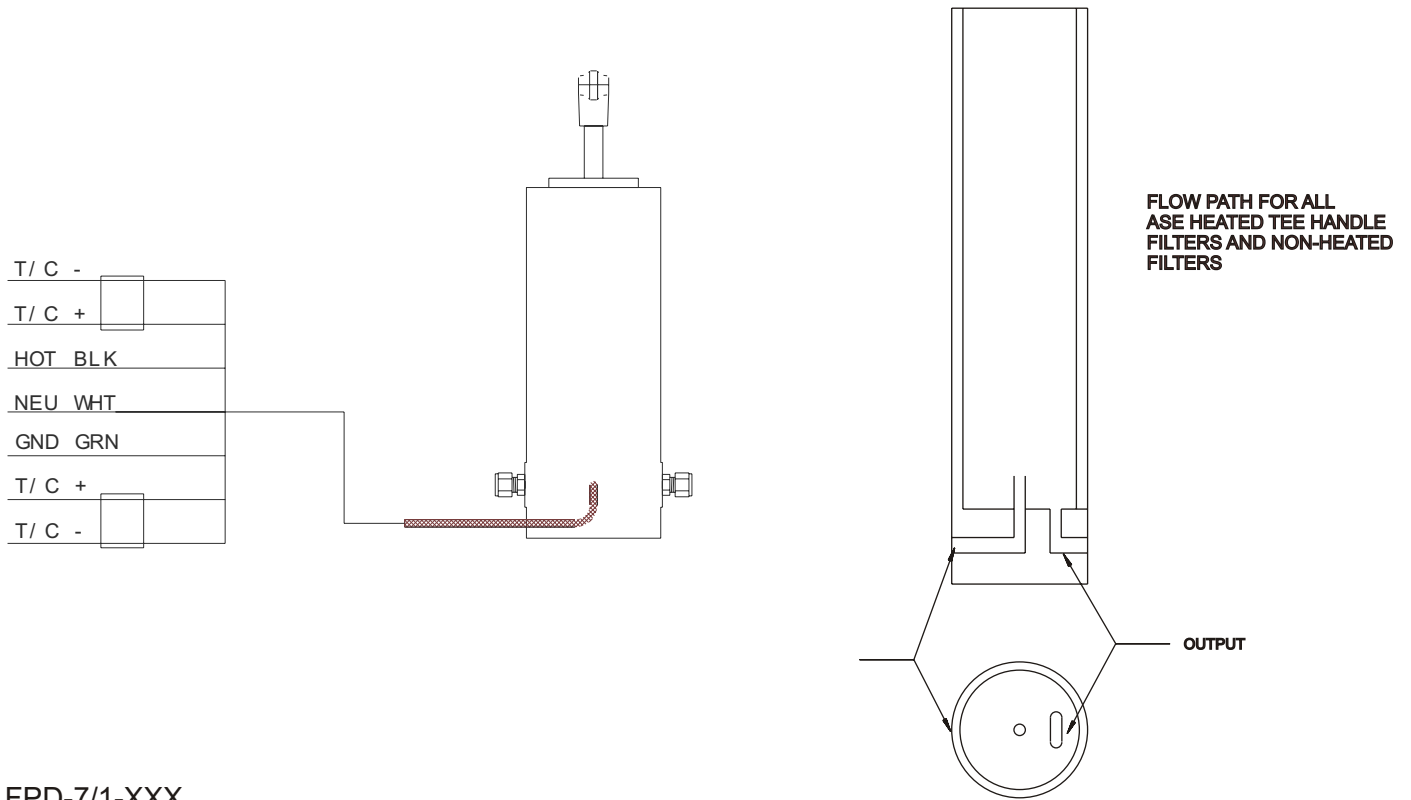


WHEN EXTRACTING SS
FILTER HOUSING FOR
MAINTENANCE

FILTER HEIGHT
FPD-7/1 - 11.25"
FPD-2.5/1 - 7.00"

FPD-SERIES HEATED FILTER HOUSING
FOR 7" LONG FILTER ELEMENTS
P/N FPD-X-7/1-XXX
FOR 2-1/2" LONG FILTER ELEMENTS
FPD-X-2.5/1-XXX





FPD-7/1-XXX
 250 WATTS (VA)
 CHOICE OF 120 OR 240 VAC OPERATION
 THERMOCOUPLE/SENSOR TYPE DETERMINED BY CUSTOMER
 PORT TYPE/SIZE SELECTED BY CUSTOMER

DEVICE REQUIRES A TEMPERATURE CONTROLLER WITH A MINIMUM, FUSED OUTPUT OF 3 AMPS AT 120 VAC. PID OPERATION CONTROLLERS ARE PREFERRED.
 USE REPLACEMENT FILTER ELEMENT EPT-7/1 (SEE CHART "REPLACEMENT FILTER ELEMENTS" FOR OTHER OPTIONAL FILTER ELEMENTS.

FPD-2.5/1-XXX
 200 WATTS (VA)
 CHOICE OF 120 OR 240 VAC OPERATION
 THERMOCOUPLE/SENSOR TYPE DETERMINED BY CUSTOMER
 PORT TYPE/SIZE SELECTED BY CUSTOMER

DEVICE REQUIRES A TEMPERATURE CONTROLLER WITH A MINIMUM, FUSED OUTPUT OF 3 AMPS AT 120 VAC. PID OPERATION CONTROLLERS ARE PREFERRED.
 USE REPLACEMENT FILTER ELEMENT EPT-2.5/1 (SEE CHART "REPLACEMENT FILTER ELEMENTS" FOR OTHER OPTIONAL FILTER ELEMENTS.

Fits all FPD, FPI, FPB, FPC series filters
 1" X 7" filter element - P/N FPX-X-7/1-XXX filters
 1" X 2.50" element - P/N FPX-X-2.5/1-XXX filters
 1/2" X 2.25" element - P/N FPX-X-2.25X.5-XXX filters
 1/2" X 1.125" element - P/N FPX-X-1.125/.5-XXX filters



Atmo-Seal Bowl Type Teflon and SS Heated Filters for High Pressure and Chemical Resistant Applications

Atmo-Seal Engineering, Inc.^(tm) manufactures a series of "Bowl Type" particulate filters designed to remove unwanted matter before it enters your sample stream. Available in both Teflon and Stainless Steel. Our typical operating temperature is up to 500 F (250 C), with ranges up to 900 F (490 C) available.

SS bowl-type filters have operational ranges to 1500 PSIG. Specialized units may handle up to 6000 PSIG.

SS bowl-type units may be coated with Teflon for both chemical resistance and high-pressure.



Heated Emissions Filters

- Choice of AC 50-60 HZ or DC operation in a wide range of voltages
- Choice of Thermocouple, RTD, Internal Thermostat or other sensors
- Housings are available for common filter element sizes (1X7, 1X2.5")
- Dual/Split Zone Heater design allows for quick element Change and service.
- Easily mounts to vertical or horizontal surfaces with Optional Mounting Clamp
- The most uniform heat available in the industry today

At Atmo-Seal, Inc. we know how dangerous life can be for equipment in the field, so our filters are built for durability. Our filters have rugged aluminum exteriors and SS or Teflon wetted internal parts.

Placed upstream as coarse filtration (10 micron), our in-line filters remove the large chunks of matter that will clog your sample train. Using an inline filter upstream ensures an extended life and cleaner sample for your analyzer and downstream fine filtration.

Using an ASE filter for primary upstream filtration (.01/.1 micron) will protect your entire sample train from unwanted particulate that could damage your analyzer and skew test results.

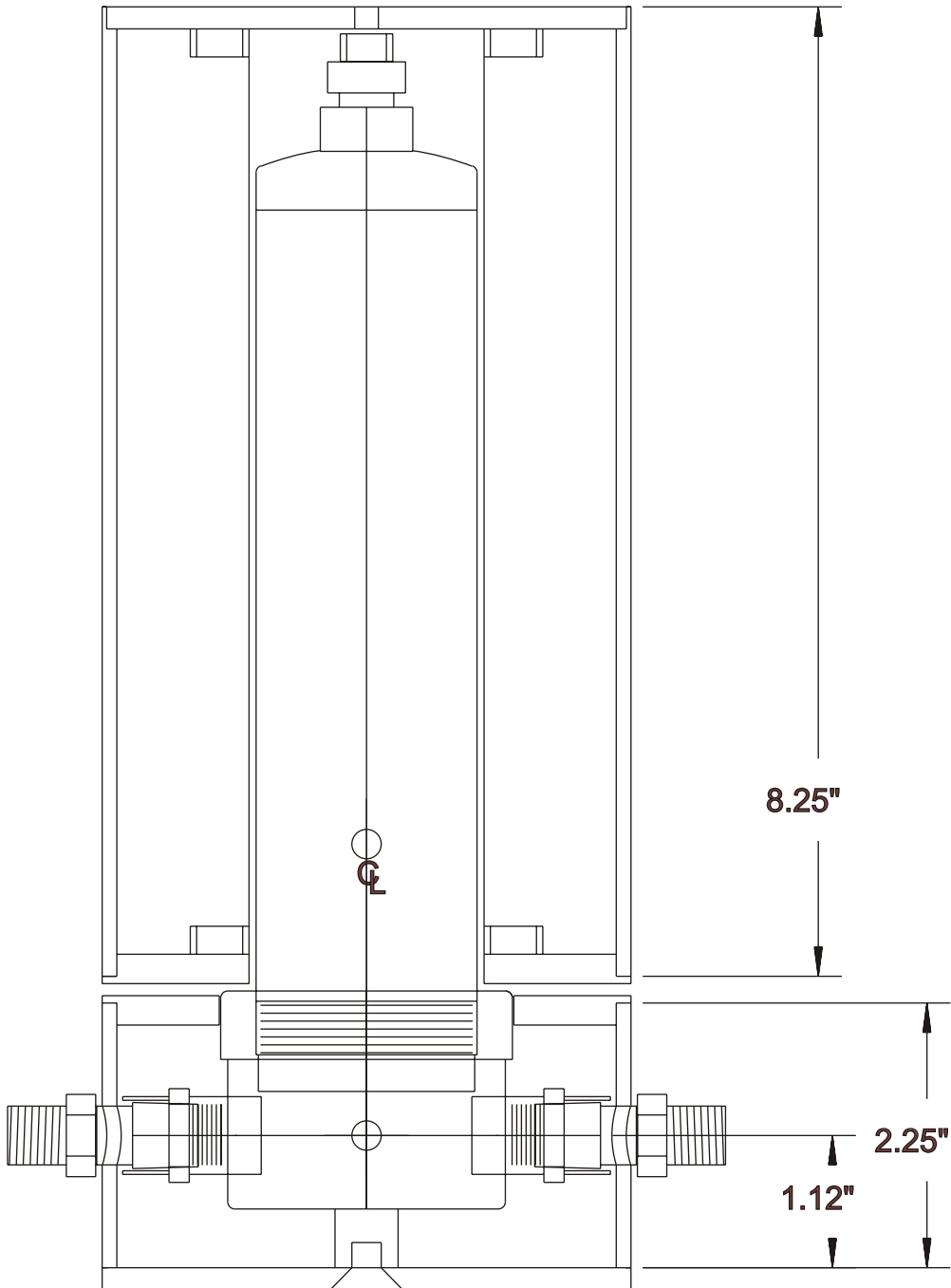
Our filters carry a full 18 month limited warranty, too!

Options

As always, Atmo-Seal, Inc., will customize your filters to your exacting specifications. Let ASE be your personal think tank.

At Atmo-Seal, Inc., We know that our continued success depends on your satisfaction.

FPB-SERIES HEATED FILTER HOUSING
FOR 7" LONG FILTER ELEMENTS
P/N FPB-X-7/1-XXX





Atmo-Seal High Flow Heated In-Line Filters

Atmo-Seal Engineering, Inc.^(tm) manufactures a series of heated in-line particulate filters designed to remove unwanted matter before it enters your sample stream. These heated filters are expressly designed for minimal pressure drop and maximum flow. Our typical operating temperature is up to 450 F (225 C), with ranges up to 900 F (490 C) available. Operational pressure may be up to 1500 PSI, making this filter tough enough for your most rugged application.



Heated Emissions Filters

- Choice of AC 50-60 HZ or DC operation in a wide range of voltages
- Choice of Thermocouple, RTD, Internal Thermostat or other sensors
- Housings are available for common filter element sizes (1X7, 1X2.5")
- Ultra Low Pressure Drop. 200 + LPM of flow with less than 5% of 1 Atmosphere pressure drop.

At Atmo-Seal, Inc. we know how dangerous life can be for equipment in the field, so our filters are built for durability. Our filters have rugged aluminum exteriors and SS wetted internal parts. Drop it, kick it, smack it - but you will not kill it.

Our In-Line heated filters are expressly designed for rough applications on the upstream side of your sample. They have an optional attaching handle/bracket to remove strain from the end of a sample line and allow for ease of movement.

Placed upstream as coarse filtration (10 micron), our in-line filters remove the large chunks of matter that will clog your sample train. Using an inline filter upstream ensures an extended life and cleaner sample for your analyzer and downstream fine filtration.

Using an ASE in-line filter for primary upstream filtration (.01/.1 micron) will protect your entire sample train from unwanted particulate that could damage your analyzer and skew test results.

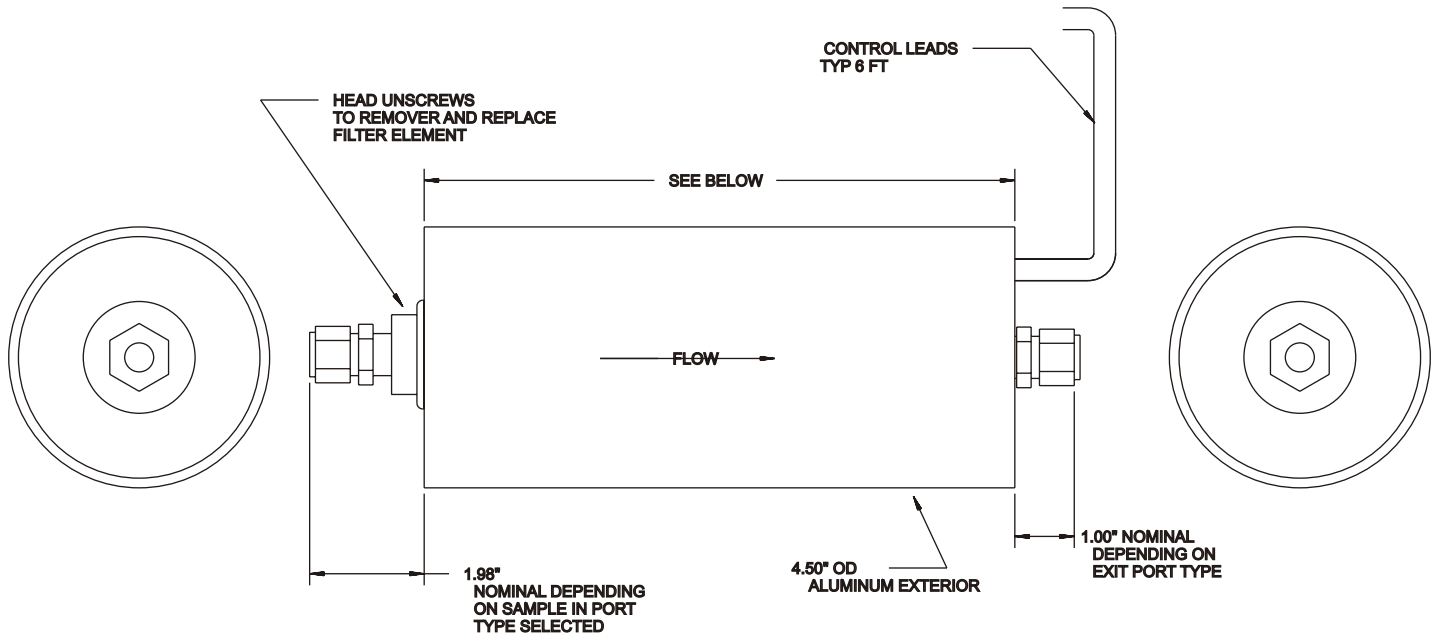
Our heated, in-line filters are designed for minimal pressure drop. An ASE In-Line Filter, with a .01 micron filter element, will deliver over 200 LPM with a pressure differential of less than 5% of one atmosphere (.75 psi). That makes this filter your best choice for all of your high-speed sampling needs.

Our filters carry a full 18 month limited warranty, too!

Options

As always, Atmo-Seal, Inc., will customize your filters to your exacting specifications. Let ASE be your personal think tank.

At Atmo-Seal, Inc., We know that our continued success depends on your satisfaction.



FILTER SIZE
 FPI-X-7/1-XXX - 10.00"
 FPI-X-2.5/1-XXX - 5.625"

FPI-SERIES HEATED FILTER HOUSING
 FOR 7" LONG FILTER ELEMENTS
 P/N FPI-X-7/1-XXX
 FOR 2-1/2" LONG FILTER ELEMENTS
 FPI-X-2.5/1-XXX



Replacement Filter Elements

Disposable Standard Elements for Gaseous Testing:

1" ID x 7" Long Element (box of 10) EPT-7/1
1" ID x 2-1/2" Element (box of 10) EPT-2.5/1
1/2" ID x 2.25" Long Elements (box of 10) EPT-2.25/.5
1/2" ID x 1" long Elements (box of 10) EPT-1/.5

Disposable Low Reactivity Elements for Gaseous Testing:

1" ID x 7" Long Element (box of 10) EPQ-7/1
1" ID x 2-1/2" Element (box of 10) EPQ-2.5/1
1/2" ID x 2.25" Long Elements (box of 10) EPQ-2.25/.5
1/2" ID x 1" long Elements (box of 10) EPQ-1/.5

Treated Elements for Gaseous Testing & Ammonia Abatement:

1" ID x 7" Long Element (box of 10) EPA-7/1
1" ID x 2-1/2" Element (box of 10) EPA-2.5/1
1/2" ID x 2.25" Long Elements (box of 10) EPA-2.25/.5
1/2" ID x 1" long Elements (box of 10) EPA-1/.5

Re-useable Stainless Steel Coarse Elements for Gaseous Testing:

1" ID x 7" Long Element - EPM-7/1
1" ID x 2-1/2" Element - EPM-2.5/1
1/2" ID x 2.25" Long Elements - EPM-2.25/.5
1/2" ID x 1" long Elements - EPM-1/.5

Disposable replacement elements are all typically 95% @ .01 micron. This and other ranges are in stock and ready for immediate shipment.

Stainless steel elements are 95% efficient at 10 micron and are designed for coarse filtration. Other ranges are available, please contact Atmo-Seal for more information.

Seal Kits for ASE Filters

High Temp Silicone unless otherwise specified. Viton, Teflon, Encapsulated Silicone, Buna, Graphite and other materials are available.

7" & 2-1/2" Filters - Twist-n-Lock style

FPD-X/1 - (*) Specify V for Viton, T for Teflon E for encapsulated, G for Graphite (Ultra-High Temp).

FPD-SERIES TEE HANDLE FILTERS
FPI-SERIES IN-LINE FILTERS
FPB-SERIES FILTERS
FPC-SERIES FILTERS
SIZES 1/2" x 1.125" 1/2" x 2.25"
 1" x 2.5" 1" x 7"



Heated Filter Part Number Guide

Filter Type	Port Size	Element Length vs ID	Configuration Code
▲ FPD FPC FPI	▲ 2 - 1/8" 3 - 3/16" 4 - 1/4" 5 - 5/16" 6 - 3/8" 8 - 1/2" or 6mm 8mm 10mm 12mm etc.	▲ 7/1 - 1" ID X 7" long 2.5/1- 1" ID x 2.5" long .5/2.25 - 1/2" ID x 2-1/4" .5/1.125 - 1/2" ID x 1.125" long	▲ See below

FPD - Bayonet-type filter, all SS construction, Silicone/Viton/Teflon/Kalrez Seals, Rated to 450 F + continuous operation.

FPC- Bayonet-type filter, all SS construction, High-temp seals, Rated to 1000 F + continuous operation

FPB- Bowl-type filter, all SS construction, Silicone/Viton/Teflon/Kalrez Seals, Rated to 450 F + continuous operation. High pressure avail.

FPI- Inline filter, all SS construction, Silicone/Viton/Teflon/Kalrez Seals, Rated to 450 F + continuous operation

Configuration Code - The configuration code at the end our part number(s) refer to your individual design criteria. Information covered in the Configuration Code may include Thermocouple or RTD type, operation voltage, etc. The Configuration Code also covers common options such as Over-Temperature Protection, R.F. Shielded Thermocouple Wires, Outdoor Use/Extreme Cold, etc.

Example Part Number: FPD-6-7/1-A25: **FPD** - Filter body type, **6** - Port Size, **7/1** Element Size, **A25** -Compression fitting ports, dual J & K Thermocouples, 200 C operation/exposure, 120 VAC.

Of course, we will customize our products to your exact specifications.

Common Options

Dual Thermocouples: Two J and Two K type thermocouples to allow the unit to be used with two temperature controller types.

Over-Temperature Protection: Built in thermal switch(es) which will open if the filter exceeds its maximum operational temperature. Switch(es) will close again once the filter has cooled down to a safe range.

Shielded Thermocouples: Provides extra RF protection in electrically noisy conditions.

Outdoor Use: Sealed for use outdoors

Classified Location: Rated for Class 1-2, Div 1-2, Grp A-G and Class X/Z purge systems.