# Strainer Information

## Strainer Definition and Purpose

Strainers are normally used for the protection of pipeline and process equipment installed downstream of the strainer to prevent debris from reaching the equipment and causing damage, disruption or failure. Typically this equipment is critical to the pipeline or operation so the costs involved in any disturbance are generally much more than the total installation and operation costs of a strainer. In short, a strainer is a safety net or insurance.

Strainers use perforated and/or wire mesh media for straining purposes. These materials are "two dimensional", meaning they do not have a "depth" or "debris holding" capacity. This means that when a debris particle is caught in the straining media the opening is blocked or plugged. This results in reduced available open area for flow. With this in mind, strainer sizing and selection are critical to ensure cleaning cycle time, particle size retention, desired pressure drop, and velocity requirements are achieved. (Maximum velocity recommended through a strainer is 15 fps.)

**Note: All information offered is a general observation based on Weamco's many years of experience and may not be suitable for your specific application.**

## Straining Media Selection for Basket

The following is a general guideline of media we have typically seen used in the various applications shown, but is in no way intended to supersede your specific requirements. We always recommend checking with the manufacture of the equipment you are protecting for direction on the strainer media requirements or information on the size and type of debris that the equipment can handle without experiencing damage, disruption or failure. This also protects you from possibly voiding any equipment warranty.

**Please contact us for assistance when needed.**

| | |
|---|---|
| Liquid Turbine Meters | 1/8" dia. perforated support with 40 x 40 mesh liner<br>1/2" flattened expanded metal support with<br>10 x 10 mesh liner |
| Positive Displacement and Coriolis Meters | 1/8" to 1/4" dia. perforated |
| Gas Turbine Meters and Regulators | 1/8" dia. perforated support with<br>100 x 100 mesh liner |
| Centrifugal Pumps | |
| Service: Crude Oil | 1/4" dia. perforated |
| Refined Products | 1/8" dia. perforated |
| Coke Fines | 3/4" flattened expanded metal |
| Water | 1/8" to 3/8" dia. perforated |
| Natural Gas Compressors | Varies by manufacturer recommendations,<br>Typically a 1/8" dia. perforated support with<br>100 x 100 mesh liner |

# Strainer Information

## Strainers Design and Selection

Weamco fabricated strainers are manufactured in several styles or types to meet various applications. Strainer type selection should be based upon your specific requirements. A general guideline as follows:

## Weamco High Capacity Type: FV, FT, FH

Applications: Pumps, Flow Meters, Compressors and Control Valve Protection, low pressure drop, high capacity, and ease of maintenance. Several optional features available.

Strainer Style: Vertical and Horizontal Baskets

### TYPE FV for horizontal pipe run

Fabricated high capacity strainer with slope-top basket:

Line Size: . . . . . 2" and larger
Operating Pressure: . . 150# thru 2500# ASME
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin FV-112

### TYPE FT for horizontal or vertical pipe run

Fabricated high capacity strainer with V-shape basket:

Line Size: . . . . . 2" and larger
Operating Pressure: . . 150# thru 2500# ASME
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin FT-112

**Basket design allows for the inlet and/or outlet nozzle elevations to be modified.**

### TYPE FH for horizontal pipe run

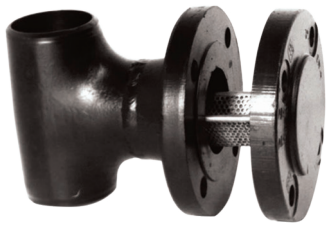
Fabricated high capacity strainer with cylinder-shape basket:

Line Size: . . . . . 4" and larger
Operating Pressure: . . 150# thru 2500# ASME
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin FH-112

## Weamco TEE Type: TS, TL & TV

Applications: Pumps, Gas Regulators, relatively clean product, adaptable to various piping arrangements.

Strainer Style: Tee Strainer for Horizontal or Vertical Pipe Run



### TYPE TS

Fabricated strainer with straight thru flow.

Line Size: . . . . . 2" and larger
Operating Pressure: . 150# thru 2500# ASME
Type: . . . . . TSW, TSF, TSFI, TSFO
(Flanged or Welded Inlet and Outlet)
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin TEE-112

### TYPE TL

Fabricated strainer with flow in the branch, out the run for a 90° flow direction change.

Line Size: . . . . . 2" and larger
Operating Pressure: . 150# thru 2500# ASME
Type: . . . . . TLW, TLF, TLFI, TLFO
(Flanged or Welded Inlet and Outlet)
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin TEE-112

### TYPE TV

Fabricated strainer with flow in the run, out the branch for a 90° flow direction change.

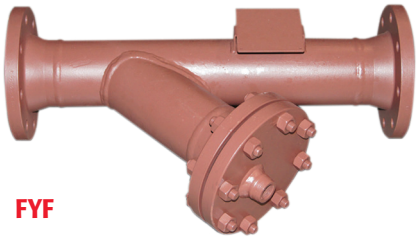
Line Size: . . . . . 2" and larger
Operating Pressure: . 150# thru 2500# ASME
Type: . . . . . TVW, TVF, TVFI, TVFO
(Flanged or Welded Inlet and Outlet)
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin TEE-112

# Strainer Information

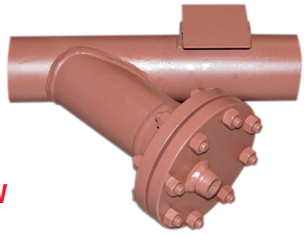
## Weamco Y Type: FY

Applications: Pumps, HVAC, various types of water service, boiler feed water, and industrial piping systems, for relatively clean product service, a blowdown is sometimes required for basket cleaning.

Strainer Style: FY Strainer for Horizontal or Vertical Pipe Run



FYF



FYW

### TYPE FY

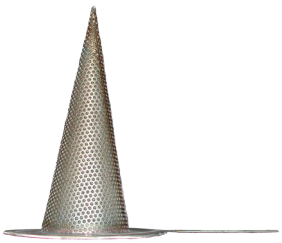
Fabricated strainer with straight thru flow.

Line Size: . . . . . 4" and larger
Operating Pressure: . 150# thru 2500# ASME
Type: . . . . . FYW, FYF
(Flanged or Welked Inlet and Outlet)
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin FY-112

## Weamco Temporary/Start Up Type: Cone & Truncated

Applications: Temporary for any liquid or gas equipment or piping systems and also used as a permanent strainer in some applications when needed.

Strainer Style: Temporary/Start Up Strainer for Horizontal or Vertical Pipe Run



### Cone Type

Line Size: . . . . . 2" and larger
Operating Pressure. . 150# thru 2500# ASME
Type: . . . . . CP, CWI, CWO, CW, CTP
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin CP-112

### Truncated Basket Type

Line Size: . . . . . 2" and larger
Operating Pressure. . 150# thru 2500# ASME
Type: . . . . . BP, BWI, BWO, BW, BTP
Material: . . . . . Carbon Steel, Stainless Steel and 5% Chrome Moly
See Bulletin BP-112