

## Simplex Basket Strainers

### Simplex Basket Strainers: Provides best in-pipeline protection

Grand Prix range of Simplex Basket Strainers were specially developed over the years to meet most demanding duties and provides the best and most popular in-pipeline protection in process plant, chemical plants refineries and petrochemical plants.

#### Principles of Operation

Strainers operate on the peripheral inflow method of particle retention. The contaminated fluid enters the body inlet and passes through one or more cylindrical shaped screens (i.e. baskets) and routes the flow of fluid from the exterior of the basket to the interior, with the strained fluid exiting through the open end of the basket through the body outlet. Particles larger than the screen perforations that do not adhere to the basket are either suspended in the water circulating around the exterior of the strainer or fall into the sump area. Particles that adhere to the surface of the screen assemblies will be removed by cleaning.

When the filter is dirty, the fluid flow is restricted and the pressure differential between the inlet and the outlet increases. By fitting a differential pressure switch, which is fed from both inlet and outlet pressures, the differential pressure across the Basket Strainer can be measured.

#### Performance

The comprehensive range of Simplex Basket Strainers is precision engineered and manufactured to the highest standards demanded by industry. Units are available for line size up to 60 inch, 1500 # and with minimum particulate removal up to 0.03mm.

Simplex Basket Strainers are permanent strainers mounted vertically/horizontally into pipelines although in larger units line connections can be incorporated to suit specific requirements.

These units are designed for applications where temporary shut-down of the plant is permissible for cleaning purposes. Cleaning or replacement of baskets can be carried out quickly and effectively.



### Features: Design & Construction Advantages

#### Mechanical Features

- ASME Pressure Vessel Code, Section VIII, Div.- 1, U Stamped and Div. 2, U2 Stamped
- National Board/IBR certified
- Can design Jacketed/Double walled Basket Strainers
- Designed with Quick Opening Closure for easy access to change basket.

## Simplex Basket Strainers

### Body

Grand Prix has come up with a novel modular design concept that enables use of fabricated body whilst maintaining competitive price. This design philosophy offers certain unique advantages:

- Wide range of body materials available (CS-HIC Tested/SS/DSS/LAS/Clad)
- High pressure requirement easily achieved
- Minimum maintenance requirements
- Compact design - minimal installation space required
- Screening elements (baskets) are easily accessed without removing filter body.
- Simple design gives reliable performance
- Easy installation into existing pipework

### Basket

Each strainers housing may consist of single basket element or a number of small basket elements for ease of handling. Strainer basket element is constructed of stainless steel perforated sheet, and when required, an additional stainless steel wire mesh can be added to screen out fine particles as per customer's requirement.

Basket Strainers feature top removal of the basket element. The basket element is provided with a

lifting handle, so that all particulate captured and retained by the basket can be easily removed for disposal.

The Top cover with Swing bolts / I bolts helps in easy opening / closing of the lid. Larger units are provided with lifting davit arm as an option for ease of cover removal. For critical applications Quick Opening Closures (QOCs) are also being provided to suit client's requirement.

### Applications

Grand Prix Simplex Basket Strainers can be effectively used for liquids (ATF/HSD/Slurry Oil/Heavy Fuel Oil) and gases (LPG/HC) service/fluid. It is used to protect various pipeline components such as pressure-reducing valves, relief valves, etc. that require clean, filtered, or strained liquids to keep these devices operational.

Simplex Basket Strainers find application in wide range of industries:

- Oil & Gas
- Refineries
- Petrochemicals
- Chemicals
- Power
- Fertilizer
- Steel
- Process Plants

For more information on other Grand Prix products viz. Pressure Vessels, Cartridge Filters, Dry Gas Filters, Cyclone Scrubbers, Gas Separators, Filter Separators, Silencers and Skid Mounted Packages contact:

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## Duplex Basket Strainers

### Duplex Basket Strainers: Provides best in-pipeline protection

Grand Prix range of Duplex Basket Strainers were specially developed over the years to meet most demanding duties and provides the best and most popular in-pipeline protection in process plant, chemical plants, refineries and petrochemical plants.

#### Principles of Operation

Strainers operate on the peripheral inflow method of particle retention. The contaminated fluid enters the body inlet and passes through one or more cylindrical shaped screens (i.e. baskets) and routes the flow of fluid from the exterior of the basket to the interior, with the strained fluid exiting through the open end of the basket through the body outlet. Particles larger than the screen perforations that do not adhere to the basket are either suspended in the water circulating around the exterior of the strainer or fall into the sump area. Particles that adhere to the surface of the screen assemblies will be removed by cleaning.

Duplex filters consist of two filter housings. One half of the filter is in operation while the other is being cleaned or on stand-by. If contamination exceeds a tolerance threshold over to the clean filter side, the contaminated filter element is then cleaned while operation continues. The changeover is performed by a change-over cock or by a two-stage three-way ball valve. The design of the filter excludes simultaneous isolation of both filter chambers.

to the highest standards demanded by industry. Units are available for line size up to 16 inch, 1500 # and with minimum particulate removal up to 0.03mm.

Duplex Basket Strainers are permanent strainers mounted vertically/horizontally into pipelines although in larger units line connections can be incorporated to suit specific requirements.

These units are designed to ensure that cleaning or replacement of baskets shall be carried out without interruption to process flow in order to provide continuous service.



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