

STRAINERS

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INTRODUCTION : STRAINER

Strainer can be defined as a pipe fitting through which liquid is passed for purification, filtering or separation from solid matter; anything used to strain a liquid; any device functioning as a sieve or filter used to prevent solid bodies from mixing in a liquid stream or flowline.

Strainers arrest pipeline debris such as scale, rust, jointing compound and weld metal in pipelines, protecting equipment and processes from their harmful effects, thus reducing downtime and maintenance.

Use of rightly selected strainers at correct locations (usually upstream) is a must to protect expensive and critical downstream equipment such as pumps, flowmeters, steam traps, control valves etc.

TYPES OF STRAINERS

- Y - TYPE STRAINER
- CONICAL TYPE STRAINER
- BASKET TYPE STRAINER
- T - TYPE STRAINER
- DUPLEX TYPE STRAINER



Y - TYPE STRAINER

In Y-type strainer the filter leg connects to the main pipe at a diagonal angle, giving the strainer its "y" shape, and hence its name. This type is commonly used in pressurized lines, steam, liquid or gas, but can also be applied in vacuum or suction situation.

Y-type strainers usually have a lower dirt holding capacity than basket type strainers, which means that they require more frequent cleaning. On steam systems, this is generally not a problem, except where high levels of rust are present, or immediately after commissioning when large amounts of debris can be introduced.

On applications where significant amounts of debris are expected, a blow-down valve can usually be fitted in the strainer cap, which enables the strainer to use the pressure of the steam to be cleaned, and without having to shut down the plant.

A Y-strainer can be installed in either a horizontal or vertical position (Downward flow) with the screen element pointing downward. This allows the strainer screen to collect material in the strainer at the lowest point of the screen.

In horizontal steam or gas piping, Y type strainer should be installed in such a manner so that the pocket is in the horizontal plane. This stops water from collecting in the pocket which can cause erosion and affect heat transfer processes.

In liquid systems, the pocket should point vertically downwards. This ensures that the removed debris is not drawn back into the upstream pipework during low flow conditions.

Although it is advisable to install strainers in horizontal lines, this is not always possible, and they can be installed in vertical pipelines if the flow is downwards, in which case the debris is naturally directed into the pocket.

Y-Strainers are devices for mechanically removing unwanted solids from liquid, gas or steam lines by means of a perforated or wire mesh straining element. They are used in pipelines to protect pumps, meters, control valves, steam traps, regulators and other process equipment.

Y-Strainers are very cost-effective straining solutions in many applications. Where the amount of material to be removed from the flow is relatively small, resulting in long intervals between screen cleaning, the strainer screen is manually cleaned by shutting down the line and removing the strainer cap. For applications with heavier dirt loading, Y-Strainers can be fitted with a "blow-off" connection that permits the screen to be cleaned without removing it from the strainer body.



BASKET TYPE STRAINER

Basket type is characterized by a vertically orientated chamber, typically larger than that of a Y-type strainer. Size for size, the pressure drop across a basket strainer is less than that across the Y-type as it has a greater free straining area, which makes the basket type strainer the preferred type for liquid applications. As the dirt holding capacity is also greater than in Y-type strainers, the basket type strainer is also used on larger diameter steam pipelines.

Basket type strainers can only be installed in horizontal pipelines, and for larger, heavier basket strainers, the base of the strainer needs to be supported.

A basket strainer is a device that uses a mesh screen to filter out foreign particles in a horizontal pipeline. These particles are then removed from the strainer and will not make their way into down-stream equipment like pumps, valves, and traps.



Basket strainers are installed to protect equipment from damage caused by unwanted debris that may be in the pipeline.

The unwanted debris could be dirt or other foreign particles that make their way into the process fluid. Typically, basket strainer are installed in horizontal pipelines and in situations where high flow capacity is required.

These strainers are installed upstream of equipment like pumps, control valves, and traps, keeping potentially corrosive or damaging debris from making its way down the line. They can be installed alone or in a series to increase filtration.

T - TYPE STRAINER

T-Type strainers are the most cost-effective custom fabricated compound strainers designed to remove foreign particles from pipeline. Filter elements used in these industrial strainers are made of stainless-steel perforated sheet or wire mesh supported by the perforated sheet.

To ensure that the system is running at the required cleanliness level when met with full load T Type Strainers are most commonly supplied with a range of graded filtration levels (fine to coarse or vice-versa).

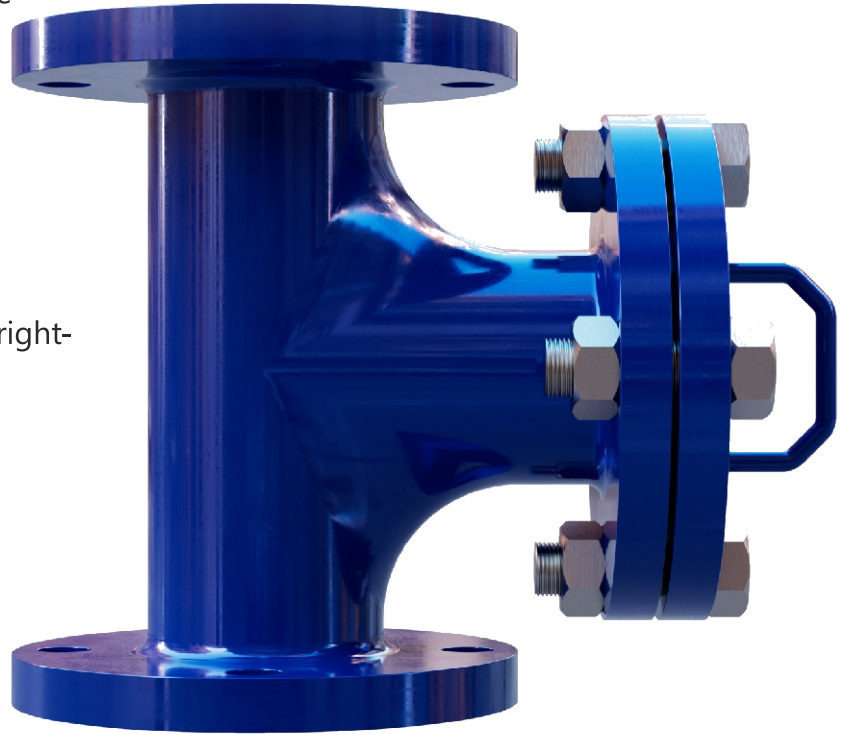
They can be mounted into horizontal or vertical piping and can be configured for right-angled applications.

These strainers are commonly used in pipelines to prevent damage of control valve, Gauge, Flow meters, Pumps, and other process equipment.

T-Type are Compact and used in applications where space is restricted.

The Standard T-strainer includes a screen suitable for high pressures, which is easy to maintain and replace and capable of filtration of more than 200% of the inlet area.

Filter elements are made of stainless-steel perforated sheet. T-Type Strainers are a low cost solution to large nominal bore straining requirements. This Strainer can be easily installed and requires minimal maintenance. T – strainers are provided with either bolted cover or quick opening covers for application suitability. T-Type Strainer can be used in both vertical and horizontal installation.



DUPLEX TYPE STRAINER

Duplex strainer or twin basket strainer is a type of filter built into a fuel, oil or water piping system and it is used to remove large particles of dirt and debris. The duplex strainer system usually consists of two separate strainer baskets housings. The system also contains a valve handle placed between the two baskets to divert the flow of liquid to one strainer while the other is being cleaned. On some strainers, the valve will work automatically and the strainer will perform a self-cleaning operation.

Duplex strainers are mainly used in various industries such as Process industry, power industry, chemical industry, oil and gas industry, pulp and paper industry, pharmaceutical industry, metals and mining industry, water and waste management, firefighting industry, refineries and petrochemical plants. Strainers are used to remove hazardous elements that might cause partial or complete breakdown of operations if they get into the system.



CONICAL TYPE STRAINER



Conical Strainers are known as Temporary Strainers, and these Conical Filter Strainers used for filtration of the system. We are suppliers of Cone type temporary strainers in fully various design. The Conical Temporary Strainers are mostly used for testing purposes by new plants.

Conical Strainers are used in a wide variety of liquid straining applications to protect downstream process system components in many industries, including: chemical processing, petroleum, power generation and marine. Water handling applications, where conical Strainers are used to protect equipment that could be damaged or clogged by unwanted sand, gravel or other debris, are very common.

RECOMMENDED DISPOSAL

- Give it back to us & we will take care of recycling & possible disposal.
- User can dis-assemble the product in multiple stage
- The above may be handed over (state pollution board), authorized re-cycler item-wise.





ENQUIRY SPECIFICATIONS:

- [1] Service Media Details.
- [2] Size, Type, MOC
- [3] System Operating and Design Pressure.
- [4] System Operating and Design Temperature.
- [5] Material Specifications (Body, Wetted Parts)

RECOMMENDED SPARES

- [1] Strainer/Mesh

OTHER RANGE OF PRODUCTS

- [1] Flame Arrester
- [2] Breather Valve
- [3] Level Indicators
- [4] Rotameters
- [5] Emergency Relief Valve
- [6] Gauge Hatch
- [7] Strainers
- [8] Pressure Reducing Valve
- [9] Safety Relief Valve
- [10] Flowmeters
- [11] Level Switches
- [12] Pressure Reducing Station
- [13] Level Gauge, etc.

Any Query?

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