

TYPE "PS" SELF-CLEANING STRAINERS



The Type "PS" or Purging Strainer is a **completely autonomous in-line self-cleaning strainer**. It utilizes a wedge wire basket as its straining component, from 50 micron upwards. The strainers autonomy comes from the fact that it will self-clean the wedge wire basket and purge the waste at pre-set intervals. The strainer will also purge to waste when it detects that the differential pressure is too high and requires the system to clean, this can occur when dirt loading is not uniform or periodic high dirt loading from operations. The cleaning of the screen is done mechanically, which causes the debris to collect in the bottom of the strainer. The debris or dirt collected at the bottom is then purged out through an automatic valve at the bottom of the strainer to waste. The system being on-line at all times through these cycles, utilizes the operational pressure to force the dirt out through the purge valve. The unit self-cleans while in operation, with minimal pressure loss, allowing production to continue without interruption.

Operating Pressure

The standard unit is suitable for 750 kPa operating pressure and is tested to 1125 kPa. The High Pressure unit is suitable for 1000 kPa operating pressure, and is tested to 1500 kPa. Higher pressure versions can also be designed and made to meet almost any pipeline design requirement.

Materials of Construction

The "PS" range is available with vessels in carbon steel, 304 stainless steel and 316 stainless steel. Carbon steel units are supplied untreated internally, and with primer and two coats of enamel painting externally. Stainless steel units are supplied in glass bead blast, matt industrial finish. In all cases, the strainer basket is in 304 stainless steel wedge wire.

Cover Securing Mechanism

"PS" automatic self-cleaning strainers are supplied with bolted cover closures. Bolted covers are an effective and reliable cover-closure solution where frequent opening of the cover is not needed.

Connections

The "PS" range of strainers can be ordered with various inlet and outlet connections; most commonly BSP male threaded on smaller units and SABS 1123 table 1000/3 flanges in larger units. To special order, almost any commercially available type of connector or flange can be supplied.

Instrumentation & Control Panel

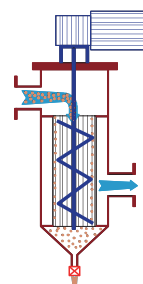
All "PS" automatic self-cleaning strainers are supplied with 2 x pressure and 1 x differential pressure switch. The standard control panel (mounted on the filter) is an IP56 rated plastic enclosure and carries "power on" and "purge open" indicator lights, as well as a "purge test" button and an "auto/run" selector to set the rotating brush to operate continuously or only when purging (best selection depends on dirt type/loading). Purge duration and purge cycle interval are controlled by site-adjustable timers in the control panel, with a high-delta P override.

Filtration Media

"PS" strainers have a wedge wire strainer basket. Wedge wire is robust and durable, and the vertical slots ensure a better purging action than would be the case with perforated plate and/or mesh. The minimum filtration rating is 50 micron (nominal).

Basket Cleaning

The effectiveness of the purging action is reduced where there is oil, algae or other contaminants in the water which would cause a "slime" to form on the basket walls. The "PS" range is primarily intended for use only in water-based applications. In addition to being cleaned by on-line purging, the basket can also be removed for periodical manual cleaning if necessary.



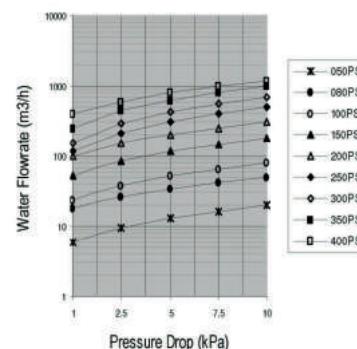
HOW IT WORKS

A motorised Rotating Brush scrubs against the inner surfaces of the basket. This operates during the purge cycle and assists in mechanically dislodging debris from the basket walls, thereby enhancing purging and basket cleaning.

The valve on the purge port (usually a ball valve for quick opening and closing) operates automatically can be fitted with all-electric or electro-pneumatic control. Options are available such as no-flow cut-out for the purging system, and alarm systems.

Custom Designed Strainers

Purpose-designed strainers can be designed and manufactured for most requirements. Some of the more common needs we meet include ASME VIII coded construction, steam jacketing, pressures up to 25 bar, line sizes up to 610mm and special instrumentation.



Strainer selector showing pressure drop @ flow rate. Select for max 7,5 kPa clean-basket pressure drop.