Kleerflo Strainers

WATEREX

Waterex uses Kleerflo strainers as our strainer of choice to remove large particles from water. Waterex's designs are backed by our own laboratory capability as well as input from our strainer suppliers allowing Waterex to continually upgrade to present state of the art plants for client's specific applications.

The Kleerflo self-cleaning strainer is designed to remove suspended solids from water utilising an integral backwash system. Units are available for flow rates up to 4,000 m^3/hr with line sizes up to 700 mm and can be manufactured in a variety of materials and codes.

A unique control system, which can be electrically or pneumatically operated, allows for automatic backwashing of the filter elements. The backwashing cycle may be initiated by pressure differential, by a timer, an external command or manually. Actuation for backwashing can be achieved utilising either compressed air or the water line pressure where this is above 200 kPa.

Applications

Waterex uses Kleerflo strainers to provide solutions for many applications including:

- Pump gland seal water
- Sea and fresh water cooling systems
- Heat exchanger and nozzle protection
- Irrigation systems
- Pump inlet strainers
- Water spray systems
- Membrane pre-filtration
- Plant supply water

Features

Kleerflo strainers have very few moving parts and no rotating or spinning parts which reduces the wear of the equipment. The strainers are simple to access and require minimal maintenance.

Principle of Operation

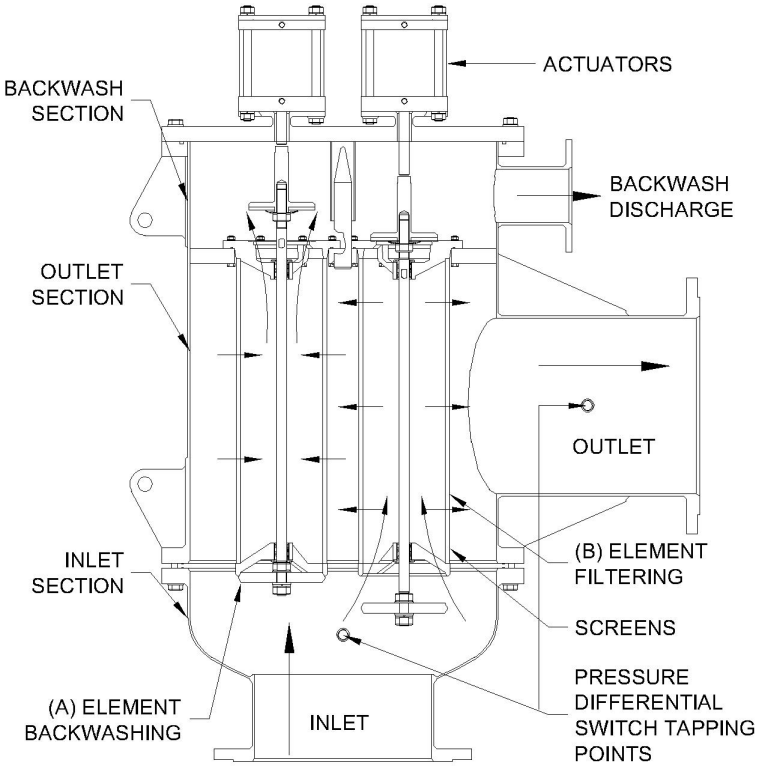
Contaminated water entering at the filter inlet is allowed to pass freely through the tubular filter elements, which typically consist of stainless steel inverted wedge wire wound spirally onto support bars and with a pitch that defines the aperture and hence the size of suspended particles that are retained. The filtered water exits at the outlet flange.

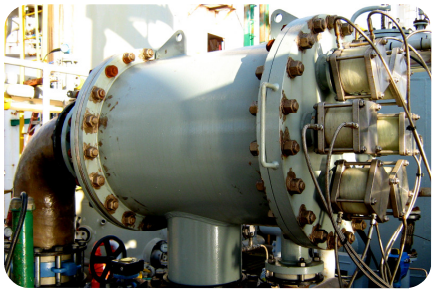
When the filter is dirty, water flow is restricted and the pressure differential between the inlet and the outlet increases. By fitting a differential pressure switch, which is fed from both inlet and outlet pressures, the degree of dirt in the filter can be determined.

A micro-switch energises the control system which automatically backwashes the filter elements. The pressure differential switch will override the built-in timer during heavy dirt loading periods. In this case the timer is reset automatically.

Backwash is achieved by simultaneously sealing the water inlet to the filter element and opening the top of the element to the backwash outlet. This causes a reversal of flow on the element being backwashed with filtered water from the other element(s) passing from the outside to the inside of the element lifting the contaminate and discharging it through the backwash outlet to drain. After a pre-set time the element is re-opened at the inlet and sealed at the backwash outlet.

On completion of this operation the control system causes the backwash operation to be carried out on each of the other filter elements with a suitable dwell period between each element backwashing to allow for system recovery. A minimum of two elements is always fitted into a filter so that during backwashing a minimal flow loss is achieved.





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