

Filtration Group Application example – Water filtration

Filtration Group valve duplex filters as pump protection filters



Factory Equipment

Initial situation

Pumps, especially those used to convey liquid media must be protected from damage due to solid particles. Depending on the size and the type of the pump are required different fineness. The Type and quantity of the attacking particles is in turn depending of the specific application and the media. In closed systems or application without, or with just very low expected entry of dirt, a protection filter as simplex filter with comparatively small filter surface applied.



Solution statement

- Valve-Duplexfilter series VS87 in welded designed
- Large filter areas allow low pressure loss by coincident long maintenance intervals
- Closed Strainers which removed upwards facilitate the operation and reduces the maintenance period
- Smooth handling duplex element simplified the operation and prevented a operating error



Customer value

- Uninterruptible operations due to switching option
- Minimal influence of facilities-NPSH
- Simply operation due to smooth handling valve – duplex element
- Operating error of the switching is excluded through only one operating lever
- High Operation safety and easy handling through closed Strainers
- Compact designed required only less space and can be integrate without problems in already existing systems

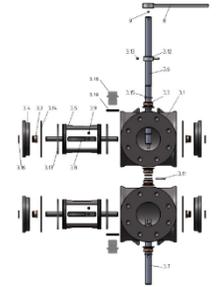


Challenge

Through the suction side Installation of the filter prior to a pump, the supply pressure of the pump is dropping by rising pressure drop across the filter. The filter has thus a dynamic influence on the NPSH-value of the plant. To take this effect low a filter have to show a low drag coefficient and a large filter surface. For a uninterruptible operation a double filter installation is require, whereby the same maxim applies here with regard to the resistance coefficient for the switch valve. Especially for large flow rates, the switch-over unit is a constructional challenge regarding the filter size and the required positioning forces for the manual switching.

Technical data

- Nominal size DN 350
- Filter surface: 18.690 cm²
- Filter fineness: 800µm



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