

Filtration Group application example – Cooling Water Treatment

FG Backflush filter for cooling water applications



Factory Equipment

Initial situation

Cooling water systems for the removal of excess heat can be found in almost all industries today. In addition to the classic applications in thermal power plants and installations in the chemical and food industries, the spectrum of applications ranges from the manufacturing industry in the field of machine cooling to air conditioning systems in building services engineering and the cooling of data centres. In addition to chemical stability, the water used must also have the lowest possible particle load in order to protect the system components and prevent damage. Our customer produces and sells a wide range of basic chemicals, inorganic specialty chemicals and coating systems on an international level. Filtration Group backwash filters are used here as **a special type of cooling water filter for use with river water**. They are urgently required if the cooling water is drawn from natural waters, as there is naturally a high proportion of dirt in the water.

Solution statement

- Filtration Group has selected a backflush filter with internal pressure cleaning of type R8-10 for this application
- At a volume flow of approx. 600 m³/h a filter with a nominal width of DN 300 can be used
- When a preset time or differential pressure is achieved, a motor rotates the internal flushing nozzle on the inside of the commercial cylinder by 360 ° while simultaneously opening a valve
- Due to the system overpressure of ideally approx. 3 bar, the dirt is removed from the surface and discharged from the system. If the pressure in the system is not sufficient, there is always the possibility to support the cleaning with external pressure – ideally filtrate can be used as medium.



Customer value

- High-performance, fully automatic filtration
- Support of the rational flow of production processes through continuous filtration
- Efficient filtration due to low backwash quantities with optimum cleaning of the filter element
- High cleaning efficiency due to direct placement of the backwash nozzle on the filter element
- Optimal synthesis between ecology and economy

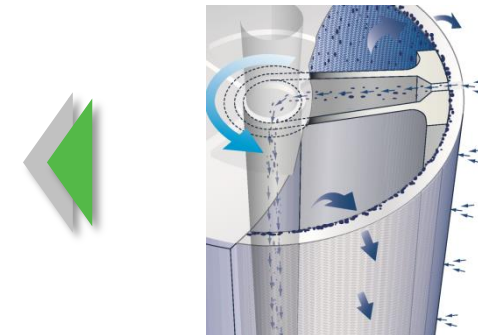


Challenge

Prolonged dry periods and the resulting low water levels force companies to draw cooling water closer to the ground. At extremely low water levels, this means that more dirt, rocks and biological matter are sucked up by the pumps. In order to prevent cost-intensive production losses, special filters for river water are used as cooling water filters, so that even mussel larvae have no chance of entering the cooling systems.

Technical data

- Connection: DN 100 up to DN 400
- Max. operating pressure: 10 bar
- Max. operating temperature: 100 °C
- Filter element: Screen basket with pleated fabric covering
- Filter fineness: 25 – 1000 µm absolute



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