



OUTOTEC LAROX[®] PF EXTERNAL CIP WASHING SYSTEM

The CIP-washing upgrade enables a high level of cleanliness by removing cumulated material in PF filter units in both the chemical and mining industry.

The PF CIP washing system is a fixed spray bar system on the PF filter that operates in sequences during the filtration cycle or can be operated manually before maintenance to clean parts that are difficult to reach.

The CIP-washing upgrade is compatible with all PF filters.

BENEFITS

- Increased lifetime of wearing parts
- Automatic washing sequence
- Reduced water consumption compared to manual wash
- Increased safety
- Cleaner working environment

Accurate wash results with less water

Leaking collectors and cake discharge may cause solids build-up in the filter causing wear or damage to certain parts. The CIP-washing system removes build-up which increases the lifetime of filter clothes, bearings, rollers, and plates. Clean filters also decrease maintenance shutdowns and spare part consumption and increase operational safety.

Should an application use harmful material would need to be washed away from all surfaces. Maintenance on the filter unit is safer and more user-friendly when using the CIP-washing system as there are fewer slurry spills or solid material on the filter and maintenance platforms.

The functionality of a washing system

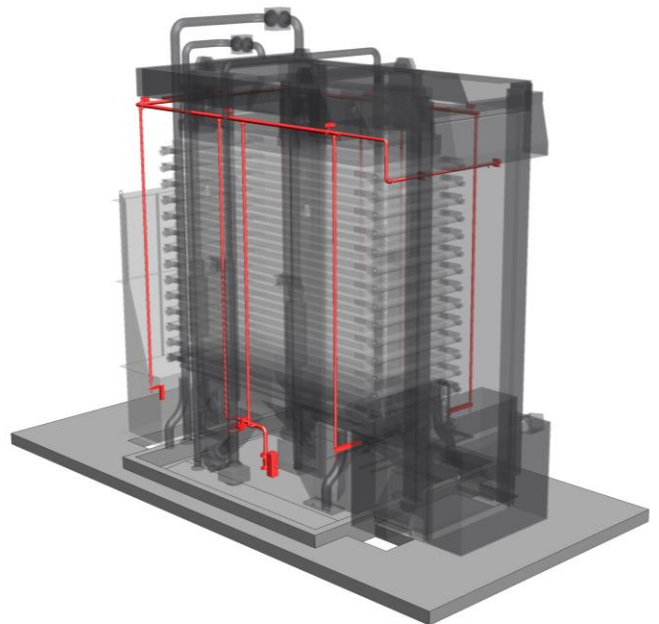
After the cake discharge, an automatic valve in the CIP-piping opens and the washing system turns on. The piping has been designed to operate at a pressure of 16 bar, although the average operating pressure is about 10 bar. There are several hundred adjustable spray nozzles in CIP-piping to ensure thorough cleaning of the entire filter.

The washing sequence can be automated or operator-controlled and programmable according to customer requirements. The washing time depends on the application and sump capacity on the floor. An average washing time ranges from 30 seconds to one minute.

The amount of water used is 300-800 L/min depending on filter size. When the CIP washing stage is complete, the filter automatically returns to standard operation.

The CIP-washing system is compatible with all standard installations of the following Outotec Larox PF filters:

- PF1.6
- PF12
- PF15
- PF30
- PF48
- PF60



Outotec develops leading technologies and services for the sustainable use of Earth's natural resources. Our 4,000 top experts are driven by each customer's unique challenges across the world. Outotec's comprehensive offering creates the best value for our customers in the mining, metal, energy, and chemical industries. Outotec had sales of approximately EUR 1.3 billion in 2018, and its shares are listed on NASDAQ Helsinki.

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