

# FINAL EFFLUENT FILTRATION



## High Performance Liquid Filters

Final effluent can be a major problem, or a great resource, depending on how it is used.

All sewage plants clean up the waste water to a point where it is clean enough to be discharged into waterways, and often this requires a final polishing stage (tertiary treatment). The treated water (the final effluent) is then discharged, but is of such high quality that it can be re-used.

This is where TC filters can come in. By guaranteeing the

quality of the water, the final effluent can be re-used throughout the plant.

TC Filters can produce filters of all sizes for final effluent filtration, from large scale multi pod S2000 filters (as above at a mill in Yorkshire), to Phoenix combo units as used at various sewage works across the UK (on right), right down to simple EasyClean filters used to supply small amounts of filtered final effluent for small requirements.

The biggest use of filtered final effluent is in screen washing, where the intake screens require a source of clean water to wash the intake screens. As all of the water is wasted in the incoming sewage, the re-used effluent makes good economic and environmental sense.

TC filters are all fully automatic and require little user input.



### Materials of construction:-

Filter coil	stainless steel
Filter cage	glass filled polypropylene* or stainless steel
Housing	stainless steel or plastic
Valve	polypropylene or stainless steel
Valve seals	EPDM, or Viton or Nitrile*

### Other Material :-

Support brackets	stainless steel
Pump	stainless steel wetted parts

### Operating Parameters :-

Maximum pressure	up to 10 bar*
Maximum temperature	up to 95°C
Maximum flow	unlimited
Power supply	100-250Vac 2,3A max 12Vdc or 24Vdc*

\*Other materials available for higher pressures and higher temperatures.

**Some working filters on site.**

To the right is a Phoenix filter used to help recycle the effluent from sand filters, which in turn filters the swimming pool water at a large leisure complex. The filters are designed to help their system re-use the warm, chlorinated water back in to the pools.

This unit has a built in bypass system which warns the BMS if the filter is too clogged and needs servicing.

The Phoenix can recycle over 1500m<sup>3</sup> of water per day.

The units below were both made using all stainless steel housings, for very different applications.



The unit on the left was fitted at a large international airport and is used to recycle their run off water. This was previously treated and then disposed of in the local river, whereas now it is re-used in their washer vehicles. The system has a UV steriliser, as well as two pumps and is fully automated. The saving in mains water was nearly as large as the saving in diesel the trucks were using driving back and forth to fill up.

The unit on the right is made up of a pair of EasyClean filters and is used to recycle final effluent at a sewage works, where it is used on a drum thickener to blast solids off the screens.



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