



INKOS[®]

Pressure filtration

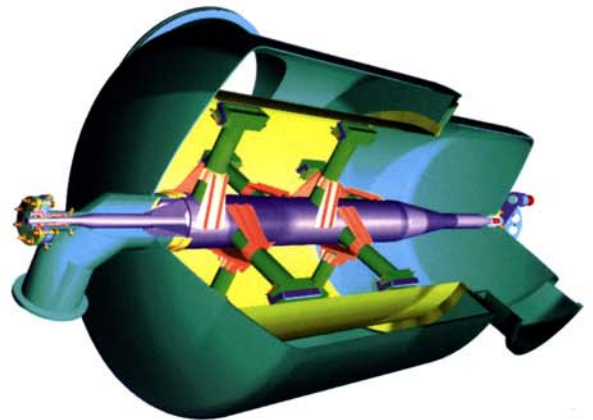
Self-cleaning pressure filters FILTROMAX TF a TMF

are fully automatic continuous filters designed for filtration and micro-filtration under pressure of water and other liquids. The filtration barrier may be composed of a stainless-steel perforated plate, a wedge wire screen or a chamber screen with cassettes made of pressed-in stainless steel woven cloth.

The FILTROMAX filters are usually placed in the delivery pipe behind the pump. The water enters the filter in the screen axis, passes the screen, and is directed by the external casing to drainage pipe situated upright the screen axis. After starting the cleaning cycle, the impurities are ripped off the screen by a contraflow of filtered water into the suction pipes and through a hollow shaft to waste pipes. During the cleaning cycle, the shaft with suction pipes turns and assures cleaning of the whole screen. The starting of the cleaning cycle is controlled by the pressure difference before and after the screen and by the timer.

Equipment advantages:

- high filtration fineness – from 8 μ m (micro-screen filters TMF)
- high flow use – up to 10 000 l/s⁻¹ (TF filters)
- easy disassembly and assembly process of the screen during the inspection and service
- high efficiency in the cleaning process perfect cleaning of the screen
- continuous filtration process and cleaning without shutting down
- very favourable ratio price/performance



wedge wire screen



screen from perforated plate



chamber screen

Areas of using the pressure filtration

COOLING WATER FILTRATION – in power engineering, chemistry, and metallurgy. The cooling systems in power stations require the filtration of large amounts of water before entering the cooling circuit. The use of big filters FILTROMAX TF seems to be the most convenient. It has been proved by the operation in power stations in the Czech Republic and abroad for several years. In contrast with other solutions, the main advantage is in the large filtration surface, efficiency in the screen cleaning and the possibility of rough impurities inlet up to 20 mm. The micro-screen filters FILTROMAX TMF with a wedge wire screen or chamber screen are beneficially used for a very fine filtration of cooling water of compressor houses, power station condensers et various machines and equipment.



Filtration station of cooling water in a power station

Screen and micro-screen pressure filtration is the most widespread method of disposal of suspended solids from liquids.

This type of filtration is based on catching the mechanical impurities on a filtration barrier.

Pressure filtration is the most convenient method for high flow filtration. Automatic self-cleaning filters use for both filtration and the screen cleaning the operational pressure in the pipes.

As far as self-cleaning filters are concerned, the filtration process is continuous and it is not necessary to double the filtration units.

INKOS supplies complex solutions for pressure filtration of liquids

Filtration tests

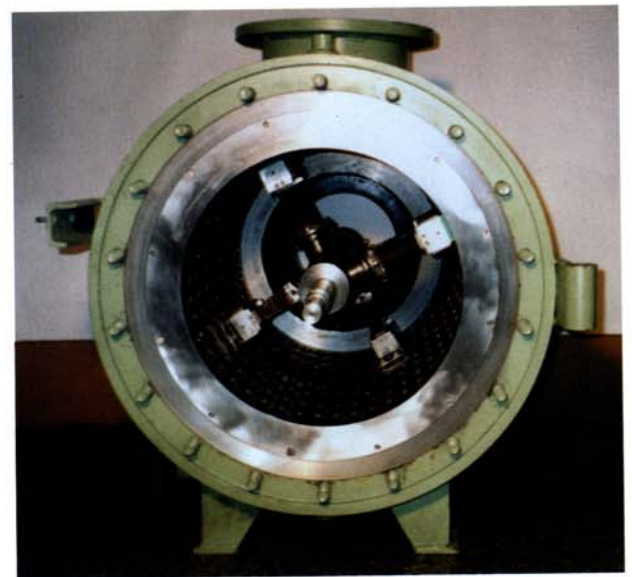
- During every new filtration solution, we execute laboratory tests to optimise the efficiency and cost-effectiveness of the process
- According to customer's demands, we execute pilot-plant tests at the installation site

Deliveries

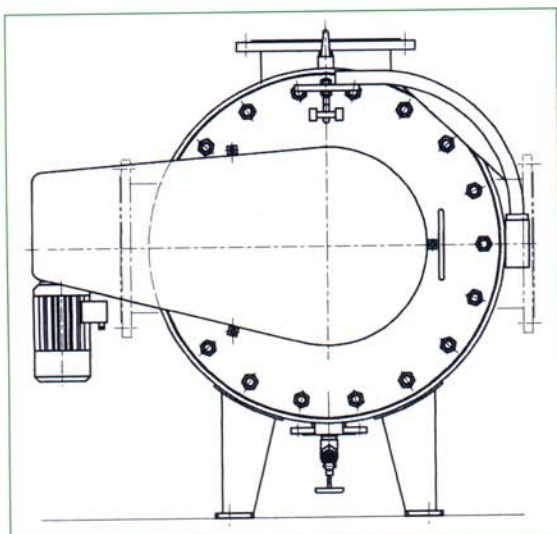
- Self-cleaning pressure filter FILTROMAX TF
- Self-cleaning pressure micro-filter FILTROMAX TMF
- Control system assuring operation without service
- All the auxiliaries (valves, control panels)

Services

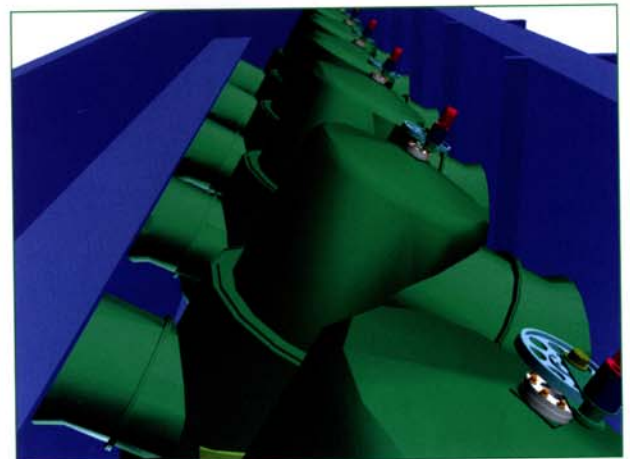
- Optimal technical set design
- Realisation project
- Erection
- Turn key project supply possibility
- Warranty and after-warranty service



FILTROMAX TMF, view of a filtration bucket and suction pipes



Side view of FILTROMAX TMF



Example of placing the filters FILTROMAX TF

TECHNOLOGICAL WATER FILTRATION

The filtration of technological water containing fibre is difficult because of clogging the filtration barrier by thin but long fibres. The construction solution of the FILTROMAX filters with a wedge wire screen and a mechanical scraper placed on the suction pipe solves this problem. The scraper cuts stuck fibres and allows a perfect cleaning of the screen.

The high flow filtration of subtle mechanical particles in both technological and potable water is assured by FILTROMAX TMF with cassettes with a pressed-in stainless woven cloth. The use of cassettes extends the filtration surface and allows to use very fine screen (from $8\mu\text{m}$). A step-by-step mechanism of the suction system assures an exact suction pipe positioning and thus a high efficiency of the cleaning cycle.

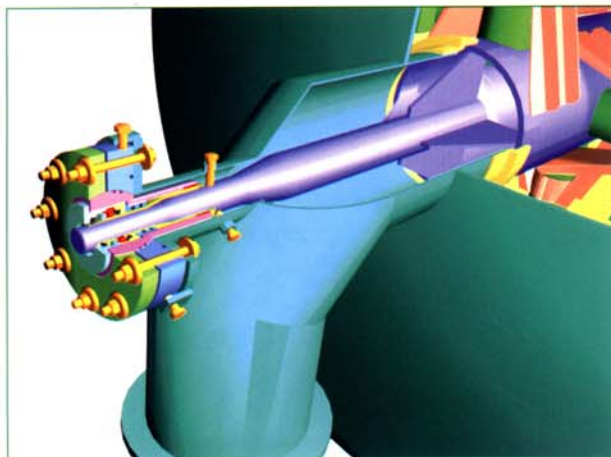


Filtration in the textile industry



Detail of a filtration cage of a chamber screen and suction pipes of FILTROMAX TMF

POTABLE WATER FILTRATION – during potable water filtration, the micro-filters FILTROMAX TMF are used for pre-filtration of mechanical impurities before entering the treatment house. They are also placed before sand filters to extend the filtration cycle, to increase the filtration efficiency and to decrease the consumption of washing water.



Detail of shaft bearing with suction pipes in drainage pipes



Detail of suction pipes and suction shaft of the FILTROMAX TF filter, flow $10\text{ m}^3/\text{s}$



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