

PRODUCT BROCHURE

WATEX DRINKING WATER TREATMENT SOLUTIONS

Sand filtration plants for municipal, commercial and industrial water treatment

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WATEX | Technological solutions and equipment for water treatment

Drinking water treatment plants

Consultancy



Construction



Service



Design



Installation



Renovation



 **WATEX**
Pure Water Systems

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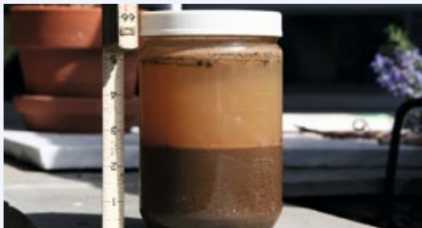
Drinking water treatment

Our engineering team has extensive experience in drinking water purification.

WATEX has more than 21 years of experience in residential, municipal and industrial water-treatment projects. More than 500 water-treatment plants have been built or reconstructed in villages and cities. Existing WATEX plants reach capacities of up to 800 m³/h.

Groundwater problems

Sand - mud - turbidity



Groundwater and surface water may contain sand, mud and other sediments that clog the system and wear valves and measuring devices.

Solutions

Suitable options include WATEX BF bag filters, cartridge filters and disc filters. They handle demanding flow rates where space is limited and are used for boiler, cooling and circulation water, surface-treatment rinse water and electronics-industry processes.

Iron and manganese



Iron and manganese often cause the main problems in waterworks. Contact with air changes the colour, increases turbidity and forms deposits; the water may taste metallic. Deposits clog pipes and stain sanitary fittings. WATEX recommends 0.1 mg/l iron and 0.05 mg/l manganese.

Solutions

Oxidation followed by sand filtration is the preferred solution, using WATEX FA and RCTB plant series. Pressure filters use Aqua Mandix and quartz sand (0.7 x 1.2 mm and 3 x 5 mm). Plant size depends on iron form, concentration, flow and other impurities.

Drinking water

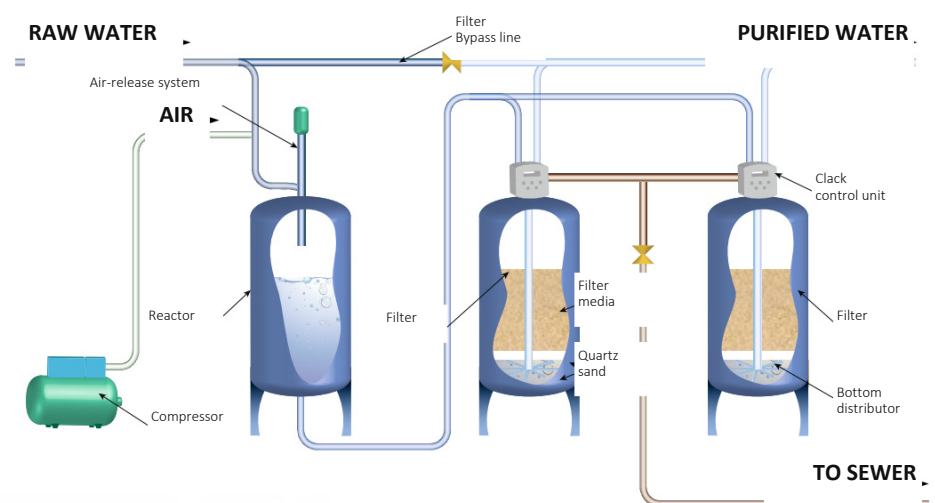
Drinking water must meet applicable quality requirements and be colourless, odourless and practically tasteless. Water samples are analysed and, where necessary, the water is treated in a pressure filter.

Waterworks, companies and households use pressure filters to reduce aggressive carbon dioxide, iron, manganese, ammonium, pesticides and arsenic.

The filter is selected according to the application, raw-water quality and consumption. We will help identify the most suitable solution.

Pressure-filter operating principle

The principle is based on aeration and filtration. Aeration oxidises iron and manganese and forms filterable deposits together with mechanical impurities. Suspended solids are retained in the filter media. Regular backwashing removes the accumulated deposits and restores performance.



Sand filtration plant series

WATEX engineers a wide range of proven models - from simple and reliable plants to technologically advanced solutions.

WATEX FA series



WATEX RCTBx2 series



APPLICATION

Sand filtration plants remove turbidity, colour, iron, manganese and odour from water for villages, cities and industrial sites. Their main application is groundwater treatment.

PIPING AND CONNECTIONS

Piping and assembly connections are available in PVC-U or stainless steel.

PRESSURE TANK

Pressure-filter vessels can be made of steel (galvanised or food-grade coated), fibreglass composite or stainless steel.

FILTER MEDIA

Water is treated with Aqua-Mandix and graded quartz sand (0.4-0.8 mm, 1-3 mm and 3-5 mm). Aqua-Mandix has a porous structure and large active surface for effective adsorption and deposit retention.

CONTROL SYSTEM

Electric three-way valves and an automatic LCD control unit operate the FA filters. Date, time and access protection can be configured. SCADA visualisation and GSM alarms are supported. Backwash can be initiated by time, volume or pressure drop.

An automatic Clack control valve runs filtration and rinsing sequences. Rinsing is available in automatic and manual modes. Backwash can be initiated by time, volume or pressure drop.

AIR SUPPLY AND RELEASE

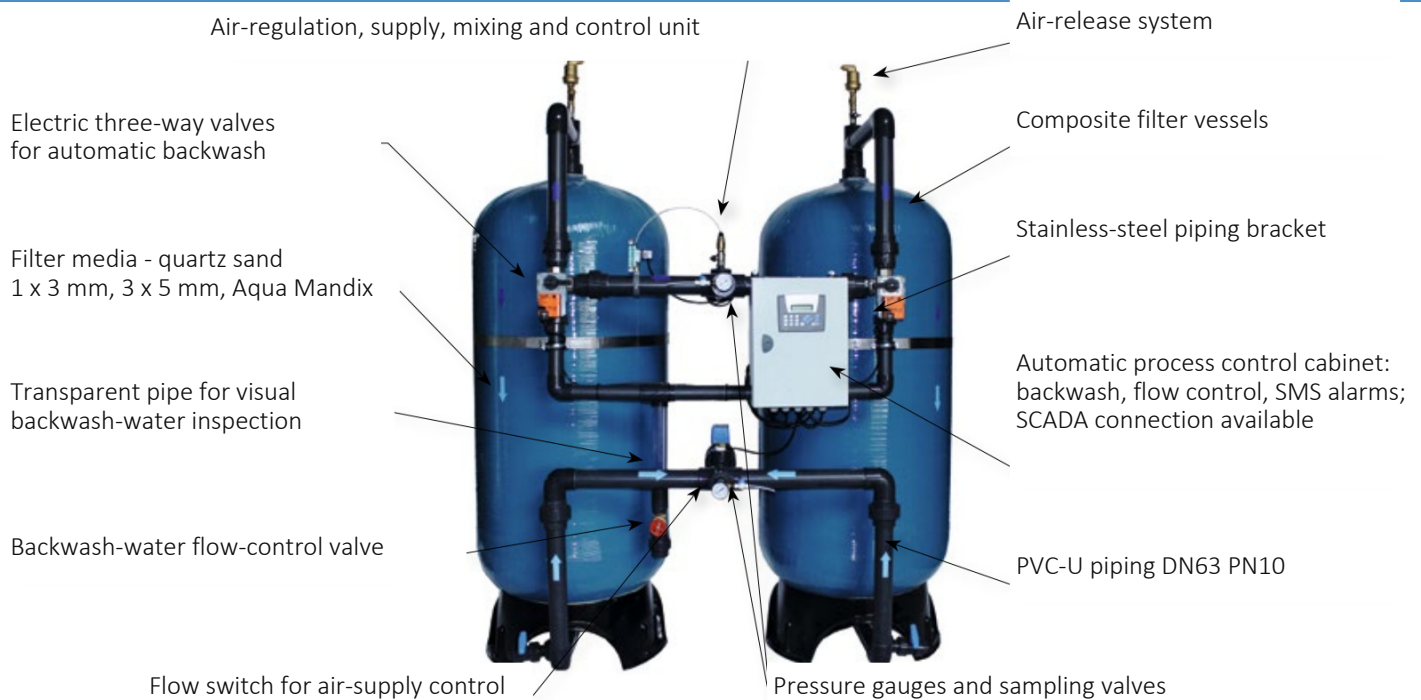
An oil-free compressor supplies air for oxidation; a flow-control unit regulates the amount. A built-in flow meter signals the solenoid valve so air delivery follows water flow. In FA models air is fed directly to the pressure filters and air release is integrated into the filters.

An oil-free compressor supplies air for oxidation and a flow-control unit regulates the amount. Aeration and air release take place in a reactor upstream of the filters.

SYSTEM MAINTENANCE

Consistent water quality requires correct air supply, removal of excess air and regular backwashing. The treatment process does not require chemicals that must be replenished continuously.

WATEX FA series filters

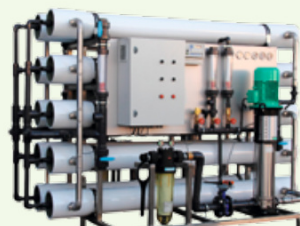


Plant assembly types



Standard prefabricated solution

Pre-assembled, tested, marked, disassembled and safely packed for compact transport. Clearly marked components can be assembled by the customer's technical staff following the supplied instructions. Start-up instructions and technical drawings are included.



Frame-mounted plant

For short project schedules. The plant is fully assembled and ready for use after connection. Frame systems are also available for high-capacity plants on container-size frames and are mainly installed indoors. Start-up instructions and technical drawings are supplied.



Containerised plant

Ready to connect and operate. All units are factory assembled and tested for rapid commissioning. Suitable for temporary or permanent treatment and for increasing existing waterworks capacity. Several insulated, electrically heated containers can be combined when required.

WATEX CUSTOMER SERVICE CENTRE IN ESTONIA



Watch the WATEX company video



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