Media Filters

WATEREX

Waterex uses the full spectrum of media filter technologies to deliver the appropriate water treatment solution for the application. Waterex's designs are backed by our own laboratory capability as well as input from our media suppliers allowing Waterex to continually develop state of the art solutions for each client's specific application.

Media filters offer high rate filtration even for arduous applications. Vessels are available in vertical and horizontal orientation with standard capacities ranging from 2.5 to 175 m^3/hr/vessel with larger capacities being provided for process specific designs to over 1,500 m^3/hr/vessel. Using stabilised media systems with single, dual or triple media allows for high backwash rates, even filtration and flow patterns, and high dirt holding capacities.

Media and Applications

Waterex uses many types of media and media combinations which may include but are not limited to:

- Dual media fine is used to filter to 10 micron as standard or 5 micron for specialised duties
- Dual media coarse is used to filter to 25 micron as standard with high dirt holding capacity
- Triple media is used for high solid holding applications where frequency of backwash should be minimised and also where filtration of suspended solids plus absorption of organic or ionically active compounds is desirable
- Catalytic media is used in the stripping of many undesirable elements
- Activated carbon and DMI-65 can be used to remove particular dissolved solids including arsenic, iron, and manganese to name a few
- BAC media used to strip organics and colour
- Hydrophobic media and/or media plus lamellae for oil/coalescing organic removal and recovery
- Inverted beds may be used for high solid holding capacities

Features

Waterex filters are tailor designed to meet each process application with specific constraints. Waterex media filters may include but are not limited to include the following features:

- Chemical dosing systems including analysers may be integrated if required
- Stabilised underbeds are installed as standard to ensure high velocity efficient cleaning cycles are realised without affecting the even efficient filtration of feed electrolytes or liquors
- Multifunctional cycles for pregnant process liquor recovery prior to backwash
- Backwash cycles are triggered by set point differential pressure criteria, timeclock (often in a standby role), or process activated sequence in the overall plant DCS control system
- Continuous filtration to suit steady state processes can be provided
- Air scour cleaning options are available for onerous or difficult applications demanding clean media or break up of scales between cycles
- PLC control with lapse time interlocks are available to minimise media bumping
- Autonomous filtration to provide reliable fully automatic filtration without the requirement for service features such as automated valves, compressed air, or PLC
- Waterex can design the system to any particular zone, gas group, and temperature class required

Materials of Construction

Waterex design filters on an individual basis to suit the application. We manufacture filters in a variety of materials including: FRP, epoxy coated mild steel, galvanised mild steel, stainless steel 304, 316, 904, super duplex stainless steel SAF2205, and SAF2507.

Pilot Plant

Waterex have a media filter pilot plant available for use on-site or on our premises at Waterex. The filter vessel may be filled with media to suit the application and air scouring can be fitted to the vessel if required.

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