

Cold WFI production

The main treatment stages in our MWFI system are a combination of a reverse osmosis stage, electrodeionization and ultrafiltration. The plant construction features a consistent hygienic design that meets all the requirements of the EMA and all other guidelines.

In addition to the implementation of a hygienic system design in all system areas and various sanitization concepts, our biofilm an control strategy also includes an intelligent alarm concept.



Our patent - ozonizable ceramic modules

When using our patent, ceramic modules are used for ultrafiltration that can be continuously exposed to ozone to provide additional protection against microorganisms.



Technical Data

Material	Stainless steel 1.4404 or 1.4435, roughness <0.8 µm (optionally <0.6 µm and electro-polished)
Process engineering	Pre-treatment, 1- or 2-stage reverse osmosis, EDI, UF
Available performances	200 - 20.000 l/h
Total yield	approx. 70 - 75% incl. concentrate stage up to > 80%*
Ultrafiltration module type	Ceramic or hollow fiber
Cut-Off Ultrafiltration	5.000 Dalton (hollow fiber 6.000 Dalton)
Ultrafiltration	Optional fully automatic and logged verification of the integrity of the UF modules during operation
Sanitization of the entire system	by means of hot water
Sanitization of Ultrafiltration	Ozone (own patent), hot water
Connections	Aseptic clamp according to DIN 11864-3 A
Valves	Diaphragm valves (optional T-Body)
Inline/ Online Process monitoring	TOC and conductivity, flow, temperature and pressure (optional bacterial count determination)
Control and visualization	System control via Simatic S7 PLC, Operation and visualization via Siemens TIA Portal
Computer validation	according to GAMP 5

* related to the entire system incl. water softener.

Technical changes and errors excepted.