



Caring about water since 1932



Pharmaceutical industry

www.usf-water.com

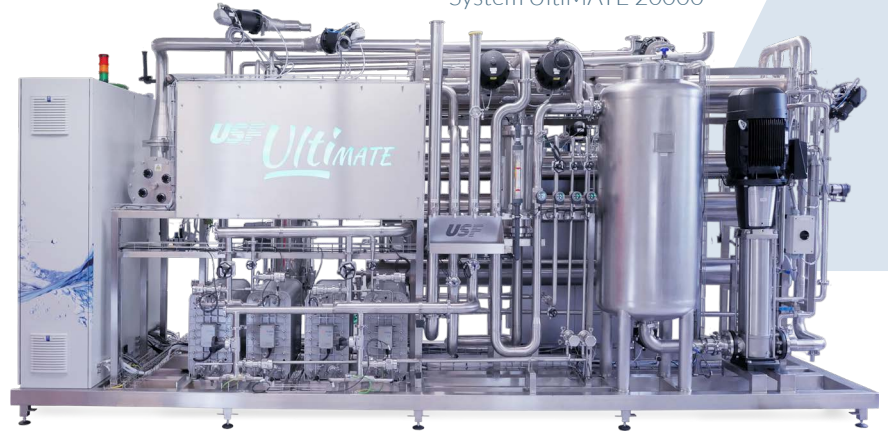
www.whitewatercare.com

Cleanest water for pharmacy and cosmetics

Pharmaceutical unit:
System UltiMATE 20000

ABSOLUTE PURITY AND BACTERIA-FREE QUALITY OF THE WATER ...

... are the basic requirements for pharmaceutical and cosmetic products. No other branch of industry places such high demands on pure water. And this is good as the purified water finds a direct way into the products themselves.



How the system components and pipelines must be constructed, which materials are used to ensure the quality of the water for the production of medicines, ointments or even decorative cosmetics – all this is subject to strict conditions. In addition to complying with exacting legal requirements, our purified water system fulfil the highest customer requirements due to the core technology of Ionpure-CEDI® modules. They stand for quality, safety, profitability and a long service life. International companies in the pharmaceutical and cosmetics industry have known this for a long time, and have been using our solutions for years.

The world of USF Water Purification

WE COVER A LARGE SPECTRUM. And as with all solutions to be optimally adapted, we adapt our products optimally to fulfil your requirements. From pre-treatment over production to storage and distribution, we offer systems to meet your needs whether it is the degree of purity of the water, from pre-treatment over pure to ultrapure water, the possibility of hot water sanitation or the quantity of water you need.

Our innovative systems comply with the strict requirements of the pharmaceutical and cosmetic industry, and excel in quality and design.

Pre-Treatment:

Only purified water can be clean water

USF Water Purification covers all possible treatment stages for the safe cleaning of your water. We always focus on your needs and also the content of raw water – because each water type is different. USF Water Purification can rely on a large, existing product portfolio.

FILTERS:

- ◆ Cartridge filtration: various filter types possible, string wound filters, pleated filters and melt blown depth filters.
- ◆ Multimedia-filter: filtration up to 5 µm, with central control or individual valve control, material plastic PVC, PP, PVDF or stainless steel
- ◆ Ultrafiltration systems: for problematic feedwater with high particle quantity or high organic content. Fully automatic control with Siemens PLC => automatic backwash and optional automatic disinfection of the UF membranes possible

WATER SOFTENERS:

Our softener units, similarly to our filter systems, can handle small quantities and also several hundred cubic meters of water per hour. They are controlled by a central control valve or by PLC and individual valve control. Smaller equipment operates in duplex mode, larger ones in parallel or duplex operation.

Pharmaceutical unit:
Softener UltiSOFT

SPECIAL FILTER STATIONS – IRON/MANGANESE REMOVAL:

- ◆ Filter systems even for the most problematic feedwater, they can also be used in the presence of hydrogen sulphide H₂S with central control or individual valve control, material plastic PVC, PP, PVDF or stainless steel

CHLORINE REMOVAL:

- ◆ either by activated carbon: also hot water sanitizable
- ◆ by sodium bisulphite dosage
- ◆ by UV treatment: feeding up to 1 mg/l free chlorine, after UV chlorine is no longer detectable.



BIOSOFT
MW/HW PLUS

BIOSOFT
MW/HW

BIOSOFT MW

BIOSOFT

ULTISOFT

	BIOSOFT	BIOSOFT MW	BIOSOFT MW/HW	BIOSOFT MW/HW PLUS	ULTISOFT
Operation	Parallel operation	Multiway operation	Multiway operation	Multiway operation	Multiway operation
Material	Plastic	Plastic	Stainless steel incl. internal parts such as resin traps and riser pipes	Stainless steel incl. internal parts such as resin traps and riser pipes	Stainless steel incl. internal parts such as resin traps and riser pipes
Control	Central control valve	Central control valve	Central control valve	Central control valve	Single valve control
Capacity control	Quantity controlled	Quantity or quality controlled	Quantity controlled	Quantity controlled	Quantity controlled
Sanitization	Chemical – manual	Chemical – manual	Hot water complete equipment – automatic	Hot water, each softener vessel is independent of the other – automatic	Hot water, each softener vessel is independent of the other – automatic



Production:

Strong series for the purest water



Our water treatment units of the series **UltiMATE, OptiMATE, EcoMATE, DoubleMATE-RO** and the **CDI-/CEDI systems** produce purified water in the purity levels of Purified Water and Highly Purified Water; their performance ranges are from 200 l/h up to 20,000 l/h. All models comply with the guidelines of the European Pharmacopoeia and the United States Pharmacopoeia USP.

Our systems in the series **UltiMATE, OptiMATE** or **EcoMATE** produce Purified Water with a combination of reverse osmosis and a CEDI module.

The **DoubleMATE-RO water purification systems** produce Purified Water with double-stage reverse osmosis.

The **CDI-/CEDI systems** can be used as post-purification for RO systems to produce Purified Water.

	ULTIMATE	OPTIMATE	ECOMATE	DOUBLEMATE	CEDI-LX
Purification technology	RO/CEDI	RO/CEDI	RO/CEDI	RO/RO	CEDI
Piping	Stainless steel	Stainless steel	PVC, optional stainless steel	Stainless steel	Stainless steel
Automation grade	Highest level	Medium level	Lower level	Medium level	Lower level
Control system	S7-1500	S7-1500	S7-1500	S7-1500	S7-1500
HMI size	15"	12"	9"	12"	7"
Cold WFI quality	Optional	Not possible	Not possible	Not possible	Not possible
Membrane degassing	Optional	Optional	Not possible	Optional	Optional
Chlorine removal	Activated carbon/ Sodium bisulphite/ UV	Activated carbon/ Sodium bisulphite/ UV	Activated carbon/ Sodium bisulphite	Activated carbon/ Sodium bisulphite/ UV	N/A
Remote access	Optional	Optional	Optional	Optional	Optional
Sanitization	Hot water – fully automatic	Hot water – fully automatic	Chemical manual, chemical automatic optional	Hot water – fully automatic	Hot water – fully automatic
Regulation of the production rate	Optional	Not possible	Not possible	Not possible	Not possible
EcoMOTION: equipment performance 50-100% adjustable					
RO concentrate reverse osmosis ConzRO: recovery up to 90%	Optional	Not possible	Not possible	Optional	Not possible

Storage and distribution: valuable ultrapure water from the collection points

With our RingMATE system and storage tank we offer an individual solution for the storage and distribution of your ultrapure water to every point-of-use, in a way to reduce the risk of any bacteria growth or any other contamination of the water. Sanitization can be carried out with constant ozonisation of the storage tank or hot water. An UV unit is used as additional bacteria control. The ultrapure water reaches the points-of-use via an engineered distribution system.

RINGMATE SYSTEM:

- ◆ Distribution system
- ◆ Skid structure
- ◆ Fully piped with stainless steel
- ◆ With UV unit for bacteria control
- ◆ The aseptic double-tube heat exchanger ensures continuous cooling and optionally hot water sanitization.
- ◆ Sanitization: alternatively with hot water or ozone
- ◆ Single pump or optional double pump station for redundancy
- ◆ Complete measurement and control technology included
- ◆ Control: optionally with its own PLC and touch panel or from the production system

STORAGE TANK:

- ◆ Made of stainless steel, electropolished optionally available
- ◆ Pressureless version or pressure tank possible
- ◆ Not insulated or with fully welded insulation
- ◆ Complete measurement technology included: level sensor, safety devices such as rupture discs or safety valves, overfill/dry-run protection
- ◆ Tank connection: with Tri-Clamp or NA-Connect
- ◆ Optional: Riboflavin test possible with FAT, optional

Pharmaceutical unit:
Distribution RingMATE



WHITewater



Caring about water since 1932



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