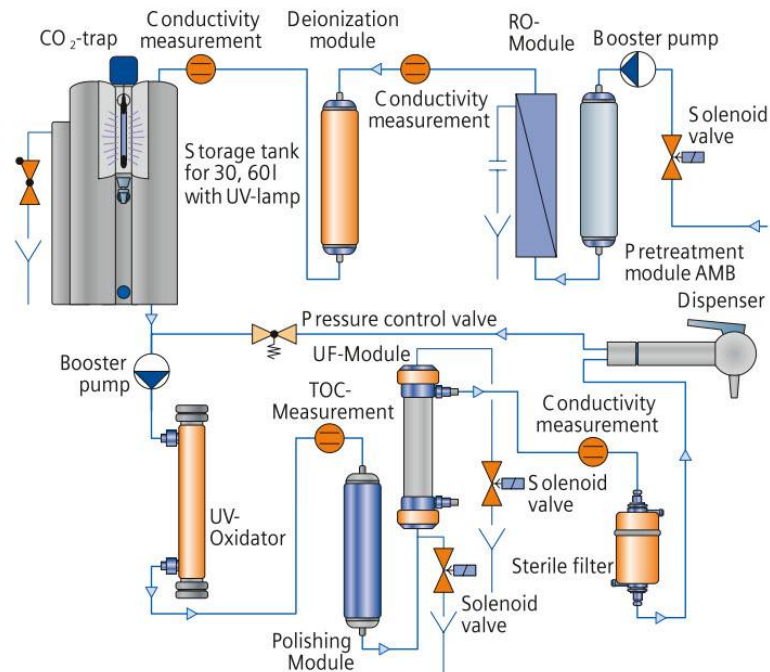




## ULTRA CLEAR TWF SYSTEMS

### DIRECT PURITY - TAP WATER FEED



The Ultra Clear TWF system is equipped with all the necessary components to produce reagent grade water directly from municipal tap water. The built-in reverse osmosis system has a recovery rate of > 30% to conserve water. The downstream deionization module polishes the RO product water prior to delivery to the storage tank. Water going to storage has flow rate of 10 l/h and quality of < 2 µS/cm.

The Ultra Clear TWF systems have a dispense rate of up to 1.8 l/min with a water quality of 18.2 MΩ-cm and a TOC-level from 10 down to 1-3 ppb depending on the selected unit. The water exceeds all reagent grade water quality standards including: ASTM Type 1, CLSI and ISO 3696 Type 1. Options include: ultrafiltration, UV-oxidization and TOC monitoring for all applications. Pretreatment, reverse osmosis module, deionization cartridge, storage tank, UV-oxidization chamber, polisher, ultra-filter and sterile filter are all integrated into one system. The system delivers ultrapure water which is RNase-, DNase- and DNA-free. Endotoxin content is extremely low < 0.001 EU/ml.

This compact system has been successfully developed with all the required technical features to economically produce purified and ultrapure water with low running costs. Other systems consisting of separate reverse osmosis unit, storage tank and polishing unit are typically more expensive.

Our new systems are available with special features such as: volume control dispensing, a 24-hour-circulation mode and an integrated RS232 interface for data recording. Variable length hoses for the remote dispenser are also available. In all versions the polishing module MFIID is included. All UV versions are delivered with pretreatment module DTO and all other versions with the deionization module VMD. The 24 hour energy saving option allows to start and stop the unit at different times. Day and night operation is free selectable with interval option for UV oxidization.

## TYPICAL APPLICATIONS

### Ultra Clear TWF

- AAS
- Routine analysis
- Standard buffer
- GC

### Ultra Clear TWF UV and UV TM

- HPLC
- IC
- GC and GC/MS
- TOC analysis
- ICP and ICP/MS

### Ultra Clear TWF UV UF and UV UF TM

- DNA sequencing
- RNase-, DNase- and DNA-free
- PCR
- IVF
- 2-D-electrophoresis
- Critical cell and tissue culture
- Pyrogen sensitive applications

## Specifications

Ultrapure water specifications	Value	UC TWF	UC TWF UV	UC TWF UV UF	UC TWF UV TM	UC TWF UV UF TM
Output** up to	l/min	1.8	1.8	1.8	1.8	1.8
Conductivity at 25° C	µS/cm	0.055	0.055	0.055	0.055	0.055
Resistivity at 25° C	MΩ-cm	18.2	18.2	18.2	18.2	18.2
TOC	ppb	5 – 10	1-3	1-3	1-3	1-3
DNase, RNase, DNA		-	-	free	-	free
Bacteria	cfu/ml	< 1	< 1	< 1	< 1	< 1
Endotoxins	EU/ml	-	-	< 0.001	-	< 0.001
Particles > 0.1 µm	per ml	< 1	< 1	< 1	< 1	< 1
Feed water specifications						
Pressure	bar	0.1 – 5	0.1 – 5	0.1 – 5	0.1 – 5	0.1 – 5
Conductivity	µS/cm	< 2000	< 2000	< 2000	< 2000	< 2000
Colloid index	SDI	< 3	< 3	< 3	< 3	< 3
Free chlorine	mg/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fe	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CO2 max.	mg/l	15	15	15	15	15
Temperature	°C	5 – 35	5 – 35	5 – 35	5 – 35	5 – 35
Shipping weight	kg	41 / 44	42 / 45	44 / 47	43 / 46	44 / 47
UC TWF 30 l/60 l						
Power supply	V/Hz	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60	100-240/50-60
Dimension 30 l: H/W/D	mm	530/560/320	530/560/320	530/560/320	530/560/320	530/560/320
Dimension 60 l: H/W/D	mm	530/900/320	530/900/320	530/900/320	530/900/320	530/900/320
Catalog number		<b>W3T197649</b>	<b>W3T199719</b>	<b>W3T199741</b>	<b>W3T199941</b>	<b>W3T199850</b>
Ultra Clear TWF 30 l						
Catalog number		<b>W3T198240</b>	<b>W3T199149</b>	<b>W3T199162</b>	<b>W3T199298</b>	<b>W3T197659</b>
Ultra Clear TWF 60 l						

## Consumables

Catalog number	Description	Change frequency
W3T197618	Deionization module VMD	6 – 12 months
W3T197613	Pre-treatment module AMB	6 – 12 months
W3T197621	Pre-treatment module DTO	6 – 12 months
W3T197694	Polishing module MFIID	6 – 12 months
W3T199853	Polishing module ILT	6 – 12 months
W2T526542	Sterile filter 0.1 µm	6 months
W3T199768	Disinfection kit (pack of 3)	-
W2T558521	UV replacement bulb	12 months
W3T197614	Ultrafiltration module	18 – 36 months
W3T197620	RO replacement module 10 l/h	2 – 3 years
W3T199197	CO2 Trap replacement cartridge	12 months
W2T558519	UV Submersible bulb 30 and 60 l tanks	12 months