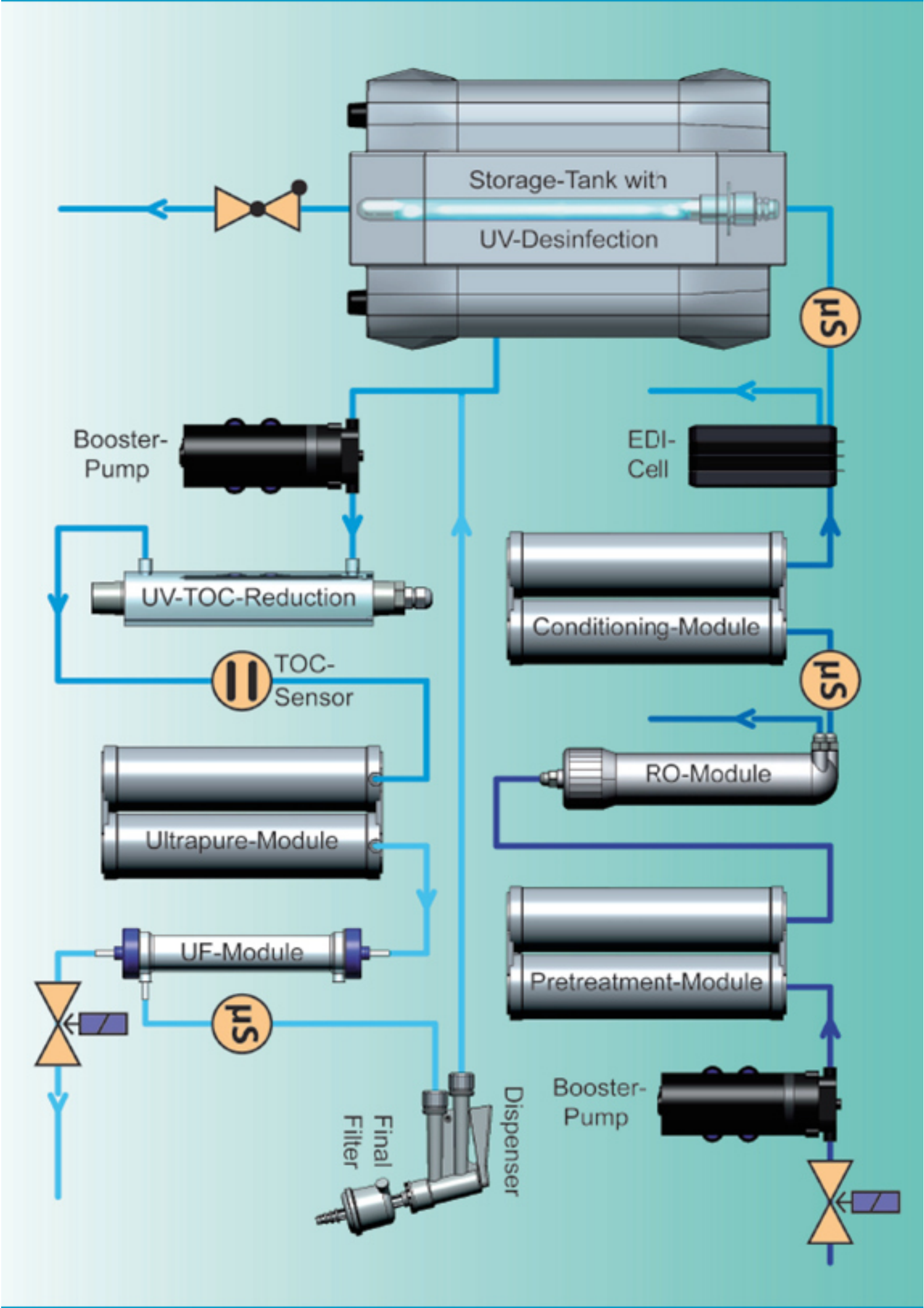
WATER PURIFIER


# Aquinity² E35/70

## PRODUCT INFORMATION

The new ultrapure water systems Aquinity² E35 and E70 provide you with reliable and compact systems to produce both ASTM Type I and Type II grade water. The systems are fed directly with tap water.
Aquinity² E models are equipped with an electro deionization (EDI) cell. The water therefore has a very high quality (< 0.1 µS/cm, TOC < 30 ppb). The 35l or 70l storage reservoirs are filled with ASTM Type II grade water at a production rate of 10l/h (optionally 20 l/h). The pure water can be dispensed straight from this reservoir.
In the next step, ultra pure ASTM Type I water (< 0.055 µS/cm, TOC < 1 ppb) is produced with a combination of optimized cartridges.


Storage-Tank with
UV-Desinfection
Booster-
Pump
EDI-
Cell
UV-TOC-Reduction
Conditioning-Module
TOC-
Sensor
RO-Module
Ultrapure-Module
UF-Module
Pretreatment-Module
Booster-
Pump
Final
Filter
Dispenser

# TECHNICAL SPECIFICATIONS

| | |
|---|---|
| feed water type | potable tap water |
| ultra pure water quality | ASTM Type I |
| resistivity | 18.2 MOhm x cm*** |
| TOC | < 10 ppb (Reagent)<br>< 5 ppb (LifeScience)<br>< 1 ppb (Analytical) |
| dispensing flow rate | up to 2 l/min |
| bacteria | < 1 cfu/ml * |
| particulate | > 0.2 µm less than 1 particulate/ml |
| pyrogen (endotoxins) | < 0.001 EU/ml |
| RNAase | < 1 pg/ml ** |
| DNase | < 5 pg/ml ** |
| pure water quality | ASTM Type II |
| conductivity | < 0.1 µS/cm*** |
| TOC | < 30 ppb |
| production rate | 10 l/h, optionally 20 l/h |
| particulate | > 0.2 µm less than 1 particulate/ml |

* with Endfilter 0.2 µm
** with LifeScience model
*** with cell constant 0,01 $cm^{-1}$

Touch Screen Display

ASTM Type I Dispenser


35 l or 70 l reservoir tank.
The tank is made out of
4 mm polyethylene (PE)

ASTM Type II Dispenser

| Aquinity² E model | UV-reactor | UF-module | TOC-monitoring | Cat.-No. (35 l reservoir) | Cat.-No. (70 l reservoir) |
|---|---|---|---|---|---|
| Reagent | - | - | - | 114-0053 | 114-0063 |
| Analytical | x | - | - | 114-1154 | 114-0064 |
| LifeScience | x | x | - | 114-0055 | 114-0065 |
| Analytical TI | x | - | x | 114-0058 | 114-0068 |
| LifeScience TI | x | x | x | 114-0059 | 114-0069 |

# OPTIONS

## TOC monitoring

The TOC monitoring during production and intermittent measurements during non-use periods allow to check the organics in water. The TOC value is measured between 1 and 999 ppb and can be shown in the display to monitor organic impurities.

## Upgrade for Trace Analysis

To detect traces of substances in analytics, the water quality has to be of highest purity. Therefore all components are made of unfilled material. Tubing material is PTFE for minimal adhesion. Dead spaces are avoided and the recirculation pump is made of PEEK and stainless steel. The material of the tap valve is PVDF.

## memTap

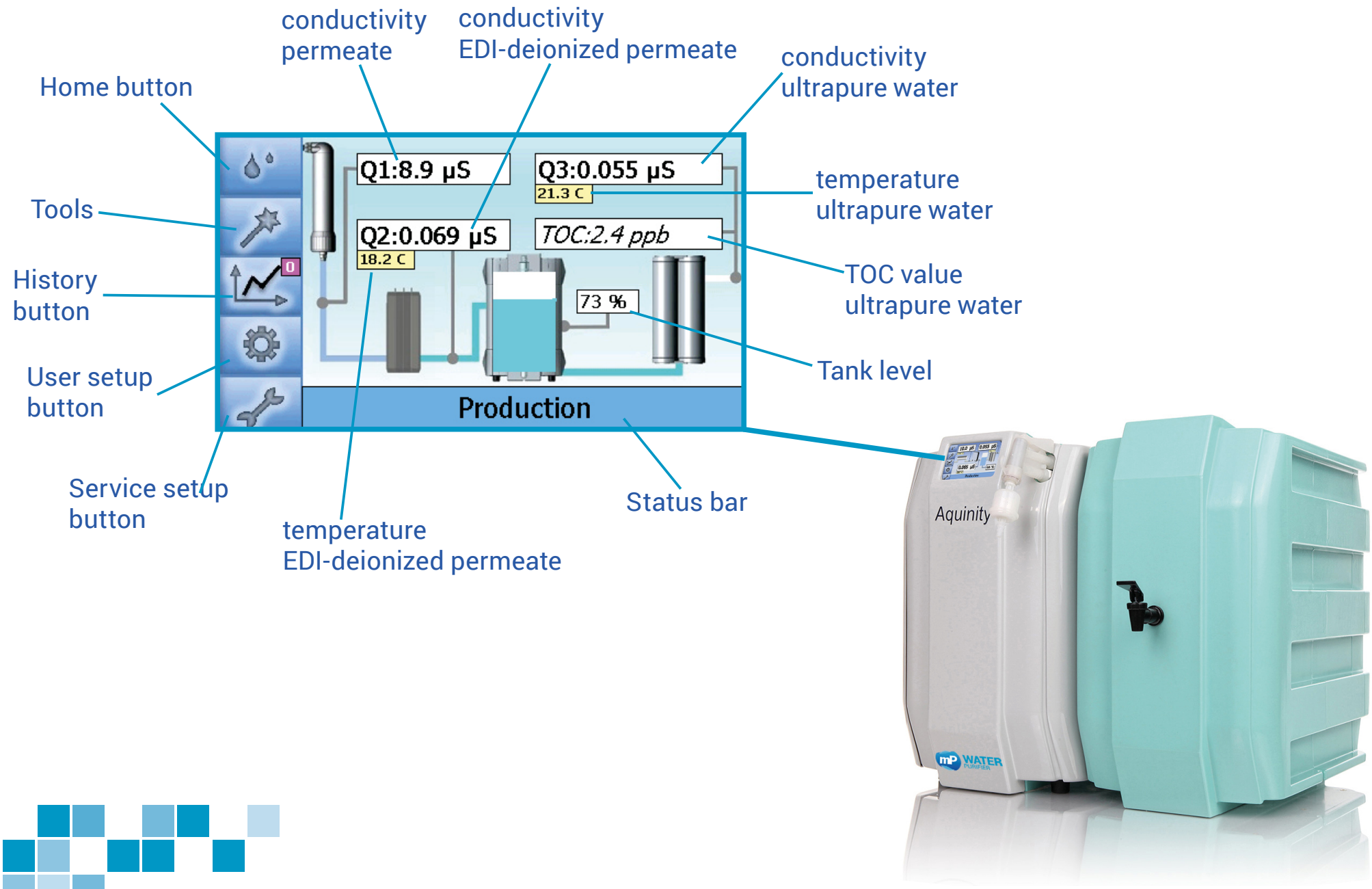
Our new memTap allows the volumetric controlled dispensing of water with an additional device. The arm can be moved horizontally and vertically. Preset of tap-volume is in 0.1 l steps from 0.1 to 99 l. This system prevents overflow of containers and allows to tap water without supervision. The 3.5“ display with touch screen offers you all relevant data at a glance.

# Feed water requirements

| | | | |
|---|---|---|---|
| pressure | bar | 1.5 ... 6 | |
| max. flow | l/h | 80 | |
| feed water conductivity | µS/cm | < 1,400 | |
| free chlorine | mg/l | < 0.1 | |
| $CO_2$ | mg/l | < 15 | concentration total < 20 mg/l |
| silica | mg/l | < 10 | |
| Silt Density Index (SDI) | | < 3 | |
| iron | mg/l | < 0.1 | |
| manganese | mg/l | < 0.05 | |
| pH | | 3 ... 9 | |
| temperature | °C | 5 ... 25 | |

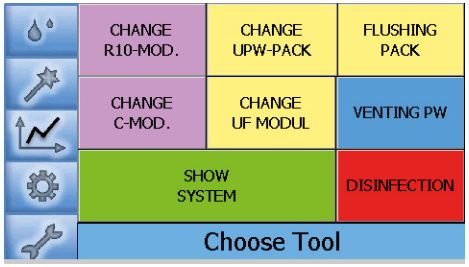
All given flow rates are based on feed water temperature of 10°C (50°F). The RO permeate flow will change approx. 2% for each °C (decrease for lower values, increase for higher values).

# DISPLAY

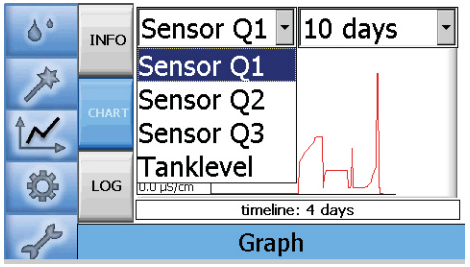

conductivity permeate
conductivity EDI-deionized permeate
conductivity ultrapure water
Home button
Tools
History button
User setup button
Service setup button
temperature ultrapure water
TOC value ultrapure water
Tank level
Status bar
temperature EDI-deionized permeate
Q1:8.9 µS
Q3:0.055 µS
21.3 C
Q2:0.069 µS
18.2 C
TOC:2.4 ppb
73 %
Production
Aquinity
WATER

# SOFTWARE

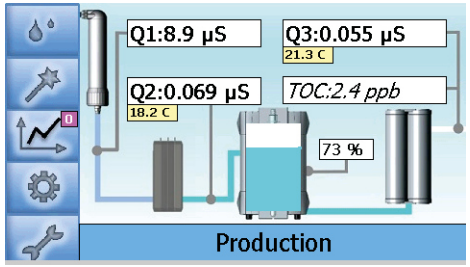
The software allows the user to see all information, use maintenance tools and to track back historic values.



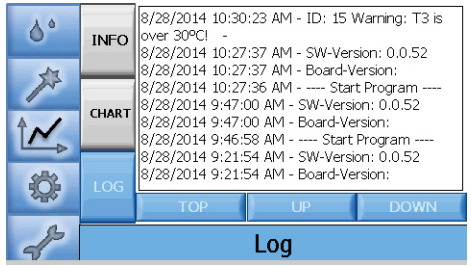

Helping tools to maintain system



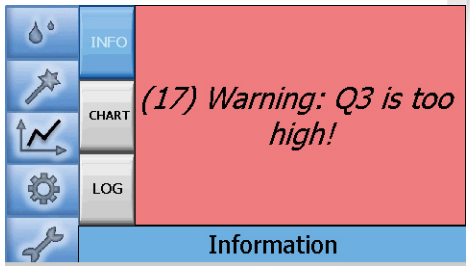

Trackable values up to 1 year



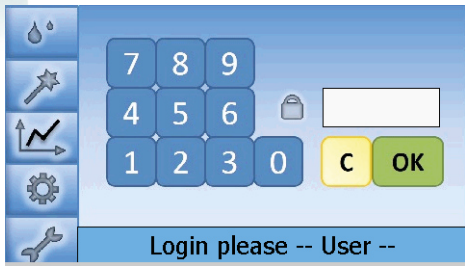

Current status - main screen


Log files

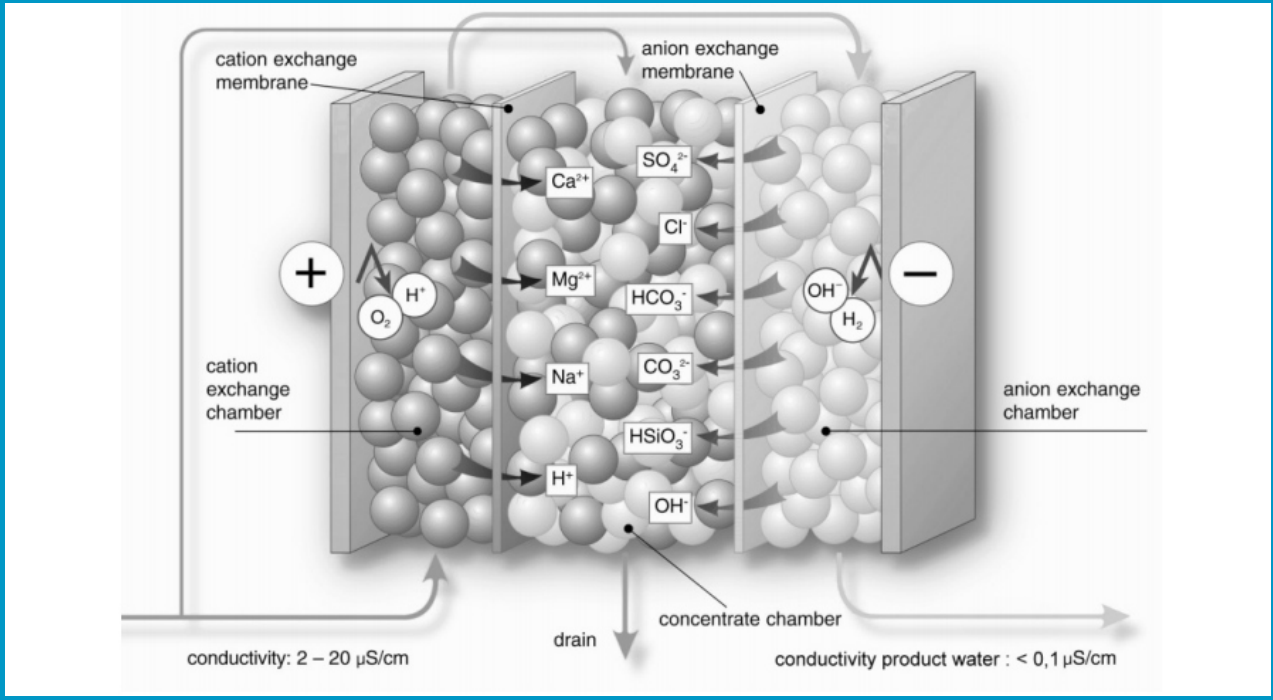



Warnings




Security password

# ELECTRODEIONIZATION (EDI CELL)




Following a reverse osmosis step, the conductivity will be decreased further by an electro-chemical process within the EDI cell. The resin is self regenerating. The conductivity value of the product water will be lower than 0.1 µS/cm.


# CONSUMABLES

| Description | Cat.-No. |
|---|---|
| final filter, capsule, 0.2 µm | 190-0013 |
| tank vent filter | 190-0085 |
| pretreatment module ProPak R10 | 290-0065 |
| conditioning module | 290-0218 |
| polisher module MemPak LS (organic applications) | 190-0087 |
| polisher module MemPak AL (anorganic applications) | 190-0088 |
| submersible UV-lamp | 921-0483 |
| UV-lamp | 921-0138 |
| ultrafiltration module | 190-0052 |
| disinfection tablets | 290-0227 |

# DIMENSIONS

| | |
|---|---|
| Measurement | 504 x 680 x 535 mm |
| Weight | 16 - 20 kg |
| Power supply | 110 - 230 V |

WATER
PURIFIER

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