

## LABOSTAR® PRO TWF

# FROM TAP WATER TO ULTRAPURE WATER- ONLY ONE INNOVATIVE STEP

The LaboStar® PRO TWF systems produce ultrapure water straight from your drinking water supply. This equipment incorporates a pre-filtration unit and a reverse osmosis membrane. The pure water collects in an integrated tank and is finally circulated through the polishing module by a circulation pump. The user can extract either Type III water from the built-in 7l storage tank or Type I water from the dispenser with a quality of 0.055  $\mu$ S/cm, equivalent to 18.2 M $\Omega$ -cm, and TOC of between 1 and 10 ppb, depending on the system type. The RO water quality is displayed as well. The LaboStar PRO TWF equipment can cost-effectively produce small amounts of analytical-grade water. The water quality exceeds all relevant standards including ASTM Type I, CLSI and ISO 3696 Type I. System can be upgraded with 30 or 60l storage tank.

A conductivity sensor constantly measures the product water purity in the recirculation loop. A positively charged 0.2  $\mu$ m sterile filter at the dispenser removes bacteria and endotoxins, eliminating the need for an expensive ultra-filter. An uncharged 0.2  $\mu$ m sterile filter is also available. LaboStar PRO TWF systems are delivered with the first set of modules and filters.

#### **Typical Applications LaboStar PRO TWF**

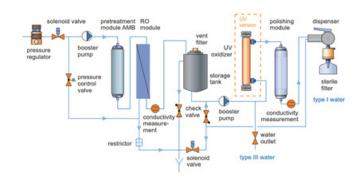
- General analysis
- Standard buffer
- AAS
- GC
- · IC
- Type III water
- QC Food Industry
- Pyrogen sensitive applications
- Cell and tissue culture
- ICP

## **Typical Applications LaboStar PRO TWF UV**

- Micro- und molecular biology
- PCR
- HPLC
- TOC analysis
- Type III water

#### **SPECIFICATIONS**

| Type III water specifications |        | LaboStar PRO<br>TWF          | LaboStar PRO<br>TWF UV       |
|-------------------------------|--------|------------------------------|------------------------------|
| Flow rate @ 25°C              | l/h    | 9                            | 9                            |
| Flow rate @ 20°C              | l/h    | 8                            | 8                            |
| Flow rate @ 15°C              | l/h    | 7                            | 7                            |
| Rejection rate for ions       | %      | 98 max                       | 98 max                       |
| Rejection rate for bacteria   | %      | >99                          | >99                          |
| Rejection rate for particles  | %      | >99                          | >99                          |
| Type I water specifications   |        |                              |                              |
| Output up to                  | l/min  | 1,2                          | 1,2                          |
| Conductivity @ 25° C          | µS/cm  | 0,055                        | 0,055                        |
| Resistivity @ 25° C           | MΩ-cm  | 18,2                         | 18,2                         |
| TOC                           | ppb    | 5-10                         | 1-5                          |
| Bacteria                      | cfu/ml | <1                           | <1                           |
| Endotoxins                    | EU/ml  | <0,001                       | <0,001                       |
| Particles > 0.2 µm            | per ml | <1                           | <1                           |
| Feed water specifications     |        |                              |                              |
| Pressure                      | bar    | 3-5                          | 3-5                          |
| Conductivity                  | µS/cm  | <1400                        | <1400                        |
| Colloid Index                 | SDI    | <3                           | <3                           |
| TOC                           | ppb    | <1000                        | <1000                        |
| Free Chlorine                 | mg/l   | <0,5                         | <0,5                         |
| Fe                            | mg/l   | <0,1                         | <0,1                         |
| CO <sup>2</sup> max.          | mg/l   | <15                          | <15                          |
| Water temperature             | °C     | 5-30                         | 5-30                         |
| Ambient temperature           | °C     | 5-35                         | 5-35                         |
| Connections                   |        |                              |                              |
| Raw water                     | R =    | 5/16" push-in /<br>flex tube | 5/16" push-in /<br>flex tube |
| Pure water                    | d =    | ¼" push-in /<br>flex tube    | ½" push-in /<br>flex tube    |
| Drain concentrate             | d =    | 3/8" push-in /<br>flex tube  | 3/8" push-in /<br>flex tube  |
| Power requirements            |        |                              |                              |
| Power consumption             | W      | 270                          | 270                          |
| Power supply                  | V/Hz   | 100-240V /<br>50-60Hz        | 100-240V /<br>50-60Hz        |
| Dimensions (HxWxD)            | mm     | 535x400x520                  | 535x400x520                  |
| Catalog number                |        | W3T324337                    | W3T324338                    |



### **CONSUMABLES & ACCESSORIES**

| Item Number | Description   | Change<br>Frequency |
|-------------|---|---------------------|
| W3T197613   | Pre-treatment module AMB  | 6 - 12 months       |
| W2T558521   | UV replacement bulb   | 12 months           |
| W3T197694   | Polishing Module MFIIID   | 6 - 12 months       |
| W3T199853   | Polishing Module ILT  | 6 - 12 months       |
| W3T199279   | Sterile filter 0.2 $\mu$ m with endotoxin retention (pack of 3) | 6 months            |
| W3T199209   | Sterile filter 0.2 µm without endotoxin retention (pack of 3)   | 6 month             |
| W3T199768   | Disinfection kit (pack of 3)                                    | -                   |
| W3T197620   | RO Replacement module 10 l/h                                    | 2 - 3 years         |
| W3T199880   | Vent Filter for the tank  |                     |
| W3T199556   | Wall bracket f. LaboStar Pro TWF                                |                     |
| W3T324494   | 30   Storage tank for LaboStar Pro TWF                          |                     |
| W3T324495   | 60   Storage tank for LaboStar Pro TWF                          |                     |
| W3T314413   | degasing unit up to 150 l/h                                     |                     |



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