

Fields of use

Molecular biology
Microbiology
Electronics
Optics
Semiconductor
Biochemistry
Pharmaceuticals
Chemistry
Analytical methods

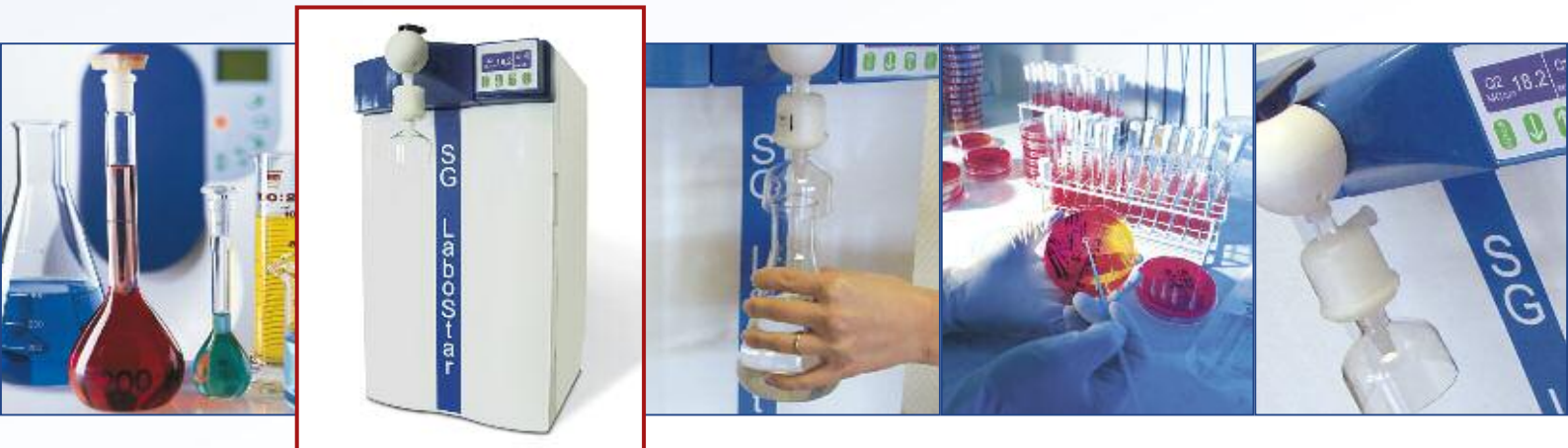
Ultrapure water

Pure water

new · new · new · new · new

Series LaboStar

Design meets perfection



Always one step ahead.



LaboStar 1-DI

General analysis, standard buffer, AAS, GC, IC, ICP, cell and tissue culture, pyrogen sensitive applications

LaboStar 1-UV

Micro- und molecularbiology, PCR, HPLC, TOC analysis

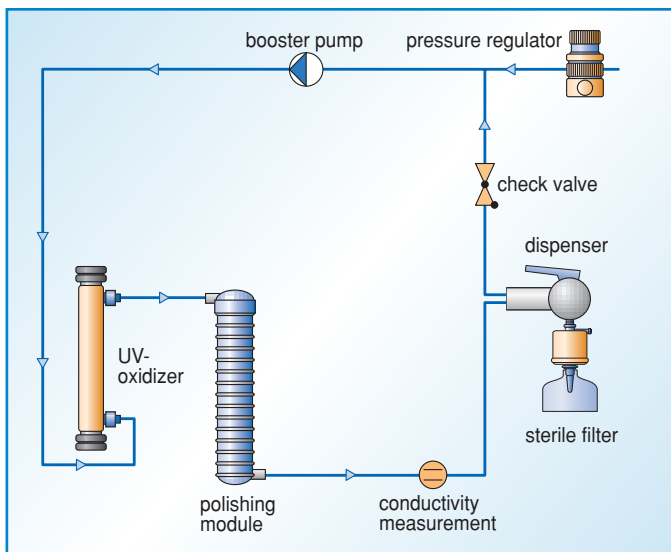
Ultrapure Water System LaboStar 1-DI and -UV

Highest water quality – economically produced

The extremely compact ultrapure water system is a cost-effective means of producing analytical grade water, and can be used on a laboratory bench or mounted to the wall. The water produced by the DI version

has a conductivity of 0.055 $\mu\text{S}/\text{cm}$ (equivalent to 18.2 $\text{M}\Omega\text{-cm}$) and a TOC value of < 10 ppb. Water produced by the UV version has a TOC value of 1–5 ppb. This water quality exceeds all relevant standards including ASTM Type I,

Flowsheet LaboStar 1-UV



NCCLS Type I and ISO 3696 Type I. The Labostar 1-DI is fed with either deionized water, distilled water or permeate from a reverse osmosis unit.

The selection of treatment materials in LaboStar 1-DI's polisher module guarantees that the product water meets the highest quality standards. A conductivity meter in the recirculation section continually monitors the purity of the product water.

A 0.2 μm charged sterile filter at the dispenser removes endotoxins. This makes it possible to produce pure water with an endotoxin content of < 0.001 EU/ml without the need for any further investment in an ultrafilter.

The advantages in brief:

- Easy to dispense water using the practical dispenser
- Protective jacket at the end of the sterile filter
- Ultra pure water circulation right into the dispenser head
- Whisper operation mode
- Conductivity monitoring of input water and ultrapure water
- Rapid and simple disinfection
- Pressure reducer included
- Simple module exchange via quick-release connections

The LaboStar unit is delivered with the first set of modules and filters and is ready for use.

Consumables

Item	Cat. No.
Polishing module	2170
Sterile filter, pack of 3	2097
UV replacement bulb	2068

Type LaboStar 1...		DI	UV
Ultrapure water specifications			
Output	<i>l/min</i>	1	1
Conductivity at 25° C	<i>$\mu\text{S}/\text{cm}$</i>	0.055	0.055
Resistivity at 25° C	<i>$\text{M}\Omega\text{-cm}$</i>	18.2	18.2
TOC	<i>ppb</i>	5 – 10	1 – 5
Bacteria	<i>cfu/ml</i>	< 1	< 1
Endotoxins with use of SG filter	<i>EU/ml</i>	< 0.001	< 0.001
Particles > 0.2 μm	<i>per ml</i>	< 1	< 1
Feed water specification			
Feed water pressure	<i>bar</i>	0 – 6	0 – 6
Feed conductivity	<i>$\mu\text{S}/\text{cm}$</i>	< 20	< 20
TOC	<i>ppb</i>	< 50	< 50
Silica	<i>ppm</i>	2	2
Temperature	<i>°C</i>	5 – 35	5 – 35
Power supply	<i>V/Hz</i>	100-240 / 50-60	
Dimensions: H/W/D	<i>mm</i>	535/290/320	535/290/320
Shipping weight	<i>kg</i>	20	22
Catalogue Number		2201	2202



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LaboStar 3-DI

General analysis, standard buffer, AAS, GC, IC, ICP, cell and tissue culture, pyrogen sensitive applications

LaboStar 3-UV

Micro- und molecularbiology, PCR, HPLC, TOC analysis

Ultrapure Water System LaboStar 3-DI and -UV

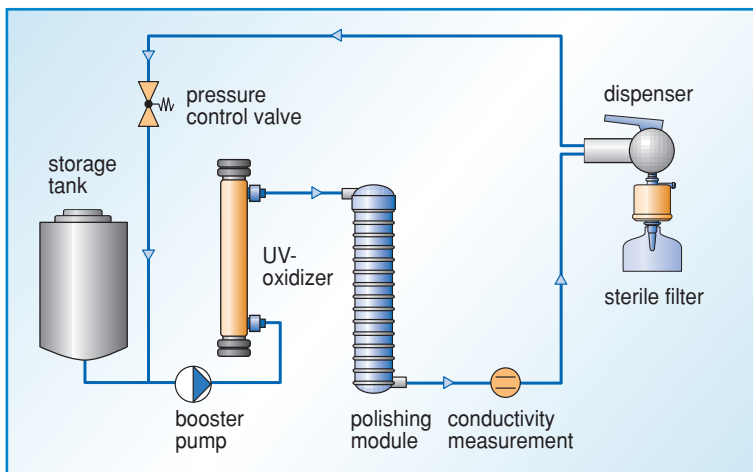
Ready to go – for all needs

This mobile bench device with an integrated tank which can be directly filled with feed water, can cost-effectively produce analytical-grade water with a conductivity of 0.055 $\mu\text{S/cm}$, equivalent to 18.2 $\text{M}\Omega\text{-cm}$. The TOC level is in the range of 1 – 10 ppb,

depending on the used model when fed with deionized water, distilled water or permeate from a reverse osmosis facility. The product water exceeds all relevant standards including ASTM Type I, NCCLS Type I and ISO 3696 Type I. The selection of pure treatment materi-

als in LaboStar 3's polishing module guarantees that the product water meets the highest quality standards. A conductivity measurement constantly monitors the product water in the recirculation loop. A charged 0.2 μm sterile filter at the dispenser removes endotoxins, eliminating the need for an ultrafilter.

Flowsheet LaboStar 3-UV



The advantages in brief:

- 7 liter tank volume
- Suitable for mobile use
- Ultrapure water is ready for use within minutes of filling the tank
- System can be used at different locations
- Easy to extract water using the practical dispenser
- Protective jacket at the end of the sterile filter
- Ultrapure water circulation right into the dispenser head
- Whisper mode
- Conductivity monitoring of ultrapure water
- Rapid and simple disinfection
- Simple module exchange via quick-release connections.

The Labostar water system is delivered with the first set of modules and filters and is ready for use.

Type LaboStar 3...		DI	UV
Ultrapure water specifications			
Output	<i>l/min</i>	1	1
Conductivity at 25° C	<i>$\mu\text{S/cm}$</i>	0.055	0.055
Resistivity at 25° C	<i>$\text{M}\Omega\text{-cm}$</i>	18.2	18.2
TOC	<i>ppb</i>	5 – 10	1 – 5
Bacteria	<i>cfu/ml</i>	< 1	< 1
Endotoxins with use of SG filter	<i>EU/ml</i>	< 0.001	< 0.001
Particles > 0.2 μm	<i>per ml</i>	< 1	< 1
Feed water specification			
Feed conductivity	<i>$\mu\text{S/cm}$</i>	< 20	< 20
TOC	<i>ppb</i>	< 50	< 50
Silica	<i>ppm</i>	2	2
Temperature	<i>°C</i>	5 – 35	5 – 35
Power supply	<i>V/Hz</i>	100-240 / 50-60	
Dimensions: H/W/D	<i>mm</i>	535/290/400	535/290/400
Shipping weight	<i>kg</i>	21	23
Catalogue Number		2211	2212

Consumables

Item	Cat. No.
Polishing module	2170
Sterile filter, pack of 3	2097
UV replacement bulb	2068

Accessories: wall mount.

LaboStar 3/6 TWF-DI

General analysis, standard buffer, AAS, GC, IC, ICP, cell and tissue culture, pyrogen sensitive applications, type III water

LaboStar 3/6 TWF-UV

Micro- und molecularbiology, PCR, HPLC, TOC analysis, type III water

Ultrapure Water System LaboStar 3/6 TWF-DI and -UV

From tap to ultrapure water – only one innovative step

The LaboStar 3/6-TWF-DI and UV produces ultrapure water straight from your drinking water supply. This equipment incorporates a pre-filtration unit and a reverse osmosis facility in one single compact module. The Type III quality of the reverse osmosis water appears in the display. The pure water collects in an in-

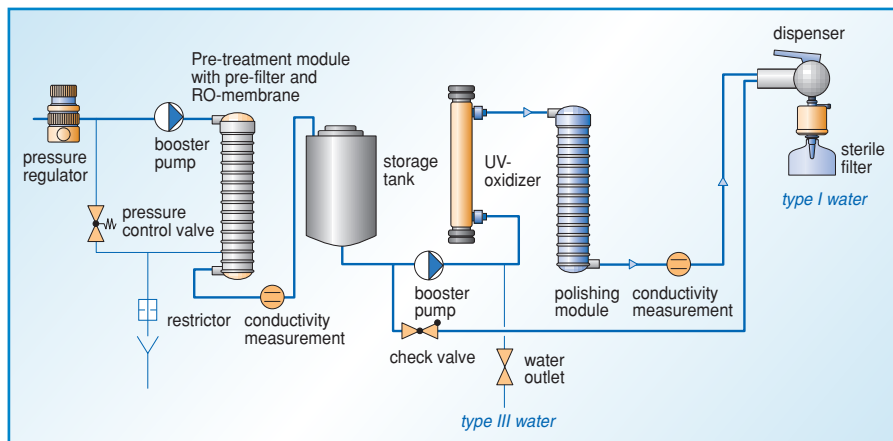
tegrated tank and is circulated through the polishing module by a circulation pump. The user can extract either Type III water from the tank or Type I water from the dispenser with a quality of 0.055 $\mu\text{S}/\text{cm}$, equivalent to 18.2 $\text{M}\Omega\text{-cm}$, and TOC of between 1 and 10 ppb, depending on the model. The functionally designed LaboStar equipment can

cost-effectively produce even small amounts of analytical-grade water. The water quality exceeds all relevant standards including ASTM Type I, NCCLS Type I and ISO 3696 Type I. A conductivity sensor constantly displays the purity of the product water in the recirculation loop. A charged 0.2 μm sterile filter at the dispenser removes endotoxins, eliminating the need for an ultrafilter.

The advantages in brief:

- 7 liter tank volume
 - Connection to municipal drinking water supply
 - Easy to dispense water using the practical dispenser
 - Protective jacket at the end of the sterile filter
 - Ultrapure water circulation right into the dispenser head
 - Whisper mode
 - Conductivity monitoring of pre-treatment module and ultrapure water
 - Rapid and simple disinfection
 - Simple module exchange via quick-release connections
 - Extraction of Type III pure water also possible
- LaboStar systems are delivered with the first set of modules and filters.

Flowsheet LaboStar 6 TWF-UV



Type LaboStar 3/6 TWF...		DI	UV
Ultrapure water specifications			
Output	<i>l/min</i>	1	1
Permeate rate at 15°C	<i>l/h</i>	3/6	3/6
Conductivity at 25° C	$\mu\text{S}/\text{cm}$	0.055	0.055
Resistivity at 25° C	$\text{M}\Omega\text{-cm}$	18.2	18.2
TOC	<i>ppb</i>	5 – 10	1 – 5
Bacteria	<i>cfu/ml</i>	< 1	< 1
Endotoxins with use of SG filter	<i>EU/ml</i>	< 0.001	< 0.001
Particles > 0.2 μm	<i>per ml</i>	< 1	< 1
Conductivity of input water is reduced by 98 %			
Feed water specification			
Feed water pressure	<i>bar</i>	3 – 5	3 – 5
Feed conductivity	$\mu\text{S}/\text{cm}$	< 1400	< 1400
Temperature	$^{\circ}\text{C}$	5 – 35	5 – 35
Power supply	<i>V/Hz</i>	100-240 / 50-60	
Dimensions: H/W/D	<i>mm</i>	535/290/400	535/290/400
Shipping weight	<i>kg</i>	24	25
Catalogue Number	3 l/h	2221	2222
	6 l/h	2231	2232

Consumables

Item	Cat. No.
Polishing module	2170
Pre-treatm.module	2111
Sterile filter, pack of 3	2097
UV replacement bulb	2068

Accessories: wall mount.