Barnstead LabTower TII water purification system

The Barnstead LabTower TII converts tap water into high-purity water and provides water storage for a complete Type 2 water solution.

Consistent water quality

- Type 2 laboratory water meets ASTM Type II, CSLS-CLRW and ISO 3696 international standards
- Designed to continuously recirculate purified reservoir water to preserve water quality even during periods of inactivity

Compact mobile design

- Two system options with permeate flows of 40 L/hr
- Stand-alone design with integrated 100 L reservoir takes up zero bench space
- Castors allow easy relocation

Two ways to dispense water

- Dispense directly from the system via the dispensing valve for calibration solutions, reagent preparation, filling of containers, general rinsing purposes, etc.
- Dispense from the reservoir to supply autoclaves, dishwashers, ultrapure water systems, etc.

• Integrated 100 L reservoir

- Up to 100 L of high purity water ready for dispensing when needed
- High purity polypropylene reservoir is opaque to light
- Conical bottom allows complete emptying for efficient cleaning and disinfection
- Adjustable setting for reservoir volume can be programmed for times when demand is low, allowing you to only store water that you can use

Clear information on system display

- The large four-line display is code-protected to prevent accidental changes in system settings
- Illuminated and easily readable, the display provides information on resistivity or conductivity, operating mode status, such as “production”, “stand-by” or sanitization, and volume of the reservoir in %

GLP-compliant documentation

- Developed to meet or exceed GLP requirements
- Recorded and traceable data can be obtained by print-out via the RS-232 interface and accessory printer
- Highly qualified and precise measurement of the conductivity is ensured by the cell constant of 0.01 cm^{-1} to an accuracy of ±0.1 °C

Routine Laboratory Work

- Rinsing lab glassware
- Supplying autoclaves and ultrapure water systems
- Preparing and diluting buffers, reagents, and media

Pure water system with integrated 100 L tank

Quick Look Comparison	LabTower TII system	LabTower TII + UV system
Pure water production at 15 °C, L/hr	40	40
Resistivity at 25 °C, MΩ.cm	10-1	10-1
Conductivity, µS/cm	0.1-1	0.1-1
Bacteria content, CFU/mL, with sterile filter	<0.01	<0.01
TOC, ppb	<50	<50
Particle content µm per mL with sterile filter	<1	<1

Pretreatment

- 5 µm prefilter and activated carbon in the combi-filter cartridge protects the RO membrane from chlorine and particles
- Hardness stabilizing cartridge protects the reverse osmosis stage from hard water

Reverse osmosis and reservoir

- Pretreated water is pressure-forced through the permeable reverse osmosis module removing 97-99 % of all inorganic ions, 99 % of dissolved organic substances as well as microorganisms and particles
- The built-in 100 L reservoir has a conical bottom outlet to optimize cleaning and sanitization

Ion exchange and UV

- RO membrane removes up to 99 % of impurities. All remaining ions are removed by the low TOC, high-purity resins in the ion exchange cartridge.
- Irradiation with UV light (TII units with UV option only) eliminates any bacteria or germs that are present

Barnstead LabTower TII with optional hand dispenser

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Specifications and Ordering Information

Feed Water Specifications*	
Source	Potable tap water softened or hardness stabilized
Blocking index (SDI)	<3, with higher values, an upstream pretreatment (model no. 09.4000) is to be installed
Conductivity, µS/cm	<1500
Free chlorine, mg/L	<0.1
Colloid index	<3
pH-Range	4-11
Temperature, °C	2-35
Pressure, psi (bar)	29-87 (2-6)

* Complete list of feed water specifications can be found in the operational manual.

LabTower TII					
Operating pressure	Electrical requirements	Power consumption	Feed water connector	Dimensions W x D x H in (mm)	Ambient temperature
29-87 psi (2-6 bar)	90-240 V, 50/60 Hz	0.12 kW	3/4" NPT	17.7 x 22.8 x 59 (450 x 580 x 1500)	2-35 °C

System Options	UV option	LabTower TII 40
LabTower TII Systems* All systems include an RO membrane, a high purity water cartridge, 10 inch 5 µm prefilter with hardness stabilizer cartridge, pressure regulator, 06.5555 optional 0.2 10" filter, 0.2 µm filter, integrated 100 L reservoir and UV lamp where applicable	System with UV	50132141
	System without UV	50132196
Required Accessories		
LabTower TII Pretreatment Both cartridges are required for complete pretreatment	5µm filter with activated carbon and a 10" filter housing	50134022
	1 µm filter with a 10" filter housing	09.4003
Sterile vent filter for reservoir		50135142
Sterile overflow for reservoir		50132714
Optional Accessories		
Water watcher Alerts the user to leaks. Available as 230 V, 50 Hz only		16.0129
Printer Utilizes RS-232 interface for safe documentation of all measured values and faults with date and time in compliance with GLP-Guidelines	120 V, 50/60 Hz	STARA-106
	230 V, 50 Hz	09.2207
Qualification documents (IQ/OQ)		IOQDOCE50134156
Hand Dispenser Kit Hand dispenser with 3 meter cord that connects to tank. Ships with a 0.2 micron final filter.		50138221
Replacement Consumables		
High purity water cartridge		02.2850-LAB
Reverse Osmosis membrane LabTower TII 40 requires two membranes		22.0087 (must order 2)
System UV-lamp		50139226
Sterile 0.2 µm filter for hand dispenser		09.1003
Activated carbon cartridge with 5 µm prefilter		06.5201
Hardness stabilizing cartridge		06.5452
Sterile 0.2 µm filter for reservoir outlet		06.5555
5 µm prefilter and hardness stabilizer		06.5204

* cULus CE