

Thermo Scientific Barnstead Pacific TII water purification system

The Barnstead Pacific TII water purification system converts tap water into high purity water. The ultimate system for the automatic and economical production of Type 2 water, the Pacific TII system supports daily requirements from 20 to 200 liters.



ROUTINE LABORATORY WORK

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



Multiple options for Type 2 water

- Five system options with permeate flows of 3, 7, 12, 20, or 40 L/hr
- Future system upgrades accommodate greater capacities to meet growing water demands
- Space-saving design permits benchtop installation or wall mounting with integrated mounting bracket

Operational reliability

- Microprocessor controlled for automatic operation with continuous monitoring of all critical parameters
- Automatic return to “operating” mode ensures recirculation during standstill periods
- Optional UV lamp prevents biological contamination

Easy-to-operate

- Resistivity/conductivity clearly displayed on large back-lit control panel that tilts for optimum viewing
- Status of current operating mode clearly indicating “production”, “stand-by”, “cleaning” or “disinfection” modes
- Reservoir fill-level shown as %
- System parameters are code-protected to prevent accidental changes to set points
- Water is dispensed directly from storage tank

GLP-Compliant documentation

- Optional printer connects to RS-232 port for data recording and traceability
- Cell constant of 0.01cm⁻¹ ensures precise conductivity measurements
- Temperature compensation for the conductivity measurement has an accuracy of ±0.1°C (in conformity with USP 645)

Volume display

- Water level % in reservoir is shown automatically on the Pacific TII display

Clear information

Large, illuminated four-line display is easy to read and provides information on:

- Operating mode status, such as production, stand-by, disinfection
- Reservoir volume in %
- Temperature in °C

type 2 water system

with ultimate flexibility

Quick Look Comparison					
	Pacific TII 3 L/hr system	Pacific TII 7 L/hr system	Pacific TII 12 L/hr system	Pacific TII 20 L/hr system	Pacific TII 40 L/hr system
Pure water production at 15°C, L/hr	3	7	12	20	40
Resistivity at 25°C, MΩ·cm	15-10	15-10	15-10	15-10	15-10
Conductivity, μS/cm	0.067-0.1	0.067-0.1	0.067-0.1	0.067-0.1	0.067-0.1
TOC, ppb	<30	<30	<30	<30	<30
Removal, bacteria and particles, %	99	99	99	99	99
Silicate removal, %	> 99.9	> 99.9	> 99.9	> 99.9	> 99.9

Technologies that produce high purity water —



Reverse osmosis membrane

The high performance reverse osmosis membrane removes approximately 98% of inorganic ions and 99% of all dissolved organic substances as well as microorganisms and particles.

High purity water cartridge

This cartridge further purifies the reverse osmosis permeate to produce high purity water as required by international standards (ASTM Type II, CAP, ISO 3696, BS 3997 and CLSI).

UV lamp (UV version only):

The 254 nm UV transmission ensures optimal UV irradiation. Light of wavelength 254 nm acts as germicide.

Recirculation

Recirculation of the water between the storage reservoir and Pacific TII is important for maintenance of the water quality. Water from the reservoir is cycled through the high purity water cartridge and the UV chamber, then back to the reservoir. (available only for systems that include a tank with recirculation/pressure pump)

Thermo Scientific Barnstead Pacific TII water purification system (continued)

The Barnstead Pacific TII system converts tap water to 15-10 MΩ·cm high purity water.



Pacific TII reservoirs

- Store high purity water safely and conveniently!

Large opening

- For easy and effective cleaning by hand

Optional safety filters:

- A CO₂ adsorber prevents conductivity increases from drawn-in CO₂
- Sterile overflow prevents microorganisms from entering and contaminating reservoir water

Polyethylene reservoir

- Constructed with inert materials opaque to light

Recirculation pump

- Recirculation pump protects high purity water from bacterial growth during standstill while maintaining a low conductivity value

Wall mount

- Simple and space-efficient wall mounting

Conical bottom outlet

- Allows complete draining and efficient cleaning and disinfection

Specifications and Ordering Information

Feed Water Specifications*	
Source and pre-treatment	Tap water, softened or hardness stabilized
Conductivity, μS/cm	< 1500
Free chlorine concentration, mg/L	< 0.1
pH-Range	4-11
Temperature, °C	2-35°C
Pressure, psi (bar)	29-87 (2-6)

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

Pacific TII System					
Operating pressure	Electrical requirements	Power consumption	Feed water connector	Dimensions W x D x H	Ambient temperature
29-87 psi (2-6 bar)	90-240V, 50/60Hz	0.08kW	3/4" NPT	14.6 x 13 x 23.7 in (372 x 330 x 603 mm)	2-35°C

Storage Reservoir		
Volume	Material	Dimensions
30 L	Polyethylene, ultrapure water resistant, opaque to light	23.5 x 14.9 in (598 x 380 mm)
60 L		35.9 x 14.9 in (912 x 380 mm)
100 L		49.2 x 14.9 in (1249 x 380 mm)

System Options	UV option	Pacific TII 3	Pacific TII 7	Pacific TII 12	Pacific TII 20	Pacific TII 40
Pacific TII Systems All systems have a built-in wall bracket and include an RO membrane, a high purity water cartridge, pressure regulator, and UV lamp where applicable	System with UV	50132129	50132131	50132132	50131982	50132133
	System without UV	50132121	50132123	50132124	50132125	50132127
Required Accessories						
Pacific TII Reservoir Choose a reservoir that fits your needs		See "Storage Reservoir Options" below				
Double cartridge pretreatment system A 5 µm filter with activated carbon cartridge and a hardness stabilizer cartridge ship complete with two 10 inch filter housings to control chlorine, organic impurities and control hardness <250ppm TIS For full pretreatment options, see p. 86		09.4000				
Optional Accessories						
Qualification documents (IQ00)		IOQDOCE50133915	IOQDOCE50133915	IOQDOCE50133915	IOQDOCE50133915	IOQDOCE50133915
Water watcher Alerts the user to leaks – available as 230V, 50Hz only		16.0129	16.0129	16.0129	16.0129	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	120V, 50/60Hz	AY1137X1	AY1137X1	AY1137X1	AY1137X1	AY1137X1
	230V, 50Hz	09.2207	09.2207	09.2207	09.2207	09.2207
Hand Dispenser Kit Hand dispenser with 3 meter cord that connects to tank. Use only with a tank equipped with a pressure pump (06.5032, 06.5062, 06.5082). Ships with a 0.2 micron final filter.		50138221	50138221	50138221	50138221	50138221
Replacement Consumables						
High purity water cartridge		09.4011	09.4011	09.4011	09.4011	09.4011
Reverse Osmosis membrane Pacific TII 3, 7, 12 only require a single RO membrane Pacific TII 20 and 40 require two membranes as indicated		22.0046	22.0046	22.0046	22.0046 (order 2)	22.0087 (order 2)
System UV lamp		09.4002	09.4002	09.4002	09.4002	09.4002
Cleaning solution	Europe/Asia Pacific	09.2202	09.2202	09.2202	09.2202	09.2202
	North America/Latin America	CMX25	CMX25	CMX25	CMX25	CMX25
Activated carbon cartridge with 5 µm prefilter		06.5201	06.5201	06.5201	06.5201	06.5201
Hardness stabilizing cartridge		06.5452	06.5452	06.5452	06.5452	06.5452
Storage Reservoir Options for Pacific TII				30 L	60 L	100 L
Reservoir Choose a tank to meet your capacity and pump	with level display			06.5033	06.5063	06.5083
	with level display and recirculation/pressure pump			06.5032	06.5062	06.5082
Required Accessories						
Sterile overflow for reservoir				06.5001	06.5001	06.5001
Vent filter Choose the vent filter for your application needs	Sterile filter, 0.2 µm (ideal choice for tanks without a recirculation pump)			50135142	50135142	50135142
	Sterile filter, 0.2 µm + CO ₂ adsorber (ideal choice for tanks with a recirculation pump)			06.5002	06.5002	06.5002
Optional Accessories						
UV lamp assembly for reservoir with lamp, 230V, 50Hz				06.5006	06.5006	06.5006
Wall mounting bracket				06.5015	06.5016	na
Replacement Consumables						
Replacement UV lamp (Reservoir)				09.5002	09.5002	09.5002
Sterile 0.2 µm filter for system				09.1003	09.1003	09.1003