



Thermo Scientific
Barnstead Smart2Pure
Water Purification Systems

smart H₂O
for you, and your science

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Thermo Scientific Barnstead Smart2Pure water purification systems

Pure water is elemental to the success of your experiments. But finding the right water system for your research goes deeper than water quality alone. You need a smart choice that supports both your science and your budget— on day 1, and with every cartridge and filter change. One that reflects 130 years of innovations, like effortless cartridge change-outs. With a Thermo Scientific™ Barnstead™ lab water system, the only thing you'll have in your water is confidence.







Suitable for even the most demanding and sensitive applications, Thermo Scientific™ Barnstead™ Smart2Pure™ water purification systems exceed international standards ASTM D11931 Type 1, ISO 3696 Grade 1, and CLSI-CLRW, delivering ultrapure 18.2 MΩ·cm water with consistent quality.




	Smart2Pure Standard	Smart2Pure UV	Smart2Pure UF	Smart2Pure UV/UF
Type 1 Water				
Applications examples	AA, IC, standard buffer	HPLC, GC-MS and ICP-MS, TOC Analysis, Trace Analysis	Microbiology, monoclonal antibodies, Cell Culture	Molecular biology, PCR, DNA sequencing, electrophoresis, cell culture media
Resistivity at 25°C, MΩ·cm	18.2	18.2	18.2	18.2
Conductivity, μS/cm	0.055	0.055	0.055	0.055
TOC value , ppb	5 - 10	1 - 5	5 - 10	1 - 5
Bacterial content in CFU/ml:	<0.01	<0.01	<0.01	<0.01
Particles, μm/mL	<1	<1	<1	<1
Endotoxin, EU/ml:	n/a	n/a	<0.001	<0.001
Flow Rate, L/min	1	1	0.6	0.6
Type 2 Water				
Applications	Rinsing lab glassware, supplying autoclaves and ultrapure water systems, preparing and diluting buffers, reagents, and tissue culture media.			
Pure water production at 15°C, L/h	3, 6, or 12	3, 6, or 12	3, 6, or 12	3, 6, or 12
Resistivity at 25°C, MΩ·cm	15-10 10-15	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

Ideal for your molecular biology, microbiology and analytical chemistry applications:

Type 1 Applications

-  Cell and tissue culture
-  PCR, DNA sequencing
-  Electrophoresis, TOC Measurements, IC
-  HPLC, GC-MS, ICP-MS, AA

Type 2 Applications

-  Rinsing lab glassware
-  Supplying general lab equipment
-  Preparing and diluting buffers, reagents, and media



Thermo Scientific Barnstead Smart2Pure water purification systems

All in one! The Barnstead Smart2Pure system is a compact system that converts tap water into both ASTM Type I and Type II water. The Smart2Pure 3 and 6 systems feature a built-in 6 L reservoir to store the Type 2 water. The Smart2Pure 12 system offers the choice of a 30 or 60 L reservoir for added storage capacity.

Powerful performance

- Based on your requirements, choose from capacities of 3, 6 or 12 L/hr, dispensing up to 2 L/hr of Type I water.

Smart consumables

- Validated 0.2 µm final filter can be autoclaved up to 5 times.
- UV-Oxidation 185/254 nm reduces organic compounds in the water to ultra-low levels as well as microorganisms and their metabolites with up to a 2-year lifetime. Available on UV systems only.
- Internal ultrafilter (UF) is flushed automatically and has a large surface area to ensure the highest retention of endotoxins and nucleases, and allows for up to a 2-year lifetime. Available on UF systems only.
- Water purification progresses through independent cartridges with Aquastop quick-connect for fast replacement.
- **Module 1** ▶ Combination of pretreatment and reverse osmosis membrane.
- **Module 2** ▶ Polishing cartridge contains high-quality ultrapure resin designed for consistent purity and long cartridge life.

Easy-to-operate

- Dispensing is easy and features variable speed controlled flow.
- The display can be tilted for optimal reading.

Placement options

- Position on laboratory bench or mount it on the wall.

Smart2Pure 3 and 6 systems feature integrated 6 L reservoirs

- Constructed with pigment-free materials.
- Conical bottom outlet allows for complete draining and efficient cleaning and disinfection.

Smart2Pure 12 system offers 30 or 60 L reservoir options

- Polyethylene reservoir is opaque to light to discourage bacteria growth, and has large opening for easy and effective cleaning.
- Wall-mount optional for space-savings.



Economical Design

The RO membrane with pretreatment cartridge is separate from the DI cartridge, allowing you to replace each cartridge only as needed



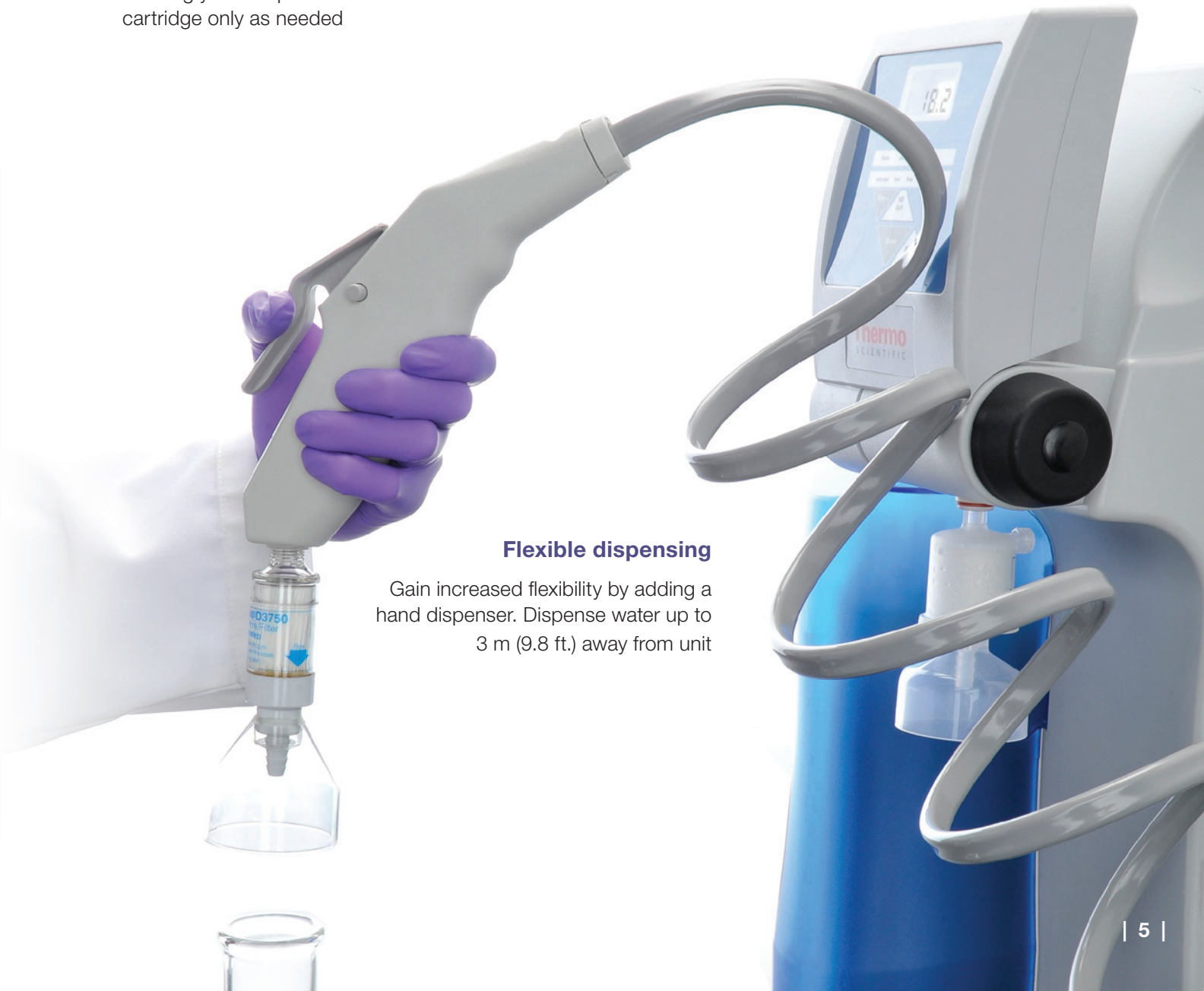
Space-Saving Design

Simply stand the Smart2Pure system on the benchtop or mount it directly to the wall



UV-Oxidation 185/254 nm

Optional UV-oxidation for reducing the content of microorganisms and organics



Flexible dispensing

Gain increased flexibility by adding a hand dispenser. Dispense water up to 3 m (9.8 ft.) away from unit

Storage Solutions

Flexible Storage

Store high purity water safely and conveniently in either a 30 or 60 L reservoir (only for Smart2Pure 12 system)

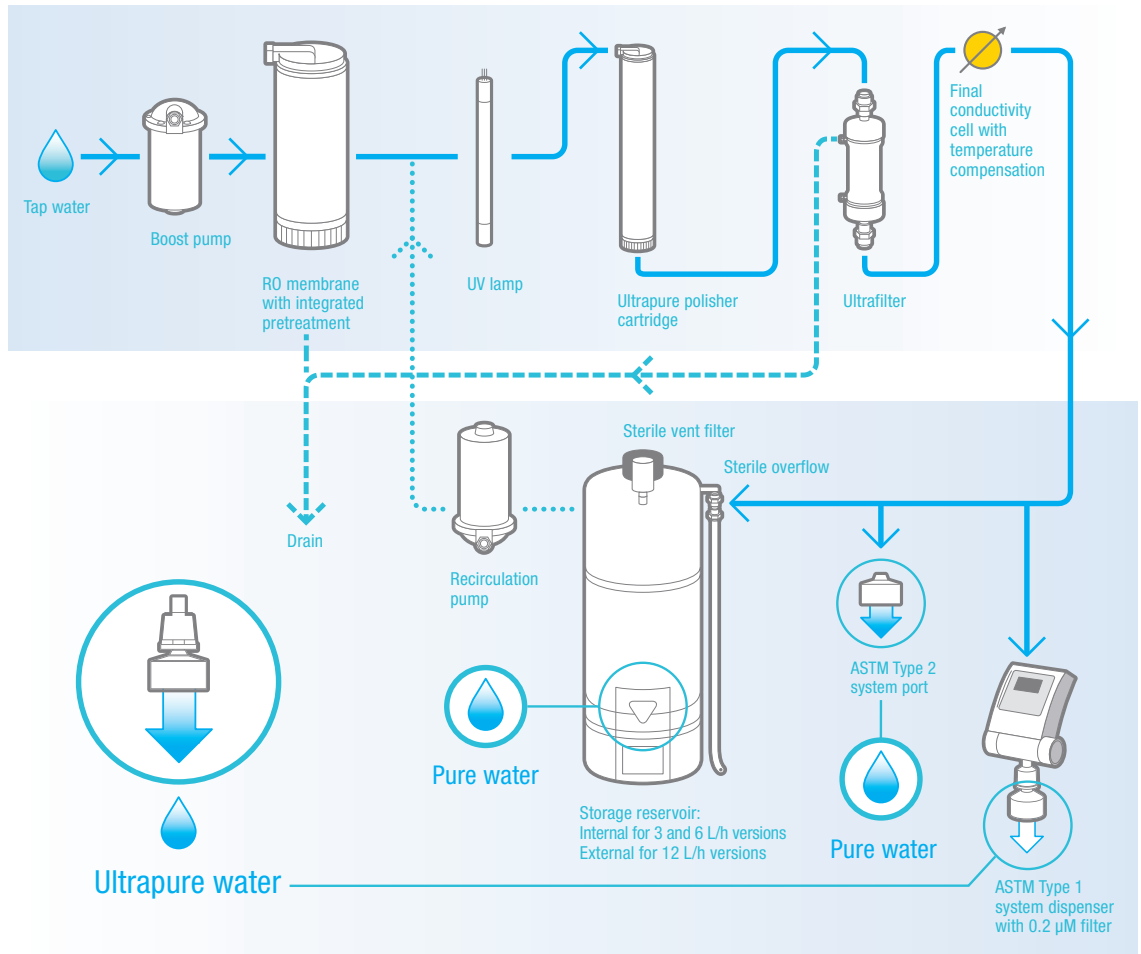
30 or 60 L

- Polyethylene reservoir is opaque to light and has large opening for easy and effective cleaning
- Sterile venting filter/reservoir overflow protects against contamination by microorganisms
- CO₂ adsorber prevents airborne contamination from entering the tank
- Recirculation pump protects the high purity water from bacterial growth during standstills and maintains low conductivity value
- Wall-mount optional for space-savings
- Conical bottom outlet allows for complete draining and efficient cleaning and disinfection



System Flow Diagram

The following diagram illustrates the flow of water through the components of a Barnstead Smart2Pure water system. This particular diagram uses the Smart2Pure UV/UF system.



	Smart2Pure 3,6	Smart2Pure 12	Storage Reservoirs		Required feed water quality
			30 L	60 L	
Product Dimensions HxWxD, mm (in.)	545x305x390 (22x12x15)	545x305x300 (22x12x12)	603x380 (24x15)	914x380 (36x15)	Source Tap water
Product Weight kg (lbs.) w/o water	21 (46)	20 (44)	8 (18)	15 (33)	TDS >500 ppm
Shipping Dimensions HxWxD, mm (in.)	706x455x430 (28x18x17)	706x455x430 (28x18x17)	706x455x430 (28x18x17)	940x410x495 (37x16x19)	Turbidity > 1 N.T.U
Shipping Weight kg (lbs.)	24-27 (52-60)	22-25 (48-55)	10 (22)	17 (37)	pH Range 4 – 11
					Temperature, °C 2-35
					Pressure, psi (bar) 1.4 - 87 (1 - 6)

ordering information

System Options	Permeate flow at 15°C	Smart2Pure Standard	Smart2Pure UV	Smart2Pure UF	Smart2Pure UV/UF
Smart2Pure System Systems include RO/pretreatment cartridge, an ultrapure polisher cartridge, sterile 0.2 µM filter, and UV lamp and/or UF filter where applicable. 3 and 6 L/hr version also include an internal 6L tank with vent filter.	3 L/hr	50129869	50129872	50129870	50129688
	6 L/hr	50129873	50129885	50129874	50129887
	12 L/hr	50129888	50129890	50129889	50129845

Required Accessories					
Pretreatment Filter, 1 µM filter Prolongs cartridge life, ships with filter housing and 1 µM filter.				09.4003	
Pretreatment Cartridge, Hardness Stabilizer For locations with hard water, prolongs the life of the RO membrane. Ships with filter housing and hardness stabilizer cartridge.				09.4001	
Smart2Pure Reservoir (for Smart2Pure 12 systems only) Choose a reservoir that fits your needs.		See "Storage Reservoir Options"			

Optional Accessories					
Hand Dispenser Kit Ships with 3 meters (9.8 ft) of tubing to connect to tank and sterile 0.2 µM filter.				50138221	
Wall mounting bracket				09.2212	
Qualification documents (IQ/OQ)	3/6 L/hr			IQQDOCE50133911	
	12 L/hr			IQQDOCE50133912	

Replacement Consumables					
RO membrane with integrated pretreatment	3 L/hr			09.2003	
	6 L/hr			09.2006	
	12 L/hr			09.2012	
Ultrapure polisher cartridge				09.1020	
Sterile 0.2 µM filter for system				09.1003	
1 µM filter for 09.4003				06.5101	
Hardness stabilizer cartridge for 09.4001				06.5204	
Sterile vent filter replacement, 3 and 6 L/hr only				22.0091	
Sterile overflow, 3 and 6 L/hr only				15.0009	
Cleaning Solution	Europe/Asia Pacific			09.2202	
	North and South America			CMX25	
Ultrafilter	n/a	n/a	50133981	50133981	
System UV lamp	n/a	09.1002	n/a	09.1002	

Storage Reservoir Options for Smart2Pure 12	30L	60L
Storage Reservoir Choose a reservoir to meet your capacity needs. Water in reservoir should be used every 1-2 days.	06.5040	06.5070
Required Accessories		
Sterile overflow for reservoir	06.5001	
CO₂ adsorber + sterile filter, 0.2 µM	06.5002	
Replacement Consumables		
System UV lamp (Reservoir)	09.5002	
Optional Accessories for 09.5002		
UV lamp assembly for the tank, 230 V (not sold in U.S.) Ships complete with assembly and UV lamp.	06.5006	
Wall mounting bracket	06.5015	06.5016

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