

# Thermo Scientific Barnstead Smart2Pure Pro UV/UF 16 LPH Water Systems

## Tap to Type 1 Water purification system with UV/UF

All in one! The Thermo Scientific™ Barnstead™ Smart2Pure™ Pro system converts tap water into ASTM Type 1 and Type 2 water. The Smart2Pure Pro 16 offers the choice of a 30 or 60 L reservoir for customizable storage capacity.

Suitable for even the most demanding and sensitive applications, Barnstead Smart2Pure Pro 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.

### Features

- Increases productivity with 16 LPH reverse osmosis membrane to fill storage tank.
- Leak detection to shut down system and water supply to prevent damage.
- System alerts when to change consumables.
- External pretreatment protects RO membrane to maximize life and performance.
- System includes consumables: Reverse osmosis cartridge, high purity cartridge, UV light, ultrafilter, 0.1 micron final filter.
- Operating system is code protected to prevent unauthorized changes to settings.
- RO purity monitoring to determine life of RO membrane and performance.
- 30 and 60 liter tanks recirculate the water to provide high purity water on demand.
- Storage water level display.
- Pretreatment, Barnstead Smart2pure Pro and Storage tank can be wall or bench mounted.
- Internal ultrafilter (UF) has a large surface area to ensure the highest retention of endotoxins and nucleases, and allows for up to a 2-year lifetime.
- Gain increased flexibility by adding a hand dispenser. Dispense Type 1 or Type 2 water up to 3 m (9.8 ft.) away from unit.



## Specifications

### Feed-water requirements

Source	Potable tap water pretreated with Barnstead Pretreatment System - Cat. No. 50157886
Silt density index (SDI)	<3
Turbidity	<1 NTU
Conductivity (reference temperature +25°C)	1500 µS/cm (670 Ω·cm)
Hardness	Hardness stabilized
Chlorine	Max. 0.1 ppm
pH range	4 - 11
Temperature	+2°C - +35°C
Pressure	2 - 6 bar / 29 - 87 PSI (at a pressure >6 bar / 87 PSI a pressure reducer must be installed upstream of the system.)

### Product water quality ASTM Type I (from dispensing valve)

Parameter	Unit of Measure	UV/UF
Conductivity (reference temperature +25°C)	µS/cm	0.055
Resistance (reference temperature +25°C)	MΩ·cm	18.2
TOC value	ppb	1 - 5
RNase	ng/ml	<0.003
DNase	pg/ul	<0.4
Bacteria	CFU/ml	<0.1
Bacterial endotoxins	EU/ml	<0.001
Particle >0.2µm	#/ml	<1
Dispense rate	L/min	up to 1

### Product water quality ASTM Type II (tank quality)

Parameter	Unit of Measure	UV/UF
Conductivity (reference temperature +25°C)	µS/cm	0.1 – 1.0
Resistance (reference temperature +25°C)	MΩ·cm	1 - 10
Retention rate for bacteria and particles	%	99
External tank capacity Smart2Pure Pro	Liter	30 or 60
Smart2Pure Pro RO membrane permeate flow*	L/hr	16lph +/- 15%
Smart2Pure Pro RO membrane concentrate flow*	L/hr	60

\*RO flows at 15°C



Barnstead Smart2Pure Pro Water System

## Specifications

Dimension	Measurement	
<b>Barnstead Smart2Pure Pro System</b>		
Height	545 mm/21.46 inch	
Width	305 mm/12.01 inch	
Depth	300 mm/11.81 inch	
Base Area	277 mm x 372 mm/10.91 x 14.65 inch	
Weight including ultrapure cartridge and RO membrane	28 kg/61.74 lbs	
<b>External 30 L and 60 L storage tanks</b>		
	<b>30 L pure water tank</b>	<b>60 L pure water tank</b>
Height	606 mm/23.86 inch	920 mm/36.22 inch
Width	Ø 388 mm/ 5.28 inch	Ø 388 mm/15.28 inch
Depth	Ø 384 mm/15.12 inch	Ø 384 mm/15.12 inch
Weight with full capacity	37,5 kg /82.57 lbs	71,5 kg/157.66 lbs
Height with CO <sub>2</sub> Filter	778 mm/30.63 inch	1092 mm /43 inch
<b>Pretreatment System</b>		
Height	396 mm/15.58 inch	
Height with wall bracket	385 mm/15.17 inch	
Width	280 mm/11 inch	
Depth	178 mm/7 inch	
Depth with wall bracket	188 mm/7.38 inch	
Dry weight	11,1 kg / 24.5 lbs	
Wet weight (during operation)	13,2 kg / 29 lbs	
<b>Electrical connection for the Barnstead Smart2Pure Pro System</b>		
Input voltage	AC 100 – 240 VAC, 50 – 60 Hz, 2.0 A Max	
Output voltage	DC 24 V, 5.0 A Max	
System connection	DC 24 V, 120 W	
Serial interface	RS232	
Potential free contact	Maximum 30 V, 2 A	
Protection class	Class II (external SMPS certified as Class I)	

## Barnstead Smart2Pure Pro ordering information

Description	Cat. No.
Smart2Pure Pro UV/UF 16 LPH with 60 L Re-circulation Tank, Pre-Treatment and System Wall Mount	50157872
Smart2Pure Pro UV/UF 16 LPH with 30 L Re-circulation Tank, Pre-Treatment and System Wall Mount	50157873
Smart2Pure Pro UV/UF 16 LPH with 60 L Re-circulation Tank	50157877
Smart2Pure Pro UV/UF 16 LPH with 30 L Re-circulation Tank	50157882
Barnstead Pretreatment	50157886
Optional Wall Mounting Bracket for POU Systems	50157885
Optional Hand Dispenser	50138221
Optional wall mounting bracket for 30 L storage	06.5015
Optional wall mounting bracket for 60 L storage	06.5016

In the U.S., call 866-984-3766 or contact the Thermo Fisher Scientific Regional Office nearest you. Outside the U.S., order through your local Thermo Fisher Scientific office or distributor. Refer to the following part numbers.

Find out more at [thermofisher.com/water](http://thermofisher.com/water)