



# Barnstead Cartridge and Filter Systems

# Cartridges and filter systems

For all your single-step purification and pretreatment needs

We offer a complete line of Thermo Scientific™ Barnstead™ Cartridge and Filter Systems for all your single step purification and pretreatment needs. Use the Barnstead™ Bantam™ Deionizer, Barnstead™ Hose Nipple Cartridges or Barnstead™ B-Pure™ Cartridges for simple, single step purifications.



## Innovation

Joints and seams are ultrasonically welded to prevent contamination from chemical adhesives



## Convenience

Quick-release designs provide easy cartridge change-outs and simplify maintenance, bypassing the costs of service calls



## Flexibility

Versatile configurations meet an array of specific applications

# Barnstead cartridge & filter selector guide

Pressurized systems

Non-pressurized water systems



			B-pure Double Holder	B-pure Single Holder	B-Pure Half Size Holder	Harvey DI+	Economical Filter Holder	Hose Nipple	Bantam Deionizer
			Expanded purification with full features	Single step purification	Smaller capacity for optimal value	Complete system with dispenser and cartridge	Economical choice for particle filtration	Simple system for nonpressurized applications	Complete nonpressurized system
Purity indicators	Digital purity indicator	Thermo Scientific™ Orion™ AquaPro™ meter features large color graphic display, temperature readout, temperature compensated, calibratable	✓						
	Pura-Lite "Go/No Go" / Analogue Resistivity Indicator	Quick glance monitoring to notify user when it's time to install a new cartridge. Useful if cartridge system feeds a piece of lab equipment, such as an autoclave, where real time resistivity is not required.	✓	✓	✓	✓			✓
	Color change - cartridge	Color change indicates when the cartridge is beyond its useful life and must be replaced. Useful for general lab applications.						✓	
Added features	Remote dispenser	Hand dispense water from the cartridge system. Ideal for rinsing glassware or filling a waterbath.				✓			
	Wall mounted	Saves laboratory bench space. Ideal configuration for autoclaves and dishwashers where no bench space exists.	✓	✓	✓	✓	Requires hard piping to support unit	✓	✓
	Quick release canisters	Allows for fast and simple cartridge change-outs.	✓	✓	✓	✓			
	Maximum flow rate L/min	Enhances productivity	4	4	2	4	2	0.75	0.63

Choose the feature you need

Technology / Feature

Benefits

Purity indicators

Added features

Digital purity indicator

Pura-Lite "Go/No Go" / Analogue Resistivity Indicator

Color change - cartridge

Remote dispenser

Wall mounted

Quick release canisters

Maximum flow rate L/min

Thermo Scientific™ Orion™ AquaPro™ meter features large color graphic display, temperature readout, temperature compensated, calibratable

Quick glance monitoring to notify user when it's time to install a new cartridge. Useful if cartridge system feeds a piece of lab equipment, such as an autoclave, where real time resistivity is not required.

Color change indicates when the cartridge is beyond its useful life and must be replaced. Useful for general lab applications.

Hand dispense water from the cartridge system. Ideal for rinsing glassware or filling a waterbath.

Saves laboratory bench space. Ideal configuration for autoclaves and dishwashers where no bench space exists.

Allows for fast and simple cartridge change-outs.

Enhances productivity

✓

✓

✓

✓

4

✓

✓

✓

4

✓

✓

✓

2

✓

✓

✓

✓

4

Requires hard piping to support unit

2

✓

✓

0.75

✓

✓

0.63

# Barnstead B-Pure Water Purification System

## Economical laboratory grade water

The Barnstead B-Pure Water System provides flow rates up to 4 L/min that can be customized to meet your specific applications. Choose from single or double holders depending on your application needs.

### Applications include

- Pretreatment
- Deionization
- Organic and chlorine removal
- Feeding laboratory equipment

- Customize your water system to meet your application needs. Modular design provides the ability to add additional holders when the need arises
- Produces up to four L/min
- Quarter turn quick release canisters make changing cartridges simple
- Accepts Barnstead™ Pura-Lite™ Purity Indicator or Digital Purity Meter to monitor water quality
- Available in full or half-size cartridge configurations supporting space constraints



The Barnstead B-Pure Water System with Orion AquaPro Digital Meter with digital temperature compensation. Purity is displayed as resistivity or conductivity as well as temperature

### Single holder

- Produces up to 4 L/min
- Simple system without a draw-off valve or purity indicator

### Double holder

- Produces up to four L/min
- Complete with draw-off valve
- Choose from models with AquaPro Digital Purity Meter or Pura-Lite “Go/No Go” Resistivity Indicator
- Pressure regulator included on model D4521 and AY1273X4

### Half-size holder

- Produces up to 2 L/min
- Easily attaches to full size Barnstead B-Pure Water Systems
- Small size allows for flexibility in mounting location



Barnstead B-Pure Water System with Single Holder and Filter

### Quick look comparison

Resistivity reading	Flow rate
1-10 MΩ.cm (depending on cartridges used)	Up to 4 L/min

# Thermo Scientific Harvey DI+ Cartridge System

Customizeable for your pretreatment or deionization needs

## Thermo Scientific™ Harvey™ DI+ Cartridge System

- Turn-key system ships complete with a remote dispenser, Barnstead Pura-Lite Indicator (50 KΩ.cm) indicator and a high capacity, two-bed ion exchange cartridge to remove calcium, magnesium, and other ions from water
- The system accepts a broad range of other cartridges to remove impurities and produces pure water at a flow rate of up to 4 L/min
- Pressure regulator included



## Product Specifications

	Overall dimensions W x H x D	Inlet connection	Feed water temperature	Max feed water pressure	Max flow rate
Single holder	7 x 24 x 7 in (17.8 x 61 x 17.8 cm)	1/2 in NPTF	4-49 °C (40-120 °F)	100 psig	4 L/min
Double holder	19.75 x 28 x 7.5 in (50 x 71 x 19 cm)	1/2 in NPTF	4-49 °C (40-120 °F)	100 psig	4 L/min
Half size holder	7 x 15 x 7 in (17.8 x 38.1 x 17.8 cm)	1/2 in NPTF	4-49 °C (40-120 °F)	100 psig	2 L/min
Harvey DI+	7 x 26 x 7 in (17.8 x 63 x 17.8 cm)	1/2 NPTF	4-49 °C (40-120 °F)	100 psig	4 L/min

# B-Pure water system



## Cartridges

Size	Dimensions Length x Diameter
Full Size Cartridge	17.5 x 3.4 in
Half Size Cartridge	10.95 x 3.4 in

## System options

	Electrical	Model number
Single holder	–	D4511
Double holder with digital purity meter	120/240 VAC	D4521
Double holder with Pura-Lite indicator (50 k $\Omega$ )	120 VAC	D4524
Double holder with Pura-Lite indicator (1 M $\Omega$ )	120 VAC	D5833
Half size holder	–	D4505
Harvey DI+	120 V	AY1273X4



## Required Accessories

Choose the cartridge(s) according to your needs.	Resin type(s)	Cartridge size	Capacity as CaCO <sub>3</sub>	Cat. No.
<b>Anion removal</b> Effective removal of weakly ionized impurities, raises the pH of solutions, recovers precious metal complex	Strong anion exchange	Full	1680 grains	D0760
<b>Cation removal</b> Converts ionized salts to the acid form resulting in a product water that is low in pH, ideal for precious metal or isotope recovery	Strong cation exchange	Full	3170 grains	D0815
<b>High capacity</b> Removes ionized impurities, produces a larger quantity of water than that of the Ultrapure (D0809), however at a lower resistivity	Two-bed ion exchange	Full	1760 grains	D0803
<b>Pretreatment macropure</b> Effectively removes colloids and bacteria, increases filter life	Macroreticular, activated carbon	Full	2000 gal	D0836
<b>Organic removal</b> Removes organics and chlorine	Activated carbon	Full	5000 gal	D0813
		Half	5000 gal	D50215
<b>Organic removal</b> Removes organics and chlorine. Ideal for pretreating water systems with high organic levels in the feed water.	Extruded carbon	Full	5000 gal	D63112
<b>Oxygen removal</b> Maintains low oxygen content to prevent corrosion in cooling water loops, etc. The feed water should contain less than 10 ppm of ionized solids.	Porous strong anion exchange	Full	30 g	D0811
		Half	18 g	D50214
<b>Oxygen and demineralization</b>	Oxygen removal mixed-bed	Half	275 grains / 9 g	D50216
<b>Ultrapure</b> Removes ionized impurities to produce high resistivity water with a neutral pH	Mixed-bed	Full	875 grains	D0809
		Half	550 grains	D50213
<b>Ultrapure and organic removal</b> Commonly used as still pretreatment. Removes ionized impurities and has a layer of activated carbon to remove chlorine and organics.	Mixed-bed, activated carbon	Full	785 grains / 1000 gal	D0832
		Half	275 grains / 2000 gal	D50217
<b>Ultrapure and oxygen removal</b>	Ultrapure, oxygen removal	Full	455 grains / 30 g	D8809
<b>Ultrapure, oxygen, and organic removal</b>	Ultrapure, oxygen and organic removal	Full	365 grains / 2000 gal / 12 g	D8811

## Optional Accessories

		Voltage	
		120	240
<b>Pura-Lite</b>	Indicator light at 50,000 Ω.cm	E3450	E3454
	Indicator light at 200,000 Ω.cm	E3451	E3455
	Indicator light at 1,000,000 Ω.cm	E3452	E3456
<b>Flow meters</b>	0 to 190 L/hr using 1/8 inch NPT inlet	D0788	D0788
<b>0.2 µm final filter</b> – For use on Double Holder units		D3750	D3750

# Bantam Deionizer

## Simple deionization system

The Barnstead Deionizer is an economical way to deionize your water. Easily view resistivity readings directly from unit. Customizable to specific applications by selecting the appropriate cartridge listed below.

- Ideal for applications requiring up to 38 L/hr of purified water
- Select the cartridge to best meet your application needs
- Point of use polishing of pretreated water or single stage treatment of tap water
- Direct reading purity monitor
- Designed for non-pressurized applications. Output water must be diverted to an atmospherically-vented receptacle, no back pressure can be accepted
- Minimum inlet pressure 5 psi, maximum inlet pressure 70 psi
- Includes 3 ft (0.9 m) of inlet feed tubing



**Barnstead Bantam Deionization System** is reliable for routine laboratory work including pretreatment, deionization and removal of organic contaminants and chlorine

### Quick Look C

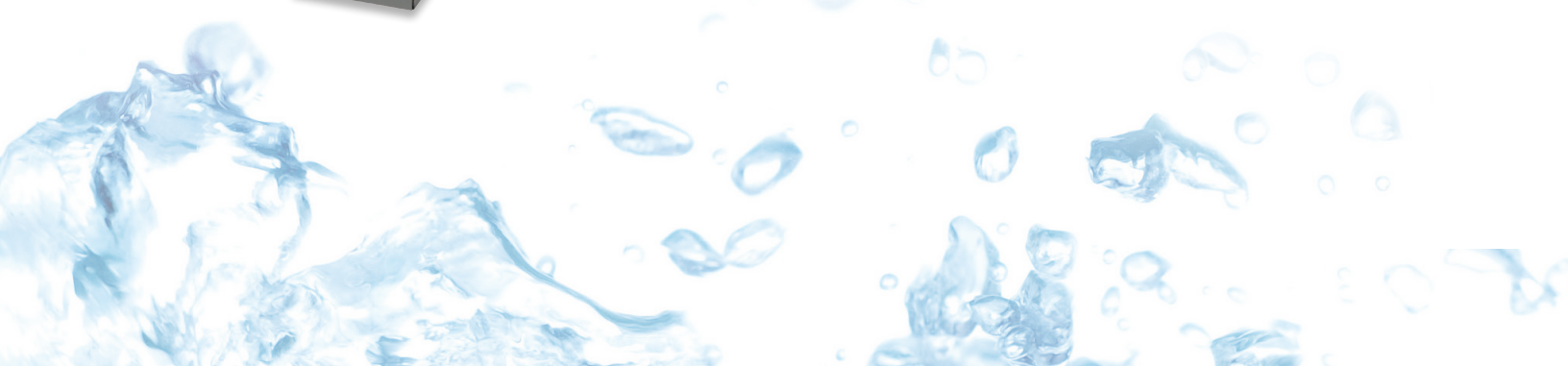
Resistivity reading	Flow rate
25,000-18,000,000 Ω-cm	Up to 38 L/hr

### System Options

	Overall dimensions W x H x D	Feed water pressure	Electrical	Model number
<b>Bantam Deionizer*</b>	6 x 28.5 x 8.75 in (15.2 x 72.4 x 22.2 cm)	5-70 psi	120 VAC	D0800
			240 VAC	D0805

### Required Accessories

Choose the cartridge based on your application needs	Resin Type(s)	Capacity	Model Number
<b>High capacity</b> Removes ionized impurities, produces a larger quantity of water than that of the Ultrapure (D0809), however at a lower resistivity	Two-Bed Ion Exchange	1760 grains	D0803
<b>Ultrapure</b> Removes ionized impurities to produce highest resistivity water with a neutral pH	Mixed-Bed	875 grains	D0809
<b>Ultrapure and organic removal (pretreatment)</b> Removes ionized impurities and has a layer of activated carbon to remove chlorine and organics	Mixed-Bed, Activated Carbon	785 grains / 1000 gal	D0832





# Barnstead Hose Nipple Cartridges

## Easily customizable cartridge holder

The Barnstead Hose Nipple Cartridges are an economical way to purify water volumes up to 75 L/hr. Applications include softening, deionization, organic and chlorine removal.

- Economical purification option
- Ideal for small volume applications
- Same superior quality resins used in Barnstead B-Pure cartridges
- Constructed of 100 % virgin polypropylene cartridge
- Designed for non-pressure applications, these cartridges include 3/8 inch barb hose connections on each end. D8822, D8950, and D8951 cartridges include tapered straight nipple for 3/8 inch ID tubing
- Color change indicator identifies when resin is exhausted in specific cartridges
- Simple cartridge holder is easily wall mounted



The Barnstead Hose Nipple Cartridge is suitable for daily use in pretreatment, deionization, removal of organic contaminants and chlorine, and to feed water into laboratory equipment.

### Product Specifications

Cartridge size	Dimensions (Length x Diameter)
1/2 Size	10.2 x 3.25 in (25.9 x 8.25 cm)
2/3 Size	13.3 x 3.25 in (33.8 x 8.25 cm)
Full Size	18.7 x 3.25 in (47.5 x 8.25 cm)

### System Options

Description	Model number
<b>Hose nipple cartridge holder</b> For easy wall mounting	D8900

### Required Accessories

Choose the cartridge based on your needs	Resin type(s)	Capacity	Color indicator <sup>1</sup>	Model number
1/2 size mixed-bed	Ultrapure ion exchange	430 grains	No	D50220
1/2 size mixed-bed with oxygen removal	Ultrapure mixed-bed with strong anion exchange	280 grains / 4.4 g	No	D8822
2/3 size high capacity	Two-bed ion exchange with strong cation exchange	1100 grains	Yes	D8950
2/3 size mixed-bed and organic removal	Mixed-bed ion exchange with activated carbon	470 grains / 2000 gal	Yes	D8951
Full size cation removal	Cation exchange	3000 grains	Yes	D8905
Full size high capacity	Two-bed ion exchange	1650 grains	Yes	D8901
Full size macroreticular, cation removal	Macroreticular cation exchange	n/a	No	D8908
Full size organic removal	Activated carbon	5000 gal	No	D8904
Full size oxygen removal	Strong anion exchange	30 g	No	D8903
Full size pretreatment and scale eliminator	Mixed-bed and strong cation exchange, activated charcoal	1250 grains / 1000 gal	Yes	D8921
Full size ultrapure	Ultrapure ion exchange	915 grains	No	D8911
Full size ultrapure	Ultrapure mixed-bed ion exchange	915 grains	Yes	D8902
Full size ultrapure with organic removal	Mixed-bed ion exchange with activated carbon	730 grains / 2000 gal	Yes	D8922

<sup>1</sup> Alcohol-containing water supplies cannot be used with cartridges containing the color indicator.

# Barnstead 1/2 size B-Pure Filter

Barnstead 1/2 Size B-Pure Filters will meet all your prefiltration needs. The filters can be used to pretreat feed water or act as a final filter to ensure consistently pure water.



The Barnstead 1/2 Size B-Pure Filter and Economy Filter Holder may be used together for particulate and bacteria removal.

## Product features

- Large surface area ensures long life
- Flow rates of up to two L/min

## Choose from two holder options

### 1/2 Size B-Pure Filter Holder

- Natural polypropylene material construction maintains purity
- Filters are easily and quickly replaced with quarter turn quick release canisters
- Accepts 10 inch (25.43 cm) pre- and post-filters
- Wall mounting bracket comes standard

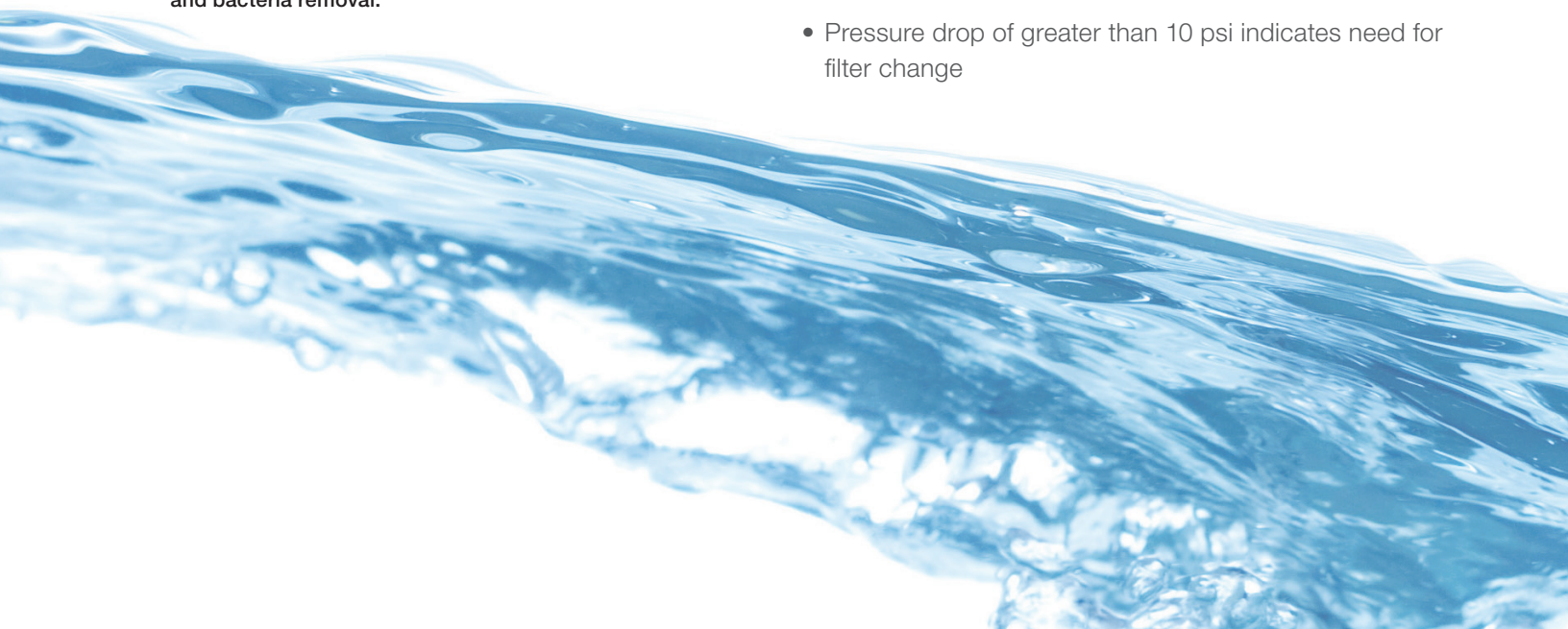
### Economy Filter Holder

- Accepts 10 inch (25.43 cm) double open-ended filters
- Can be piped into any water line

## Optional accessory

### Pressure Gauge Kit

- Attaches to any B-Pure system
- 0 to 160 psi pressure gauge allows for monitoring inlet and outlet water pressure
- Monitors pressure drop across any of the 10 inch (25.43 cm) filter cartridges used in the 1/2 Size B-Pure Filter Holder
- Pressure drop of greater than 10 psi indicates need for filter change



# Flexible filtration system

## System Options Product Specifications

	Overall dimensions W x H x D	Inlet connection	Feed water temperature	Max feed water pressure	Max flow rate	Model number
<b>1/2 Size B-Pure holder*</b> Wall mount included	7 x 15 x 7 in (17.8 x 38.1 x 17.8 cm)	1/2 in NPTF	4-49 °C (40-120 °F)	100 psig	2 L/min	D5839
<b>Economy filter holder*</b>	5.25 x 12 x 5.25 in (13.3 x 30.5 x 13.3 cm)	3/4 in NPTF	4-49 °C (40-120 °F)	100 psig	2 L/min	15840

## Accessories

	Pore Size	Length in (cm)	Diameter in (cm)	1/2 size B-Pure Filter Holder	Economy Holder
<b>Required accessories</b>					
	1 µm Pre-filter	10 (25.4)	2.5 (6.5)	FL583X4	18024
	5 µm Pre-filter	10 (25.4)	2.5 (6.5)	FL583X1	D2729
<b>Filters</b> Choose the filter(s) according to your needs	10 µm Pre-filter	10 (25.4)	2.5 (6.5)	FL583X2	18011
	15 µm Pre-filter	10 (25.4)	2.5 (6.5)	FL583X3	18018
	0.2 µm Final Filter	10 (25.4)	2.5 (6.5)	FL583X6	–
	0.45 µm Final Filter	10 (25.4)	2.5 (6.5)	FL583X5	–
<b>Optional Accessories</b>					
	<b>Dual pressure gauge kit</b>			D2780	–
	<b>Single pressure gauge</b>			D0780	–

Find out more at [thermofisher.com/purewater](https://thermofisher.com/purewater)

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