ASTM Water Grade Standards

Ultrapure (Type 1) Water, 18.2 MΩ

This grade of water is required for your most sensitive and critical laboratory applications. Type I water can be made pyrogen-, nuclease-, bacteria-, and particulate-free. It has the highest purity, but is also the most expensive to generate. Use for the following analytical and life science applications:

- High performance liquid chromatography (HPLC)
- Gas chromatography (GC)
- Ion chromatography (IC)
- Inductively coupled plasma spectroscopy (ICP)
- Mass spectroscopy (MS)
- Atomic absorption (AA)
- Total organic carbon (TOC)
- Genomics (ex. PCR, mutagenesis)
- Proteomics (ex. crystallography, electrophoresis)
- Immunology (ex. monoclonal antibody production, blots)
- Pharmacology
- Cell and tissue culture
- Drug discovery

Pure (Type II) Water, 1 to 15 MΩ

Type II water is most widely used in general laboratory applications, such as reagent preparation and glassware rinsing. It is also commonly used to feed our Type I systems to create a comprehensive water system. Use for the following general laboratory applications:

- Autoclave
- Humidification
- Glassware washing/rinsing
- General lab equipment (water baths, incubators, etc.)
- Feed water to Type I systems
- Media preparation
- Buffer preparation
- Chemical and biochemical reagent preparation

Reverse Osmosis (Type III) Water

Reverse osmosis (RO) water is the most economical method to remove up to 99% of impurities in feed water. It is an excellent option for use in general laboratory equipment, such as water baths, humidifiers, and autoclaves, and preparing buffer and chemical reagents. Use for the following applications:

- Autoclave
- Humidification
- Glassware washing/rinsing
- General lab equipment (water baths, incubators, etc.)
- Feed water to Type I systems
- Microbiological buffers and chemical reagent preparation
- Preparing and diluting buffers and reagents
- General biotechnology

Cartridge/Filter System (Type IV) Water

Cartridge and filter systems are useful for your single-step purification and pretreatment needs, producing laboratory-grade water. Purity can be indicated by digital display, "go/no go" analog indicator, and color change. Use for the following applications:

- Autoclave
- Humidification
- Glassware washing/rinsing
- General lab equipment (water baths, incubators, etc.)
- Pretreatment

Common Specifications of ASTM Grade Water

	Resistivity (MΩ-cm, min)	Conductivity (µS/cm, max)	Organic carbon (µg/L, max)	Silica (µg/L, max)	Chlorides (µg/L, max)	Sodium (µg/L, max)
Type I	18.0	0.056	100	3	1	1
Type II	1 to 15	1.0	50	3	5	5
Type III	4.0	0.25	200	500	10	10
Type IV	0.2	5.0	No limit	No limit	50	50

Methods of Purification

Adsorption: Activated carbon bonds with the chlorine and organic materials in feedwater to immobilize and remove these impurities.

Deionization: The removal of ions and minerals by synthetic ion exchange resins. Cation resins remove positively charged ions; anion resins remove negatively charged ions.

Distillation: The process in which water is heated to a gaseous state and recondensed in a separate vessel.

Filtration: Use as a pretreatment or a stand-alone treatment. Water passes through a filter of specified porosity at normal line pressures. The filter retains most particulates, with water passing through.

Reverse osmosis (RO): Use primarily as a pretreatment. Equal amounts of pure water and saline solution are separated in a U-tube by a semipermeable membrane. When external pressure is applied to the saline side, the semipermeable membrane allows water to pass through while salts are concentrated and flushed down a drain.

Ultrafiltration: Use for removing pyrogens and bacteria. Under pressure, water is forced through a membrane with a pore size smaller than 0.005 µm. Particulates are retained, with only pure water passing through.

Ultraviolet (UV) oxidation: UV light (at <280 nm) passes through the water destroying bacteria, viruses, and trace organics.

Impurities Removed

E = Excellent G = Good P = Poor

Method	Dissolved ionized solids	Dissolved organics	Dissolved ionized gases	Particulates	Bacteria	Pyrogens
Adsorption	P	E	P	P	P	P
Deionization	E	P	E	P	P	P
Distillation	E / G	G	P	E	E	E
Filtration	P	P	P	E	E	P
Reverse osmosis	G	G	P	E	E	E
Ultrafiltration	P	G	P	E	E	E
UV oxidation	P	G	P	P	G	P

GenPure™ Water Purification Systems

No more difficult cartridge changes

- Quick-change cartridge design simplifies self maintenance, even in mid-operation
- Push-button operation for easy dispensing
- Ergonomic controller tilts for optimal key pressing and easy readability
- Digital microprocessor control automatically monitors and stores faults from the last four weeks

Barnstead GenPure systems deliver up to 200 L/day of Type I ultrapure water from a pretreated feed water supply. Water product quality exceeds international standards ASTM Type I, ISO 3696 Grade 1, ASTM D1193 and CLSI-CLRW.

Illuminated four-line alphanumeric display shows important system parameters including conductivity/resistivity measurements and TOC value. The flexible dispenser offers a radius of 24" (60 cm) from the system for filling larger vessels or glassware washing.

The RS-232 interface with adjustable send-interval safely transfers all measured data, faults, date, and time to a computer or log printer. Data printing at preprogrammed intervals satisfies GLP guidelines; order external printer separately below. Real-time clock and code-protected operating system prevents unauthorized changes to system settings. USP-compliant conductivity measurement with temperature compensation can be switched on or off.

Systems with UV option offer UV oxidation (185/254 nm) for reducing the content of microorganisms and their metabolites.
Systems with UF option include an ultrafilter to remove endotoxins.
Systems with TOC option offer real-time TOC monitoring for continual measurement of organic substances present in water.

What's included: ultrapure polisher cartridge, sterile 0.2 µm filter, pressure regulator, wall bracket, and power cord.

99287-00

Tilting control panel provides optimal viewing.

Applications

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

Specifications

Max dispensing flow rate: 2 L/min
Operating pressure: 29 psi (2 bar) min; 87 psi (6 bar) max
Power: 90 to 240 VAC, 50/60 Hz
Inlet connection: ¾" hose connector
Dimensions (W x H x D): 14⅝" x 24¼" x 13" (37.2 x 61.5 x 33 cm)

Feed water requirements
Source: potable tap water; pretreated by reverse osmosis, ion exchange, or distillation†
Conductivity: <2 µS/cm
TOC: 50 ppb, max
Bacteria count: <100 CFU/mL

Turbidity: 1.0 NTU
Temperature: 35.6 to 95°F (2 to 35°C)
Pressure: 1.4 to 87 psi (0.1 to 6 bar)

†If feed water is pretreated using RO or DI, system requires DI cartridge 99299-00 (order separately below).

Applications	Type I water: Resistivity at 25°C	Conductivity	TOC	Bacteria	Endotoxins	TOC monitor	Catalog number	Price
GenPure system								
AA, IC, ICP, standard buffers	18.2 MΩ-cm	0.055 µS/cm	5 to 10 ppb	<1 CFU/mL	—	No	GY-99287-00	
GenPure UV system with UV lamp								
Inorganic and organic trace analysis, HPLC, ICP-MS, IC, TOC analysis	18.2 MΩ-cm	0.055 µS/cm	5 to 10 ppb	<1 CFU/mL	—	No	GY-99287-10	
Chemical analysis (trace analysis, HPLC, IC, ICP-MS, TOC measurements)	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1 CFU/mL	—	Yes	GY-99288-10	
GenPure UF system with ultrafilter								
Molecular biology, microbology, PCR, IVF, monoclonal antibodies	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1 CFU/mL	<0.001 EU/mL	No	GY-99287-20	
GenPure UV/UF system with UV lamp and ultrafilter								
Molecular biology, PCR, DNA, monoclonal antibodies, cell culture media	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1 CFU/mL	<0.001 EU/mL	No	GY-99287-30	
Biosciences (cell and tissue culture media, PCR, DNA, monoclonal antibodies)	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1 CFU/mL	<0.001 EU/mL	Yes	GY-99288-30	

Accessories

GY-99299-00 **Stainless steel DI cartridge†.** Pretreatment for use between house RO or DI system and water system to further protect and extend cartridge life
GY-99299-36 **Disinfection cartridge**
GY-99299-10 **Storage reservoir, 30 L,** to feed system
GY-99299-15 **Storage reservoir, 60 L,** to feed system
GY-99299-50 **Printer,** 110 VAC

Micro-Pure™ Water Purification Systems

Don't worry about bacterial growth

- During standstill, recirculating pump prevents bacterial growth
- Feed water monitoring for maximizing cartridge life
- Variable flow control knob for dispensing
- Quick-change cartridges for rapid cartridge change, even mid-operation
- Optional integrated 6-L feed water reservoir for areas without direct access to a water line

Barnstead MicroPure systems deliver up to 15 L/day of Type I ultrapure water from a pretreated feed water supply. Water product quality exceeds international standards ASTM Type I, ISO 3696 Grade 1, ASTM D1193 and CLSI-CLRW.

The ergonomically designed controller is backlit and tilts for easy operation and better visibility. Dispenser allows drop by drop or quick dispensing.

Systems with UV option offer UV oxidation (185/254 nm) for reducing the content of microorganisms and their metabolites. **Systems with UF option** include an ultrafilter to remove endotoxins.

What's included: ultrapure polisher cartridge, sterile 0.2 µm filter, pressure regulator, and power cord.

Dispense water quickly or drop by drop

Fast, easy cartridge replacement

99271-11

Applications

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

Specifications

Max dispensing flow rate: 2 L/min
Operating pressure: 29 psi (2 bar) min; 87 psi (6 bar) max
Power: 90 to 240 VAC, 50/60 Hz
Inlet connection: ¾" hose connector
Dimensions (W x H x D)
Line fed: 12" x 21½" x 11⅞" (30.5 x 54.5 x 30 cm)
With 6-L feed reservoir: 12" x 21½" x 15¾" (30.5 x 54.5 x 40 cm)

Feed water requirements
Source: potable tap water; pretreated by reverse osmosis, ion exchange, or distillation†
Conductivity: <2 µS/cm
TOC: 50 ppb, max
Bacteria count: <100 CFU/mL
Turbidity: 1.0 NTU
Temperature: 35.6 to 95°F (2 to 35°C)
Pressure: 1.4 to 87 psi (0.1 to 6 bar)

†If feed water is pretreated using RO or DI, system requires DI cartridge 99299-00 (order separately below).

Applications	Type I water: Resistivity at 25°C	Conductivity	TOC	Bacteria	Endotoxins	Water source	Catalog number	Price
MicroPure systems								
AA, IC, ICP, standard buffers	18.2 MΩ-cm	0.055 µS/cm	5 to 10 ppb	<1	—	Line fed	GY-99271-10	
						6-L feed reservoir	GY-99271-11	
MicroPure UV systems with UV lamp								
Inorganic and organic trace analysis, HPLC, ICP-MS, IC, TOC analysis	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1	—	Line fed	GY-99271-20	
						6-L feed reservoir	GY-99271-21	
MicroPure UF systems with ultrafilter								
Molecular biology, microbology, PCR, IVF, monoclonal antibodies	18.2 MΩ-cm	0.055 µS/cm	5 to 10 ppb	<1	<0.001	Line fed	GY-99271-30	
						6-L feed reservoir	GY-99271-31	
MicroPure UV/UF systems with UV lamp and ultrafilter								
Molecular biology, PCR, DNA, monoclonal antibodies, cell culture media	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1	<0.001	Line fed	GY-99271-40	
						6-L feed reservoir	GY-99271-41	

Accessories

GY-99299-00 **Stainless steel DI cartridge†.** Pretreatment for use between house RO or DI system and water system to further protect and extend cartridge life

GY-99299-36 **Disinfection cartridge**
GY-99299-37 **Wall-mounting bracket**

Cole-Parmer® Ion-X-Changer Filter Cartridges

Customize to your exact needs

- Design your system with any combination of up to four different cartridges
- Purify water up to 15 MΩ-cm
- Know when to change cartridges—resins go from purple to brown when replacement is needed†
- Use mounting brackets for installation

Mounting Bracket Kit comes with two mounting brackets, faucet diverter assembly with 4 ft (1.2 m) of ¼" OD white vinyl tubing, and 12 ft (3.6 m) of ¼" OD polyethylene connection/dispensing tubing. Use one bracket for single cartridge installation or two for tandem cartridge installation.

Cole-Parmer®

Specifications

Pressure drop per cartridge: 5 psi (0.3 bar)
Maximum working temperature: 75°F (23.9°C)
Cartridge dimensions (L x dia): 18¾" x 3¼" (17.6 x 8.3 cm)

Cartridge type	Application	Max flow rate	Inlet pressure		Max inlet water temp	Capacity grains as $CaCO_3$	Catalog number	Price
			Max	Min				
Adsorber	Pretreatment: removes most organic compounds, free chlorine, and chloramines	7.2 GPH (27.3 L/hr)	100 psi (6.9 bar)	5 psi (0.3 bar)	100°F (37.8°C)	—	GY-01506-15	
Metex	Removes most metallic ions, ammonia, other cations; recovers precious metals					3200	GY-01506-45	
Universal	Produces water equivalent to single-distilled water					1600	GY-01506-25	
Research	Produces water ionically equivalent to triple-distilled water					1000	GY-01506-35	

†Except for Adsorber cartridge 01506-15, which needs to be replaced when approximately 1500 gallons (5600 liters) of water have flowed through the cartridge.

GY-01506-60 **Mounting bracket kit**

Monobed Deionizers

Remove harmful ions in your system

- Visually monitor water quality

Deionizer with Large-Capacity Housing incorporates an ultrapure mixed bed ion exchange resin which contains a 1:1 chemical equivalent of cation and anion resins with a maximum capacity of 1400 grains as $CaCO_3$.

A built-in monitor turns red if the resistivity falls below 0.2 MΩ-cm. Order the resin refill to replace the exhausted resin quickly during a momentary shutdown of the system. For a faster, more convenient resin replacement, use the ultrapure resin cartridge below (capacity when used with cartridge is 1050 grains as $CaCO_3$). The resin for both the refill and cartridge is an FDA-grade ultra-clean resin designed for ultrapure water systems.

What's included: mounting bracket and two polypropylene elbows (¾" NPT(M) x ⅜" hose barb) that accept ⅜" ID tubing.

Deionizer 01503-00

Deionizer with Clear Housing lets you see when the resin is exhausted. The deionizer is loaded with a mixed bed resin (1:1 equivalent) with a maximum capacity of 700 grains as $CaCO_3$. The resin is specially treated to yield a gradual color change from dark blue to amber to indicate the level of exhaustion (spending). Change the resin when all but 1" (2.5 cm) of resin is amber. Replace exhausted resin quickly during a momentary shutdown of the water system. Order resin separately below (deionizer requires up to two resin refills).

What's included: mounting bracket and two polypropylene elbows (¾" NPT(M) x ⅜" hose barb) that accepts ⅜" ID tubing.

Deionizer 01503-20 shown with resin 01503-30

Max resistivity	Max flow rate	Min/max inlet pressure	Inlet water temperature	Inlet connections	Dimensions (H x Dia)	Capacity grains $CaCO_3$	Power (VAC)	Catalog number	Price
Large-capacity monobed deionizers									
18 MΩ-cm	60 GPH (227 L/hr)	125 psi (8.6 bar)	100°F (38°C)	¾" NPT(F)	23¼" x 7" (59 x 17.8 cm)	1050	110	GY-01503-00	
							220	GY-01503-05	
Monobed deionizer with clear housings									
15 MΩ-cm	15 GPH (57 L/hr)	125 psi (8.6 bar)	90°F (32°C)	¾" NPT(F)	12⅝" x 5¼" (32.1 x 13.3 cm)	700	—	GY-01503-20	

GY-01503-10 **Resin refill,** ultrapure mixed bed, for models 01503-00 and -05

GY-01503-12 **Ultrapure resin cartridge,** for models 01503-00 and -05

GY-01503-30 **Resin** refill, mixed bed, for model 01503-20, with color indicator

WaterPro® BT™ Water Purification Systems

Get up and running in minutes

NEW

- Simple set-up: connect to tap supply, insert filter, and power on
- Get water when you need it—integrated 6-liter storage tank holds Type III RO-purified water
- Easy cartridge replacement—single twin-cartridge snaps in place
- Type I water is dispensed from the front or Remote Dispenser, with the option of Auto-Dispense mode for preset volumes
- Quiet—50 dB—and compact enough to be shared between labs, set up on a benchtop, or wall mounted
- Choose systems with integrated UV lamp to remove bacteria, metabolites, and certain organics

Type I water					UV lamp	Remote dispenser	115 VAC, 60 Hz		240 VAC, 50/60 Hz	
Resistivity at 25°C	Conduc-tivity	Bacteria	Endo-toxins	TOC			Catalog number	Price	Catalog number	Price
18.2 MΩ-cm	0.056 µS/cm	<1 CFU/mL†	<0.01 ng/mL†	<10 ppb	No	No	GY-99290-40		GY-99290-41	
						Yes	GY-99290-42		GY-99290-43	
				<5 ppb	Yes	No	GY-99290-44		GY-99290-45	
						Yes	GY-99290-46		GY-99290-47	

†With the ultrfiltration final filter 99290-53 in place.

Specifications

Max dispensing flow rate: 0.5 L/min for Type I, 3.0 L/hr for Type III
Inlet connection: 1/2" GAZ(M)
Drain requirement: 30 L/hr

Type III (RO) water quality

Conductivity: better than 4.0 MΩ with 100 µS, or better, inlet water quality
Ion rejection: >96%
Organic rejection for molecular weight over 200: >96%
Bacteria and particulate rejection: >99%

Feedwater requirements

Source: potable water
pH range: 4 to 10
Conductivity: <2000 µS/cm
Temperature: 41 to 95°F (5 to 35°C)
Inlet pressure: 7.3 psi (0.5 bar) min, 87 psi (6 bar) max
Inlet flowrate: 10.6 gal./hr (40 L/hr) min

GY-99290-48 **Filter pack** (required); includes twin cartridges used for pretreatment, RO, activated carbon, and deionization filtration
GY-99290-49 **Replacement vent filters,** 1 micron. Pack of 2
GY-99290-50 **Hollow fiber final filter,** 0.22 micron, with filling bell; not for ultrafiltration final filter
GY-99290-51 **Replacement UV lamp,** 185/254 nm
GY-99290-53 **Ultrafiltration final filter;** may not be used with hollow fiber final filter
GY-99290-55 **Optional wall-mounting bracket**

LabTower EDI™ Water Purification Systems

No more cartridges to change—EDI automatically regenerates resin

- Produce Type I or Type II water with EDI technology
- Integrated 100-L reservoir allows you to safely and conveniently stock high purity water
- Microprocessor control for automatic operation
- Highly visible display continuously monitors all critical parameters, including reservoir levels
- Free standing with bottom-mounted rollers for easy relocation
- RS-232 interface with adjustable send-interval safely transfers all data

Specifications

Max dispensing flow rate: 2 L/min
Operating pressure: 29 psi (2 bar) min; 87 psi (6 bar) max
Power: 90 to 240 VAC, 50/60 Hz
Inlet connection: 8 mm OD
Dimensions (W x H x D): 17¾" x 59⅛" x 22⅞" (45 x 150 x 58 cm)

Feed water requirements

Source: potable tap water softened or hardness stabilized
Conductivity: <1500 µS/cm
Colloid index: <3
pH range: 4 to 11
Temperature: 35.6 to 95°F (2 to 35°C)
Pressure: 1.4 to 87 psi

Type I water						Type II water		15 L/hr production		30 L/hr production	
Applications	Resistivity at 25°C	Conductivity	TOC	Bacteria	Particles, 0.22 µm/mL	Resistivity at 25°C	Conductivity	Catalog number	Price	Catalog number	Price
Cell and tissue culture, chemical analysis, PCR, DNA, standard buffers	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	<1 CFU/mL	<1	15 to 10 MΩ-cm	0.067 to 0.1 µS/cm	GY-99281-15		GY-99281-30	

Required Components

GY-99299-45 **Sterile venting filter/overflow** protects against contamination
GY-99299-03 **CO_2 absorber and sterile filter,** 0.2 µm. Prevents TOC value increase from drawn-in CO_2
GY-99281-60 **Mix Multi Mini water softener,** 110 VAC
GY-99281-61 **Water softener salt**
GY-99299-48 **Filter with carbon cartridge** for water softener, 5 µm
GY-99299-49 **Hardness detection kit,** North America/Asia

Accessories

GY-99299-25 **Sterile filter** for reservoir outlet, 0.2 µm
GY-99299-36 **Disinfection cartridge**
GY-99299-50 **Printer,** 110 VAC

Smart2Pure™ Water Purification Systems

Stop replacing all filters at once

- RO membrane with pretreatment cartridge is separate from the DI cartridge, ensuring you only replace each cartridge as needed
- Display can be tilted for optimal reading
- Variable-flow control knob for dispensing of Type I water
- Quick-change cartridge design simplifies self maintenance, even in mid-operation

Barnstead Smart2Pure systems deliver up to 72 L/day of Type I ultrapure water or Type II pure water from a tap feed water supply.

Systems with UV option offer UV oxidation (185/254 nm) for reducing the content of microorganisms and their metabolites.

Specifications

Max dispensing flow rate: 1 L/min

Operating pressure: 29 psi (2 bar) min; 87 psi (6 bar) max

Power: 90 to 240 VAC, 50/60 Hz

Inlet connection: ¼" OD

Dimensions (W x H x D): 12" x 21½" x 15¾" (30.5 x 54.5 x 40 cm)

Feed water requirements

Source: potable water according to DIN 2000

pH range: 4 to 11

Temperature: 35.6 to 95°F (2 to 35°C)

Pressure: 1.4 to 87 psi (0.1 to 6 bar)

Type I water				Type II water		3 L/hr production†		6 L/hr production†	
Applications	Resistivity at 25°C	Conductivity	TOC	Resistivity at 25°C	Conductivity	Catalog number	Price	Catalog number	Price
Smart2Pure systems									
AA, IC, ICP, standard buffers	18.2 MΩ-cm	0.055 µS/cm	5 to 10 ppb	15 to 10 MΩ-cm	0.067 to 0.1 µS/cm	GY-99259-01		GY-99259-11	
Smart2Pure UV systems with UV lamp									
Inorganic and organic trace analysis, HPLC, ICP-MS, IC, TOC analysis	18.2 MΩ-cm	0.055 µS/cm	1 to 5 ppb	15 to 10 MΩ-cm	0.067 to 0.1 µS/cm	GY-99259-02		GY-99259-12	

†3 and 6 L/hr models include internal 6-L tank with vent filter.

GY-99299-41 **Pretreatment filter** (required)

E-Pure™ Three- and Four-Holder Water Purification Systems

Know your water purity instantly

- Digital resistivity meter (included) indicates water purity
- Produce ASTM Type I water
- Recirculation pump ensures water purity

E-Pure systems meet or exceed ASTM and CISI-CLRW requirements for bacteria-free, Type I reagent-grade water. Inert wetted parts prevent contamination of purified water. A built-in, whisper-quiet recirculation pump with pressure regulator ensures Type I reagent grade water on demand.

Choose from wall mountable three- or four-holder purification systems. Order disposable cartridges (required) on page 1096. Upgrade your system by adding an optional Remote Dispenser™.

99252-10

Max flow rate	Inlet pressure		Inlet water temperature	Inlet connections	No. of holders	Dimensions (W x H x D)	Power (VAC, Hz)	Catalog number	Price
	Max	Min							
2 L/min	100 psi (6.9 bar)	5 psi (0.3 bar)	40 to 120°F (4 to 49°C)	¼" NPT(F)	3	29" x 28" x 7½" (73.6 x 71.1 x 19 cm)	120, 60	GY-99252-00	
							240, 50/60	GY-99252-05	
					4	35" x 28" x 7½" (88.9 x 71.1 x 19 cm)	120, 60	GY-99252-10	
							240, 50/60	GY-99252-15	

GY-99254-02 **Remote Dispenser** with filter

GY-99261-60 **Final filter,** 0.2 µm, for 99254-02

Pacific™ TII Water Purification Systems

Know exactly how much water you have

- Reservoir fill level (%) automatically shown on display
- Microprocessor controlled for automatic operation with continuous monitoring of all critical parameters

Systems deliver up to 240 L/day of Type II pure water from a tap feed water supply. High-performance reverse osmosis membrane removes approximately 98% of inorganic ions and 99% of all dissolved organic substances, as well as micoorganisms and particles.

Space-saving design allows benchtop operation or wall mounting. Large, illuminated four-line display is easy to read and clearly shows operating mode status (production, standby, disinfection), reservoir volume (%), and temperature (°C). Display can be tilted for optimal viewing.

Use the RS-232 interface for safe documentation of all measured values and faults with date and time in compliance with GLP guidelines; order external printer separately. Optional UV lamp (254 nm) acts as a germicide, preventing biological contamination.

Opaque polyethylene reservoirs (required; order separately) allow complete draining and efficient cleaning and disinfection. Reservoirs are available with an optional recirculation pump which protects high purity water from bacterial growth during standstill. The 30- and 60-L units can be used with the optional wall-mounting bracket for further space-saving capabilities.

What's included: high purity water cartridge, RO membrane, pressure regulator, built-in wall bracket, and power cord. Order required reservoir separately at right.

Barnstead Pacific TII system
99290-12 shown with reservoir 99290-08
(order separately)

Production capacity	Systems		Systems with UV lamp	
	Catalog number	Price	Catalog number	Price
3 L/hr	GY-99290-12		GY-99290-22	
7 L/hr	GY-99290-14		GY-99290-24	
12 L/hr	GY-99290-16		GY-99290-26	
20 L/hr	GY-99290-18		GY-99290-28	
40 L/hr	GY-99290-20		GY-99290-30	

GY-99299-38 Double cartridge pretreatment package (required) to control chlorine, organic impurities, and hardness
GY-99299-50 Optional printer, 110 VAC

Required Storage Reservoirs

Capacity	Reservoirs		Reservoirs with recirculation pump	
	Catalog number	Price	Catalog number	Price
30 L	GY-99299-08		GY-99299-07	
60 L	GY-99299-13		GY-99299-12	
100 L	GY-99299-18		GY-99299-17	

GY-99299-02 Sterile overflow (required)
GY-99299-04 Sterile filter (required), 0.2 µm
GY-99299-03 CO_2 absorber and sterile filter (required), 0.2 µm
GY-99299-05 Optional wall-mounting bracket for 30-L reservoir
GY-99299-06 Optional wall-mounting bracket for 60-L reservoir

Specifications

Operating pressure: 29 psi (2 bar) min; 87 psi (6 bar) max
Power: 90 to 240 VAC, 50/60 Hz
Inlet connection: R ¾"
Dimensions (W x H x D): 14⅝" x 23¾" x 13" (37.2 x 60.3 x 33 cm)

Type II water production
Resistivity at 25°C: 15 to 10 MΩ-cm
Conductivity: 0.067 to 0.1 µS/cm
TOC: <30 ppb
Removal of bacteria and particles: 99%
Silicate removal: >99.9%

Feed water requirements
Source: tap water, softened or hardness stabilized
Conductivity: <1500 µS/cm
Free chlorine concentration: <0.1 mg/L
pH range: 4 to 11
Temperature: 35.6 to 95°F (2 to 35°C)
Pressure: 1.4 to 87 psi (0.1 to 6 bar)

Applications

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

FREE H_2O Select™ Analysis Kit

- Purchase the correct water purification system for your application, volume requirements, and budget!

Request your free H_2O Select™ test kit today. Simply complete the questionnaire, fill the sample bottle, place it in the return box, and we will do the rest. Our water experts will perform up to eight different tests on your sample: TOC, pH, resistivity, calcium, CO_2, alkalinity, silica, and total ionized solids. A water system will be recommended along with the annual operating costs for that system based on your usage. The results and a quote will be mailed directly to you.

Catalog number	Description
GY-01504-50	Free water analysis kit

Mega-Pure™ Distillation Systems

No more waiting for water—high-purity water on demand

1. Mega-Pure Glass Stills

– Ensure your water quality with nonmetal wetted parts

– Choose from three output capacities—1.4, 3.4, and 6 L/hr

These stills remove most dissolved solids and all pyrogens and biological impurities from tap water or pretreated water—meets pyrogen purity standards. Wetted parts are quartz, glass, and PTFE.

Stills feature a water-level sensor in the boiling chamber. The high-temperature cutoff switch prevents any possibility of overheating. Aluminum cabinet with baked-epoxy finish keeps electrical cords and the drain line out of your way.

Double solenoid valve lets you use pretreated feed water for feed to the boiler, reduceing the amount of cleaning required. Stills do not operate automatically with storage tanks other than the automatic collection system. Order reservoir and valve separately below.

What's included: 7-ft (2.1-m) cord with three-prong (the 240 VAC models come with European plug; 120 VAC models have a US plug.) In addition, models 99292-00 and -05 include a 6-liter reservoir; for all other models, use your own collection vessel or the optional reservoir bottle to collect up to 13.25 liters (3.5 gallons).

REQUIRED System Components

1) Mega-Pure glass still
2) Automatic collection system
3) Pretreatment deionizer (for systems with hard water makeup) and cartridges

1

Output L/hr (GPH)	Cooling water L/hr (GPH)	Inlet pressure	Connections			Power (VAC, Hz)	Wattage	Dimensions (W x H x D)	Shpg wt.† lb (kg)	Catalog number	Price
			Tap water	Pretreated	Drain						
1.4 (0.26)	11.3 (3)	20 to 100 psi (1.4 to 6.9 bar)	¼" NPT(M)	⅜" ID	½" ID	120, 50/60	1.0 kW	18" x 34" x 9¾" (45.7 x 86.3 x 24.8 cm)	39 (17.7)	GY-99292-00	
						240, 50/60				GY-99292-05	
6 (1.58)	53 (14)					208, 50/60	5.0 kW	23" x 45" x 12" (58.4 x 114.3 x 30.5 cm)	74 (33.6)	GY-99292-20	
						240, 50/60				GY-99292-25	

†All stills must ship by motor freight. **Note:** Stills are available with capacities of 12 L/hr and 13 L/hr; call your local representative for details.

2. Automatic Collection System

Automate your purification system with the optional automatic collection system. A water-level sensor in the reservoir turns the heater and water supply on and off to keep water storage levels between 38 and 45 liters.

2

GY-99292-70 **Automatic collection system.** Use with all the Mega-Pure stills. Collects up to 45 L of water and controls the still

3. Pretreatment Deionizers

– Clean your still less often by reducing the level of scaling ions entering your still

Temperature-compensated purity meter continuously monitors water purity and indicates when cartridges are exhausted; a flow control valve for precise output flow control; and a built-in drain valve for fast, no-spill cartridge replacement. Systems withstand pressure from 10 to 100 psi.

Single-Cartridge Deionizer economically removes dissolved inorganic matter from most water supplies. Measures 10½"W x 25½"H x7½"D (26.7 x 64.8 x 19.1 cm). Use with high-capacity cartridge 99292-91 sold below.

Dual-Cartridge Deionizer removes dissolved organic and inorganic matter from most water supplies. Measures 16¾"W x 25½"H x 7½"D (42.5 x 64.8 x 19.1 cm). Use with any of the three cartridges sold below.

What's included: 5 ft (1.5-m) of ½" ID vinyl drain tubing, 5 ft (1.5-m) of 7⁄16" ID vinyl output tubing, ⅜" OD inlet connection, and a 7-ft (2.1-m) cord with three-prong plug.

Description	Power	Catalog number	Price
Single-cartridge deionizer	120 VAC	GY-99292-40	
Double-cartridge deionizer	120 VAC	GY-99292-45	

3

Cartridges for Deionizers

Type	Capacity	Catalog number	Price
High-purity cartridge	1200 grains (as $CaCO_3$)	GY-99292-90	
High-capacity cartridge	2400 grains (as $CaCO_3$)	GY-99292-91	
Organic cartridge	1500 gallons (approx)	GY-99292-92	

Classic Stills

Won't corrode or leach contaminants

- Constructed from bronze and copper with a pure tin coating
- Remove most inorganic solids and organics with a boiling point greater than 100°C, and all bacteria and pyrogens†
- Low-water cutoff protects still from burnout if feedwater is interrupted
- Easy installation with plug-and-play hardware

Portable Still doesn't require any permanent plumbing or electrical connections. Set up is quick and easy—ideal for educational use or start-up labs. No floorstand included.

Stationary Stills are ideal for higher capacity applications. Stills incorporate a vented condenser that aids in the removal of gaseous contaminants. Feedwater entering the condenser is preheated to conserve energy, while the horizontal condenser position saves space. The double-walled boiler saves electricity, and includes a baffle to produce pyrogen-free water. Use on benchtop or on included floor stand.


99276-00

99276-10

Specifications

Connections:
Feed water: ¼" NPT(M) for portable still, ⅜" NPT(M) for stationary stills
Cooling water: ¼" NPT(M)
Drain: ½" NPT(M)

Output L/hr (GPH)	Cooling water L/hr (GPH)	Inlet pressure		Power		Watts	Dimensions (W x H x D)	Shpg wt lb (kg)	Catalog number	Price
		Max	Min	Main unit	Low-water cutoff††					
Portable still										
1.9 (0.5)	15 (4)	90 psi (6.2 bar)	40 psi (2.8 bar)	120 VAC, 60 Hz, 12 A	120 VAC	1.3 kW	21" x 19" x 10" (53.3 x 48.3 x 25.4 cm)	25 (11)	GY-99276-00	
Stationary stills										
3.8 (1.0)	30 (8)	90 psi (6.2 bar)	40 psi (2.8 bar)	120 VAC, 60 Hz, 22 A	120 VAC	2.6 kW	22" x 20" x 10" (55.9 x 50.8 x 25.4 cm)	30 (14)	GY-99276-10	
				240 VAC, 60 Hz, 12 A	240 VAC				GY-99276-16	
7.6 (2.0)	61 (16)	90 psi (6.2 bar)	40 psi (2.8 bar)	240 VAC, 60 Hz, 26 A	240 VAC	6 kW	23" x 35" x 11" (58.4 x 88.9 x 27.9 cm)	40 (18)	GY-99276-26	
				208 VAC, 60 Hz, 17 A‡	120 VAC				GY-99276-28	
19 (5.0)	151 (40)	90 psi (6.2 bar)	40 psi (2.8 bar)	208 VAC, 60 Hz, 36 A	240 VAC	13 kW	35" x 45" x 14" (88.9 x 114.3 x 35.6 cm)	90 (41)	GY-99276-38	

†Product water purity depends on feedwater quality. ‡System is three-phase. ††Low-water cutoff requires a separate 120 VAC power supply from the main unit.

Laboratory Water Still

Easy to use

- Features a sturdy metal stand for either wall or bench mounting
- Operate directly from tap water

This versatile water still is perfect for general laboratory distillations. Features a waste water drain below the level of the still—connect your drain pipe from the boiler straight downward without troublesome bends that may slow the flow rate.

Boiler and high-efficiency condenser are both constructed of borosilicate glass to ensure the highest in distillate purity. Heater is chromium plated and provides protection from overheating. Condenser features screw thread connections and plastic ⅜" ID hose barb fittings—change tubing quickly and safely without worrying about using excessive force on the glass.

What's included: 5-ft (1.5-m) cord with stripped ends.

Specifications

Heating elements: one, 3 kW (chromium-plated)
Power: 220 VAC, 50/60 Hz
Dimensions (W x H x D): 18¾" x 18" x 6" (47.6 x 45.7 x 15.2 cm)

Description	Capacity	Resistivity	Cooling water	Water pressure	Catalog number	Price
Water still	4 L/hr	0.25 to 0.3 MΩ-cm	60 L/hr consumption	3 psi (0.2 bar), min	GY-99293-00	

Pacific™ RO and LabTower™ RO Water Purfication Systems

Get pure water wherever you need it

- Ensure water quality and extended cartridge service life with integrated feed water monitoring
- Easy-to-operate clear display tilts for optimal viewing
- Reservoir fill level (%) automatically shown on display

A. Barnstead Pacific RO Systems

These systems deliver up to 240 L/day of Type III (RO) water from a tap feed water supply. Space-saving design allows for system installation on benchtop or for wall mounting.

Microprocessor control offers automatic operation, as well as real-time clock records system of errors and faults. The code-protected operating system prevents unauthorized changes to settings.

Use the RS-232 interface for safe documentation of all measured values and faults with date and time in compliance with GLP guidelines; order external printer separately below right.

Opaque polyethylene reservoirs (required; order separately) allow complete draining and efficient cleaning and disinfection. Reservoirs are available with an optional recirculation pump which protects high purity water from bacterial growth during standstill. The 30- and 60-L reservoirs can be used with the optional wall-mounting bracket for further space-saving capabilities.

What's included: RO membrane, pressure regulator, built-in wall bracket, and power cord. Order required storage reservoir separately at right.

B. Barnstead LabTower RO Systems

A complete mobile solution! These systems offer the same features as the Barnstead Pacific RO above, but this stand-alone unit with integrated 100-L reservoir requires no bench space and the smooth-rolling casters allow easy relocation in your lab.

Dispense two ways—from reservoir or directly from system. Plus, an adjustable setting for reservoir volume allows decreased storage when demand is low. Purified water in the reservoir is continuously circulated to preserve water quality during activity.

What's included: RO membrane(s), 10" filter (5 µm) with hardness stabilizer cartridge, pressure regulator, integrated 100-L reservoir, bottom-mounted rollers, and power cord.

Specifications

Specifications for Both Systems

Operating pressure: 29 psi (2 bar) min; 87 psi (6 bar) max
Power: 90 to 240 VAC, 50/60 Hz
Inlet connection: R ¾"
Dimensions (W x H x D): 14⅝" x 23¾" x 13" (37.2 x 60.3 x 33 cm)

Type III water production

Salt retention: >99.9%
Retention, bacteria and particles: 99%

Feed water requirements

Source: potable tap water, softened or hardness stabilized
Silt density index (SDI): <5, pretreatment required for higher values
Conductivity : <1500 µS/cm
Prefiltration: 5 µm and activated carbon
Free chlorine concentration: <0.1 mg/L
pH range: 4 to 11
Temperature: 35.6 to 95°F (2 to 35°C)
Pressure: 29 to 87 psi (2 to 6 bar)

A. Barnstead Pacific RO system 99289-00 shown with reservoir 99289-08 (order separately)

B. Barnstead LabTower RO system 99289-35 includes integrated 10-L reservoir

Applications

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

A. Barnstead Pacific RO Systems

Production capacity	Catalog number	Price
3 L/hr	GY-99289-00	
7 L/hr	GY-99289-10	
12 L/hr	GY-99289-20	
20 L/hr	GY-99289-30	
40 L/hr	GY-99289-40	

GY-99299-38 **Double cartridge pretreatment package (required)** to control chlorine, organic impurities, and hardness
GY-99299-50 **Optional printer,** 110 VAC

Required Storage Reservoirs for Barnstead Pacific RO Systems above

Capacity	Reservoirs		Reservoirs with recirculation pump	
	Catalog number	Price	Catalog number	Price
30 L	GY-99299-08		GY-99299-07	
60 L	GY-99299-13		GY-99299-12	
100 L	GY-99299-18		GY-99299-17	

GY-99299-02 **Sterile overflow (required)**
GY-99299-04 **Sterile filter (required),** 0.2 µm
GY-99299-03 **CO_2 absorber and sterile filter (required),** 0.2 µm
GY-99299-05 **Optional wall-mounting bracket** for 30-L reservoir
GY-99299-06 **Optional wall-mounting bracket** for 60-L reservoir

B. Barnstead LabTower RO Systems

Production capacity	Catalog number	Price
20 L/hr	GY-99289-35	
40 L/hr	GY-99289-45	

GY-99299-48 **Pretreatment package (required),** 5 µm filter with activated carbon and a 10" filter housing
GY-99299-41 **Pretreatment package (required),** 1 µm filter with a 10" filter housing
GY-99299-45 **Sterile overflow (required)** for reservoir
GY-99299-04 **Sterile vent (required)** for reservoir
GY-99299-50 **Optional printer,** 110 VAC

B-Pure™ Water Purification Systems

Modular design—fill with your choice of cartridges

– Perfect for general pretreatment of laboratory water

B-Pure systems are modular wall-mountable systems for point-of-use deionization. Simply add modules as needed when your water requirements change. All systems accept pre- and post-treatment cartridges. Use pretreatment cartridges to filter water before reverse osmosis, deionization, or distillation. Use post-treatment cartridges at the point of use for filtration of ultrapure water. Easily install and remove cartridges; a quarter twist releases canister. A Pura®-Lite resistivity indicator can be mounted directly to the housing to monitor water purity threshold—order separately on page 1095.

99253-10

Double-Holder System accepts disposable cartridges (required) sold at ColeParmer.com. System includes a digital resistivity meter for accurate monitoring of water purity and a spigot for easy dispensing.

Single-Holder System accepts disposable cartridges (required) sold at ColeParmer.com. Outlet is ½" NPT(F).

Half-Sized Holder System is a compact stand-alone unit or a space-saving addition to your existing B-Pure system. System accepts the pre- and post-treatment filter cartridges sold on right. Canister measures 10" (25.4 cm) in length.

Cartridges for Half-Sized Holder System (99259-00)

Pretreatment cartridges			Post treatment cartridges		
Pore size	Catalog number	Price	Pore size	Catalog number	Price
1 µm	GY-99259-54		0.2 µm	GY-01504-32	
5 µm	GY-01502-13		0.45 µm	GY-01504-34	
10 µm	GY-99259-50		—	—	—
15 µm	GY-99259-52		—	—	—

Systems

Type	Max flow rate	Inlet pressure		Inlet water temperature	Inlet connections	No. of holders	Dimensions (W x H x D)	Power (VAC, Hz)	Catalog number	Price
		Max	Min							
Double	4 L/min	100 psi (6.9 bar)	5 psi (0.3 bar)	40 to 120°F (4 to 49°C)	½" NPT(F)	2	15" x 27" x 7" (38.1 x 68.6 x 17.9 cm)	120, 60	GY-99253-10	
								230, 50/60	GY-99253-15	
Single	4 L/min	100 psi (6.9 bar)	5 psi (0.3 bar)	40 to 120°F (4 to 49°C)	½" NPT(F)	1	7" x 24" x 7" (17.9 x 61.0 x 17.9 cm)	—	GY-99253-00	
Half-sized	2 L/min	100 psi (6.9 bar)	5 psi (0.3 bar)	40 to 120°F (4 to 49°C)	½" NPT(F)	1	7" x 14" x 8⅝" (17.9 x 35.6 x 22.0 cm)	—	GY-99259-00	

Barnstead™ Hose Nipple Cartridge System

Customize your system with application-specific cartridges

– Disposable cartridges are ideal for use in nonpressurized applications

– Inert polypropylene cartridge material prevents contamination

Cartridge holder 99260-50 shown with cartridge 99260-14

Specifications

Max flow rate: 1.25 L/min **Connection:** ⅜" hose barb at each end **Diameter:** 3 7/16" (8.7 cm)

Description	Function	Cartridge media	Capacity	Catalog number	Price
½-size cartridges, 10.2" (25.9 cm) long					
Combination	Ion exchange, oxygen removal	Combination resin	190 grains as NaCl	GY-99260-00	
Mixed-bed deionization	Ultrapure ion exchange	Resin	430 grains as NaCl	GY-99260-01	
⅔-size cartridges, 13.3" (33.8 cm) long					
Two-bed deionization	High capacity, ion exchange, strong cation exchange	Resin†	1100 grains as NaCl	GY-99260-03	
Mixed-bed combination	Ion exchange with activated carbon	Combination resin†	470 grains as NaCl	GY-99260-05	
Full-size cartridges, 18.7" (47.5 cm) long					
Two-bed deionization	High capacity, lower purity	Resin†	430 grains as NaCl	GY-99260-02	
Mixed-bed deionization	High purity, lower capacity		760 grains as NaCl	GY-99260-04	
Pretreatment	Cation exchange		3000 grains as NaCl	GY-99260-06	
Pretreatment	Macroreticular cation exchange	Resin	—	GY-99260-07	
	Organics and chlorine removal	Activated charcoal	—	GY-99260-08	
	Oxygen removal, strong anion exchange	Resin	30 g	GY-99260-09	
Pretreatment	Ultrapure ion exchange	Resin	915 grains as NaCl	GY-99260-10	
Pretreatment	Organics, chlorine, and ion removal	Resin/activated charcoal†	1450 grains as NaCl	GY-99260-14	
Mixed-bed combination	Organic removal and high-purity deionization	Resin/activated charcoal†	600 grains as NaCl	GY-99260-16	

†Color-changing resin indicates when cartridge is exhausted. Cannot use with alcohol-containing fluids.

GY-99260-50 **Cartridge holder,** wall mount. Holds one ion exchange cartridge

Bantam™ Deionizer

View resistivity reading directly from unit

– Selectable cartridges to best meet your application

Use this nonpressure cartridge system for polishing pretreated water or single-stage deionization of tap water. Deionizer monitor indicates when it is time to change cartridges. When the monitor drops below the acceptable minimum purity, or when it registers in the 0.05 to 0.025 MΩ range, the cartridge should be replaced. Monitor shows resistivity of effluent from 25 to 18 MΩ-cm. Disposable cartridges are easily replaced by turning a thumbscrew. Deionizer mounts on benchtop or wall.

What's included: 3 ft (0.9 m) of inlet feed tubing and four screws for wall mounting.

Resistivity range (MΩ-cm)	Max flow rate	Inlet pressure		Inlet water temperature	Inlet connections	Dimensions (W x H x D)	Power (VAC, Hz)	Catalog number	Price
		Max	Min						
0.025 to 18	38 L/hr	70 psi (4.8 bar)	5 psi (0.3 bar)	40 to 120°F (4 to 49°C)	¼" OD tubing (supplied)	6" x 28½" x 8¾" (15.2 x 72.4 x 22.2 cm)	120, 50/60	GY-99261-01	
							240, 50/60	GY-99261-03	

Cartridges (more available on page 1096)

Description	Application	Capacity	Catalog number	Price
Anion removal	Removal of weakly ionized impurities, raises the pH of solutions, recovers precious metal complex	1680 grains as NaCl	GY-01505-16	
Cation removal	Converts ionized salts to the acid form resulting in a product water that is low in pH, ideal for precious metal or isotope recovery	3170 grains as NaCl	GY-01505-18	

High-Capacity Ultraviolet Sterilizer

No more nasty chemicals

– Destroys 99.9% of bacteria without adding chemicals to the water!

– Supplies disinfected water at a rate of 10 GPM

Sterilizer features a monitoring system that alerts you when the UV lamp has burned out. UV lamp disinfecting life is approximately 9000 hours. Sterilizer has ¾" NPT(F) inlet and outlet connections and measures 5½"W x 25"H x 5½"D (14 x 63.5 x 14.0 cm).

What's included: 5 ft (1.5 m) of polypropylene tubing, brackets, hardware for wall mounting, and 6-ft (1.8-m) cord (120 VAC unit includes three-prong plug).

Flow rate	Power			Catalog number	Price
	VAC	Hz	W		
10 GPM (37.9 L/min	120	60	16	GY-99280-20	
	220	50	16	GY-99280-25	

GY-99280-51 **Replacement UV bulb** for 99280-20 and -25

Accessories For Deionization Systems

Use with E-Pure™ and B-Pure™ systems

Final Filters

Final filters remove particulates down to 0.2 µm to provide bacteria- free water. Constructed of hollow fiber material, filters do not contain any wetting agents or surfactants. Filters are radiation sterilized and individually sealed. Autoclavable.

99256-00

Compatible systems	Max flow rate	Catalog number	Qty/pk	Price/pk
E-Pure, Nanopure II, Nanopure Diamond, and Easypure II	2.0 L/min	GY-99256-00	1	
Quad-style Nanopure	2.0 L/min	GY-99254-50	2	
Easypure II, Nanopure Infinity, replacement filter for Remote Dispenser 99254-02	1.8 L/min	GY-99261-60	1	

Pura®-Lite Resistivity Indicators

Designed for use with B-Pure systems. A low-cost alternative to digital purity meters, these indicators can be mounted directly on top of single- or double-cartridge housings with ½" NPT(F) connections. Green light indicates water resistivity is above the threshold; red light warns if resistivity falls below threshold. Operates on 120 VAC power.

01504-37

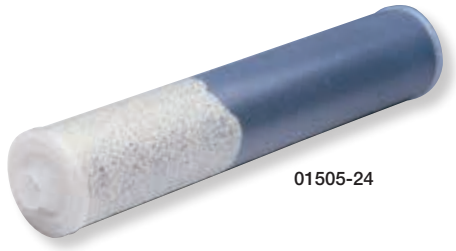
Resistivity threshold	Catalog number	Price
50 kΩ	GY-01504-36	
200 kΩ	GY-01504-37†	
1 MΩ	GY-01504-38	

†Indicator light is white; light comes on above threshold level.

Replacement Cartridges

Keep systems operating precisely

– Use with Nanopure®, Nanopure Infinity®, Easypure® II, E-Pure™, Bantam™, and B-Pure™ systems



01505-24

Individual Cartridges

Select pretreatment, deionization, or organic-free cartridges, depending upon your application.

Compatible systems	Application	Capacity	Catalog number	Price
Pretreatment cartridges				
B-Pure, Bantam	Removes organics and chlorine	785 grains as $CaCO_3$	GY-01535-15	
B-Pure, Bantam	Removes organics and chlorine, maximizes deionization resin life	5000 gallons (18,925 L), avg	GY-01505-28	
E-Pure, all Nanopure	Removes colloids and bacteria, maximizes deionization resin life	2000 gallons (7570 L), avg	GY-99257-00	
B-Pure, E-Pure, all Nanopure (except Nanopure Infinity)	Removes colloids, chlorine, and organics; use when nonionized solids and/or colloids are present	5000 gallons (18,925 L), avg	GY-01505-22	
Nanopure Infinity	For reverse osmosis and distilled feedwater sources	—	GY-99275-60	
Nanopure Infinity	For tap and deionized feedwater sources	—	GY-99275-61	
Easypure II	For reverse osmosis and distilled feedwater sources	120 grains as NaCl	GY-99261-54	
Easypure II	For deionized feedwater sources	—	GY-99261-50	
Deionization cartridges				
B-Pure, E-Pure, all Nanopure, Bantam	High capacity, lower purity; use for making up stock solutions	1700 grains as $CaCO_3$	GY-01505-24	
B-Pure, Nanopure II, old Nanopure, Bantam	High purity, lower capacity; use for most analytical lab testing	875 grains as $CaCO_3$	GY-01505-26	
E-Pure, quad-style Nanopure	High purity, lower capacity; use for most analytical lab testing	760 grains as NaCl	GY-01505-29	
Nanopure Infinity	Ultrapure, for high resistivity	680 grains as NaCl	GY-99275-62	
Easypure II	Ultrapure, for high resistivity	200 grains as NaCl	GY-99261-53	
Organic-free cartridges				
E-Pure, quad-style Nanopure	Removes organics to <20 ppb organic carbon; use for HPLC, BOD, pH, and cell cultures	370 grains as NaCl	GY-01506-05	
Nanopure Infinity	For low organics and high resistivity	330 grains as NaCl	GY-99275-63	
Easypure II	For low organics and high resistivity	150 grains as NaCl	GY-99261-52	

Cartridge Kits and Packs

Cartridge kits include all cartridges needed to produce 18.3 MΩ-cm resistivity, Type I reagent-grade water. Kits that include organic-free cartridges produce water that has less than 10 ppb organic carbon. Kits for Nanopure Infinity and Nanopure Dlamond systems include final filter; order final filter for quad-style Nanopure and E-Pure systems separately on page 1089.

Description	Contents	Catalog number	Price
Kits for use with quad-style Nanopure systems			
Type I	One 01505-22, one 01505-24, and two 01505-29	GY-99258-00	
Type I, organic free	One 99257-00, one 01505-24, one 01505-29, and one 01506-05	GY-99258-02	
Kits for use with E-Pure systems			
Type I, three module	One 01505-22 and two 01505-29	GY-99258-11	
Type I, four module	One 01505-22, one 01505-24, and two 01505-29	GY-99258-21	
Type I, organic free, three module	One 99257-00, one 01505-29, and one 01506-05	GY-99258-12	
Type I, organic free, four module	One 99257-00, one 01505-24, one 01505-29, and one 01506-05	GY-99258-22	
Kits for use with Nanopure Infinity systems			
Type I, for tap or deionized feedwater	One 99275-61 (pretreatment), three 99275-62 (ultrapure), and two 99261-60 (final filter)	GY-99275-80	
Type I, for RO or distilled feedwater	One 99275-60 (pretreatment), three 99275-62 (ultrapure), and two 99261-60 (final filter)	GY-99275-81	
Type I, organic free, for tap or deionized feedwater	One 99275-61 (pretreatment), two 99275-62 (ultrapure), one 99275-63 (organic free), and two 99261-60 (final filter)	GY-99275-82	
Type I, organic free, for RO or distilled feedwater	One 99275-60 (pretreatment), two 99275-62 (ultrapure), one 99275-63 (organic free), and two 99261-60 (final filter)	GY-99275-83	
Packs for use with Nanopure systems organic-free RO and distilled feed			
Type I water, ultra-low organics. Reverse osmosis (RO) or distilled water feed	One organic absorption, two mixed bed, and one organic free	GY-99277-50†	
Packs for use with Nanopure systems organic-free DI feed			
Type I water, ultra-low organics Deionized (DI) water feed	One organic/colloid absorption, two mixed bed, and one organic free	GY-99277-52†	
Packs for use with Nanopure systems Type I RO and distilled feed			
Type I water, low organics. Reverse osmosis (RO) or distilled water feed	One organic absorption, three mixed bed, and one organic free	GY-99277-54	
Packs for use with Nanopure systems Type I DI feed			
Type I water, low organics Deionized (DI) water feed	One organic/colloid absorption, three mixed bed, and one organic free	GY-99277-56	

†Use with ultraviolet NANOpure® systems.