

Type I Biological Grade DI Systems



Features and Benefits

- ◆ Produces 18 Megohm-cm Type I water
- ◆ Purified water has no RNase/DNase activity
- ◆ Produces pyrogen & endotoxin free water
- ◆ Exceeds ASTM, CAP, NCCLS & USP Specs
- ◆ Accepts 100-240 VAC, 50/60 Hz power
- ◆ System runs on 12 VDC internal power
- ◆ Certified by CSA for the US & Canada
- ◆ CE marked for export to Europe, Etc.
- ◆ Can be bench, shelf or wall-mounted
- ◆ 2-Year warranty - (Most Countries)
- ◆ Remote dispenser included in price
- ◆ User installable and serviceable
- ◆ Meets current USP specifications
- ◆ 0.1 micron final filter capsule
- ◆ DI modules can be recycled
- ◆ Complete instrumentation
- ◆ Fully automatic operation
- ◆ Continuous recirculation
- ◆ Made in the USA



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Product Availability

AQUA SOLUTIONS Type I Biological Grade DI Systems produce Type I reagent grade water that exceeds ASTM, CAP, NCCLS, and USP specifications. These systems are recommended for applications requiring Type I pyrogen/endotoxin free water, and/or Type I water with no RNase/DNase activity.



Chemical Applications include AA, GC, HPLC, IC, ICP, IR, MS, heavy/trace metals, environmental testing and COD.

Biological Applications include endotoxin/pyrogen sensitive media preparation and tissue culture, in vitro and in vivo fertilization, MAB production, organ transplant, DNase testing, and immunological applications.

AQUA SOLUTIONS Type I DI systems dispense purified water at the rate of 2-3 Liters/minute. Higher flow rate systems are available.

All biological grade systems include a **5,000 molecular weight cutoff ultrafilter** to provide a 4-6 log reduction of pyrogen, endotoxin, DNase, and RNase, and can be purchased with or without an optional **built-in ultraviolet (UV) sterilizer**, which can prevent the growth of microorganisms within the system. The UV includes an LED display with audible warnings to monitor the performance of the UV lamp.

AQUA SOLUTIONS biological grade systems are designed to operate on **ordinary tap water**, or water that has been pretreated via reverse osmosis, distillation, or deionization by a central or point-of-use pretreatment system. If the incoming tap water feed contains more than 170-250 ppm of TDS (total dissolved solids), and/or the average daily purified water usage exceeds 20 liters/day, reverse osmosis (RO) pretreatment should be considered (see next paragraph).

These systems are also available in an **Ultra-Low TOC Biological Grade** version, which includes a **UV oxidizer** to reduce TOC, DNase and RNase to the lowest possible levels (see Brochure: T1-BL).

AQUA SOLUTIONS Type I Biological Grade Systems can also be purchased with a **built-in 10 or 20 Liter/hour RO pretreatment system**, all in a single cabinet measuring just 20" wide by 20" high by 12" deep (see page 2 for details)!

AQUA SOLUTIONS Type I Biological Grade DI Systems offer features, benefits, and higher capacities that are not found on many other systems. **And, they are very competitively priced!**

Type I Biological Grade DI Systems General Description & Specifications



Model Number **General Description - Type I DI Systems**

2121B Type I **Biological Grade** DI System for operation on water that has been pretreated via reverse osmosis, distillation or deionization by a central or point-of-use pretreatment system, and contains less than 20 ppm of TDS (total dissolved solids).

Requires Purification Kit Number 2613M1T (not included in system price). Kit includes activated carbon prefilter capsule, high purity TOC reduction DI module, and final filter capsule.

2121BU Identical to Model 2121B above, except it includes a **built-in Ultraviolet (UV) Sterilizer** to prevent the growth of microorganisms within the system.

2122B Type I **Biological Grade** DI System for operation on **ordinary tap water** containing up to 250 ppm of TDS (total dissolved solids).

Requires Purification Kit Number 2613M2T (not included in system price). Kit includes activated carbon prefilter capsule, high capacity DI pretreatment module, high purity TOC reduction DI module, and final filter capsule.

2122BU Identical to Model 2122B above, except it includes a **built-in Ultraviolet (UV) Sterilizer** to prevent the growth of microorganisms within the system.

Upgradeability The above systems can be field upgraded or modified to become any other Type I system.

Model Number **General Description - Combination Reverse Osmosis plus Type I DI Systems**

RODI-C-12B Combination Reverse Osmosis plus Type I **Biological Grade** DI System.

Requires Purification Kit Number 2613M1T-A (not included in system price). Kit includes high purity TOC reduction DI module, and a final filter capsule.

RODI-C-12BU Identical to Model RODI-C-12B above, except it includes a **built-in Ultraviolet (UV) Sterilizer** to prevent the growth of microorganisms within the system.

More information Request brochures #: RODI-C for more information about these RODI systems.

System and Purified Water Specifications

DI capacity 2121B/BU and RODI-C 12B	*2,000
DI capacity 2122B/BU	*4,000
*(grains of ion exchange capacity as CaCO ₃)	
Resistivity	18.2 Megohm-cm
TOC	<50 PPB
Bacteria	<1 cfu/ml
Endotoxin (EU/ml)	<0.001
RNase (ng/ml)	<0.01
DNase (pg/μl)	<4
Continuous flow rate	2-3 Liters/minute
Cabinet depth	12" (305 mm)
Cabinet width	20" (508 mm)
Cabinet height	20" (508 mm)
External power supply input	100-240 VAC, 50/60 Hz
Internal power	12 VDC @ 2.5 Amps from external supply
Minimum inlet pressure	35 PSIG (2.3 Bar)
Maximum inlet pressure	100 PSIG (6.7 Bar)
Shipping weight	40-55 lbs (18-25 kg)
Operating weight	55-70 lbs (25-32 kg)
Inlet connection	1/4" or 3/8" NPT

