

Type I Ultra-Low TOC Biological Grade DI Systems



Features and Benefits

- ◆ Produces 18 Megohm-cm Type I water
- ◆ Purified water has no RNase/DNase activity
- ◆ Exceeds ASTM, CAP, NCCLS & USP Specs
- ◆ Produces pyrogen & endotoxin free water
- ◆ Purified water has less than 3 PPB TOC
- ◆ 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
- ◆ Remote dispenser included in price
- ◆ 2-Year warranty - (Most Countries)
- ◆ Meets current USP specifications
- ◆ User installable and serviceable
- ◆ 0.1 micron final filter capsule
- ◆ DI modules can be recycled
- ◆ Complete instrumentation
- ◆ Fully automatic operation

Product Availability

AQUA SOLUTIONS Type I Ultra-Low TOC Biological Grade DI Systems produce Type I reagent grade water that meets or exceeds ASTM, CAP, NCCLS, and USP Specifications.

They are recommended for applications requiring Type I water that is pyrogen/endotoxin free, and/or has no RNase/DNase activity, and/or contains little, if any, TOC (trace organic carbon).



Biological Applications include pyrogen/endotoxin sensitive media prep and tissue culture, in vivo and in vitro fertilization, recombinant RNA/DNA, DNA fingerprinting, DNA sequencing, MAB production, organ transplant, and immunological applications sensitive to TOC.

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

All Ultra-Low TOC Biological grade systems include a **5,000 molecular weight cutoff ultrafilter** and a **dual-wavelength ultraviolet (UV) oxidizer/sterilizer** to reduce pyrogen, endotoxin, and TOC to the lowest possible levels, and eliminate RNase/DNase activity. The UV includes an LED display and audible alarms to monitor the performance of the UV lamp.

AQUA SOLUTIONS Ultra-Low TOC 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 system.

For those installations where the incoming tap water feed contains more than 170 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).

AQUA SOLUTIONS Type I Ultra-Low TOC DI 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" (508 mm) wide by 20" (508 mm) high by 12" (305 mm) deep (see page 2)!

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

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Type I Ultra-Low TOC Biological Grade DI Systems

General Description & Specifications



Model Number General Description - Type I DI Systems

2121BL Type I **Ultra-Low TOC Biological Grade** DI System for operation on **pretreated water** (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 total dissolved solids).

Requires Purification Kit Number 2613M1L (not included in system price). Kit includes an activated carbon prefilter capsule, high purity TOC reduction DI module, and final filter capsule.

2122BL Type I **Ultra-Low TOC Biological Grade** DI System for operation on either **pretreated water** (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 total dissolved solids), or **ordinary tap water** containing up to 170 ppm of TDS (total dissolved solids).

Requires Purification Kit Number 2613M2L (not included in system price). Kit includes activated carbon prefilter capsule, two high purity TOC reduction DI modules, and final filter capsule.

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-12BL Combination Reverse Osmosis plus Type I **Ultra-low TOC Biological Grade** DI System.

Requires Purification Kit Number 2613M1L-A (not included in system price). Kit includes high purity TOC reduction DI module, and a final filter capsule.

More information For **Basic Analytical Grade Systems**, request brochure #: T1-A.
 For **Biological Grade Systems**, request brochure #: T1-B.
 For **Ultra-Low TOC Analytical Grade Systems**, request brochure #: T1-AL.
 For **Combination Reverse Osmosis plus Type I DI Systems**, request brochure #: RODI-C.
 For **Reverse Osmosis and/or Type II DI Systems**, request brochure #: T2-RO.

System and Purified Water Specifications

DI capacity 2121BL and RODI-C 12BL	*2,000
DI capacity 2122BL/BLU	*4,000
*(grains of ion exchange capacity as CaCO ₃)	
Resistivity	18.2 Megohm-cm
TOC	< 3 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

