

# Type I Ultra-Low TOC Analytical Grade DI Systems



## Features and Benefits

- ◆ Produces 18 Megohm-cm Type I water
- ◆ Ultra-Low trace organics - (TOC < 3 PPB)
- ◆ 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
- ◆ Can be bench, shelf or wall-mounted
- ◆ CE marked for export to Europe, Etc
- ◆ 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
- ◆ Continuous recirculation
- ◆ Made in the USA



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## Product Availability

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

These systems include a built-in, dual-wavelength ultraviolet (UV) oxidizer/sterilizer to reduce TOC to < 3 PPB). The UV includes an LED display and audible alarms to monitor UV lamp performance.

They are recommended for laboratory applications requiring Type I water that contains little, if any, TOC (trace organic carbon).

**Chemical Applications** include AA, GC, HPLC, IC, ICP, IR, MS, heavy or trace metals, environmental testing, TOC, TOX, TCLP, VOC, electrochemistry, and toxicity testing, where ultra-low TOC Type I water is required.

**Biological Applications** include those that are sensitive to TOC, (where endotoxin/pyrogen levels are NOT critical).

AQUA SOLUTIONS Type I DI systems dispense purified water at the rate of 2-3 Liters/minute. Higher flow rate systems (6-10 Liters/minute) are available.

AQUA SOLUTIONS Ultra-Low TOC analytical 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 for details!

And, if more RO capacity is required to feed multiple systems, or other applications, individual AQUA SOLUTIONS RO systems are available in 10, 20, 30, and 60 Liter/hour and higher configurations.

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



# Type I Ultra-Low TOC Analytical Grade DI Systems

## General Description & Specifications



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

**2121AL** ..... Type I **Ultra-Low TOC Analytical 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 activated carbon prefilter capsule, high purity TOC reduction DI module, and final filter capsule.

**2122AL** ..... Type I **Ultra-Low TOC Analytical Grade** DI System for operation on **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**      Any of these 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-12AL** ..... Combination Reverse Osmosis plus Type I **Ultra-low TOC Analytical 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. See brochure RODI-C for details.

**More information**      For **Basic Analytical Grade Systems**, request brochure #: T1-A.  
 For **Biological Grade Systems**, request brochure #: T1-B.  
 For **Ultra-Low TOC Biological Grade Systems**, request brochure #: T1-BL.  
 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.  
 For **High Flow (8-12 Liters/minute) Systems**, contact your sales person.

**System and Purified Water Specifications**

DI capacity 2121AL and RODI-C 12AL .....	*2,000
DI capacity 2122AL .....	*4,000
*(grains of ion exchange capacity as CaCO <sub>3</sub> )	
Resistivity .....	18.2 Megohm-cm
TOC .....	< 3 PPB
Bacteria .....	< 1 cfu/ml
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

