

# Type I Ultra-Low TOC Analytical Grade DI Systems

## Features and Benefits

- ◆ Produces 18 Megohm-cm Type I water
- ◆ Ultra-Low trace organics - (TOC <5 PPB)
- ◆ Exceeds ASTM, CAP, CLSI & 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
- ◆ 0.2 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, CLSI, and USP specifications.

These systems include a built-in, dual-wavelength ultraviolet (UV) oxidizer/sterilizer to reduce TOC to <5 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-Liters/minute. Higher flow rate systems (8-12 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 .....  | <5 PPB                                 |
| Bacteria .....   | <1 cfu/ml                              |
| Continuous flow rate .....                               | 2-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                       |

