





AQUA SOLUTIONS Type I Laboratory Water Purification Systems produce 18.2 Megohm-cm purified water that exceeds ASTM, CAP, CLSI, and USP Reagent Grade Specifications.

They offer higher flow rates and more ion exchange capacity, plus other features and benefits that are not found on many other systems.

## And they are competitively priced!

The Type I product line includes four basic types of systems to handle a wide variety of applications:

- · Analytical Grade
- Biological Grade (pyrogen/endotoxin, RNase/Dnase free)
- Ultra-Low TOC Analytical Grade (<5 PPB TOC)</li>
- Ultra-Low TOC Biological Grade (<5 PPB TOC and pyrogen/endotoxin, RNase/Dnase free)

Systems are available for operation on pretreated water, ordinary tap water, and poor quality tap water.

The standard system flow rate is 2-Liters/Minute. High-flow (8-12 Liters/Minute) versions are also available.

Analytical and Biological grade systems can be purchased with an optional, built-in ultraviolet (UV) sterilizer, which prevents the growth of microorganisms within the system.

Systems that have a built-in UV Oxidizer or Sterilizer include a built-in power supply that monitors and displays the UV lamp's performance and life, with appropriate audible/visible alarms.

# Type I Reagent Grade **Laboratory Water Purification Systems**

## FEATURES and BENEFITS

- Produces >18.2 Megohm Type I reagent grade water
- RO+DI costs less than individual RO & DI systems
- · 2-Year warranty (US and most other countries)
- Analytical, Biological & ultra-low TOC models
- · Exceeds ASTM, CAP, CLSI and USP Specs
- · Accepts 100-240 VAC, 50/60 Hz input power
- · CE marked when exported to the EU, etc.
- · System runs on 12 VDC internal power
- · Certified by CSA for the US & Canada
- · Can be bench, shelf or wall-mounted
- · Remote dispenser included in price
- · Meets current USP specifications
- · User installable and serviceable
- · 0.22 micron final filter capsule
- · DI modules can be recycled
- Complete instrumentation
- · Fully automatic operation
- · Continuous recirculation
- · Made in the USA





## Type I DI Systems with Built-in RO Pretreatment

If the purified water usage is high, or the incoming tap water is hard or high in TDS, consider purchasing an AQUA SOLUTIONS combination RO+DI System.

RO+DI systems include a 10 or 20 Liter/hour Reverse Osmosis (RO) Pretreatment System, PLUS an Analytical, Biological, or Ultra-Low TOC Analytical or Biological grade Type I DI system, in a single, cabinet measuring just 20" x 20" x 12" (508mm x 508mm x 305mm).

See page 4 of this brochure for information on RO+DI systems, or request brochure number RODI-C for more detailed product information and specifications.

Brochure #:T1 03112



# **Analytical Grade Systems**

### **MODEL 2121A**

**AQUA** SOLUTIONS Type I Analytical 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.

#### 20" Remote Dispenser with 0.22 µm Filter Ultraviolet Sterilizer (AU only) 18.2 Pre-Resistivity Filter Pressure Monitor Reg/Gauge 20 Hiah Purity High Purity Sensor Capacity DI and DI Module TOC Water (2122A & Reduction Inlet 2122AU Circ Module only) Power Cord

### **MODEL 2121AU**

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

#### **MODEL 2122A**

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

#### **MODEL 2122AU**

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

**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.

## **Ultra-Low TOC Analytical Grade Systems**

### **MODEL 2121AL**

**AQUA SOLUTIONS** Type I Ultra-Low TOC 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 TDS (total dissolved solids).

The system includes a built-in UV Oxidizer/Sterilizer to reduce TOC to the lowest possible levels, and prevent the growth of microorganisms in the system.

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

#### Remote Dispenser with 0.22 µm Filter 20" Ultraviolet Oxidizer/Sterilizer A/C 18.2 Pre-Resistivity Pressure Filter Monitor Reg/Gauge 20' High Purity High Purity Sensor DI/TOC DI and Reduction TOC Water Module Reduction 2122AL only Module Power Cord Pump

## **MODEL 2122AL**

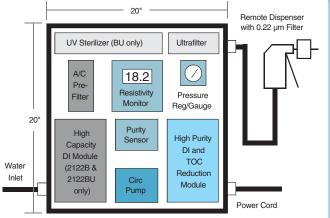
Identical to Model 2121AL above, except it is for operation on ordinary tap water containing up to 170 ppm of TDS (total dissolved solids). **Requires Purification Kit Number 2613M2L** (not included in system price). Kit includes an activated carbon prefilter capsule, two high purity TOC reduction DI modules, and a final filter capsule.

## **Biological Grade Systems**

### **MODEL 2121B**

**AQUA SOLUTIONS** 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). The system includes a built-in ultrafilter to provide a 4-6 log reduction of pyrogen and endotoxin, resulting in Type I purified water that is free of pyrogen, endotoxin, DNase, and RNase.

**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.



### **MODEL 2121BU**

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

### **MODEL 2122B**

AQUA SOLUTIONS Type I Biological Grade DI System for operation on ordinary tap water containing up to 250 ppm of TDS.

## **MODEL 2122BU**

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

**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.

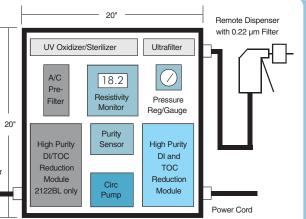
## **Ultra-Low TOC Biological Grade Systems**

## **MODEL 2121BL**

**AQUA SOLUTIONS** 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 TDS.

The system includes a built-in UV Oxidizer/Sterilizer to reduce TOC to the lowest possible levels, and a built-in ultrafilter to provide a 4-6 log reduction of pyrogen and endotoxin, resulting in Type I purified water that is free of pyrogen, endotoxin, DNase, and RNase<sub>Water</sub>

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



## **MODEL 2122BL**

Identical to Model 2121BL above, except it is 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 an activated carbon prefilter capsule, two high purity TOC reduction DI modules, and a final filter capsule.

Inlet

## Type I Combination RO+DI Systems

(for more details, request brochure number RODI-C)

AQUA SOLUTIONS compact, combination Reverse Osmosis plus Type I  $\square$  Systems combine a 10 or 20 Liter/hour RO Pretreatment System with a Type I  $\square$  system, all in a single cabinet design. They produce 2-Liters/minute of Type I reagent grade  $\square$  water that exceeds ASTM, CAP, CLSI, and USP specifications.

The Compact RO+DI System should be considered whenever:

- · A central DI system is not planned or available at the site.
- Incoming tap water contains > 150 ppm of total dissolved solids, and/or
- Type I purified water usage exceeds 20 Liters/week.



These systems are ideally suited for applications where the existing central RO, DI, or distillation pretreatment system is unreliable or overloaded (with regard to capacity), or nonexistent in a particular location. It is also suitable for applications where either space or funding limitations preclude purchasing separate RO and Type I DI systems.

The RO portion of the system is fully automatic, and includes an activated carbon prefilter cartridge, product and reject flow meters, TFC (thin film composite) high-capacity RO membrane cartridges, and an external 30 or 42 Liter pressurized tank for storing the RO purified water for later use by the DI system. Optional 130 and 200 Liter tanks are available.

The Type I DI portion of the system includes a high-purity TOC reduction/DI polishing module, continuous recirculation, a digital resistivity monitor with red/green LED's and setpoints, a remote dispenser, and a 0.22 micron final filter capsule.

## PRODUCT AVAILABILITY

MODEL#	DESCRIPTION
R00I-C-12A	Combination RO plus Type I Analytical Grade D System. Requires Purification Kit# 2613M1T-A (not included in system price). Kit includes a high purity TOG reduction D module, and a final filter capsule.
R0DI-C-12AU	Identical to Model RODI-C-12A above, except it includes a built-in Ultraviolet (UV) Sterilizer to prevent the growth of microorganisms within the system.
	ODI-C-128 and RODI-C-12BU (described below) include a built-in Ultrafilter to provide a 4-6 log reduction of pyrogen, se, and RNase resulting in Type I purified water that is pyrogen/endotoxin free, and has no RNase or DNase activity.
R0DI-C-12B	Combination RO plus Type I Biological Grade D System. Requires Purification Kit# 2613M1T-A (not included in system price). Kit includes a high purity TOG reduction D module, and a final filter capsule.
R0DI-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.
reduce TOG to t	DDI-C 12AL and RODI-C-12BL (described below) include a built-in, combination UV Oxidizer/Sterilizer to ne lowest possible levels. Model RODI-C-12BL also includes a built-in Ultrafilter to reduce pyrogen/endotoxin, I purified water that is free of pyrogen, endotoxin, RNase and DNase.
R00I-C-12AL	Combination Reverse Osmosis plus Type I Ultra-low TOG Analytical Grade D System. Requires Purification Kit # 2613M1 L-A (not included in system price). Kit includes a high purity TOG reduction D module, and a final filter capsule
R00I-C-12BL	Combination Reverse Osmosis plus Type I Ultra-low TOG Biological Grade D System. Requires Purification Kit # 2613M1L-A (not included in system price). Kit includes a high purity TOG reduction D module, and a final filler capsule

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