# RIOS-DI® Clinical Water purification system

**Consistent and reliable purified water** for low-volume clinical analyzers



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The life science business of Merck operates as MilliporeSigma in the U.S. and Canada.

### A compact & low Maintenance water purification system

#### For clinical analyzers with pure water needs up to 30 L daily

The RiOs-DI<sup>®</sup> Clinical system is a very compact solution specifically designed for low-volume analyzers. The system efficiently combines reverse osmosis (RO) technology with deionization (DI) resins to produce CLSI<sup>®</sup> Special Reagent Water (SRW).

With high resistivity and low TOC (typically > 10 M $\Omega$ .cm @ 25°C and < 50 ppb before storage, respectively), product water is of higher quality than either water produced by stills or service DI water. Product water can be stored in the system's integrated 6 L reservoir.

#### Ready for use with your analyzer

#### **Easy to install**

In order to minimize capital investment, RiOs-DI<sup>®</sup> Clinical systems have been designed to enable you to install them yourself. However, as with all our systems, on your request, our dedicated and certified engineers can provide this service.

#### **Saves space**

With its integrated 6-liter reservoir, the RiOs-DI<sup>®</sup> Clinical system can easily be installed anywhere in your lab. For low-volume analyzers requiring between 10-30 L/day, the RiOs-DI<sup>®</sup> Clinical system is the answer to your purified water needs.

#### **Key benefits:**

- Specifically designed to feed clinical analyzers
- Provides an efficient alternative to buying and storing bottled water
- Economical system allows substantial cost savings
- Eliminates the need to constantly and manually refill pure water reservoirs or storage tanks
- Produces a consistent and reliable supply of pure water

## Facilitates your work in the clinical environment

Pure water is a clinical reagent and should be monitored as any other reagent in the clinical environment. With our extensive experience in water purification technologies and laboratory applications, you can be sure that the RiOs-DI<sup>®</sup> Clinical system offers a reliable, compact and easy-to-use solution for your analyzer.

#### System status at a glance

The at-a-glance color graphic display clearly indicates system parameters, showing all the information you need regarding water quality, system functions and water level in the reservoir.



#### Information at your fingertips

Should you need it, you'll find a handy *Quick Reference Guide* in the system base, instantly giving you all the essential information you may require.

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#### **Easy to maintain**

At the heart of the RiOs-DI<sup>®</sup> Clinical solution is the all-inone SmartPak<sup>®</sup> RODI cartridge that combines the different purification technologies. A single, quick pack change is all the maintenance needed! Following an automatic flush cycle, the system sets itself up to produce optimal quality water. Additionally, the color graphic screen automatically displays a reminder when the pack change is needed. The pack change takes just a few minutes, avoiding any downtime for your analyzer.

#### Low bacteria levels

The RiOs-DI<sup>®</sup> Clinical system's built-in UV lamp (254 nm) ensures low bacteria levels before storage, with typically > 99% of microorganisms rejected (log reduction value 5, LRV 5).

#### **Flow Schematic**

- 1. Potable (tap) water feed
- 2. Booster pump to increase flow rate and rejection of contaminants by RO membrane
- 3. SmartPak<sup>®</sup> RODI cartridge first stage:
  - Pretreatment for Reverse Osmosis cartridge protection
    - Reverse Osmosis cartridge for removal of ions (> 94%), organics, particulates and colloids (> 99%) typically.
- 4. SmartPak<sup>®</sup> RODI cartridge second stage:
  - Mixed bed ion-exchange resin for removal of remaining ions
  - Organex for removal of ionic and organic trace contaminants
- 5. Resistivity cell
- 6. High efficiency UV lamp (254 nm) for bacteria destruction (LRV 5)
- 7. Tank for pure water storage
- 8. Analyzer

Merck delivers a broad and innovative range of systems for clinical and immunochemistry instruments that improve laboratory productivity and ensure accurate daily results. Our clinical products benefit users in hospitals, physicians' offices, reference and forensic labs, as well as diagnostic manufacturers.

Our Life Science division provides innovative tools, services and biological reagents that drive advancements in biomedical and academic research, as well as support the discovery and development of new pharmaceuticals. Our customers work in leading research laboratories across a variety of industries throughout the world. We help to improve laboratory productivity and efficiency through optimized workflows.



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#### **RiOs-DI® Clinical System Specifications**

RiOs-DI <sup>®</sup> Clinical water purification system	
Feed water specification	Potable tap water with conductivity < 2000 $\mu S/cm$ @ 25°C at a pressure between 0.5 and 6 bar
Flow rate	> 2.4 L/h @ 15°C typically
Resistivity	> 10 M $\Omega$ .cm @ 25°C (SRW water)* typically <sup>+</sup>
тос	< 50 ppb <sup>+</sup>
Bacteria	< 10 cfu/mL after UV $^{\dagger}$
Dimensions (H x W x D)	50 x 29 x 33 cm (19.7 x 11.4 x 13 in)
Net weight	7.8 kg (17.2 lb)

\*CLSI Special Reagent Water

+ Before storage

#### **Ordering information**

Description	Cat. No.
RiOs-DI <sup>®</sup> Clinical 3 UV S. Kit	ZRDSVCL3 + Country Code*
SmartPak <sup>®</sup> RODI cartridge	SPR00SIA2
Wall mounting bracket with tap	WMBSMT001
Wall mounting bracket	WMBSMT002
Vent filter for internal reservoir (Qty 2/box)	TANKMPK03
Tank connection kit	TANKPECKT
Sanitization kit	SANIKIT01

\*Ask your Merck Application Specialist to specify your correct 2-letter country code before ordering.

#### **To Place an Order or Receive Technical Assistance**

In Europe, please call Customer Service:

France: 0825 045 645 Germany: 069 86798021 Italy: 848 845 645 Spain: 901 516 645 Option 1 Switzerland: 0848 645 645 United Kingdom: 0870 900 4645

For other countries across Europe, please call: +44 (0) 115 943 0840

For other countries across Europe and the world, please visit: MerckMillipore.com/offices

For Technical Service visit: MerckMillipore.com/techservice

For more information, please visit our website: MerckMillipore.com/labwater

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