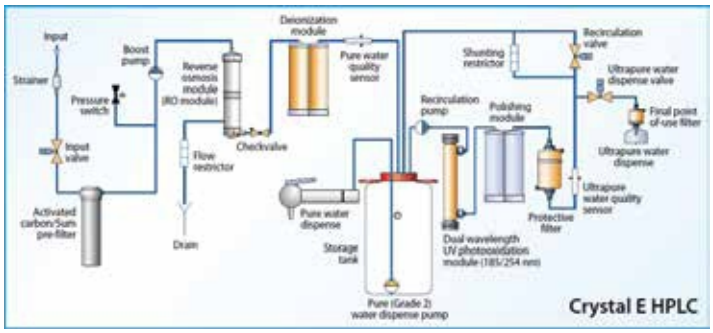
LABORATORY ULTRAPURE WATER SYSTEM

Crystal EX Series

The Crystal EX Ultrapure systems are economy class, multi-purpose, water purication systems.
All Crystal EX Systems produce two types of water : Ultrapure (ISO 3696 Grade 1) and Pure (ISO 3696 Grade 2). Ultrapure water produced by the Crystal EX systems has resistivity 18.2 Mega Ohm∗cm (conductivity 0.055 µS/cm). This exceeds requirements of all the relevent standards (ISO 3696 Grade 1, ASTM Type I, CLSI Type I). Puried water is collected in a storage tank. The recirculation system ensures a consistent quality of water, and a low level of organic carbon content (TOC). TOC is <2 ppb for "HPLC" and "Bio" congurations, and 5-10 ppb for the "Trace" conguration.
The dispensing rate of high quality Ultrapure water is 2 L/min.
Pure water produced by Crystal EX systems can be used for labware washing, wet chemistry methods, ame spectrophotometers, etc., Pure water is dispensed directly from the storage tank.
The dispensing ow rate of pure water is 4 L/min.



Crystal EX Ultrapure water systems are available in the following congurations:

- Crystal EX Trace System (P/N EX-1001-P) produces water for inorganic trace analysis. This water is recommended for atomic absorption spectrometry (with graphite furnace atomizer), ICPOES analysis, ICP-MS and other inorganic analytical methods.
- Crystal EX HPLC System (P/N EX-1101-P) produces water with very low organic carbon content (TOC) to comply with the requirements of liquid chromotography methods. Crystal E HPLC water can also be used for some microbiological and molecular biology applications.
- Crystal EX Bio System (P/N EX-1201-P) produces water with very low organic and RNase / DNase content, intended for molecular biology, including RNase - sensitive applications.

Description EX series

Application	EX-1001-P Trace	EX-1101-P HPLC	EX-1201-P Bio
Water Type	• Ultrapur water (Grade 1) • Pure water (Grade 2)	• Ultrapur water (Grade 1) • Pure water (Grade 2)	• Ultrapur water (Grade 1) • Pure water (Grade 2)
Application	• Automatic absorption spectometry • Plasma optical emission spectometr • Other inorganic trace analysis	• Chromotography • Mass spectometry • Microbiology • Molecular biology	• High sensitive biology applications
Display	Monochrome LCD display	Monochrome LCD display	Monochrome LCD display
Conductivity Sensor	-	-	-
TOC Monitor	Option	Option	Option
Connection Possibility to Water Dispensing Unit	No	No	No
Storage Unit	Water storage tank 'Pro' 30 L w/o multipoint sensor included		
Installation	Installation on a laboratory bench		

Specication

Puried Water Specications	Crystal EX Trace	Crystal EX HPLC	Crystal EX BIO
Grade 1 water resistivity	18.2 MΩ x cm	18.2 MΩ x cm	18.2 MΩ x cm
Grade 1 water conductivity	0.055 µS / cm	0.055 µS / cm	0.055 µS / cm
Grade 2 water resistivity	>10 MΩ x cm	>10 MΩ x cm	>10 MΩ x cm
Grade 2 water conductivity	<0.1 µS / cm	<0.1 µS / cm	<0.1 µS / cm
Total organic carbon (TOC) level	5-10 ppb	<2 ppb	<2 ppb
RNase	N/A	N/A	<0.01 pg/ml
DNase	N/A	N/A	<4 pg/ml
Bacteria	<1 CFU / ml	<1 CFU / ml	<0.1 CFU / ml
Endotoxins	<0.15 EU / ml	<0.15 EU / ml	<0.001 EU / ml
Particles > 0.22 µm	<1 per ml	<1 per ml	<1 per ml
Nominal ow, pure water (to storage tank)	10 L/h	10 L/h	10 L/h
Nomial dispense ow, pure water	4 L / min	4 L / min	4 L / min
Deionization module life (standard module)	1 m^3	1 m^3	1 m^3
Deionization module life (high capacity module)	3 m^3	3 m^3	3 m^3
Recovery	>30 %	>30 %	>30 %
Dimensions (W x D x H) cm	40 x 35 x 55	40 x 35 x 55	40 x 35 x 55
Feed water pressure	1-4 bar	1-4 bar	1-4 bar
Feed water conductivity	<1500 µS / cm	<1500 µS / cm	<1500 µS / cm