

# Alto™ Type 1 Ultrapure Water System



## Features & Benefits

- Fast dispense of ultrapure water - variable rate of up to 2 liters per minute.
- Dual wavelength 185nm and 254nm UV in a quartz thimble.
- Water on demand.
- Endotoxin and nuclease free.
- Remote dispenser available.
- Quick-change consumables with realistic costs.
- Easy to use software.
- Quiet operation.
- Under-bench, on-bench or wall mounted.
- Comprehensive monitoring of water quality including TOC (Total Organic Carbon).

## Overview

The Alto™ Ultrapure Water System is a complete, pre-engineered system designed to provide Type I water that can be dispensed from an integral dispenser gun or via a remote dispenser gun.

This compact Type 1 water system can be fed from a Geno, Puro or existing ringmain/ RO system. This range of bench-top or wall mounted water systems are specifically designed to save laboratory space while providing high quality water that exceeds all reagent water quality standards through its state-of-the-art water purification technology.



# Alto™ Type 1 Ultrapure Water System

## Specifications

### UNIT SPECIFICATIONS

Part Number:

- 7120-4000-000; Alto T1 UF Polisher
- 7120-4000-010; Alto T1 UF Polisher Tank Fed
- 7120-4000-020; Alto T1 UF Polisher Tank Fed w/ Remote Dispenser
- 7120-4000-030; Alto T1 UF Polisher Single Dispenser
- 7120-4000-100; Alto T1 Polisher
- 7120-4000-110; Alto T1 Polisher Tank Fed
- 7120-4000-120; Alto T1 Polisher Tank Fed w/ Remote Dispenser
- 7120-4000-130; Alto T1 Polisher Single Dispenser

### Dimensions

- Unit: 19 in. (W) x 26 in.\* (H) x 11 in. (D)  
490 mm (W) x 670 mm\* (H) x 290 mm (D)  
\*To the top of Dispense Gun, height to the top of the Dispense tube curve is 29 in. (730 mm).
- Remote Dispensing Stand Dimensions  
10 in. (W) x 25 in.\* (H) x 10 in. (D)  
250 mm (W) x 640 mm\* (H) x 255 mm (D)  
\*To the top of Dispense Gun, height to the top of the Dispense tube curve is 26 in. (670 mm).
- Shipping Weight: 58 lb (26 kg)

### Power Supply

- 100-240 VAC; 50/60 Hz

### Water Quality

- Ultrapure Water Quality: Type 1

### Feed Water Requirements

- Type 3 Feed Water Required
- Flow Rate at Pressure  
Alto: 2.0 lpm @ 10 kPa, 0.1 bar  
(0.27 gpm @ 1.5 psi) minimum
- Inlet pressure: 1.5 psi (10 kPa, 0.1 bar) minimum to 87 psi (600 kPa, 6.00 bar) maximum (NOTE: Minimum pressure must be maintained at the flow rate specified above)
- Temperature: 41°F to 95°F (5°C to 35°C)
- Minimum Feed Water Pressure: 1.5 psi (0.1 bar)
- Maximum Feed Water Pressure: 87 psi (6 bar)
- pH: 3.0-9.0

### Waste Water Drain Requirements

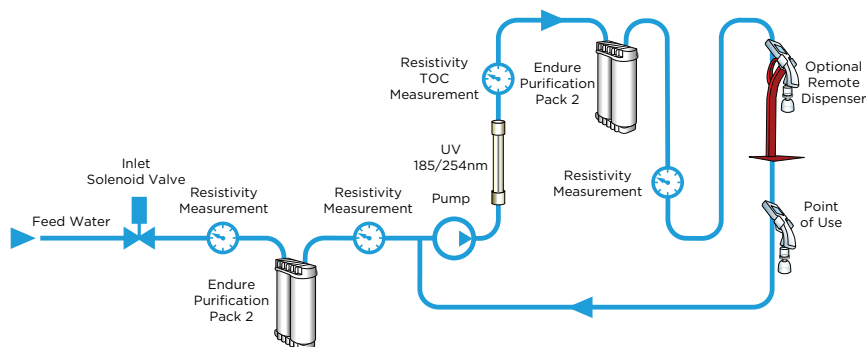
- A. Flush water drain, 5/16 in. tube connection to 1-1/2 in. (38 mm) pipe minimum, with a minimum safety distance of 3/4 in. between tube end and waste water drain.
- Floor level drain not to exceed 6.56 pipe feet (2000 mm) of the RO drain outlet

All specifications are subject to change without notice.

## Operation

Alto provides 18.2MΩ-cm water on demand. The systems are fed from a pre-treated supply and produce Type 1 water instantly as required. The integrated dispenser or optional remote dispenser provides Type 1 water at up to 2 liters per minute. Output is either continuous or volumetrically dispensed. Select the dispense rate required with the intuitive and simple software controls. Alto has quick-change, long-lasting consumables provided in the start up package.

### ALTO FLOWCHART: T1 unit



## Application

Alto is suitable for Type 1 water usage of up to 120 liters per hour (adequate feed water must be available). Type 1 water is suitable for molecular biology, electrophoresis, cell and tissue culture, sequencing, HPLC, genomics, pharmacology and any other sensitive applications.

TOC monitoring is critical when organics will affect results so a real time TOC reading will provide absolute confidence in your water.

	Alto TOC	AltoTOC UF
Dispense rate	2 l/min	2 l/min
Resistivity	18.2 MΩ-cm	18.2 MΩ-cm
TOC	1-5 ppb	1-5 ppb
RNase / DNase	-	free
Bacteria	<1 cfu/ml	<1 cfu/ml
Endotoxins	-	<0.001EU/ml
Feedwater quality	<30 μS/cm	<30 μS/cm
Feed water pressure	0.1-6 bar	0.1-6 bar