GE Power
Water & Process Technologies

Fact Sheet

Ultra High Purity-720 (UHP-720*)

Ultra-high purity deionization unit for point-of-use applications

Description and Use

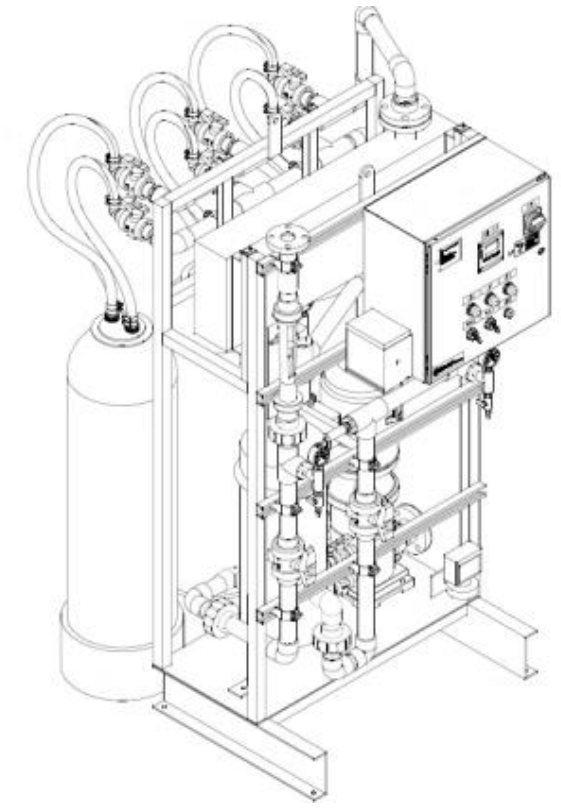

Figure 1: The GE UHP-720 system

The GE UHP-720 (Figure 1) provides a reliable supply of ultra-high purity water in a small and efficient package. The UHP-720 can produce up to 24 gpm (91 Lpm) of 18.2 megohm-cm ultra-high purity water. This water quality is achieved by deionizing the water using ion-exchange resins. Performance data for the UHP-720 and UHP-720-Storage Tank (ST) are found in Table 1. The UHP-720-ST model differs from the base model by providing DI storage capacity.

Table 1: Performance data for UHP-720 and UHP-720-ST

Parameter	UHP-720	UHP-720-ST
Make-up flow rate	24 gpm (91 Lpm)	
DI Storage Capacity	N/A	1500 gal (5678 L) or as required per project site
Polish Flow Rate	24 gpm (91 Lpm)	
Final Filtration Level	0.2 Micron or as required per specification	
System Operating Pressure	65 psi (448 kPa)	
Design Temperature	77 °F (25 °C)	

The system's recirculating polishing loop is kept pressurized by a stainless steel centrifugal pump, which provides a continuous supply of ultra-high purity water to the in-house loop. The UHP-720 is equipped with pressure gauges at various points along the system. Additionally, a recirculation rate flowmeter, and resistivity monitor are provided to monitor the volume and quality of water being produced. A steel frame supports the system and its major components. Information regarding the equipment used in the system is referenced in Table 2.

The UHP-720 was designed with simplicity in mind. The system can be easily integrated into small spaces, and arrives pre-wired and pre-piped for simple installation.

Find a contact near you by visiting www.gewater.com and clicking on "Contact Us".

General Properties

Instrumentation Included

- Polish recirculation rate flowmeter
- Resistivity monitor with analog output
- Stainless steel pressure gauges

Weight and Dimensions

- 44" L x 35" W x 81" H
- Shipping weight estimate: 1525 lbs
- Operating weight estimate: 1975 lbs

Piping

- Solvent-welded, PVC 80 polish piping

Features

- Compact, fully integrated stand-alone system
- NEMA 4 Control Panel w/ storage tank level control
- Hoses and fittings for resin columns

Table 2: Equipment details for the GE UHP-720

Equipment Description	
Recirculation Pump	Sized to maintain proper flows and pressure throughout the entire recirculation loop
Polish Mixed Bed DI Column	Maintains and polishes the water produced by the primary and secondary mixed beds, ensuring water availability during high TDS conditions
Ultraviolet Sterilizer	Kills 99% of the bacteria passing through it, prior to entering the polish loop
Final Filter, 0.2µ Absolute	Prevents bacteria or particulates greater than 0.2µ from entering the DI polish water
Ball / Butterfly Valve	Final component to which user connects distribution

Typical Applications

- Wafer cleaning
- Optical rinsing
- Media preparation
- Reagent grade water
- Chemical dilution
- Qualitative analysis
- Autoclaving
- Plating shops
- Feed water to a still
- Temporary service

System Options

- PP/PVDF/SS Piping
- PE/PVDF storage tanks
- Nitrogen blanketing
- System redundancy
- 185 nm TOC reduction UV

Each skid can be configured to incorporate:

- RO makeup
- Membrane degasification
- Sanitary design
- Ultrafiltration

Installation

Installing the UHP-720 is simple and fast. Units are shipped pre-assembled, plumbed and wired to expedite installation. The portable ion exchange bottles incorporate quick disconnects to speedup routine maintenance of the system. Every aspect of the UHP-720 has been designed to maximize system uptime. Table 3 tabulates specifics on installation and utility requirements.

Table 3: Installation details for the GE UHP-720

Installation and Utility Requirements	
Inlet Connection	2" flange
Inlet Pressure	5 psi min, 60 psi max (34 kPa min, 414 kPa max)
DI Outlet	1.5" flange
Drain	Up to 30 gpm (114 Lpm) with no back pressure
Power Requirements	480 VAC, three-phase, 15 amps
Motor Power	3 HP