



## DELIVER EXTREMELY CLEAN WATER TO YOUR CRITICAL PROCESS EQUIPMENT

Ultra Pure Systems Reverse Osmosis and Deionization (RODI) units use a five-stage process to remove harmful substances, such as heavy metal ions and total dissolved solids from domestic water sources. This purification process will convert municipal water to a stable 0-2 PPM.

Neatly packed in a sturdy 1/2" welded high density polyethylene plastic cabinet with a hinged door makes this single point connection system ideal for small reverse osmosis applications. With our advanced system controller you can monitor RO & DI PPM water quality at a glance via the highly visible BLUE and RED illumination on the front of the cabinet. BLUE indicating proper water quality and RED indicating an alarm condition, such as water quality is no longer within acceptable range. Serving AND protecting your process and equipment investment.

Optimize your system's performance with our unique Query Code System. A simple, friendly, powerful, no cost mobile application for customers to manage routine filter maintenance from anywhere on-site or remotely.

#### Benefits:

- Eliminate system shut down due to consumed filters
- Automatically generate email notifications when filters are expiring
- Live factory support and tutorials
- Predictable data budgeting filter costs
- No contracts or licensing fees required

## System Summary - UPS 400GPD

5 Stage reverse osmosis process. The final purity of the water leaving the reverse osmosis & deionization system is dependent on incoming water condition. Once water levels exceed 150ppm the reverse osmosis membrane & 10 PPM filters and resin should be replaced. This system flow is rated at **400 gpd** +/- 15% based on 77° entering water, 100 psi applied pressure.

Feed Pressure	Operating Temperature	Electrical Rating	Amp Max	Dry Weight	Total Weight
<b>50-125 psi</b>	<b>40- 100° F</b>	<b>120 VAC/60Hz .8</b>	<b>MFS 20</b>	<b>185lbs</b>	<b>220lbs</b>

## Stage 1 : Sediment Filter

Engineered to expanded volume and higher flow rates for commercial applications such as equipment protection and water polishing. Each filter is pretested for maximum pressure and temperature.

Quantity Per Unit	1
Model Number	<b>UPF_4291</b>
Filter Dimensions	<b>3.125" OD x 2.875" ID x 17.5" L</b>
Rating	<b>5 Micron</b>
Max Operating Pressure	<b>125 PSI</b>
Operating Temperature	<b>40 - 100F</b>

### Features and Benefits:

- Protect equipment from hard water
- Large Filter Surface Area 2" x 17.5"
- Capacities of up to 20,000 gallons
- Hefty flow rates up to 2 gal/min
- Spin off canister for ease of replacement
- Best cost to performance ratio in the industry



**Test Information:** Housings and fittings have been tested for performance to NSF Standard 42. Tests included Hyrdo Static Testing at 300 psig and Cycle Testing of 100,000 repetitions from 0 to 150 psig. Filters have been tested and listed under Standard 42 for odor, and chlorine reduction; or particulate reduction; or have been materials certified. All filters should be installed on cold water lines. **Note:** Activated carbon filters are not intended to be used where the water is micro-biologically unsafe or with water of unknown quality without adequate disinfection before or after the unit.

**Warranty Information:** Filters are warrantied to be free from any defects in workmanship or materials. Further, the warranty provided applies, only when used with the product specifications and service life, from the date of install or 5 years from the date of manufacture whichever occurs first, beyond which time or use Ultra Pure Systems is absolved of any and all liability for any use of the product.

## Stage 2 : Carbon Filters

Engineered to expanded volume and higher flow rates for commercial applications such as equipment protection and water polishing. Each filter is pretested for maximum pressure and temperature.

<b>Quantity Per Unit</b>	<b>2</b>
<b>Model Number</b>	<b>UPS_4292</b>
<b>Filter Dimensions</b>	<b>3.125" OD x 2.875" ID x 17.5" L</b>
<b>Rating</b>	<b>10 Micron</b>
<b>Max Operating Pressure</b>	<b>125 PSI</b>
<b>Operating Temperature</b>	<b>40 - 100°</b>

### Features and Benefits:

- Protect equipment from hard water
- Large Filter Surface Area 2" x 17.5"
- Capacities of up to 20,000 gallons
- Hefty flow rates up to 2 gal/min
- Spin off canister type filter cartridge
- Best cost to performance ratio in the industry



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## Stage 3 : Membrane Filter

Polyamide thin-film composite membranes are one of the industry's most reliable and highest performing reverse osmosis elements. The high flow membranes are available in all standard commercial sizes and feature a protective Stainless Steel Sleeve. Advanced membrane technology and manufacturing processes ensure high quality and performance.

<b>Quantity Per Unit</b>	<b>1</b>
<b>Model Number</b>	<b>UPF_5295</b>
<b>Filter Dimensions</b>	<b>2.5" x 21"</b>
<b>pH Range</b>	<b>2 - 11</b>
<b>Max Operating Pressure</b>	<b>150 PSI</b>
<b>Operating Temperature</b>	<b>40 - 100°</b>

### Features and Benefits:

- Polyamide thin-film composite membrane
- Available in all standard commercial sizes
- Stainless steel housing
- Meets and exceeds NSF standards
- Half the operating pressure of standard high rejection membranes



**Test Information:** 550 TDS Filtered (5 Micron), De-chlorinated, Municipal Feed Water, 77°F, 15% Permeate Recovery, 6.5 - 7.0 pH range, at the specified operating pressure. Data taken after 30 minutes of operation. Maximum pressure drop for each element is 15 psi. Minimum salt rejection is 96%. Permeate flow for individual elements may vary +/- 20%.

## Stage 4 : Deionization Filtration

Mixed bed high capacity Type 2 Deionization resin is a mixture of hydroxide form strong base gel anion exchange resin and hydrogen form strong acid sulfonated gelular polystyrene cation exchange resin.

<b>Capacity</b>	<b>.66 CuFt</b>
<b>Model Number</b>	<b>UPF_6291</b>
<b>Filter Dimensions</b>	<b>8.5" OD x 35"</b>
<b>Inlet / Outlet Size</b>	<b>1/2"</b>
<b>Max Operating Pressure</b>	<b>150 PSI</b>
<b>Operating Temperature</b>	<b>40 - 100°</b>

### Features and Benefits:

- Reinforced composite tank
- Low Amine Oder (fishy order)
- High operating capacity
- Ease of changing out tanks



**Capacity Example:** Water at 100 ppm equals approximately 5.85 grains per gallon (GPG). At this level 1 cubic foot of DI resin will produce approximately 2,735 gallons of permeate water.

Typical tap water in the state of Arizona is between 300-750 ppm depending on variables such as location and time of year. Water at a level of 300 ppm equals 8.77 GPG which will allow .5 cubic feet of DI resin to produce approximately 456 gallons of permeate water. When water is passed through a prefilter reverse osmosis system the typical ppm output for Arizona water is approximately 20-50 ppm. At a level of 20 ppm .5 cubic feet of DI resin will produce approximately 6837.5 gallons of permeate water

## Stage 5 : Ultra Violet Light Sterilization

Ultra violet sterilization systems are a reliable, economical and chemical-free way to safeguard against microbiological contaminants in any water treatment application.

<b>Disinfection Flow Rate</b>	<b>1 GPM</b>
<b>Model Number</b>	<b>UPS-UWT1</b>
<b>Filter Dimensions</b>	<b>2.5" OD x 12.5" T</b>
<b>Connection Size</b>	<b>3/8"-1/2" Combo NPT</b>
<b>Weight</b>	<b>4lbs</b>
<b>Max. Current</b>	<b>.28A Max</b>
<b>Max Operating Pressure</b>	<b>125 PSI</b>

### Features and Benefits:

- Stainless steel reactors
- Exceeds NSF standards
- Visual "Power On" indicator
- Low cost maintenance
- Quartz bulb sleeve



To ensure ongoing disinfection of your water, UV lamps need to be replaced annually with OEM factory-supplied replacements. OEM lamps are the result of extensive development resulting in a highly efficient disinfection platform with extremely stable UV output over the entire 9000 hour lifetime.



## Additional System Components

### Product Water Storage Tank

High strength, cold rolled steel tank finished w/ an epoxy resin and high quality polyurethane finish. Copolymer polypropylene lower water chamber w/ a 100% butyl diaphragm. Durable, high-quality steel tank for the toughest conditions. (External of RO cabinet)

<b>Model Number</b>	<b>UPS_900_2</b>
<b>Total Capacity</b>	<b>44 Gallons</b>
<b>Dimensions</b>	<b>37.5" OD x 21" T</b>
<b>Connection Size</b>	<b>1 1/4" FPT</b>
<b>Weight</b>	<b>65lbs</b>
<b>Max Operating Pressure</b>	<b>125 PSI</b>

Larger capacity (80, 120 Gallon) water storage tanks available for this model upon request.

### Features and Benefits:

- Discharges in any position
- Exceeds NSF and ANSI standards
- 100% butyl diaphragm liner
- Strong, Long Lasting Polypropylene Liner
- Environmentally safe, 100% lead-free



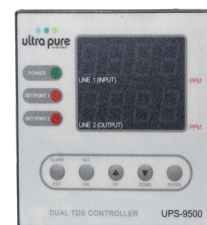
### Dual Display PPM Controller

The dual display PPM controller allows for continuous and simultaneous monitoring and controls of the PPM levels on two different water lines for high output commercial systems. The dual display controller also has a large, bright LED display as well as internal alarm that will sound if the PPM level rises above the user-set level for both lines.

<b>Range</b>	<b>0 - 999 ppm</b>
<b>Accuracy</b>	<b>+/- 2%</b>
<b>Dimensions</b>	<b>3.7" x 3.7" x 4.9"</b>
<b>Power Supply</b>	<b>AC 110V</b>
<b>Weight</b>	<b>2lbs 1.1oz</b>
<b>Conversion Factor</b>	<b>NaCl (avg 0.5)</b>

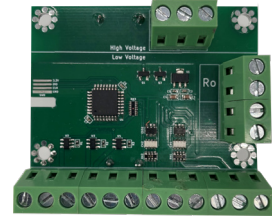
### Features and Benefits:

- Simultaneous monitoring and control
- Exceeds NSF standards
- Large, bright LED display
- Internal audible alarm based on user set points
- Dry contacts for equipment relay control (24VDC Required)



## BMS Control Card

Each RO cabinet has a built in control card that resides inside electrical cabinet that is capable High RO PPM levels. Contacts are dry n/o isolated from any other use. Max switching voltage 125vac, 60vdc Max switching current 1A Min permissible load 1 mA @ 5vdc . During normal operation, contacts remain closed. When motor stops running, readings are locked and contacts are unable to change position. Upon start-up, timer initiates and after 45 seconds real time readings and alarms are active.



## John Guest LLDPE Tubing

The John Guest PE range of plastic tubing is produced in Linear Low Density Polyethylene for cold and intermittent hot water applications. The tubing provides the benefits of a wide range of temperature and pressure suitability, broad chemical compatibility and is made from non contaminating materials. LLDPE is more robust than traditional low or medium density polyethylene and is recommended for use with cold and intermittent hot water. The tubing is made from FDA compliant materials and is NSF International certified.

Tube Tolerances	1/4”- 1/2” : +0.001/-0.004		
Max Temperature	150°F		
Tube Dimensions	1/4” OD - .170” ID		
Tube Dimensions	5/16” OD - .187ID		
Weight	2lbs 1.1oz		
Conversion Factor	NaCl (avg 0.5)		
Internal Tubing Color Key			
Yellow	Blue	Black	Red
Incoming	Reverse Osmosis	Reject	Deionized

## Features and Benefits:

- FDA compliant materials
- Broad chemical compatibility
- Made from all non-contaminating materials
- Stronger than standard polyethylene tubing
- NSF International certified.



## John Guest "push-fit" Fittings

John Guest fittings are manufactured in grey and acetal copolymer with RED safety clips attached to each fitting.

<b>Standard Sizes</b>	<b>1/4" 3/8" 1/2"</b>
<b>Max Pressure 3/16" - 5/16"</b>	<b>150 psi</b>
<b>Max Pressure 3/8" - 1/2"</b>	<b>150 psi</b>
<b>Max Temperatures</b>	<b>-2° - 149° F</b>

## Features and Benefits:

- Push-fit technology fast, simple & secure
- Suitable for soft metal or plastic tubes
- Suitable for air or inert gases
- Superior flow characteristics
- Quick disconnection without the need for tools



## RO Controller

The ROC-5 is a state of the art RO system controller built integral of each system. This controller will enable automatic operation year round. System will automatically turn on when pressure in storage tank is below 40psi. During operation clean water will be produced filling water storage tank. When pressure reaches 60psi the system shuts down. System cycles on-off automatically to maintain between 40-60psi in storage tank.

Range	0 - 999 ppm
Accuracy	+/- 2%
Dimensions	3.7" x 3.7" x 4.9"
Power Supply	AC 110V
Weight	2lbs 1.1oz
Conversion Factor	NaCl (avg 0.5)

## Features and Benefits:

- Simultaneous monitoring and control
- Exceeds NSF standards
- Large, bright, easily visible display
- Internal audible alarm based on user set points
- Isolated dry contacts for remote RO alarms.
- Internal Leak Detector shutting system down if water is detected



## Motor and Rotary Vane Pump

The Ultra Pure 400 GPD system comes equipped with a split-phase induction motor used for hub-mounted pump ap-

### Motor Specifications

Power Output	.75 HP
Voltage	115v
RPM Range	1701 -1800

### Pump Specifications

Max Operating Pressure	230 psi/up to 16 bar
Inlet/Outlet Port Size	3/8" - 3/8"

## Motor Features and Benefits:

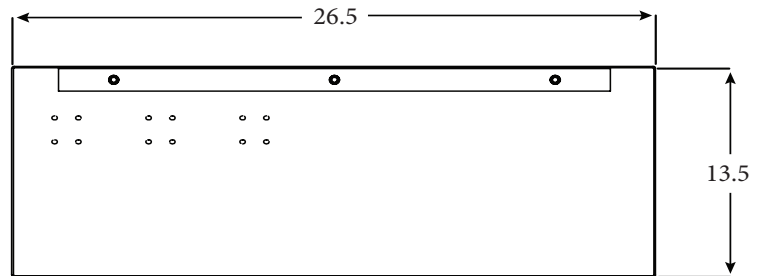
- Low amp draw design for 115V/60Hz operation
- UL recognized and CSA Certified
- High starting and breakdown torque
- Continuous duty at nameplate ratings

## Pump Features and Benefits:

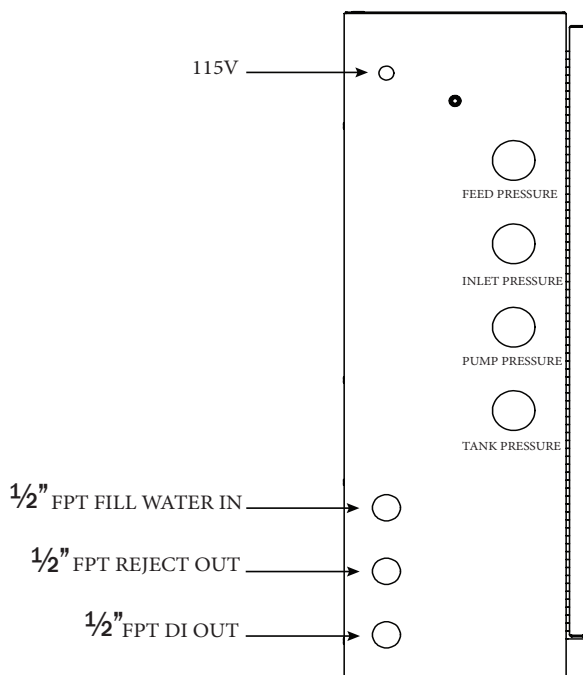
- AISI 303 Stainless steel housing and rotor
- Carbon graphite pumping chamber and vanes
- Direct-mounted motor connection via SS clamp



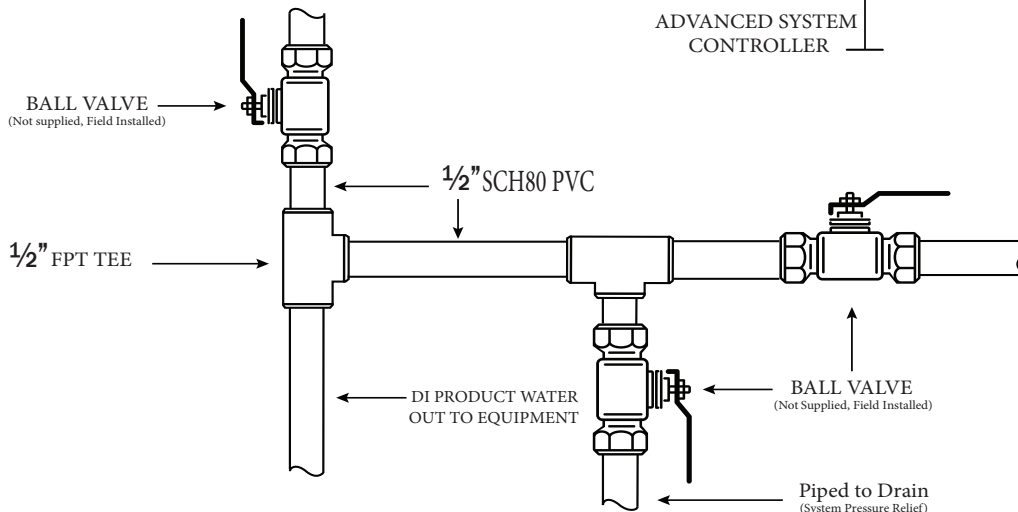
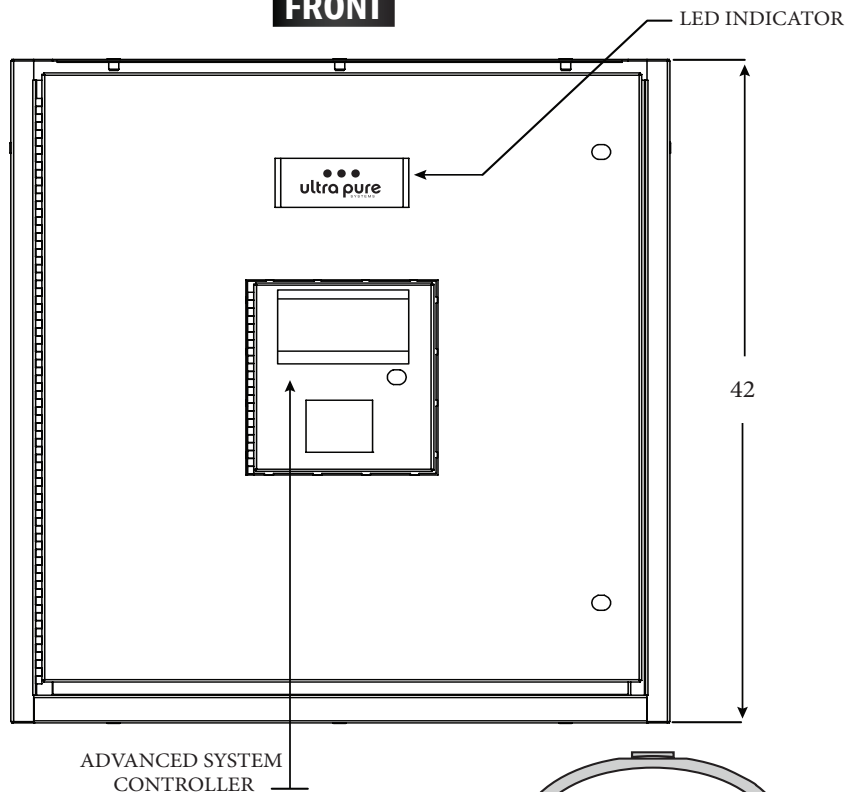
**TOP**



**SIDE**



**FRONT**



**STORAGE TANK**