

# PIONEER™



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## INSTALLATION OPERATION MANUAL

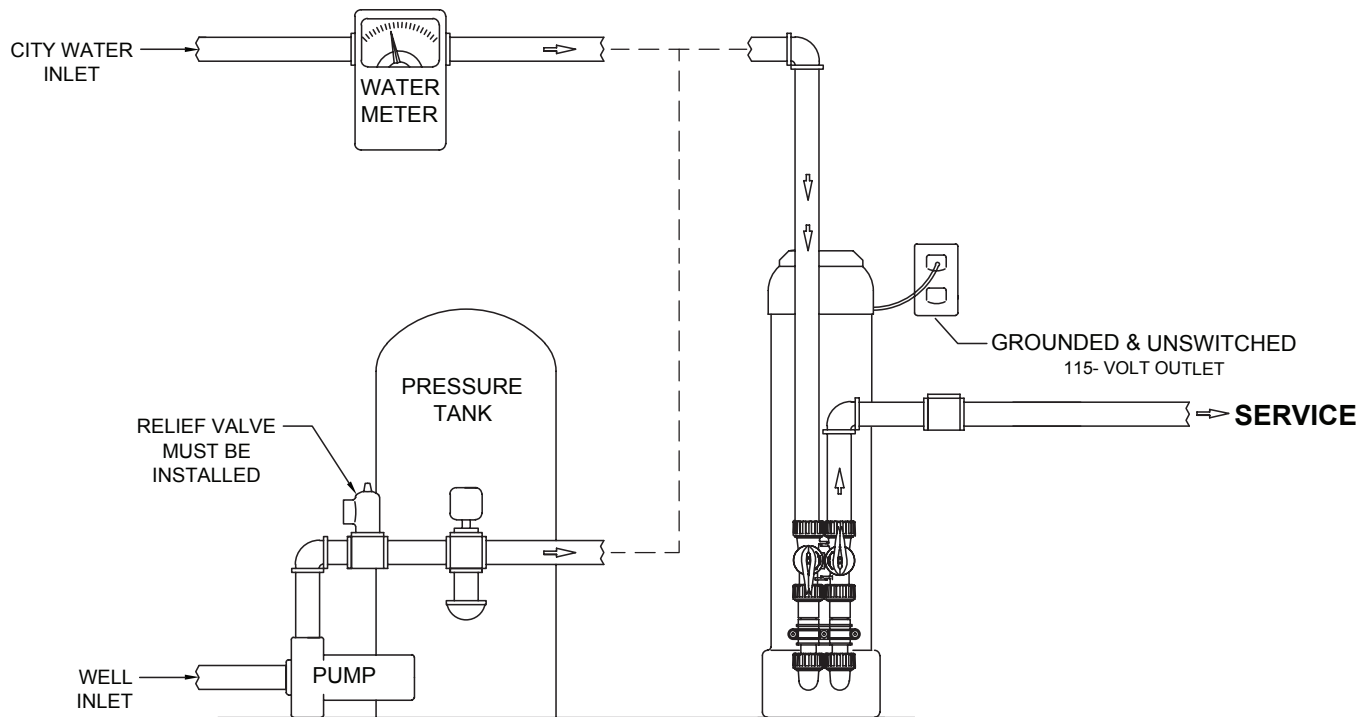
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# PIONEER™

## WHERE TO INSTALL



## INSTALLING THE CARTRIDGE

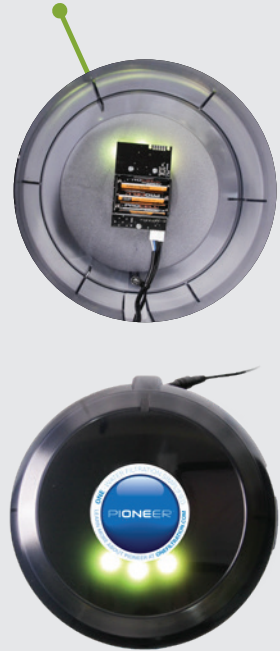
The System comes preassembled without the cartridge installed.

1. Push down the top cap with both hands to unseat the retaining ring, and remove the retaining ring by carefully grasping the handle and pulling inward, then upward. The retaining ring should slide completely out of the groove.
2. Remove the Top Cap from the housing assembly by pulling the cap out of the top of the tank, by lifting up on the top handles. Place removed Top Cap on a clean and dry surface, free of debris, so no contamination of the o-ring occurs.
3. Look down into the tank assembly, and you should see a small opening centered in the bottom of the tank.
4. Remove packaging from filter, then place the cartridge into the tank with the double o'ring facing down.
5. Position the cartridge so that it is aligned with the bottom, center opening.
6. Press down on the cartridge so that the double o'ring seal moves into place within the bottom, center opening.
7. Reposition the Top Cap into its original location.
8. Reattach the top tank Snap Ring, pull up on the Top Cap to seat o-rings.
9. Run water through system for 10 minutes before use.

# REPLACING THE CARTRIDGE

1. Turn off the water supply to the system by shutting off the inlet and outlet valves on the bypass.
2. (Optional) Install a 3/8" PEX tubing hose to the provided John Guest® fitting and shut-off that connects to the inlet side of the filtration system. Run the hose to a floor drain or bucket, and use to drain sediment or to aid in filter removal during change-out.
3. Remove Umbrella Cap on the top of the vessel. Replace the 3-AAA batteries with new batteries. Push and hold the reset button on the metered board for 3 seconds to reset the totalizer. When the totalizer is reset the LED lights will flash green 3 times to confirm that it is reset.
4. Depressurize the system by pushing down on the red depressurization button on the top cap of the system. Keep the button pushed down until all the air or water pressure is completely released.
5. Push down the top cap with both hands to unseat the retaining ring.
6. Remove the retaining ring by carefully grasping the handle and pulling inward, then upward. The retaining ring should slide completely out of the groove.
7. Remove the top cap of the system by lifting up on the top handles, remove old filter.
8. Open the John Guest® fitting and shut-off, and flush out the bottom of the system.
9. Look down into the tank assembly, and you should see a small opening centered in the bottom of the tank.
10. Remove packaging from the new filter, place the new cartridge into the tank with the double o'ring facing down.
11. Position the cartridge so that it is aligned with the bottom, center opening.
12. Press down on the cartridge so that the double o'ring seal moves into place within the bottom, center opening.
13. Reposition the Top Cap into its original location.
14. Reattach the top tank Snap Ring, pull up on the Top Cap to seat o-rings.
15. (If completed Step 2, then...) Close the John Guest® fitting and shut-off.
16. Turn the water supply on, opening the inlet and outlet valves on the bypass.
17. Relieve the system of air in the tank as the system fills with water, by pushing down on the red depressurization button on the top cap of the system. Keep the button pushed down until all the air pressure is completely released, and water comes out of the red depressurization button.
18. Release the red depressurization button.
19. Replace the Umbrella cap to the top of the system.
20. Check for leaks.
21. Flush the new cartridge per its installation instructions.
22. During flush, confirm green LED lights are flashing with flowing water. If lights are not flashing green, go back to step 3.

#3 UMBRELLA CAP & LED LIGHTS



## EASY TO UNDERSTAND LED REPLACEMENT NOTIFICATIONS

The Real-time Dynamic LED System monitors water and flow rate and provides a visual color-coded notification to the homeowner, letting them know when to replace their filter.



## EASY FILTER REPLACEMENTS AND NO TOOLS REQUIRED

PIONEER uses state-of-the-art snap-ring technology to eliminate the need for cumbersome tools. Homeowners can easily replace the filter in their PIONEER system by following a few simple steps.

PRESS THE RED PRESSURE RELIEF VALVE & PULL SNAP-RING



LIFT TOP CAP



\*Meter preset at 100,000 gallons; see page 6 for adjusting presets.

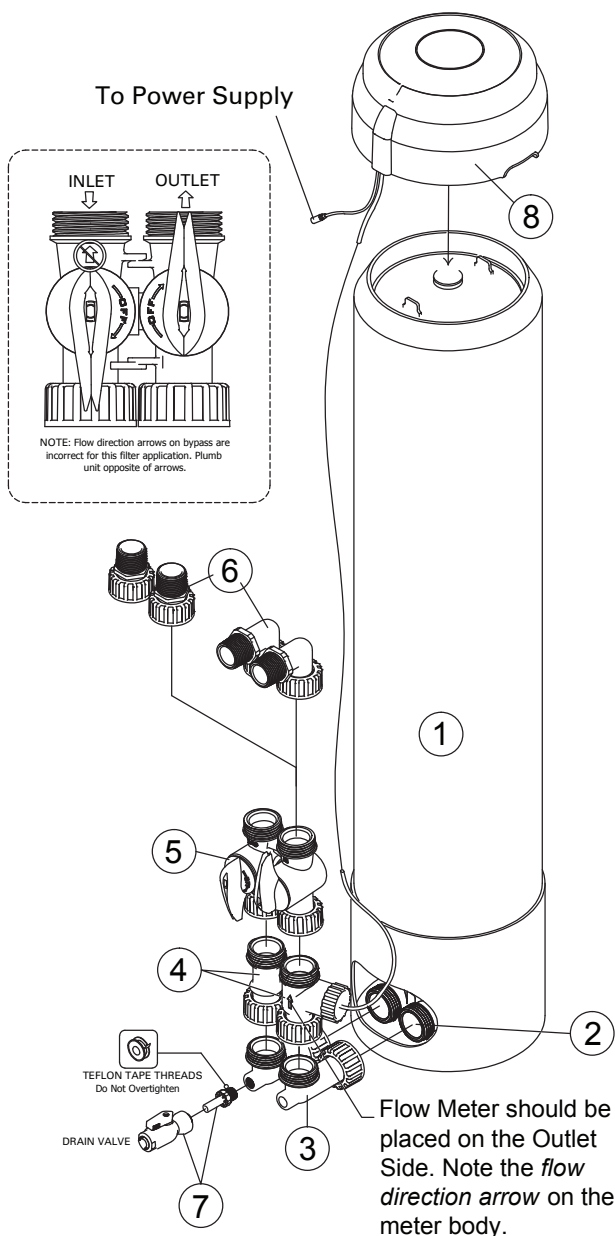
\*Three AAA batteries not included, for battery back-up. Change annually with filter change-out.

# IMAGE AND INSTALLATION INSTRUCTIONS

## PART IDENTIFICATION

PART IDENTIFICATION	PART NUMBER
1. Filter housing	CTA0840BBBKPS-04C00
2. Bottom Inlet/Outlet cap assembly	CT-INOUTASSY
3. Vertical elbow	CT-VERTICALELBOW
4. Flow Meter Assembly	CT-CTMETERASSY
5. Bypass manifold	CT-BPMANIFOLD
6. Straight or 90-degree Angled In/Out 1" MNPT plumbing connectors	CT-1MNPTELBOWSET
7. 3/8" PEX Drain valve assembly with shut-off	CT-38DRAINVALVEJG
8. Umbrella Cap with PCB assembly and battery backup	CT-PCBUMBRELLA
NOT SHOWN: Power Supply	CT-POWERSUPPLY

The system and installation must comply with state and local laws and regulations.



## SIMPLE ASSEMBLY INSTRUCTIONS

**1**

Connect #3 to #2 on the bottom of the Filter Housing #1

**HAND TIGHTEN ONLY**

**2**

Connect #4 to #3; Flow Meter Assembly should be placed on the Outlet Side. (Note the flow direction arrow on the meter body.)

**HAND TIGHTEN ONLY**

**3**

Connect #5 Bypass to #4

**HAND TIGHTEN ONLY**

**4**

Use either part of #6 for connecting your plumbing to the system

**HAND TIGHTEN ONLY**

**5**

Install part #7 into #3 using the threaded connection & Teflon® tape

**HAND TIGHTEN ONLY**

**6**

Connect 3/8" PEX Plumbing to drain

**NOT PROVIDED**

**7**

Install 3-AAA batteries to #Umbrella Cap; connect to Power Supply

Plumbing the filtration system assembly: The inlet and outlet of the filtration housing are 1" Threaded MNPT connections.

\*\*No Use of Extra lubricants, unapproved sealants, and use of tools. Use of tools other than hand tighten only parts, voids warranty.

Please allow 3 feet of open space above the system for replacement cartridges.

System to be supplied only with cold water.

3-AAA batteries not included.

Meter assembly preset to 100,000 gallons

# PIONEER™ SPECIFICATIONS

PIONEER NAME AND PART NUMBER	SIZE	MICRON RATING	RATED CAPACITY & FLOW RATE	PEAK FLOW & % REDUCTION OF LEAD	CHLORINE/CHLORAMINE TASTE AND ODOR REDUCTION CAPACITY(*)	PRESSURE DROP SPEC
<b>PIONEER™ System</b> CTA0840BBBKP5-04C00	8" x 40"	0.5	Lead Reduction 100,000 gallons @ 4.51 GPM @ 99.62% reduction (378,541 Liters @ 17.1 lpm)	8 GPM (30.2lpm) @ 99.62% reduction  (* ) >88,000 gallons at 8 GPM (333,116 Liters @ 30.2lpm)	>300,000 gallons @ 15 GPM (1,135,533 Liters @ 56.8 lpm) with greater than 90% reduction, estimated capacity using 2ppm of free chlorine.  >150,000 gallons @ 8 GPM (567,812 Liters @ 30.3 lpm) with greater than 85% reduction, estimated using 3ppm of chloramine.	15 psid @ 4.51 GPM
<b>REPLACEMENT CARTRIDGE FILTERS ARE LISTED AS PIONEER™ 0.5 Micron High Capacity Carbon Block // PART NUMBER: CT-05-CB-AMYCL</b>						

\*Claims are not performance tested or certified by IAPMO or NSF. Performance claims are based on independent laboratory and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design and application. Results may vary.

**Minimum Operating Temperature:** 34 F / 1 C  
**Maximum Operating Temperature:** 120 F / 50 C  
**Minimum Operating Pressure:** 20 psig / 1.38 bar  
**Maximum Operating Pressure:** 125 psig / 8.6 bar  
**Electrical Requirements:** Grounded & Unswitched 115 V outlet and 3-AAA Batteries  
**Filter Replacement Operating Instructions:** New cartridges must be flushed for a minimum of 10 minutes prior to use. System and installation to comply with state and local laws and regulations. **Do not** use with water that is microbiologically unsafe or unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.  
 Manufactured from NSF/ANSI standard 61 and California Prop 65 Compliant certified coconut shell carbon and raw materials.

## WARNINGS

If this or any other system is installed in a metal (conductive) plumbing system, i.e. copper or galvanized metal, the plastic components of the system will interrupt the continuity of the plumbing system. As a result any errant electricity from improperly grounded appliances downstream or potential galvanic activity in the plumbing system can no longer ground through contiguous metal plumbing. Some homes may have been built in accordance with building codes, which actually encouraged the grounding of electrical appliances through the plumbing system. Consequently, the installation of a bypass consisting of the same material as the existing plumbing, or a grounded "jumper wire" bridging the equipment and reestablishing the contiguous conductive nature of the plumbing system must be installed prior to your systems use.

**DO NOT USE** extra lubricants, unapproved sealants and tools to tighten hand tightened only parts. Use of tools other than hand tighten only parts voids warranty. Testing was performed under standard laboratory conditions; actual performance may vary. Flush the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

## PERFORMANCE

This system conforms to NSF/ANSI 53 for the specific performance claims verified and substantiated by test data. Performance claims are based on independent lab results and manufacturer's internal test data\*. Actual performance is dependent on influent water quality, flow rates, system design and applications. Your results may vary. Performance claims are based on a complete system, including a filter, housing, and connection to a pressurized water source. This filter must be operated according to the system's specifications in order to deliver the claimed performance. It is essential to follow operational, maintenance, and filter replacement requirements, as directed for each application, for this filter and system to perform correctly. Read the Manufacturer's Performance Data Sheet accompanying the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

# WATER TOTALIZER NOTIFIER

The overall purpose of this device is to receive a water meter input, and totalize the amount of water that passes through the meter. When there is flow through the water meter, the lights flash at a rate that increases with the water flow rate. When the total amount of water flowed reaches within 10% of a pre-selected amount the totalizer turns yellow, when the total amount reaches the pre-selected amount the totalizer turns red.

## Power

This unit is to be powered using +12VDC. The power input is a wire tail with a 2.5mm, center positive barrel jack.

The totalizer has a battery backup. The battery backup uses 3 AAA size batteries. The battery holder is a part of the PCB assembly and can be accessed by removing the lid to the cartridge filter. Battery life will vary based on water flow when running on battery mode and type of batteries used. With high continuous flow, the batteries are expected to last approximately 14 days. With no flow the batteries are expected to last approximately 6 months.

## Operation

### Water Meter

The totalizer keeps track of the gallons using a water meter. The water meter is a turbine style meter with a magnetic pickup that sends a pulse to the electronics for every revolution of the meter turbine. The meter turbine is removable for inspection and cleaning. Make sure water is bypassed or turned off when removing the meter for maintenance. The meter has a three pin plug that connects to the electronic board.

### LEDs

Normal colors for the LEDs are Green, Yellow and Red. Depending on the Totalizer value.

- Green = 0 – 90% of the programmed totalizer maximum
- Yellow = 90 – 100% of the programmed totalizer maximum
- Red >= 100% of the programmed totalizer maximum

If there is flow the LEDs should alternately turn off in the following pattern: 1-2-3-2 (repeat). The frequency that they turn off is linearly correspondent to the flow rate being received from the water meter. For every 1 revolution from the meter, the LED pattern should be incremented to turn off the next LED. If there are no pulse edges for 2 seconds, all the LEDs will turn on solid.

If the battery is determined to be low, the middle LED (#2) will turn White. The battery is checked only once an hour to minimize the battery drain from checking the voltage.

### Pushbutton

The pushbutton allows for the totalizer to be reset as well as the maximum value to be programmed.

To reset the totalizer, the user should press and hold the button for 3 seconds. When the totalizer is reset LEDs should flash green 3 times to confirm that it is reset.

The push button allows the unit to be programmed for the total gallons limit. It can be programmed for the range of 10,000 gals. – 990,000 gals.

To program the maximum value using the push button: Press and hold the button while powering up the board (either battery power or 12VDC power). Once the board is powered LED 1 (left LED) will represent 100,000's place and should be green. LED 2 (middle LED) will represent 10,000's place and should be blue. Both LEDs will be flashing at 1 Hz the number of flashes that corresponds to the current setting for that digit placeholder. To indicate the start of the flash sequence both LEDs should flash white for 1 second, then flash the appropriate number of times. Once both are done wait 2 seconds and repeat. Below, Figure 1, is an example.

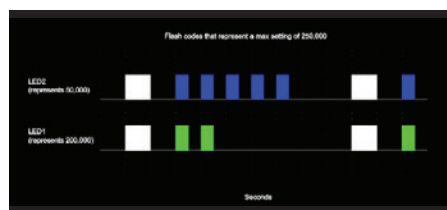


Figure 1

To change the maximum gallons setting, press and hold the button for 1 second. LED1 should turn solid green, LED2 should turn off and LED3 should flash green the number of times that corresponds to the current setting. Pressing the button for less than 1 second would increment the value, rolling over from 9 to 0. Below, Figure 2, is an example of the LEDs in this mode.

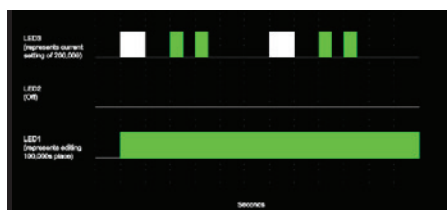


Figure 2

To save the setting for the 100,000s place and begin editing the 10,000s place press and hold the button for greater than 1 second. LED1 should turn off, LED 2 should turn solid blue, and LED3 should flash blue the number of times that corresponds to the current setting. Again, pressing the button for less than 1 second would increment the value, rolling over from 9 to 0. Below, Figure 3, is an example of the LEDs in this mode.

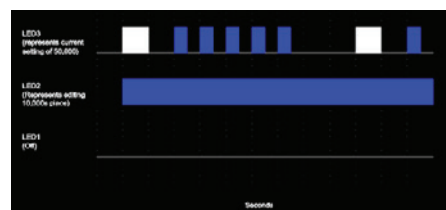


Figure 3

To save the setting for the 10,000s place and exit editing mode and return to the mode in Figure 1 press and hold the button for greater than 1 second. This would also save the current setting into internal EEPROM memory.

### Serial Port

The serial port allows for quick and efficient programming through a basic terminal type interface. The board responds with a message when the enter key is pressed:

```
Totalizer Current Total: 0 gallons
Totalizer Current Max. Setting: 250,000 gallons
(Send 'r' to reset)
(## to enter new setting in 10,000s [valid range 0-99])
>:
```

Consult the manufacturer for more details on connecting to the boards serial port.

### Power Monitoring and Battery Mode

The board monitors the 12Vdc power and the battery power. If there is a power failure and no batteries are installed, the current totalizer value will be saved to non-volatile memory. When power is resumed, the totalizer count will resume from when it had previously lost power.

The LEDs should shut off during battery mode. If the totalizer is to the yellow or red state or if the battery voltage gets low, the LEDs will flash on in the appropriate colors for 0.125 seconds every 4 seconds. If the push button is pressed in battery mode, the LEDs will turn on for 4 seconds and then return to battery mode.

# WARRANTY

## ENPRESS LLC- PIONEER™ System - Limited Warranty

- ENPRESS LLC warrants its line of ENPRESS PIONEER™ filtration systems, to be free of defects in material and workmanship for a period of one year, and replacement PIONEER™ filters for a limited thirty-day warranty, from the date of purchase. This warranty is extended to original purchaser, by authorized OEM customers. Use of this product constitutes Buyer's acceptance of this Limited Liability.
- This warranty does not cover any equipment purchased for use in applications in which the product is not suited. It is the responsibility of the buyer to determine if a product is suitable for a particular application.
- Our obligations under this warranty are limited to the repair or replacement (at ENPRESS's sole discretion) of the failed parts of the water treatment unit manufactured by ENPRESS, and we assume no liability whatsoever for direct, indirect, incidental, consequential, special, general or other damages.
- We assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligations for us.
- We assume no liability and extend no warranties, expressed or implied, for the use of this product with a non-potable water source or a water source which does not meet the conditions for use described in the owner's guide or performance data sheet for the product.
- The warranty provided herein applies, only when used within the product specifications and service life, from the date of installation, beyond which ENPRESS LLC is absolved of any and all liability for any use of the product. There are no other warranties, either of merchantability or fitness, either expressed or implied. Some states do not allow exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, or country to country. To know what your legal rights are, consult your local or state consumer affairs office, your state's Attorney General, or your national equivalent for international users.

### THIS WARRANTY EXCLUDES THE FOLLOWING:

- Damage caused by improper installation, operation or care.
- Damage caused by chemical attack, environment, accident, fire, flood, freezing, Act of God, misuse, misapplication, neglect, oxidizing agents (such as chlorine, ozone, chloramines and other related components), alteration, installation or operation contrary to the printed instructions, or by the use of accessories or components which do not meet ENPRESS's specifications, including the use of a replacement element not manufactured or supplied by ENPRESS LLC. Refer to the specifications section in the Installation and Operating manual for approved application parameters.
- Modification or alteration by other than ENPRESS LLC employees.
- Rubber type parts and normal wear items i.e. "O" rings, etc...
- Any costs of labor or expenses expended in the removal and/or installation of unit, or any surrounding device.
- Altering or removing the ENPRESS LLC information label.
- Use of non ENPRESS LLC approved cartridges, filters, or replacement parts with the appropriate systems or vessels.
- Non-use of supported piping for plumbing connections to In/Out connections.
- Replacement of water filter cartridge due to water pressure that is outside the specified operating range or due to excessive sediment in water supply; or replacement with non-authorized replacement cartridge.
- Service trips to installation site to train user on how to use product
- Improper installation
- Failure of product if it is abused, misused, or used for other than the intended purpose
- Replacement of water filter cartridge due to water pressure that is outside the specified operating range or due to excessive sediment in water supply; or replacement with non-authorized replacement cartridge
- Damage to product cause by accident, fire, floods or acts of God
- Incidental or consequential damage caused by possible defects with any other equipment not covered by this warranty

### SPECIAL NOTICES:

- Do not use water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after installing filter or system.
- Systems certified for Cyst reduction may be used on disinfected water that may contain filterable cysts.
- Any system this filter is installed in must be maintained according to manufacturer's instructions, including replacement of filter cartridges.
- Contaminants or other substances removed or reduced by this water filter cartridge are not necessarily in your water.
- Note that while testing was performed under standard laboratory conditions, actual performance may vary. Systems using these filters must be installed and operated in accordance with manufacturer's recommended procedures and guidelines.

**LIMITED LIABILITY** - ENPRESS LLC makes no warranties of any kind, expressed or implied, statutory or otherwise, and expressly disclaims all warranties of every kind, concerning the product, including, without limitation, warranties of merchantability and fitness for a particular purpose, except that this product should be capable of performing as described in this product's data sheet. ENPRESS LLC's obligation shall be limited solely to the refund of the purchase price or replacement of the product proven defective, in ENPRESS LLC's sole discretion. Determination of suitability of this product for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. Use of this product constitutes Buyer's acceptance of this Limited Liability.

Service under this warranty is to be provided by the distributor/installer who sold the unit to the user. If the distributor is unable to provide warranty service, contact:

ENPRESS, LLC. | 34899 Curtis Blvd., Eastlake Ohio 44095  
Phone 866.859.9274 | Fax 440.510.0202 | [info@enpress.com](mailto:info@enpress.com)

A Returned Goods Authorization (RGA) number must be received from the above office and placed on all shipments to and in correspondence with ENPRESS LLC.

### Please be prepared with the following information:

1

Model number and serial number.

2

Date of installation.

3

Name of installer.

4

Nature of problem.

5

Your address and contact information

