

# cascade

DRINKING WATER FILTRATION SYSTEM

Owner's Manual &  
Installation Guide



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**A****OWNER'S MANUAL  
About This System**

Congratulations on your purchase of the Cascade Drinking Water Filtration System. When properly maintained, this system will provide you with years of trouble-free service. The next three sections contain important information on the proper care and maintenance of your system, please take a few minutes to read through this information.

**B****OWNER'S MANUAL  
Maintenance Schedule**

The Cascade Drinking Water Filtration System must be serviced on a regular basis to maintain efficiency and to safeguard water quality. Each system is equipped with a sediment pre-filter and two high-capacity block carbon filters. These cartridges work together to remove sediment and chlorine taste and odor from your tap water. They must be replaced every 6-12 months. The chart below gives a general replacement timetable. Instructions for cartridge replacement can be found in Section 9 of the Installation Guide. Any significant change in performance of the system should be investigated promptly to avoid secondary damage or deterioration to other parts of the system.

Component	Interval	Indications
Sediment	6-12 months	Water production slows
Carbon Filters	6-12 months	Odors, including chlorine smell in the product water

**C****OWNER'S MANUAL  
System Information**

Immediately after installation, please fill out the form below and retain for future reference.

Model: Cascade NS-I4

Serial No: \_\_\_\_\_

Install Date: \_\_\_\_\_

Service Phone: \_\_\_\_\_

**D****OWNER'S MANUAL  
System Specifications**

System Capability	2000 gpd	Feed water	Potable water
Sediment Filter	25 micron	Minimum feed pressure	40 psi
Carbon Block Filters (2)	5 micron	Maximum feed pressure	100 psi
Manifold dimensions	12.5"W x 15"H x 4.5"D	Minimum feed temp.	32°F
Manifold weight (dry)	6.25 lbs.	Maximum feed temp	120°F

***Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.***

This system has been designed for installation by a licensed professional such as a contractor or plumber. Proper completion of this installation will require basic familiarity with standard sink plumbing and proper use of common hand and power tools. Improperly installed systems could result in water damage due to leaks or flooding.

**E****OWNER'S MANUAL  
System Warranty**

The Cascade Limited Warranty extends to the original purchaser of the system. This warranty covers all parts and factory labor needed to repair any Manufacturer-supplied item that proves to be defective in material, workmanship or factory preparation. The Warranty applies for the first full calendar year from date of purchase. These defective items are subject to the following exclusions: membranes, filters, O-rings, and all other parts or components that require regular replacement as a result of ordinary usage.

**Disclaimers** This Warranty applies only if the system is installed and used in compliance with the instructions enclosed with the system.

The Warranty does not cover any non-standard Cascade parts. This Warranty does not cover the costs of repairs or adjustments to the unit that may be needed due to use of improper parts, equipment or materials. This Warranty does not cover repairs required due to use of non-standard Cascade parts, unauthorized alterations of the unit, or failure of a unit caused by such alterations or by unauthorized repairs.

The Warranty does not cover malfunctions of the unit due to tampering, misuse, alteration, lack of regular maintenance, or misapplication. In addition, damage to the unit due to fire, accident, negligence, act of God, or events beyond the control of the Manufacturer are not covered by this warranty.

**Incidental and Consequential Damages** The Manufacturer does not assume responsibility for payment of incidental and consequential damages as a result of the failure of this unit to comply with express or implied warranties, such as lost time, inconvenience, damage to personal property, loss of revenue, commercial losses, postage, travel, telephone expenditures, or other losses of this nature. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion may not apply to you.

**Owner's Warranty Responsibilities** Under the provisions of the Warranty, the owner is expected to perform scheduled maintenance, as described in this Manual. Neglect, improper maintenance, abuse, or unapproved modifications may invalidate the Warranty. Should your unit develop a defect or otherwise fail to perform in accordance with this Warranty, you should contact the dealer from whom the product was originally purchased.

**Implied Warranties** The implied at-law Warranties of merchantability and fitness for a particular purpose shall terminate on the date one year after the date of purchase. Note: some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

**Other Rights** This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

# 1

## INSTALLATION

### Before You Begin

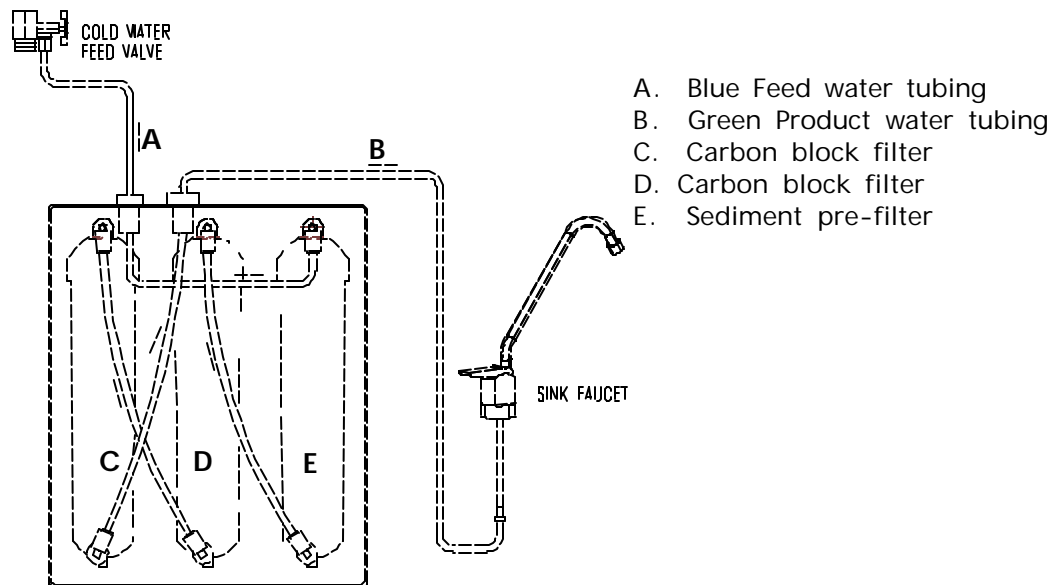
The following instructions outline a typical water treatment system installation. Consult local plumbing codes and building regulations as they may pose different or additional requirements for the installation. The installer is responsible for ensuring that the installation is in compliance with all applicable state and local regulations.

This system has been designed for installation by a licensed professional such as a contractor or plumber. Proper completion of this installation will require basic familiarity with standard sink plumbing and proper use of common hand and power tools. Improperly installed systems could result in water damage due to leaks or flooding.

The connection parts kit supplied with the Cascade Drinking Water Filtration System includes components which represent the most common under-sink plumbing connections currently in use within the United States. If these components do not match the type of connections installed at your location, contact a local hardware or plumbing supplier to obtain the correct fittings.

**Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.**

Typical Installation Diagram

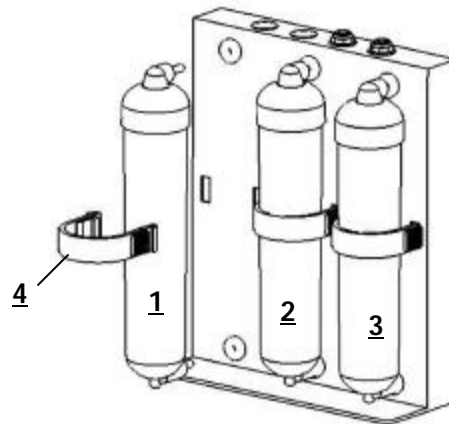


## 2

## INSTALLATION Parts

### Cascade Manifold Unit

1. Sediment Pre-filter
2. Carbon Block Filter
3. Carbon Block Filter
4. Cartridge Retainer clips (3)

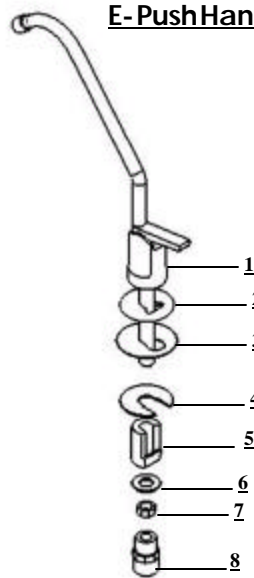


### Faucet Kit (Fig E Push Handle)\*

1. Main faucet body
2. Polished faucet base
3. Faucet base Gasket
4. Large slotted washer
5. White plastic spacer
6. 3/8" washer
7. Mounting lock nut
8. Quick-connect fitting

\*Parts bag may contain items not needed for this system configuration

### E-Push Handle



### Not Shown

- 4' blue tubing
- 4' green tubing
- Date of Installation Labels (3)
- Feed Valve Warning Tag
- Feed Shut-off Warning Label
- Self tapping Mounting Screws (2)

# 3

## INSTALLATION

### Feed Connection

1. Locate and turn off the angle stop valve on the cold water line feeding the sink where the Sierra unit is to be installed. This valve will usually be located under the sink on the pipe coming out of the wall.

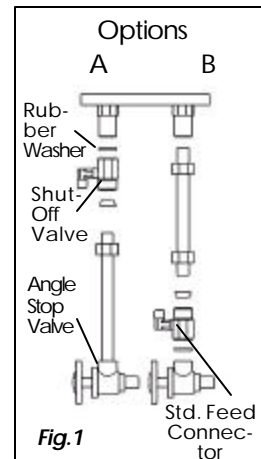
*Hint: Be sure to make this connection on the COLD water feed, not the HOT water feed. If you are not sure which line is the cold water line, open the hot water tap on the sink until hot water flows from the faucet. The hot water line under the sink can then be identified by touch.*

2. When the angle stop valve is closed, relieve pressure in the line by opening the cold water tap on the sink.

3. It may be possible to install the feed adapter fitting at either the angle stop valve or at the faucet inlet connector depending on the size and type of fittings at your location. The angle stop valve is preferable because of its easier accessibility. Both options are given in Fig 1.

Option A - To install the feed adapter at the faucet connector disconnect the cold water feed line where it connects to the faucet inlet connector. This will usually require an open end wrench, pliers, or long reach faucet wrench. Proceed to step 4.

Option B - To install the feed adapter at the angle stop valve, disconnect the feed line at the angle stop valve. This will usually require a wrench or pliers. With this end of the water line free, proceed to step 4.

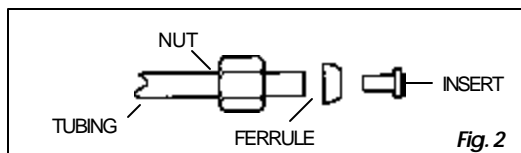


4. Take the 1/4" feed connector valve from the parts kit and install it into the brass feed connector adapter. Use a crescent wrench or open-end wrench to tighten the valve into the adapter (Option B shown in Fig. 1). If the feed adapter is to be installed at the faucet inlet connector (Option A shown in Fig. 1) it may be necessary to install the feed connector valve after step 5 due to limited space.

5. Using the flat and cone washers as necessary, install the feed adapter into the faucet inlet connector or angle stop valve as chosen above. Then reconnect the cold water feed line to the open end of the feed adapter. Tighten all connections securely.

6. Using the green tubing, install the brass nut, then the plastic ferrule and plastic tube insert. Secure the tubing into the feed connector valve. Tighten the tubing retaining nut securely. See Fig. 2.

7. Obtain the small feed valve warning tag from the parts bag and attach it by its wire ties to the feed valve.

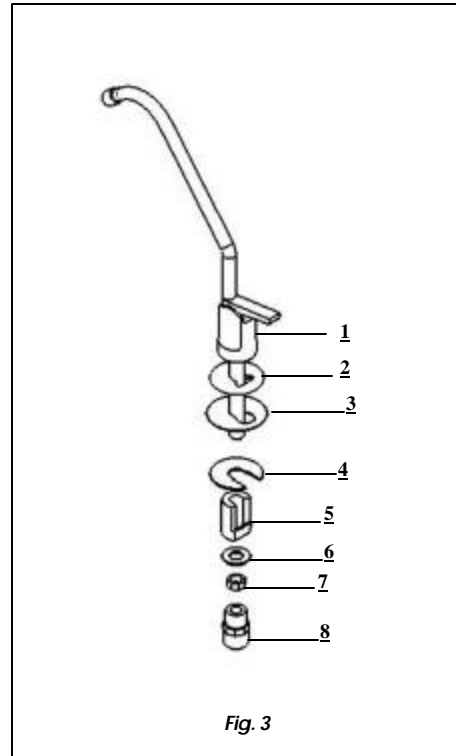


# 4

## INSTALLATION PushHandleFaucet

For easier installation, attach tubing prior to mounting the faucet as described below. Refer to Figure 3 for the following instructions.

1. Insert polished faucet base (2) and gasket (3) onto base of faucet (1).
2. Slide white plastic spacer (5) open-end-up onto the threaded faucet stem.
3. Thread the 3/8" washer (6) and mounting lock nut (7) onto the threaded stem. Do not tighten until step 6.
4. Thread the quick-connect fitting (8) on to the faucet stem threads. This connection should be hand-tightened only. Push one end of blue tubing forcefully into quick connect side of the fitting (8).
5. Insert tubing and faucet assembly down through the sink hole.
6. Position the faucet to the desired handle orientation. From underneath the sink, slip the slotted washer (4) between the white plastic spacer and the sink. Securely hand tighten the mounting nut (7).
7. Apply a small amount of FDA-approved silicone-based lubricant (not provided) to the O-rings located at the base of the spout. Firmly insert spout assembly into the top hole of faucet body ensuring it goes to the bottom of the hold. You may swivel the faucet left or right.



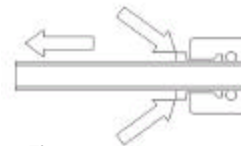
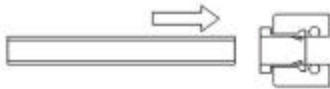
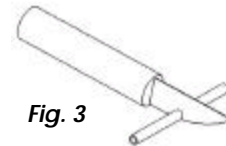
# 5

## INSTALLATION The Manifold Unit

Determine the most practical under-the-sink location for placement of the Cascade manifold unit. Ensure that the specific location allows adequate access to the manifold unit for cartridge replacement.

1. Place the manifold in the selected location. If desired, the #6 self tapping screws may be used to secure the manifold unit in position by means of the top rear and bottom lip mounting holes.
2. Route the blue tubing from the faucet assembly to the blue coded connector, marked Feed, on the top of the manifold unit.
3. Take the green tubing already connected to the water feed valve and run it to the manifold unit arranging the lie as desired. Trim the end of the green tube as described in step 5 above then insert it into the green coded connector. Push the tubing approximately 1/2" into the connector until fully seated.
4. Obtain the Shutoff Warning label from either the parts bag or loose with these instructions and affix the label in the vicinity of the manifold unit so that it is directly visible in the event that a cartridge is to be replaced. The Cascade Drinking Water Filtration system is now connected and ready for initial test and preparation.

*TUBING HINTS: Use a sharp knife or tubing cutter to cut the tubingsquarely, beingsure to remove all burrs. Then insert the tubing firmly until it stops. To remove the tubing, push against the collet while pulling on the tubing.*



## 6

### INSTALLATION Activation/Flushing

#### System Activation and Inspection

1. Check all tubing connections to ensure they are firmly seated. CHECK TO SEE THAT THE CARTRIDGE RETAINER CLIPS ARE PROPERLY INSTALLED WITH SLIDE LOCKS FULLY ENGAGED IN FRAME SLOTS. The retainer clips must be in place during long term, unattended operation of the system. Failure to keep the retaining clips in place could result in accidental leaks and flooding.
2. Open the dispensing faucet at the sink. Open the feed water valve to the system. Observe all tubing and connections for several minutes to detect any leaks. Allow the faucet to run for at least 3 minutes, then close the faucet. A small amount of carbon fines may be seen in the initial flushing of the system.
4. Check fittings again for leaks after closing the faucet.

## 7

### INSTALLATION Check List

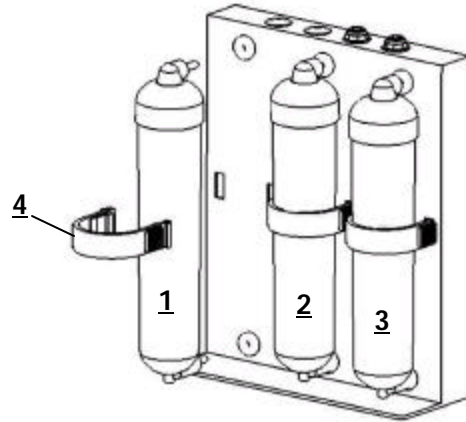
1. Cascade unit is located where it will not be subject to physical impacts or rough contact by heavy objects.
2. Feed water pressure to the unit is no less than 40 psi and no greater than 100 PSI.
3. All cartridge plastic retainer clips are installed properly.
4. All tubing connections, especially push-in quick connections, are fully inserted.
5. Feed valve is open.

# 8

## MAINTENANCE Replacements

To order replacement parts, please contact your Cascade dealer.

*Use of non-Cascade replacement parts will invalidate the Warranty as set forth in Section E of the Owner's Manual.*



Description	Part No.
Pre-Filter, Sediment <u>1</u>	104380
Carbon Block Filter <u>2</u> / <u>3</u>	104851
Cartridge Retainer Clip <u>4</u>	102131
Faucet Kit - Push Handle Style	100470
Feed Water Valve	104503

# 9

## MAINTENANCE Cartridges

Refer to Section B in the Owner's Manual portion of this guide for a suggested replacement schedule.

### Cartridge Replacement

1. Close the feed water shut-off valve.
2. Open the dispensing faucet.
3. Pull the manifold unit from the installed location.
4. Remove the retaining clip at the front of the unit by pulling back the slide lock and squeezing and pulling to remove. Pull the cartridge off the manifold evenly at top and bottom. Dispose of used cartridge.
5. Install the new cartridge, rocking gently from side to side as necessary until the cartridge tubes are properly engaged in the manifold connectors. Install the retaining clip ensuring the slide locks snap into place in the slots. If the clip does not snap easily into place through the slots it means the cartridge is not fully inserted into the connectors. Press top or bottom of cartridge to engage connectors until it snaps into place properly.
6. Close the dispensing faucet. Turn on feed water valve. Observe system for any leaks, especially at newly replaced cartridge.
7. If the replaced cartridge was a carbon filter, open the dispensing faucet and let water run for at least 3 minutes to flush out any carbon fines.



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