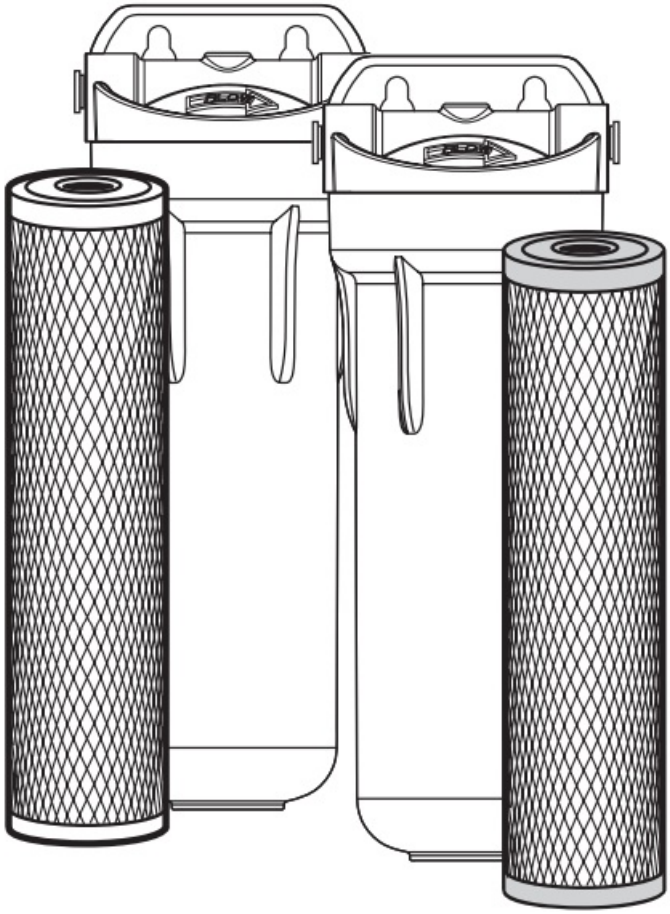
PENTAIR CBF1 Undersink Drinking Water Filter System Instruction Manual

PENTAIR

OMNIFILTER
Undersink Drinking Water Filter System



Model CBF1 & CBF3
INSTALLATION INSTRUCTIONS

Contents

Undersink Drinking Water Filter System

Tools and Fittings Required

- Phillips screwdriver
- Adjustable wrench
- Tube cutters or utility knife
- Towel
- Tape measure
- Pencil
- Safety glasses

Parts Included

- Filter system with filter cartridge – (CBF1 w/ CB1 Cartridge or CBF3 w/ CB3 Cartridge)
- Screws for mounting bracket cap
- Water supply adapter
- Housing wrench
- Lead-free drinking water faucet
- 1/4-inch plastic tubing

	The CBF1 is Tested and Certified by NSF International against CSA B483.1 and NSF/ANSI St andard 42 & 53 for the reduction of claims specified on the Performance Data Sheet.
	The CBF3 is Tested and Certified by NSF International against CSA B483.1 and NSF/ANSI St andard 42 & 53 for the reduction of claims specified on the Performance Data Sheet.
	The CBF3 is certified by IAPMO R&T against NSF/ANSI 53 for the reduction of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS).

OPERATING SPECIFICATIONS

Pressure Range:	30–125 psi
Temperature Range:	40 – 100°F
Turbidity:	5 NTU max
Model CBF1	
Flow Rate:	1 gpm
Capacity:	1,000 gallons
Model CBF3	
Flow Rate:	0.5 gpm
Capacity:	400 gallons

PRECAUTIONS

⚠ WARNING Do not use with water that is microbiologically unsafe, or of 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.

CAUTION Filter must be protected against freezing, which can cause cracking of the filter and water leakage.

CAUTION The rubber o-ring provides the water-tight seal between the cap and the bottom of the housing. It is important that the o-ring be properly seated in the groove above the threads of the housing or a water leak could occur.

CAUTION Because of the product's limited service life and to prevent costly repairs or possible water damage, we strongly recommend that the bottom of all plastic housings be replaced every ten years. If the bottom of your housing has been in use for longer than this period, it should be replaced immediately. Date the bottom of any new or replacement housing to indicate the next recommended replacement date.

CAUTION Do not use electrical heating tape on this unit.

NOTES:

- For cold water use only.

- The contaminants or other substances removed or reduced by this water treatment device are not necessarily in your water. Ask your local water municipality for a copy of their water analysis, or have your water tested by a reputable water testing lab.
- Filter cartridge life varies depending on filter type, usage, and water conditions.
- The replacement filter cartridge used with this system has a limited service life. Changes in taste, odor, or flow of the water being filtered indicate that the cartridge should be replaced.
- Use only Omnifilter replacement cartridges.
- This installation must comply with all applicable state and local regulations.
- Use only plumber tape without adhesive backing to seal joints.
  Do not use pipe compound (“pipe dope”), sticks, or similar compounds with this unit; they contain petroleum derivatives which will cause crazing and cracking of the plastic in the filter housing.
- Use only soap and water to clean filter housing and components.
- After prolonged periods of non-use, such as a vacation, it is recommended that the system be flushed thoroughly. Let water run for 5-6 minutes before using.
- Wear safety glasses during installation.
- Spent adsorption media will not be regenerated and used.
- If adsorption media is affected by chlorine, influent will need to be treated to remove chlorine.

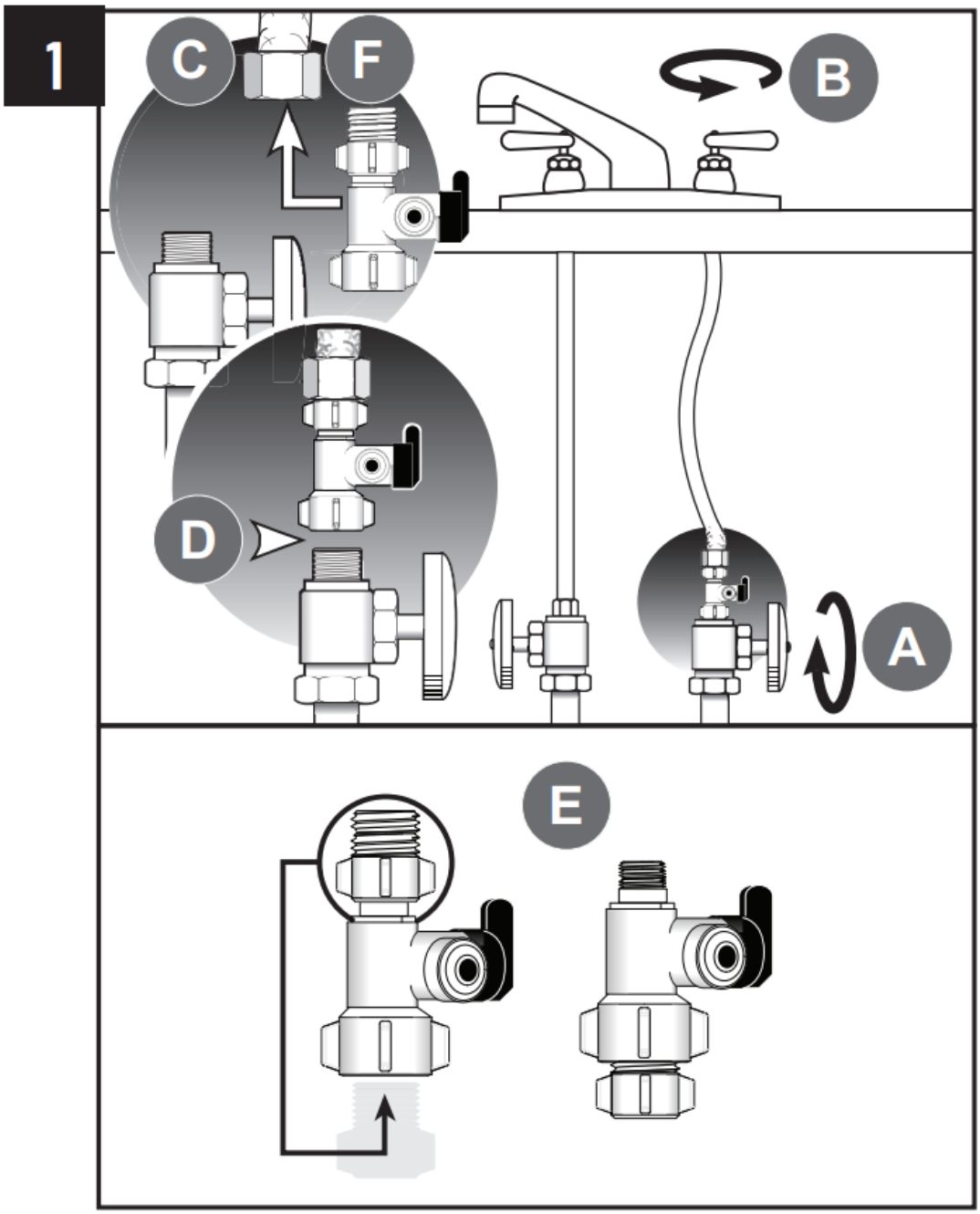
INSTALLATION INSTRUCTIONS

NOTES:

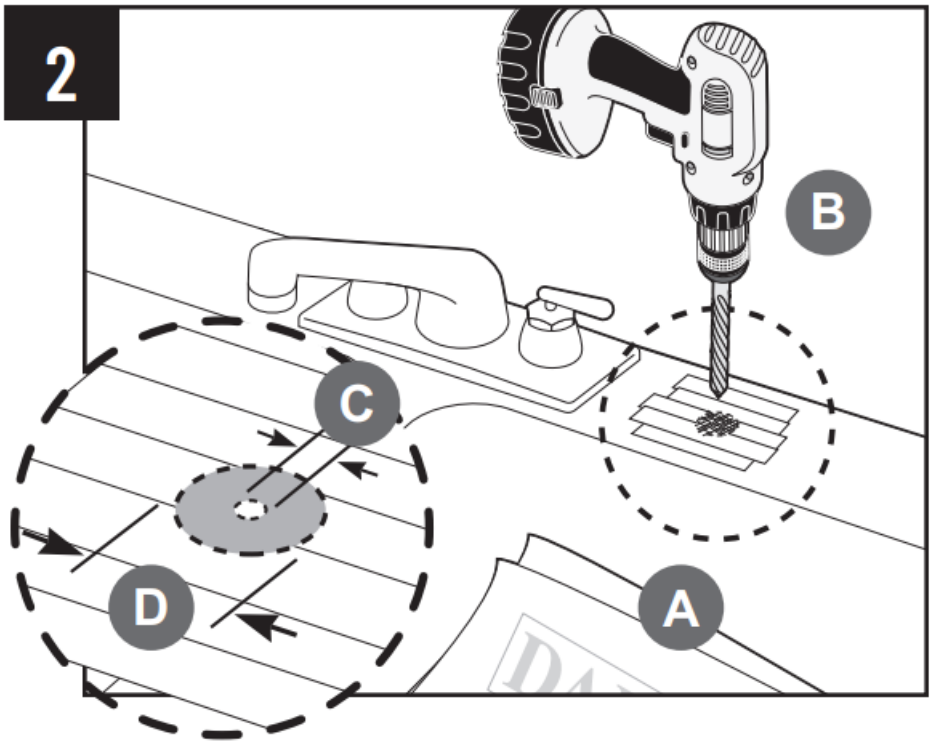
- Please read all instructions, specifications, and precautions before installing and using your water filter.
- Numbered diagrams correspond with numbered steps.

Installation

1. **Installing the Water Supply Adapter**
   The supply adapter fits 1/2”-14 NPS supply threads or 3/8” x 3/8” compression. If local codes permit, it may be used to connect the system to the cold water supply line. If local codes do not permit the use of the supply adapter, alternate connectors can be obtained from your local supplier.
   A. Turn off cold water supply line. If cold water line does not have a shut-off valve under the sink, you should install one.
   B. Turn on the cold water faucet and allow all water to drain from line.
   C. Disconnect riser cold water supply valve.
   D. Ensure the sealing gasket is fully seated into the feed adapter valve female thread.
   E. Install feed adapter valve onto supply valve as desired.
   The feed adapter valve may be installed at the bottom of the supply hose or the top of the cold water line. Hand tighten only.
   F. Connect the riser to the feed adapter valve.



2. **Selecting the Faucet Location**



NOTE: The drinking water faucet should be positioned with function, convenience, and appearance in mind. An adequate flat area is required to allow faucet base to rest securely. The faucet fits through a 3/4-inch hole. Most sinks have pre-drilled 1 3⁄8-inch or 1 1⁄2-inch diameter holes that may be used for faucet installation. If these pre-drilled holes cannot be used or are in an inconvenient location, it will be necessary to drill a 3/4-inch hole in the sink to accommodate the faucet.

CAUTION This procedure may generate dust which can cause severe irritation if inhaled or comes in contact with the eyes.

The use of safety glasses and respirator for this procedure is recommended.

CAUTION Do not attempt to drill through an all-porcelain sink. If you have an all-porcelain sink, mount the faucet in pre-drilled sprayer hole or drill through countertop next to sink.

CAUTION When drilling through a countertop, make sure the area below the drilled area is free of wiring and piping. Make certain that you have ample room to make the proper connections to the bottom of the faucet.

CAUTION Do not drill through a countertop that is more than one-inch thick.

CAUTION Do not attempt to drill through a tiled, marble, granite or similar countertop. Consult a plumber or the countertop manufacturer for advice or assistance.

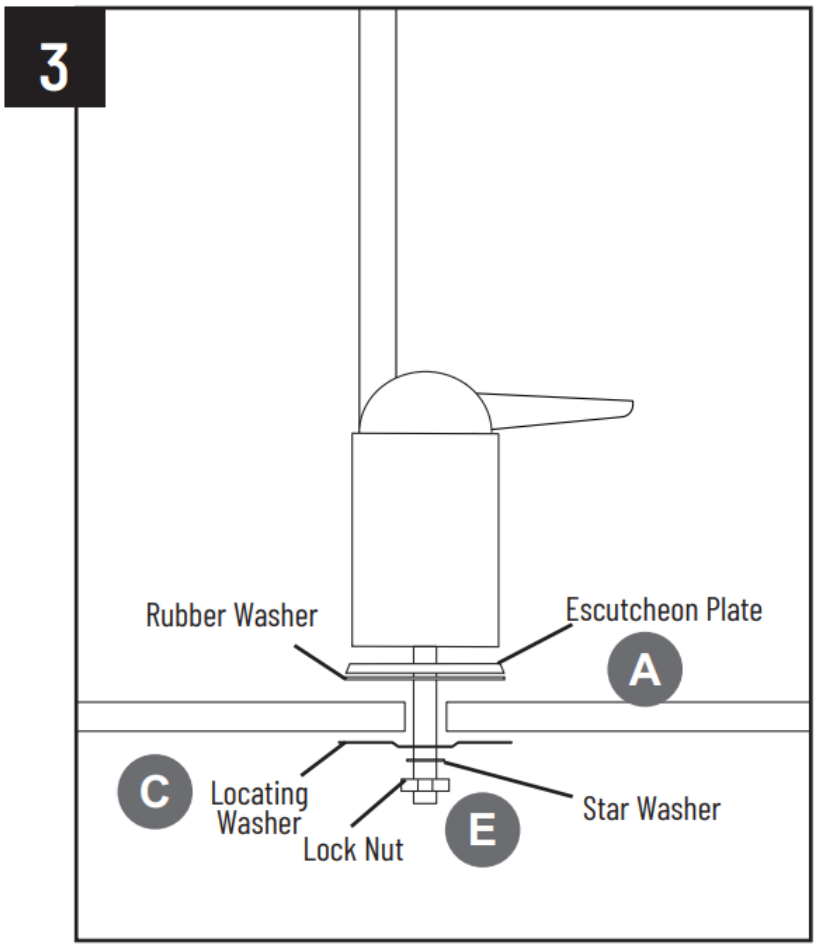
A. Line bottom of sink with newspaper to prevent metal shavings, parts, or tools from falling down drain.

B. Place masking tape over the area to be drilled to help prevent scratches if drill bit slips.

C. Mark hole with center punch. Use a 1/4-inch drill bit for a pilot hole.

D. Using a 3/4-inch drill bit, drill a hole completely through the sink. Smooth the rough edges with a file.

3. **Mounting the Faucet**



A. Place the decorative escutcheon plate over the threaded shaft followed by the flat rubber washer.

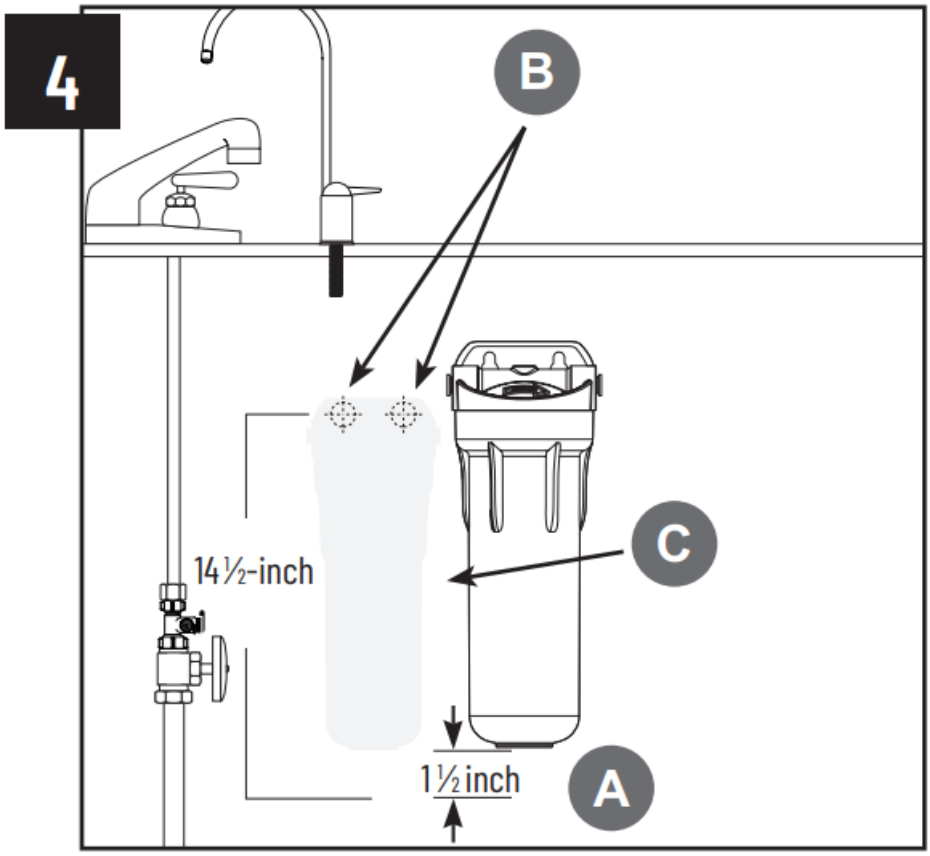
B. Slide the threaded shaft into the hole on the sink top.

C. The locating washer is positioned with the center facing down. If the hole is 1/2-inch or larger the locating washer is turned over. The center of the washer will position the faucet in the hole.

D. Place the star washer and the lock nut onto the threads and finger tighten.

E. Place the faucet in final position and tighten the lock nut until the faucet is secure.

4. **Mounting the System**

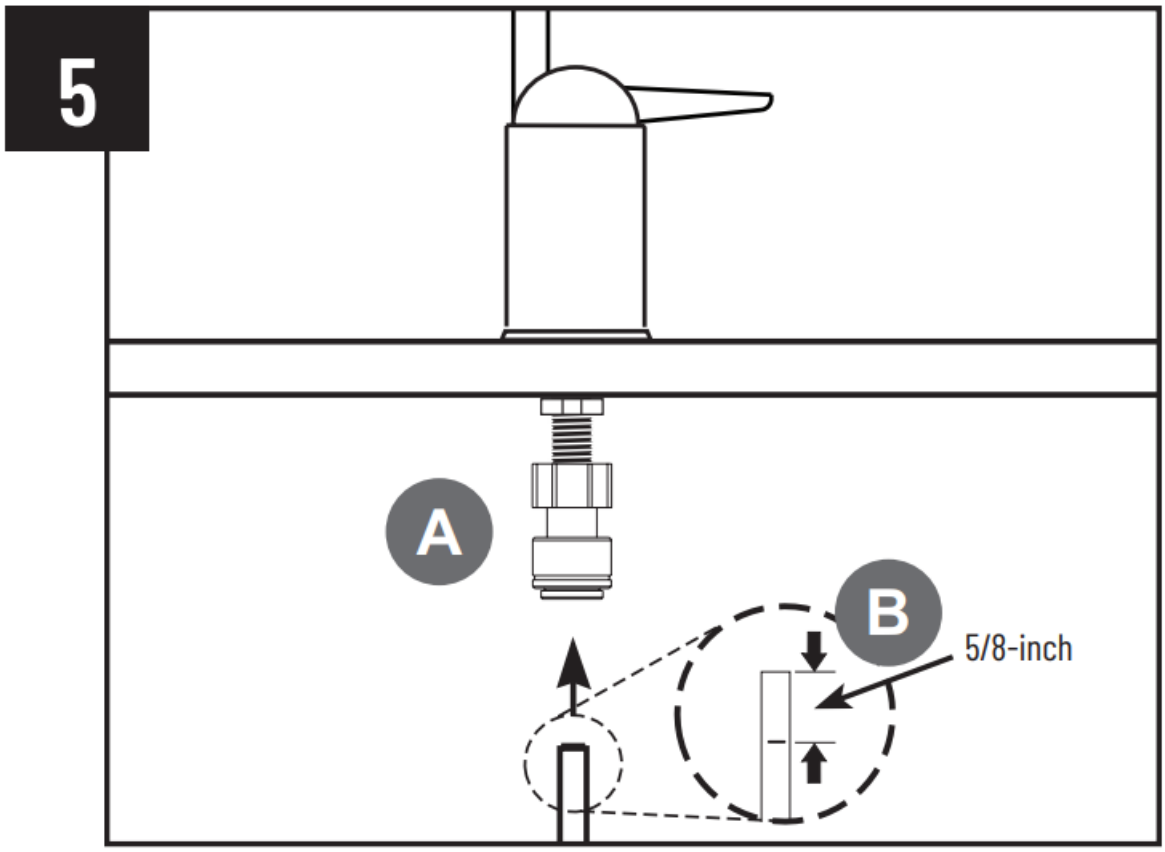


A. Select location under sink or in basement where filter is to be mounted.

NOTE: Allow 1 1 ⁄2-inches clearance below housing to enable filter cartridge changes.

B. Install mounting screws at least 14 1 ⁄2-inches from cabinet floor and 2 1 ⁄4-inches apart. Leave enough space (approximately 3/8-inch between the head of the screw and the wall to slip system onto screws. C. Place system over screws on wall and slide downwards to lock into place. Make certain system is firmly attached to wall to prevent it from falling and possibly being damaged.

5. **Connecting the Faucet**



A. Thread flow control onto threaded stem of faucet. (Do not use Plumber tape or sealant.) Tighten flow control hand tight. Finish tightening with a wrench an additional 1/2 turn, do not overtighten.

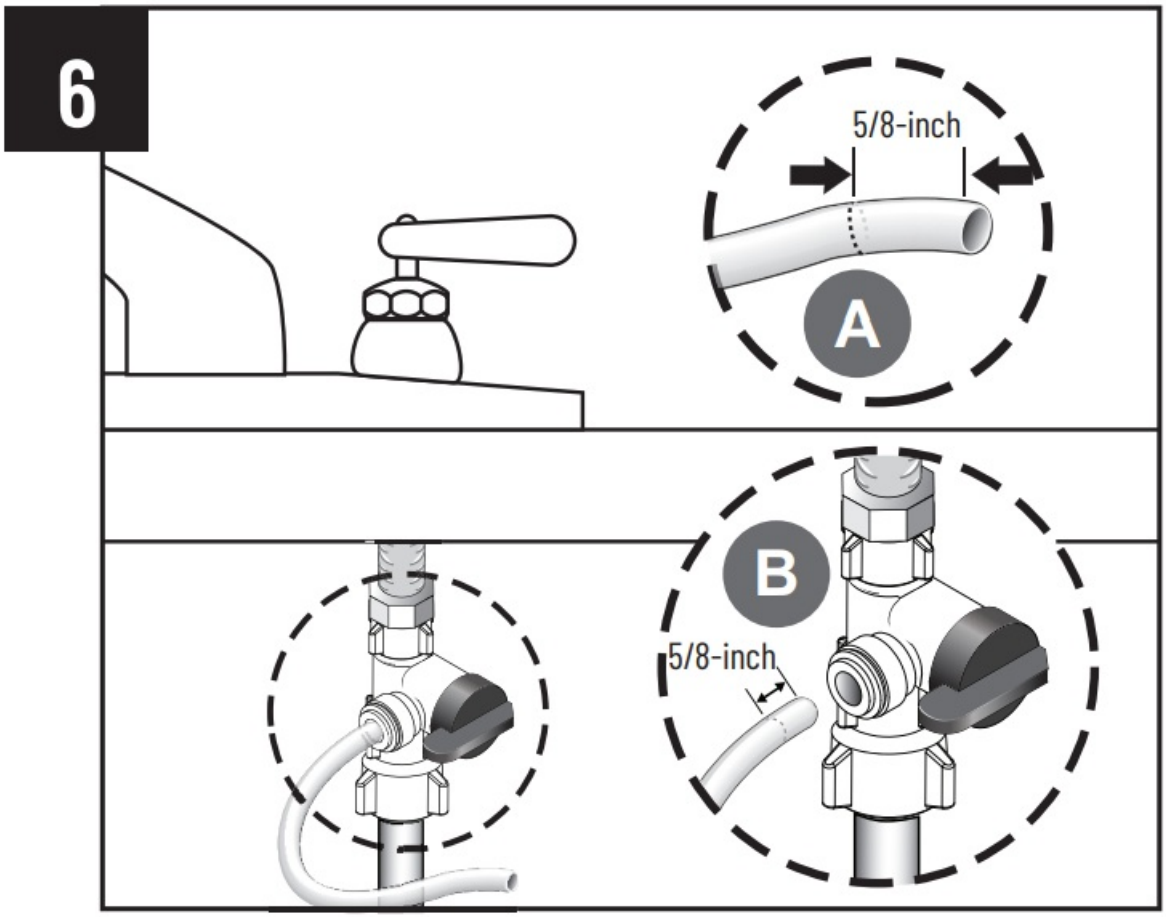
B. Insert one end of the 1/4-inch tube, supplied in the installation kit, into the quick-connect fitting collar located on the bottom of the flow control on the faucet. Push tubing into the fitting approximately 5/8-inch until you come to a hard stop. (Do not bend or crimp tube when inserting.)

Gently pull back on the tube to ensure it is connected properly. If the tube comes out of fitting, cut a small section of the tube off and reconnect.

NOTE: Disconnecting the tubing from the quick-connect fittings.

Routine maintenance and cartridge replacement will not require that you disconnect the tubing from the filter system; however, tubing may be quickly and easily removed from the fitting if necessary. First, turn off the water supply to the filter. Open faucet, then press in the collar around the tube while pulling the tubing with your other hand.

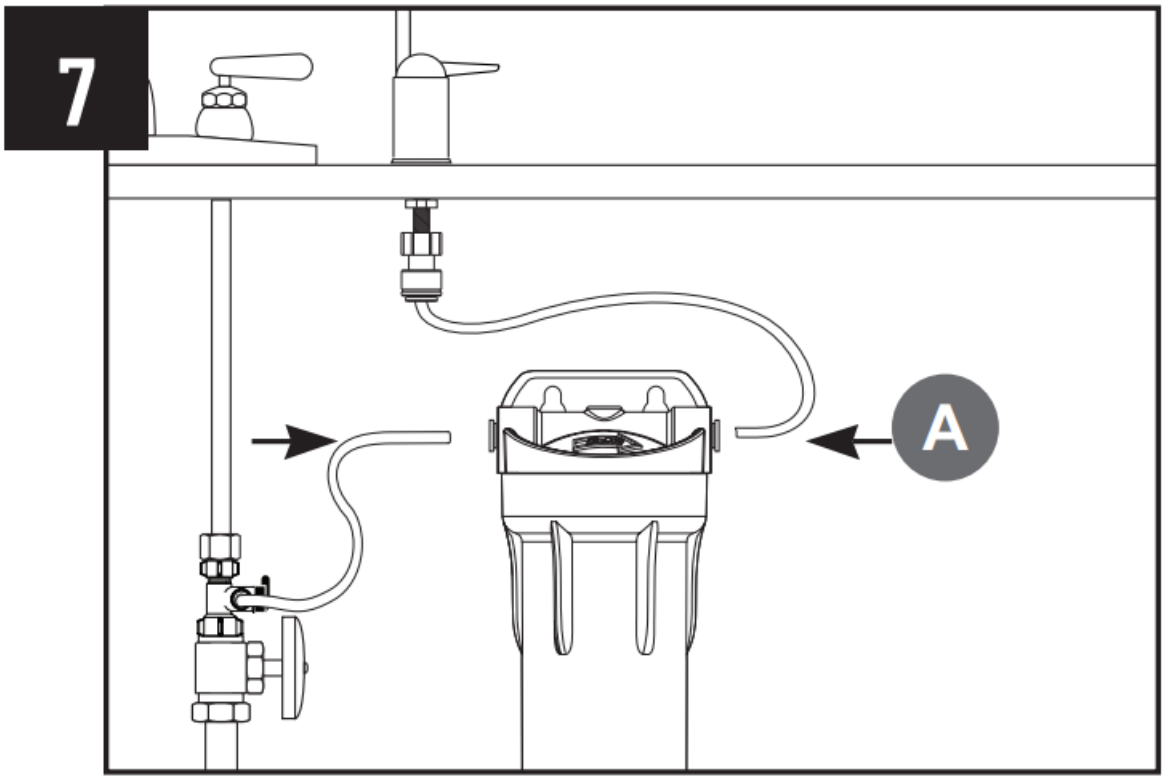
6. **Connecting the Supply Adapter**



A. Locate remaining length of 1/4-inch plastic tubing. Place a mark on the tubing 5/8-inch from the end. Moisten the end of the tubing with water and insert with a twisting motion push into quick connect fitting on the left side of system. Depending on the installation, the system may need to be removed from the mounting surface to access the left side of the system.

B. Cut the tube to a length that will allow connection to the Water Supply Adapter. Ensure the tubing does not kink. Place a mark on the tubing 5/8-inch from the end. Moisten the end of the tubing with water and insert with a twisting motion push into quick connect fitting on the Water Supply Adapter.

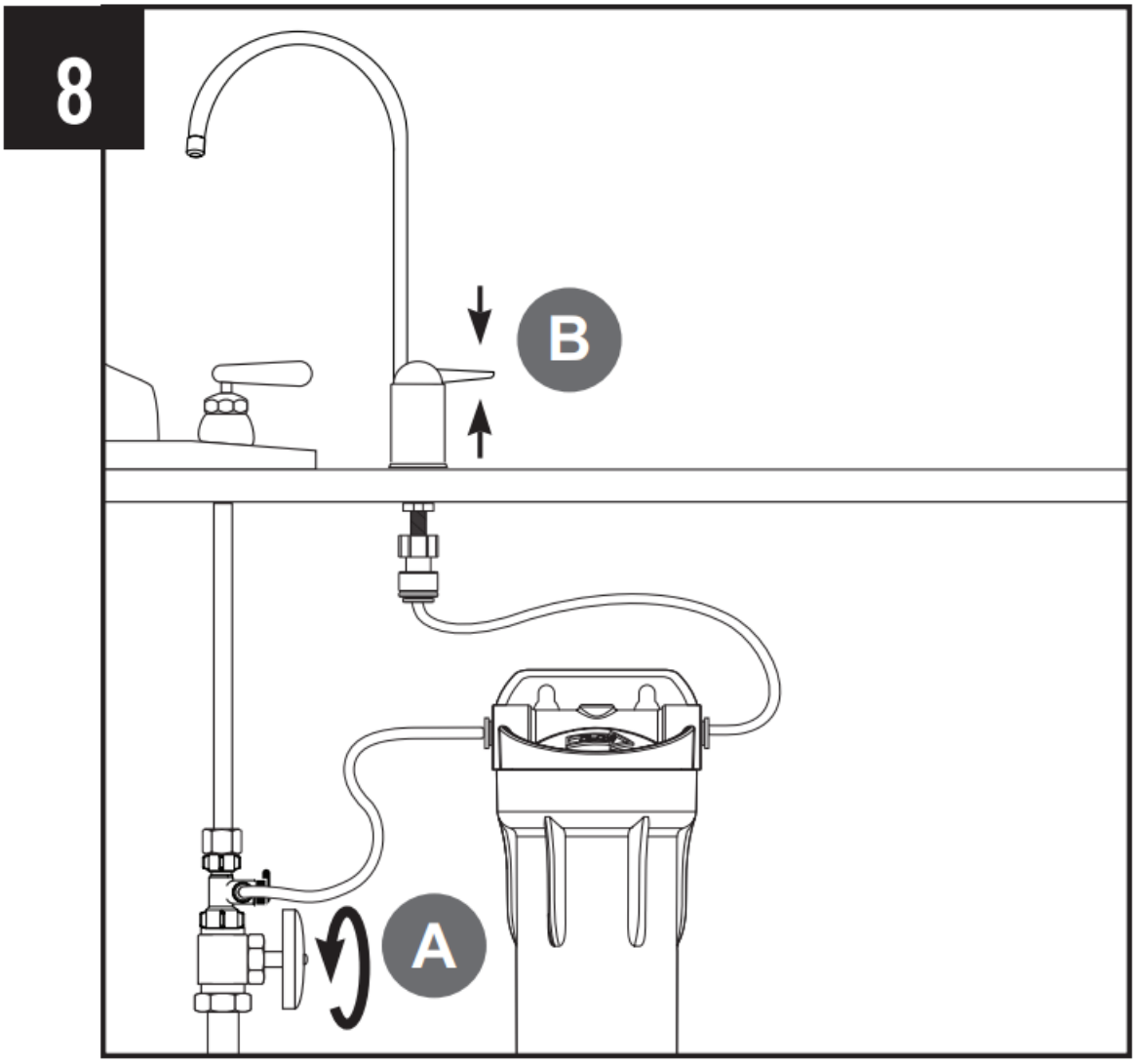
7. **Connecting the System**



A. Assemble tubing with system as shown in Figure 7, inserting supply adapter tubing into inlet and faucet tubing into outlet quick-connect fitting approximately 5/8-inch until it stops.

NOTE: In some installations, connecting the system to the water supply adapter and/or drinking water faucet causes the tubing to enter the quickconnect fitting at a sharp angle. This may exert pressure on the quickconnect fitting and cause it to leak. If sharp angles at the connections are unavoidable, please contact Omnifilter Customer Service at 800.279.9404.

8. **Putting the System into Operation**



A. Slowly turn on cold water supply.

B. Lift up drinking water faucet handle to lock faucet in open position.

Allow water to run for 5 minutes to flush air and carbon fines from filter cartridges. Check system for leaks before leaving installation. If there are any leaks, see Troubleshooting.

NOTE: It is recommended that you run the tap at least 20 seconds prior to using water for drinking or cooking purposes.

NOTE: Initially, filtered water may appear cloudy. If you set a glass of water on a level surface, you should be able to watch the cloudiness disappear from the bottom of the glass upwards. This harmless cloudiness results from the release of trapped air within the cartridge and will disappear within a few weeks after installation.

NOTE: The drinking water faucet can be operated by pushing the handle down to fill a glass. Pull up on the handle to lock it in position to fill larger containers.

INSTALLATION IS NOW COMPLETE.

WHEN TO CHANGE THE CARTRIDGE

The life of the cartridge depends on the water volume used and the substances in the water. Normally the cartridge should be changed at intervals of 400 gallons or less. Replace the cartridge sooner if the water pressure at the faucet begins to drop noticeably or if you notice changes in the taste, color, or flow of the filtered water.

NOTE: Certain types of harmless bacteria will attack cellulose material. Cartridges containing cellulose, such as the TO1 may seem to disintegrate, produce a “sewer” or “rotten egg” odor, or form a black precipitate due to bacteria. If this happens, consult Omnifilter Customer Service for advice or select a different Omnifilter cartridge.

FILTER CARTRIDGE REPLACEMENT

Filter cartridges for the CBF1 will last about 1,000 gallons and the CBF3 will last about 400 gallons before they need to be replaced.
Filter cartridge life varies depending on usage, and/or water conditions. Changes in taste, color, and flow of the water being filtered indicate that the cartridge should be replaced.
NOTE: Read all instructions before replacing filter cartridge.
A. Turn off cold water supply and open the drinking water faucet to release pressure from system.
B. Unscrew and remove bottom of filter housing. Locate and remove large o-ring, wipe clean of lubricant, and set aside.
C. Discard used filter cartridge. Using a non-abrasive sponge or cloth, scrub the bottom of filter housing, o-ring groove, and cap with dish soap and warm water. Rinse thoroughly. Fill bottom of the housing 1/3 full with water. Add 1 tablespoon of household bleach and scrub to disinfect.
D. Lubricate o-ring with silicone grease. Insert o-ring in groove and press into place.
NOTE: This step is important to ensure a proper housing seal. Make certain each o-ring is seated level in its groove or a leak may occur.
E. Screw bottom of housing with bleach water onto cap without filter cartridge and hand-tighten.
DO NOT OVER-TIGHTEN.
F. Turn on water supply. Let faucet run for about 10 seconds, then turn off faucet and let stand for 20-30 minutes.
G. Turn on faucet and allow bleach water to run out (about 3-5 minutes).
H. Turn off water supply to system and open faucet to release pressure. Remove bottom of housing and empty water.
I. Insert filter cartridge into bottom of filter housing.
J. Screw bottom of housing onto cap and hand-tighten.
DO NOT OVER-TIGHTEN.
Make certain cap standpipe slips into cartridge.
K. Open water supply and turn on drinking water faucet to release pressure in system. Let faucet run for 5 minutes to remove trapped air and carbon fines. Check system for leaks before leaving installation.

NOTE: It is recommended that you run the tap at least 20 seconds prior to using water for drinking or cooking purposes.
NOTE: Initially, filtered water may appear cloudy. If you set a glass of water on a level surface, you should be able to watch the cloudiness disappear from the bottom of the glass upwards. This harmless cloudiness results from the release of trapped air within the cartridge and will disappear within a few weeks after installation.
NOTE: Use only genuine Omnifilter replacement cartridges for best results. Failure to use Omnifilter replacement cartridges will void your warranty.

TROUBLESHOOTING

Leaks between cap and bottom of housing:

1. Turn off water supply and depress pressure-relief button.
   Remove the bottom of the housing.
2. Clean and lubricate o-ring with silicone grease. Also, clean the groove where the o-ring seats with a clean cloth. Replace o-ring back in groove above threads. Screw bottom of housing back on cap securely by hand.
   DO NOT OVER-TIGHTEN.
3. Turn on water supply. If leaks persist, or if there are other leaks on the system, turn off water supply. Call Omnifilter Customer Service at 800.279.9404.

Leaks on inlet/outlet connections:

1. Turn off water supply and turn on faucet to release pressure in pipes. Remove tubing from fitting (see step 5 under Installation) and make sure end of tubing is cut squarely and free of burrs.

Reinsert tubing into quick-connect fittings, making sure to push securely until tubing hits a hard stop.

2. Turn on water supply. If leaks persist, or if there are other leaks on system, turn off water supply. Call Omnifilter Customer Service at 800.279.9404.

CBF1 PERFORMANCE DATA

Important Notice: Read performance data and compare the capabilities of this system with your actual water treatment requirements. It is recommended that the supply water be tested, before installing a water treatment system, to determine your water treatment needs.

CBF1 System with CB1 Filter Cartridge installed

This system has been tested according to NSF/ANSI 42 and 53 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water exiting the system, as specified in NSF/ANSI 42 and 53.

Substance	Influent Challenge Concentration	Maximum Permissible Product Water	Reduction Requirements	Average Reduction
Standard 42				
Chlorine	2.0 mg/L ± 10%	–	>50%	97.%
Standard 53				
Cysts**	Minimum 50,000 Microsphere/L	–	100.%	>99.99%

** NSF/ANSI Standard 53 certified to reduce cysts such as Cryptosporidium and Giardia by mechanical means.

CBF1 Test Conditions

Flow Rate Filter Capacity Inlet Pressure pH Temperature	CB1 cartridge 1.0 gpm CB1 cartridge 1,000 gallons = 60 psi = 7.5±1 = 68°F ± 5°F

Testing was performed under standard laboratory conditions; actual performance may vary.

Operating Requirements

Pressure Temperature Turbidity	= 30-125 psi = 40-100°F = 5 NTU Max.

EPA Est. No. 090375-Mex-001

⚠ WARNING Do not use with water that is microbiologically unsafe or of 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.
NOTE: Filter must be maintained according to manufacturer's recommendations, including replacement of filter cartridges.
The contaminants or other substances reduced by this water treatment device are not necessarily in your water.

CBF3 PERFORMANCE DATA

Important Notice: Read performance data and compare the capabilities of this system with your actual water treatment requirements. It is recommended that the supply water be tested, before installing a water treatment system, to determine your water treatment needs.
CBF3 System with CB3 Filter Cartridge installed
This system has been tested according to NSF/ANSI 42 and 53 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water exiting the system, as specified in NSF/ANSI 42 and 53.

Substance	Influent Challenge Concentration	Maximum Product Water	ReductionReduction Requirements	Average Reduction
Standard 42				
Chlorine	2.0 mg/L ± 10%	–	>50%	96.%
Standard 53				
Cysts**	Minimum 50,000 Microsphere/L	–	100.%	>99.99%
Lead (pH 6.5)	0.15 mg/L± 10%	0.010 mg/L	–	99.%
Lead (pH 8.5)	0.15 mg/L ± 10%	0.010 mg/L	–	98.%
Mercu 6 ry (pH .5)	0.006 ± 10%	0.002 mg/L	–	97.%
Mercu 8 ry (pH .5)	0.006 ± 10%	0.002 mg/L	–	97.%
VOC	0.300 mg/L ± 10%	0.015 mg/L	–	100.%
MTBE	0.015 ± 20%	0.005 mg/L	–	90.%
PFOA/PFOS	0.0015 mg ± 10%	0.00007 mg/L	–	98.%

**NSF/ANSI Standard 53 certified to reduce cysts such as Cryptosporidium and Giardia by mechanical means

CBF3 Test Conditions

Flow Rate Filter Capacity Inlet Pressure pH Temperature	CB3 cartridge 0.5 gpm CB3 cartridge 400 gallons = 60 psi (4.1 bar) = 7.5±1 = 68°F ± 5°F (20°C ± 2.5°C)

Testing was performed under standard laboratory conditions; actual performance may vary.

Operating Requirements

Pressure = 30-125 psi
Temperature = 40-100°F
Turbidity = 5 NTU Max.
EPA Est. No. 090375-Mex-001

⚠ WARNING Do not use with water that is microbiologically unsafe or of 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.

Note: Filter must be maintained according to manufacturer's recommendations, including replacement of filter cartridges.

The contaminants or other substances reduced by this water treatment device are not necessarily in your water.

Substance	**Influent challenge concentration (mg/L)**	**Maximum permissible product water concentration mg/L**
alachlor	0.05	0.001
at razine	0.1	0.003
benzene	0.081	0.001
carbofuran	0.19	0.01
carbon tetrachloride	0.078	0.0018
chlorobenzene	0.077	0.001
chloropicrin	0.015	0.0002
2,4-0	0.11	0.0017
dibromochloropropane(OBCP)	0.052	0.00002
o-dichlorobenzene	0.08	0.001
p-dichlorobenzene	0.04	0.001
1,2-dichloroethane	0.088	0.0048
1,1-dichloroethylene	0.083	0.001
cis-1,2-dichloroethylene	0.17	0.0005
trans-1,2-dichloroethylene	0.086	0.001
1,2-dichloropropane	0.08	0.001
cis-1,3-dichloropropylene	0.079	0.001
dinoseb	0.17	0.0002
endrin	0.053	0.00059
ethylbenzene	0.088	0.001
ethylene dibromide (EDB)	0.044	0.00002
hal oa cetonitril es (HAN):		
bromochloroacetonitrile	0.022	0.0005
dibromoacetonitrile	0.024	0.0006

dichloroacetonitrile	0.0096	0.0002
trichloroacetonitrile	0.015	0.0003
hal oketones (H K):		
1,1-dichloro-2-propanone	0.0072	0.0001
1,1,1-trichloro-2-propanone	0.0082	0.0003
heptachlor	0.025	0.00001
heptachlor epoxide	0.0107	0.0002
hexachlorobutadiene	0.044	0.001
hexachlorocyclopentadiene	0.06	0.000002
lindane	0.055	0.00001
methoxychlor	0.05	0.0001
pentachlorophenol	0.096	0.001
simazine	0.12	0.004
styrene	0.15	0.0005
1,1,2,2-tetrachloroethane	0.081	0.001
tetra chloroethyl ene	0.081	0.001
toluene	0.078	0.001
2,4,5-TP(silvex)	0.27	0.0016
tribromoacetic acid	0.042	0.001
1,2,4-trichlorobenzene	0.16	0.0005
1,1,1-trichloroethane	0.084	0.0046
1,1,2-trichloroethane	0.15	0.0005
trichloroethylene	0.18	0.001
trihalomethanes (includes):		
chloroform (surrogate chemical)	0.3	0.015
bromoform		
bromodichloromethane		
chlorodibromomethane		
xylenes (total)	0.07	0.001

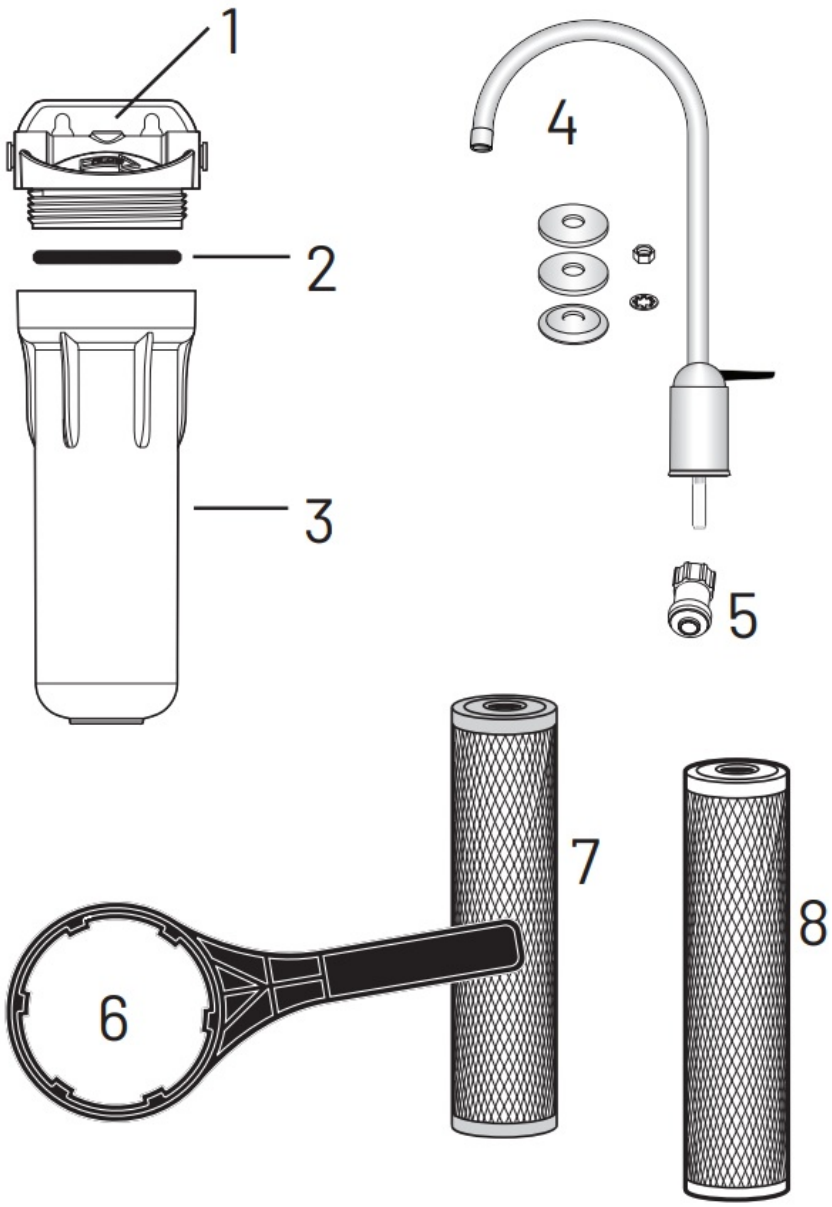
REPLACEMENT PARTS

For replacement parts, contact your nearest retailer or go to **www.Pentair.com** or call Omnifilter Customer Service at 800.279.9404.
The CBF1 and CBF3 are covered by a limited 5 year warranty.
See warranty for details.

	Part Number	Description
1	SH154396	Cap for CBF1 and CBF3 systems
2	K4	0-ring replacement for CBF1 and CBF3 systems
3	153219	Housing replacement for CBF1 and CBF3 systems
4	K12	Faucet replacement for CBF1 and CBF3 systems
5	SH243233	Flow control fitting, 0.5 gpm
6	OW30	Housing wrench replacement for CBF1 and CBF3 systems
7	CB1	Replacement cartridge for CBF1 System
8	CB3	Replacement cartridge for CBF3 system
Not shown	4004898	Water supply adaptor (for CBF1 and CBF3 systems)
Not shown	SH144072-03	Tubing for CBF1 and CBF3 systems
Not shown	SH150580	Mounting screw kit for CBF1 and CBF3 systems

MAINTENANCE

Contact your local area retailer for replacement cartridge pricing.



IOWA Residents Only:

Store or seller's name			
Address			
City	State	Zip	Telephone
Seller's Signature	Date	Customer's Signature	Date

For Pentair Product Warranties visit: Pentair.com/assets/residential-filtration-warranty

PENTAIR
13845 BISHOPS DR., SUITE 200, BROOKFIELD, WI 53005 U.S.A.
P. 262.238.400
CUSTOMER SERVICE: 800.279.9404
tech-support@pentair.com
pentair.com

248267 Rev B AU22

Documents / Resources

	PENTAIR CBF1 Undersink Drinking Water Filter System [pdf] Instruction Manual CBF1, CBF3, CBF1 Undersink Drinking Water Filter System, Undersink Drinking Water Filter System, Drinking Water Filter System, Water Filter System, Filter System, System

References

- Pentair
- Pentair.com/assets/residential-filtration-warranty
- Pentair