

# FC SERIES WATER FILTRATION SYSTEMS INSTALLATION, OPERATION & MAINTENANCE GUIDE

QC7I FC COLDRINK® 4FC INSURICE® 4FC-S OC7I FC-S COLDRINK 7FC INSURICE 7FC-S

QC7I FC5 QC7I FC5-S

### INTRODUCTION

The new Pentair® Everpure® FC Series water filtration systems are designed to provide optimum water characteristics for its specified applications. These systems can help reduce equipment maintenance, extend equipment life, and help improve the quality and consistency of your products. Built with high quality materials, each system is quality inspected prior to shipment. Proper system installation and routine filter changes will ensure years of trouble-free operation and performance.

## **NOTES**

Do not discard. Give this guide to the owner/operator after installation.

- Installation must conform to all local plumbing codes and regulations.
- 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.
- Connect system to cold water supply only.
   Water temperature must not exceed 100°F (38°C).
- Do not solder plumbing connections attached to the assembly.
   High temperature will damage these components.
- Do not mount the system behind equipment. The unit must be easily accessible for filter replacement.
- Do not install system where it may interfere with moving equipment, carts, mops or any other item that may cause damage.
- Allow a minimum of 2½" (6.35 cm) clearance under the filter to facilitate cartridge change.
- · Not for residential use. For foodservice applications only.

#### **OPERATING SPECIFICATIONS**

For use on cold water only.

Pressure Requirements: 10 - 125 psi, non-shock (0.7 - 8.6 bar), non-shock

Temperature:  $35-100^{\circ}F(2-38^{\circ}C)$ 

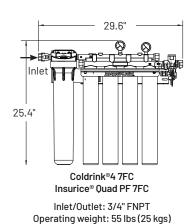
 $Refer to this \, manual \, for \, general \, installation, \, operation, \, and \, maintenance \, requirements.$ 

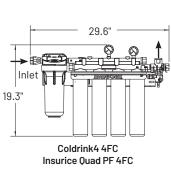
## MOUNTING AND CONNECTION CONSIDERATIONS

Give consideration to the following when selecting a suitable mounting location for the system. Filtration system configurations correspond to system model names listed below.

- · Height and width dimensions
- · Inlet/outlet connection size and direction of flow
- · Operating weight (when filled with water)

- Be near a drain for flushing the system after installation and when replacing the cartridge(s).
- Allow a minimum clearance of 2½" (6.4 cm) under the cartridge(s) to allow for filter removal and replacement.





Inlet/Outlet: 3/4" FNPT

Operating weight: 43 lbs (20 kgs)

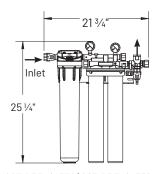
29.6"

Inlet

Coldrink3 7FC
Insurice Triple PF 7FC-S

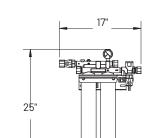
Inlet/Outlet: 3/4" FNPT

Operating weight: 45 lbs (21 kgs)



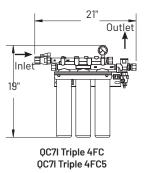
oldrink3 7FC QC7I PF Twin 7FC | QC7I PF Twin 7FC-S e Triple PF 7FC-S QC7I PF Twin 7FC5 | QC7I PF Twin 7FC5-S

Inlet/Outlet: 3/4" FNPT Operating weight: 35 lbs (16 kgs)

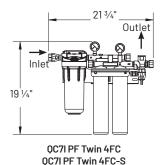


QC7I Twin 7FC | QC7I Twin 7FC-S QC7I Twin 7FC5 | QC7I Twin 7FC5-S

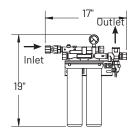
Inlet/Outlet: 3/4" FNPT Operating weight: 19 lbs (9 kgs)



Inlet/Outlet: 3/4" FNPT Operating weight: 23 lbs (10.5 kgs)

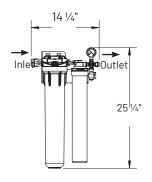


Inlet/Outlet: 3/4" FNPT
Operating weight: 24 lbs (10.9 kgs)



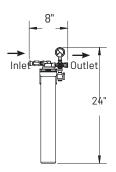
QC7I Twin 4FC | QC7I Twin 4FC-S QC7I Twin 4FC5 | QC7I Twin 4FC5-S

Inlet/Outlet: 3/4" FNPT Operating weight: 17 lbs (7.7 kgs)



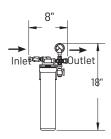
QC7I PF Single 7FC QC7I PF Single 7FC-S

Inlet 3/4" / Outlet: 3/8" FNPT Operating weight: 22 lbs (10 kgs)



QC7I Single 7FC | QC7I Single 7FC-S QC7I Single 7FC5 | QC7I Single 7FC5-S

Inlet/Outlet: 3/8" FNPT Operating weight: 9 lbs (4 kgs)



QC7I Single 4FC | QC7I Single 4FC-S QC7I Single 4FC5 | QC7I Single 4FC5-S

Inlet/Outlet: 3/8" FNPT Operating weight: 8 lbs (3.7 kgs)

## **INSTALLATION PRECAUTIONS**

- Feed water supply pressure must not exceed 125 psi (non-shock).
   When pressure exceeds 85 psi, a pressure reducing valve is recommended.
- If water hammer is evident, install a water hammer arrestor before the Pentair<sup>®</sup> Everpure<sup>®</sup> system.
- Do not use liquid pipe compounds for fitting connections.
   Use two (2) or three (3) wraps of PTFE thread sealant tape.
- Do not over-tighten fitting connections. Always back-up valves and fittings with a wrench to avoid excessive stress on system components.

#### INSTALLATION PROCEDURE

**IMPORTANT:** Confirm with the manager, and or owner/operator that equipment to be fed by the filtration system is turned off or not in use. The water supply to equipment will be shut off during installation.

**NOTE:** For installations in Australia and New Zealand product must be installed with a backflow prevention device in accordance with AS/NZS 3500 and AS/NZS 2845.1.

- 1. Locate the feed water supply shut-off valve and turn off.
  - **NOTE:** If not available, we recommend the installation of a full-flow ball valve on the supply line to be connected to the Pentair Everpure system. This will allow the system to be serviced without shutting off the main water supply. (It will not be necessary to use this valve when replacing filters.)
- Use the predrilled mounting holes in the manifold bracket as a guide to mark and drill anchor holes. Mount the system securely using fasteners suitable to support the operating weight of the system.
- 3. Connect the feed water supply line from the full-flow ball valve to the inlet connection of the Everpure system.
  Use a minimum 3/8-inch water line for the "single" models. Use a minimum 1/2-inch water line for "twin", "triple" and "quad" models.

- Connect tubing (supplied) to flush valve located at the bottom of the system outlet fitting and route to drain.
  - **NOTE:** Some municipal plumbing codes and good sanitary practices require an air gap at the drain termination point.
- 5. If the model includes a pre-filter, install the pre-filter. Check to be sure the O-ring on the pre-filter housing is sufficiently lubricated. If needed, use a good grade of silicone lubricant. Insert the pre-filter into the sump and position the cartridge on guide seat in the bottom of the sump. Then thread the sump into the head by hand. Hand-tighten to snug the sump onto the head.

- Install the primary filter cartridge(s) into the filter head(s)
  following the directions below or as shown in the Cartridge
  Change Instructions (p.6).
  - A. Hold filter head firmly. Align cartridge lug with label push up and insert the new cartridge firmly into the head.
  - B. Turn cartridge to right (1/4 turn) until rotation stops.
- 7. Select the appropriate size supply line for the equipment being served and connect it to the outlet port of the system.
- 8. Connect the outlet supply line to equipment served as required.
- 9. With the system inlet shut-off valve in the closed/off position, slowly open the feed water supply full-flow ball valve. Check for leaks from the plumbing leading to the system inlet connection.
- 10. Ensure the flush valve line is securely attached at the drain, or hold the tubing over a bucket or drain.
- 11. Slowly open the system inlet valve and allow water to flow through the flush valve for five (5) minutes to purge air and flush the system media.
- 12. After flushing, close the flush valve and check for leaks.
- 13. If no leaks, the installation is complete.
- 14. Inform the manager and or owner/operator that the equipment serviced can now be turned on and checked for normal operation.

Leave this installation, operation, and maintenance manual with the establishment for future reference.

**WARNING:** FOR CORRECT OPERATION OF THIS APPLIANCE IT IS ESSENTIAL TO OBSERVE THE MANUFACTURER'S INSTRUCTIONS.

## PERFORMANCE SPECIFICATIONS

NOT Listed Outland	Part	Capacity		Flow Rate		Scale		
NSF Listed Systems	Number	gallons	liters	gpm	lpm	Inhibitor	Reduces	
QC7I Single 4FC*	EV920241	15,000	56,781	2.5	9.46	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Single 4FC-S	EV920281	15,000	56,781	2.5	9.46	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Single 4FC5*	EV920221	15,000	56,781	2.5	9.46	No	Particulate Class III, Chlorine, Taste & Odor	
QC7I Single 4FC5-S	EV920261	15,000	56,781	2.5	9.46	Yes	Particulate Class III, Chlorine, Taste & Odor	
QC7I Single 7FC*	EV920251	25,000	94,635	2.5	9.46	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Single 7FC-S	EV920291	25,000	94,635	2.5	9.46	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Single 7FC5*	EV920231	25,000	94,635	2.5	9.46	No	Particulate Class III, Chlorine, Taste & Odor	
QC7I Single 7FC5-S	EV920271	25,000	94,635	2.5	9.46	Yes	Particulate Class III, Chlorine, Taste & Odor	
QC7I PF Single 7FC	EV932851	25,000	94,635	2.5	9.46	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I PF Single 7FC-S	EV932891	25,000	94,635	2.5	9.46	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Twin 4FC*	EV920242	30,000	113,562	5.0	18.93	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Twin 4FC-S	EV920282	30,000	113,562	5.0	18.93	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Twin 4FC5*	EV920222	30,000	113,562	5.0	18.93	No	Particulate Class III, Chlorine, Taste & Odor	
QC7I Twin 4FC5-S	EV920262	30,000	113,562	5.0	18.93	Yes	Particulate Class III, Chlorine, Taste & Odor	
QC7I PF Twin 4FC	EV932832	30,000	113,562	5.0	18.93	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I PF Twin 4FC-S	EV932882	30,000	113,562	5.0	18.93	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Triple 4FC*	EV920243	45,000	170,344	7.5	28.39	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Triple 4FC5*	EV920223	45,000	170,344	7.5	28.39	No	Particulate Class III, Chlorine, Taste & Odor	
QC7I Twin 7FC*	EV920252	50,000	189,271	5.0	18.93	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Twin 7FC-S	EV920292	50,000	189,271	5.0	18.93	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I Twin 7FC5*	EV920232	50,000	189,271	5.0	18.93	No	Particulate Class III, Chlorine, Taste & Odor	
QC7I Twin 7FC5-S	EV920272	50,000	189,271	5.0	18.93	Yes	Particulate Class III, Chlorine, Taste & Odor	
QC7I PF Twin 7FC	EV932852	50,000	189,271	5.0	18.93	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I PF Twin 7FC-S	EV932892	50,000	189,271	5.0	18.93	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
QC7I PF Twin 7FC5	EV932782	50,000	189,271	5.0	18.93	No	Particulate Class III, Chlorine, Taste & Odor	
QC7I PF Twin 7FC5-S	EV932862	50,000	189,271	5.0	18.93	Yes	Particulate Class III, Chlorine, Taste & Odor	
Coldrink System 4 4FC*	EV932844	60,000	227,124	10.0	37.85	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
Insurice PF Quad 4FC-S*	EV932744	60,000	227,124	10.0	37.85	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
Coldrink System 3 7FC*	EV932873	75,000	283,906	7.5	28.39	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
Insurice PF Triple 7FC-S*	EV932773	75,000	283,906	7.5	28.39	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
Coldrink System 4 7FC*	EV932874	100,000	378,541	10.0	37.85	No	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	
Insurice PF Quad 7FC-S*	EV932774	100,000	378,541	10.0	37.85	Yes	Particulate Class I, Chlorine, Taste & Odor, Cyst, Turbidity	

<sup>\*</sup>Denotes WaterMark



The QC7I Single 4FC, QC7I Single 4FC-S, QC7I Single 7FC, QC7I Single 7FC-S, QC7I PF Single 7FC, QC7I PF Single 7FC-S, QC7I PF Single 7FC-S, QC7I Twin 4FC, QC7I Twin 4FC-S, QC7I FT Win 4FC-S, QC7I Twin 4FC, QC7I Twin 7FC, QC7I Twin 7FC-S, Coldrink 3-7FC, Insurice Triple PF 7FC-S, Coldrink 4-4FC, Insurice Quad PF 4FC-S, Coldrink 4-7FC, Insurice Quad PF 7FC-S models are Tested and Certified by NSF International against NSF/ ANSI Standards 42 and 53 for the reduction of:

Cyst

Turbidity

STANDARD NO. 42 – AESTHETIC EFFECTS Bacteriostatic Effects

Chemical Reduction Taste & Odor Chlorine

Mechanical Filtration Nominal Particulate Class I



0C7I Single 4FC5, 0C7I Single 4FC5-S, 0C7I Single 7FC5-S, 0C7I Single 7FC5-S, 0C7I Twin 4FC5-S, 0C7I Twin 4FC5-S, 0C7I Triple 4FC5, 0C7I Twin 7FC5-, 0C7I Twin 7FC5-S, 0C7I PF Twin 7FC5-S models are Tested and Certified by NSF International against NSF/ ANSI Standard 42 for the reduction of:

STANDARD NO. 42 – AESTHETIC EFFECTS

Bacteriostatic Effects Chemical Reduction

Taste & Odor Chlorine

Mechanical Filtration Nominal Particulate Class III EPA Est. No. 002623-IL-002





#### SYSTEM OPERATION

With adequate pressure, normal operation of the system is completely automatic. Dependable operation involves only monitoring of the outlet pressure, periodic filter changes and service documentation. Filter changes are necessary for optimum performance of your foodservice equipment.

#### **Pressure Gauge Monitoring**

Periodically monitor the pressure gauge on the system. When connected equipment is not using water (no water flowing through the filtration system) the pressure on the gauge indicates the static "available water pressure" supplied to the system. When connected equipment is in operation and water is flowing through the system, the outlet pressure gauge indicates the dynamic service water pressure".

The service water pressure may become lower as sediment accumulates in the filter cartridge(s) restricting flow. If "service water pressure" is observed to be below the "available water pressure" and gets near or enters the red zone, it is an indication that the filters are becoming clogged and should be replaced. Monitoring the service water pressure can help ensure that pressure loss through the filter is not interfering with normal equipment operation.

#### **MAINTENANCE**

The only routine maintenance your Pentair Everpure system should ever require is periodic filter cartridge changes. Filter changes are necessary for optimum performance of your foodservice equipment.

Contact your Pentair Everpure dealer for replacement cartridges and system replacement parts.

#### The Pentair Total Water Management (TWM) program offers end-to-end water treatment services that include:

- · Water Analysis
- · Site Surveys
- · Product Solutions
- · Installation and Start-Up
- · Planned Maintenance

To learn more about how Pentair Total Water Management can help support your business, contact your Pentair Everpure dealer or TWM Project Management at (800) 842-6193 or TWM@Pentair.com.

#### FILTER CHANGE DETERMINATION

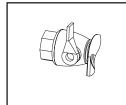
It is recommended that all filter cartridges be replaced:

- Every six (6) months on a regular scheduled program
   All primary quick-change cartridges on multiple cartridge systems must be changed at the same time.
- When water pressure or flow to equipment becomes inadequate.
   This may be due to excessive sediment accumulating in the filter cartridge(s) causing flow restriction. If this occurs and the filtration system includes a prefilter, replace the prefilter cartridge first. If the water pressure and flow to equipment is not corrected, replace the primary quick-change (QC) filter cartridge(s).
- Always replace filter cartridges at least once per year.
   All primary quick-change cartridges on multiple cartridge systems must be changed at the same time.

## **CARTRIDGE REPLACEMENT**

**IMPORTANT:** Confirm that equipment fed by the filtration system is turned off or not in use. Water supply to equipment will be shut off when replacing filter cartridges.

#### **E-Series Prefilter Cartridge Change Procedure**



 Close inlet shut-off valve on the system.



 Push and hold the red pressure relief-button until pressure on the gauge drops to zero (0). Unscrew the filter sump. Empty the water and remove the cartridge.



Use only water to clean sump. Do not use cleaners.

- Check O-ring placement, If dry, replace or lubricate with good-quality silicone lubricant.
- 4. Insert new pre-filter into cartridge sump.

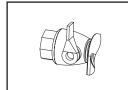


Thread the sump into the head by hand. Hand-tighten to snug the sump onto the head.



6. Open the inlet shut-off valve. Check for leaks.

#### **Primary Cartridge Change Procedure**



1. Close inlet shut-off valve on the system.





- 2. Open the flush valve to relieve pressure.
- 3. Hold filter head firmly. Push upward and turn the cartridge to left (1/4 turn) until it stops.

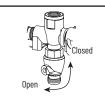




- Pull cartridge down and remove from head.
- 5. Hold filter head firmly. Align cartridge lug with label – push up and insert the new cartridge firmly into the head.



- 6. Turn cartridge to right (1/4 turn) until rotation stops.
- 7. Repeat steps 3-6 for all remaining primary cartridges.



- 8. With the flush valve fully open, open the inlet shut-off valve and flush for five (5) minutes.
- Close the flush valve and check for leaks.

After cartridge change is complete, equipment can be returned to service and checked for normal operation.

## **REPLACEMENT CARTRIDGES**

Pentair Everpure filtration systems are designed, tested, and certified with exclusive Everpure filter cartridges with proven performance, size and operating capacities. Use of replacement cartridges other than those specified will void warranties, certifications and may compromise equipment serviced.

System	Cartridge(s)	Part Number	Quantity
QC7I Single 4FC	4FC	EV969221	1
QC7I Single 4FC-S	4FC-S	EV920281	1
QC7I Single 4FC5	4FC5	EV969321	1
QC7I Single 4FC5-S	4FC5-S	EV927222	1
QC7I Single 7FC	7FC	EV969261	1
QC7I Single 7FC-S	7FC-S	EV969271	1
QC7I Single 7FC5	7FC5	EV927222	1
QC7I Single 7FC5-S	7FC5-S	EV969371	1
QC7I PF Single 7FC	EC210 7FC	EV953426 EV969261	1
QC7I PF Single 7FC-S	EC210 7FC-S	EV953426 EV969271	1
QC7I Twin 4FC	4FC	EV969221	2
QC7I Twin 4FC-S	4FC-S	EV920281	2
QC7I Twin 4FC5	4FC5	EV969321	2
QC7I Twin 4FC5-S	4FC5-S	EV927222	2
QC7I PF Twin 4FC	EC110 4FC	EV953412 EV969221	1 2
QC7I PF Twin 4FC-S	EC110 4FC-S	EV953412 EV920281	1 2
QC7I Triple 4FC	4FC	EV969221	3
QC7I Triple 4FC5	4FC5	EV969321	3
QC7I Twin 7FC	7FC	EV969261	2
QC7I Twin 7FC-S	7FC-S	EV969271	2
QC7I Twin 7FC5	7FC5	EV927222	2
QC7I Twin 7FC5-S	7FC5-S	EV969371	2
QC7I PF Twin 7FC	EC210 7FC	EV953426 EV969261	1 2
QC7I PF Twin 7FC-S	EC210 7FC-S	EV953426 EV969271	1 2
QC7I PF Twin 7FC5	EC210 7FC5	EV953426 EV927222	1 2
QC7I PF Twin 7FC5-S	EC210 7FC5-S	EV953426 EV969371	1 2
Coldrink 4-4FC	EC210 4FC	EV953426 EV969221	1 4
Insurice Quad PF 4FC-S	EC110 4FC-S	EV953412 EV920281	1 4
Coldrink 3-7FC	EC210 7FC	EV953426 EV969261	1 3
Insurice Triple PF 7FC-S	EC210 7FC-S	EV953426 EV969271	1 3
Coldrink 4-7FC	EC110 7FC	EV953412 EV969261	1 4
Insurice Quad PF 7FC-S	EC210 7FC-S	EV953426 EV969271	1 4

For Pentair Everpure Product Warranties visit: http://pentair.com/assets/foodservice-warranty



United States | 1040 Muirfield Drive | Hanover Park, IL 60133 | 800.942.1153 (US Only) 630.307.3000 Main | cseverpure@pentair.com | foodservice.pentair.com | Australia | 1-21 Monash Drive | Dandenong South, Vic 3175 | Australia | 011.1300 576 190 Tel | au.everpure@pentair.com | China | 21F Cloud 9 Plaza, NO 1118 | Shanghai, 200052 | China | 86.21.3211.4588 Tel | china.water@pentair.com | India | Boulevard, B-9/A, 7th Floor - Tower B Sector 62 | Noida - 201301 | 91.120.419.9444 Tel | indiacustomer@pentair.com | Europe | Pentair Water Belgium BVBA | Industriepark Wolfstee, Toekomstlaan 30, B-2200 Herentals | Belgium | +32.(0).14.283.504 Tel | sales@everpure-europe.com | Japan | Japan Inc. | Hashimoto MN Bldg. 7F, | 3-25-1 Hashimoto, Midori-ku, Sagamihara-shi | Kanagawa 252-0143 | Japan | 81.(0)42.775.3011 Tel | info@everpure.co.jp | Southeast Asia | 390 Havelock Road, | #04-01 King's Centre | Singapore 169662 | 65.6768.5800 Tel | cseverpure@pentair.com

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