



CASCADIAN[®]
Water Treatment:
"It's What We Know, It's All We Do"

Instructions for Installing and Maintaining ICS Series Cartridge Filters:

Notes and Warnings:

- Follow local plumbing codes and good plumbing practices.
- Please consider hiring your local water treatment professional or an experienced plumber to install your ICS Series Filter Assembly.
- Do not use the filter wrench to tighten housings to caps. Simply snug the housing to cap by hand. An O-ring is used to seal between housing and cap and using a wrench can damage the O-ring.
- Do not use petroleum based products to lubricate the O-ring. Use only silicon lubricant.
- Do not use any type of thread sealant or tape on the threads of the housings. The seal is made with the O-ring. If a leak develops replace the O-ring (lubricate with silicon grease, do not use a petroleum based product to lubricate).

1) Location:

Locate your ICS Series Filter Assembly on a wall near your plumbing. Total weight of loaded assembly with water can be over 75 lbs. The location must be protected from freezing conditions. Protect wall and floor from water that may be spilled during installation and when changing cartridges. Provide at least 12" of space between bottom of ICS Series Filter Assembly and the floor or anything that would prevent easy changing of filters.

2) Installation:

a) Mark housings with installation date:

b) Mount on a solid and level surface making sure the ICS is level using anchoring devices designed to hold at least 100 lbs.

c) Install valves on the inlet and outlet to enable control of water during installation and maintenance (see diagram).

i) Other installation considerations;

- Install a bypass assembly around the Filter Assembly (see installation diagram). This is to allow water downstream of the ICS Series Filter Assembly during service or if a leak develops.
- Install a 0-100 psi pressure gauge on either side of the Housing Assembly. This will help you know when it is time to change filters.

d) Connect plumbing to the Filter Assembly turn off V2.

e) Check for leaks;

i) Turn on water supply V1 and press the pressure relief valve (red) to let air escape, release when water replaces escaping air.

ii) Check for leaks repairing any found.

iii) Check for leaks where the housings meet the caps.

If there is a leak where the housing meets the cap;

- Turn off water supply V1 and relieve pressure by depressing the pressure relief valve (red).
- Loosen the leaking housing (may require a wrench), check O-ring for damage and then re-tighten by hand only.
- Turn on water supply V1, relieve air and check for leaks again. Repeat above if still leaking. If leak continues replace O-ring (lubricate with silicon grease, do not use a petroleum based product to lubricate).

f) Install Cartridges;

i) Disinfect housings prior to installing cartridges;

- Turn off water supply V1 and relieve pressure by depressing the pressure relief valve (red). If unit is Valve-In-Head style, rotate handle on top of housing to OFF position.
- Remove each of the housings, dump some water and add approximately 4 tablespoons of common chlorine bleach. Fill housing with water and reattach to housing caps.
- Turn on water supply V1, open outlet valve V2, open a tap downstream of ICS Filter Assembly to draw approximately 1 quart of water, close tap, and wait 30 minutes for disinfection.
- Open tap and run water until you don't smell the strong odor of chlorine.



ii) Install cartridges into housings;

- Turn off water supply V1 and outlet valve V2; relieve pressure by depressing the pressure relief valve (red). If unit is Valve-In-Head style, rotate handle on top of housing to OFF position.
- Thoroughly wash and rinse your hands.
- Remove and empty each of the housings, remove any cartridge wrapping, install cartridges into the housings in the specified order and reinstall housing with cartridge in the specified order.
- Turn on water supply V1 and press the pressure relief valve to let air escape, releasing when water replaces the escaping air. If unit is Valve-In-Head style, slowly rotate handle on top of housing to ON position.
- Check for leaks where the housings meet the caps (see 2)d) above).

g) Start up your ICS Series Filter Assembly and ready for use.

Open outlet valve V2, open a downstream tap and run water until all air is removed and water runs clear. Note and record the downstream tap that is open and the pressure difference between the pressure gauges when water is flowing. This is your initial pressure differential (delta P). The pressure difference will widen as your filters age and this indicates when it is time to change your filters. For the most accurate delta P fully open the same tap each time you record delta P. Maintenance:

h) Inspect and record pressure;

Periodically inspect for any leaks and repair as needed. Observe and record pressure readings when cartridge is new (see 2)f) above) and at least every other week thereafter. Be sure to note the difference during each observation using the same tap as used in 2)f). Changing filters on a regular basis may prevent filter cartridge and/or system failure.

i) Change filter cartridges;

- PolyHalt™ Cartridges; Change approximately every 4 to 6 months;
- All Others:
 - Change when pressure difference is 5 to 7 psi above the difference when cartridge is new as measured in step 2)f) above or;
 - Change when taste or odor re-appears or;
 - Change at least once a year.

i) Prepare sterilizing solution;

You will need to sterilize the inside of the cartridge housing(s) each time you change the cartridge(s). Prepare a solution of household strength bleach (non-scented only) in a standard spray bottle. Use approximately 1 tablespoon of bleach to 1 quart of clean water. Be sure to make a new solution each time you change cartridges. Take your Filter Assembly off-line: Close inlet valve V1 and outlet valve V2. Depress pressure relief valve (red).

ii) Remove old cartridges and disinfect;

- Remove housing from cap (may require a housing wrench).
- Remove old cartridge from the housing and dispose. Empty all water from housing.
- Spray the inside of the housing with the solution prepared in step "i" above.
- Check filter housing O-rings and replace if damaged.

iii) Install new cartridges into housings in the specified order;

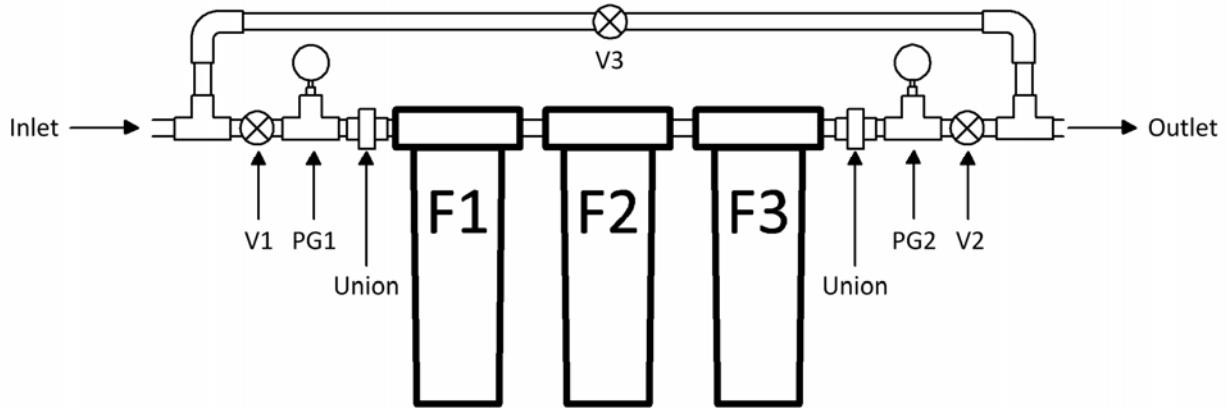
- Determine which cartridge goes into which filter housing; filters will be labeled F1, F2 and F3 (if a 3 filter system) and are installed in order from left to right (filter assembly inlet to outlet). Thoroughly wash and rinse your hands and install new filters.
- Tighten housing with cartridge to cap; snug to the cap (do not over tighten).

iv) Turn on inlet valve V1 and press the pressure relief valve to let air escape, releasing when water replaces the escaping air. If unit is Valve-In-Head style, slowly rotate handle on top of housing to ON position. Check for leaks where the housings meet the caps. If a leak is found (see 2)d) above).

v) Turn on outlet valve V2. Note the pressure difference between the pressure gauges when water is again flowing, see 2)f) above).

3) Order a new cartridge kit so you will have them the next time your cartridges need changing.

Installation Diagram
with Bypass Assembly and Pressure Gauges



V1 = Valve 1; V2 = Valve 2; V3 = Valve 3
 PG1 = Pressure Gauge 1
 PG2 = Pressure Gauge 2
 F1 = Filter Housing 1
 F2 = Filter Housing 2 (if a 2 filter ICS System)
 F3 = Filter Housing 3 (if a 3 filter ICS System)

ICS System	Replacement Filter Kit	Replacement O-Ring	Replacement Wrench
P0523	P0521-K	P-151121	P-SW-1A
P0525	P0521-K	P-151121	P-SW-1A
P0527	P0521-K	P-151121	P-SW-1A
P06	P06-K	P-151122	P-SW-4
P12	P12-K	P-151122	P-SW-4
SCP523	SCP523-K	P-151121	P-SW-1A
SP06	SP06-K	P-151122	P-SW-4
SP12	SP12-K	P-151122	P-SW-4
S5	S5-K	P-151122	P-SW-4
SI	SI-K	P-151122	P-SW-4
SIP	SIP-K	P-151122	P-SW-4
SIT	SIT-K	P-151122	P-SW-4
PWC06	PWC06-K	P-151122	P-SW-4
PWC12	PWC12-K	P-151122	P-SW-4
SS51	SS51-K	P-151122	P-SW-4
SS75	SS75-K	P-151122	P-SW-4
ST	ST-K	P-151122	P-SW-4
TO	TO-K	P-151122	P-SW-4