

700 Series Deluxe Water Control Package Installation & Operation Instruction Manual

NOTICE TO INSTALLER:

DO NOT.....DISCARD THIS MANUAL AFTER INSTALLATION. THIS MANUAL CONTAINS IMPORTANT OPERATION, MAINTENANCE AND PRECAUTIONARY INFORMATION. PLEASE PRESENT THIS MANUAL TO USER/OPERATOR/OWNER AFTER INSTALLATION.

IT IS STRONGLY ENCOURAGED THAT YOU READ THIS MANUAL BEFORE INSTALLATION TO COMPLETE THE BEST POSSIBLE INSTALLATION.

INSTALLATION MUST CONFORM TO ALL LOCAL PLUMBING CODES.

NOTICE TO USER/OPERATOR/OWNER:

PLEASE COMPLETE PRODUCT REGISTRATION CARD AND MAIL OR FAX TO MANUFACTURER. PLEASE RETAIN THIS MANUAL FOR FUTURE REFERENCE FOR PARTS, MAINTENANCE OR TROUBLE-SHOOTING.

IT IS STRONGLY RECOMMENDED THAT ALL PERSONNEL IN THE PREPRESS DEPARTMENT READ THE PRECAUTIONS, OPERATION AND MAINTENANCE SECTIONS OF THIS MANUAL.

The Procam Controls Deluxe Water Control Package, Series 700, filters both hot and cold water feeding the thermostatic mixing valve. The thermostatic mixing valve automatically blends the hot and cold water supplies and provides tempered water output that maintains a set temperature to $\pm 1/2^\circ$ F. If a closer tolerance is required a pressure balancing valve (Model PB-100) may be added to the water supplies. This device will provide a set temperature tolerance of $\pm 1/4^\circ$ F. The Series 750S also regulates flow thru two independent outputs and has a flowmeter providing easy adjustment and monitoring. A code-approved anti-siphon vacuum breaker is utilized to meet city codes.

Connections:	Inlets 1/2" female pipe thread. Cold water enters from the right side, hot water enters from the left side. Water supplies should have valves installed to shut off water supply to panel. Outlets 3/4" male garden hose thread. Outlets are on left side of panel pointing down. No electrical connections required.
Panel Dimensions:	Mounting Panel 20" wide by 22" tall Plumbing Assembly is within the 20"x 22" Plumbing Assembly extends 8" from wall. Mounting holes are on 16" centers.
Location of Panel:	Never position water panel over processor. Water from changing filters could possibly land on critical areas of processor. Ideally locate panel on wall approximately one foot to the right or left. <i>Important: The bottom of the panel should be no lower than the highest level of water in the processor.</i> If possible locate panel so the mounting holes line up with the studs in the wall. Avoid installing the panel where the filter housings would be exposed to organic solvents or cleaners.
Flow Rate:	Model 750S, 700S 1.0 to 5.0 gallons per minute Model L750S, L700S .25 to 2.0 gallons per minute Model H750S, H700S 1-7 gallons per minute
Maximum Pressure:	100 psi
Maximum Temperature:	Cold Side: 125°F, Hot Side: 180°F

Important Safety Precautions: Read before attempting installation!!!!

Do not expose checkstops to excessive heat when connecting water supplies. Seals and gaskets could be damaged by high heat due to soldering with a torch.

Bleed air out of water panel before connecting to processor to avoid air locks.

Continued

Important Precautions Continued:

If vacuum breaker leaks water when first installed it is likely that dirt or other foreign material has fouled the seal. Carefully remove vacuum breaker bonnet and clean the gasket and float.

It is recommended that water hammer arrestors (# WH-500) are used when plumbing system experiences water hammer.

MAXIMUM WATER PRESSURE FOR THE PANEL IS 100 PSI.

MAXIMUM WATER TEMPERATURE FOR COLD WATER FILTER HOUSING IS 125° F.

Do not expose clear filter housing sump to solvents, harsh cleaning agents or chemicals other than water and a mild dishwashing detergent. The clear plastic will weaken and crack as a result.

Clear filter housing sumps must be replaced after they have been in use five (5) years. Additionally, always replace clear filter housing sumps if they have been dropped, chipped, scratched, cracked, exposed to chemicals. Replace opaque sumps every ten (10) years. Never reuse a dropped, chipped or cracked housing sump.

A filter replacement cartridge that is too long will cause the bottom of the sump to crack. Use only Procram replacement filters 9-7/8" long.

DO NOT USE WRENCH TO TIGHTEN FILTER HOUSING SUMP AFTER FILTER CHANGE. IF LEAK OCCURS REPLACE O-RING. WRENCH TIGHTENING SUMP MAY CAUSE SUMP TO STRESS CRACK.

BEFORE INSTALLATION

1. Run piping to installation location and flush thoroughly.
2. Choose panel location for installation that allows the bottom of the panel to be above the highest water level in the processor. *Do not install panel over processor. Mount on wall one foot left or right of processor.*
3. Locate studs in wall. If stud spacing does not match hole pattern in panel, redrill panel for proper spacing.
4. Install full flow ball valves on water supplies to provide easy shut down of panel.
5. Measure water pressure and monitor for a period of time for water hammer or surges. Pressure must not exceed 100 psi.

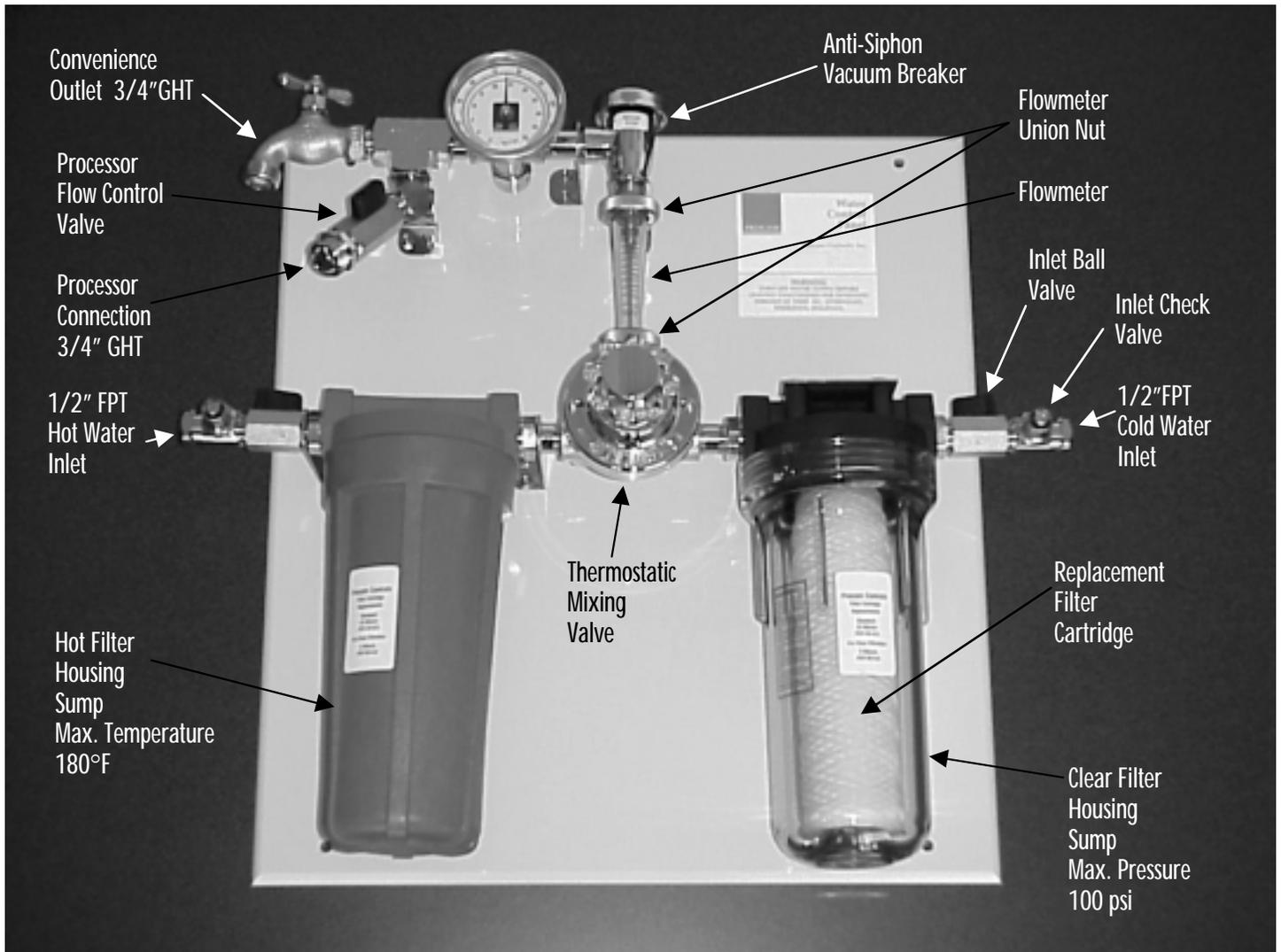
INSTALLATION

1. Mount panel on wall in desired location. It is very important that the flowmeter is vertical. If the panel is mounted so that the meter is leaning the flow indicator may not be accurate.
2. Facing the front of the water panel, connect the hot water supply to the checkstop on the left side of panel and the cold water supply to the right side. *Protect the checkstop from excessive heat. Excessive heat could damage the internal parts on the checkstops.*
3. Unwrap filter cartridges and place in filter sumps. Lubricate O-ring (Part No. 10-OS) in filter sump with O-ring lubricant or silicone lubricant.
4. Install sumps with filter and hand tighten only. It is not necessary to tighten with wrench. Using the wrench will only make removal of sump difficult and stress the plastic.
5. Connect a hose to either output and place in sink or drain.
6. Close both output flow valves. Open both checkstops by turning slotted adjustment counter-clockwise until it stops.
7. Open ball valves on water supplies slowly. Open output flow valve with hose attached and flush system for 10-15 minutes.
8. Close output flow valve and inspect for leaks.
9. Connect output to processor. The other outlet is for chemical mixing and wash-up.

OPERATION

1. Turn processor wash on manually (Film feed sensor may need to be tripped). Adjust flow rate to processor manufacturer specifications by turning black butterfly handle on outlet valve and reading the flowmeter. Visually align the ridge on stainless steel float with markings on tube to read rate.
2. Adjust temperature to film and processor manufacturer specifications by turning clear acrylic knob on mixing valve. Turning counter-clockwise raises the temperature, turning clockwise lowers the temperature. The mixing valve is designed to stop any water flow when valve is turned fully clockwise. Also, if either water supply fails the valve will stop any water flow.
3. Once the flow rate and temperature settings have been adjusted it is not necessary to change the settings unless a change in the setpoint is required. To turn the control panel off use the water supply valves.

WARNING: When shutting system down for the weekend or night, shut-off the water supplies upstream of the filter housings. Never leave water panels, processors, or connection hoses unattended when pressurized for extended periods of time. (Overnight, Holidays, Weekend, Plant Shutdown)



FILTER CARTRIDGE REPLACEMENT

The Series 750S is equipped with standard 9-7/8", 25 micron wound polypropylene filter cartridges (PCP-25-9.8). Due to varying water conditions it is impossible to predict filter change schedules. Filters should be changed before water becomes restricted or particles bleed through the cartridge. Initially this will have to be determined by the user and a filter change schedule should be implemented as part of the maintenance program. If finer filtration is desired use PCP-05-9.8

1. Shut off ball valves for the hot and cold water supplies or close checkstops by turning fully clockwise.
2. Open the convenience outlet to relieve water pressure in water control panel assembly. **Allow hot water housing to cool.**
3. Position a bucket or tray below filter housing to catch any water that might splash out of filter housing. (Procams Controls offers the SpillGard Model SG-1 which can be installed on the bottom of the water panel to catch any spillage during filter changes).
4. Snap filter wrench around housing catching a rib with the tooth on the end of the wrench. Turn counter-clockwise to remove. **If filter housing is difficult to loosen check that water supply is turned off and pressure has been relieved thru the convenience outlet.**
5. Lower sump and empty water. Remove filter cartridge and inspect. If discoloration is evident inside core of filter, increase filter change frequency.
6. Wash out filter housing, lubricate O-ring with glycerine or silicone o-ring lubricant and replace filter cartridge. **Important: Do not use Vaseline or petroleum jelly. This increases the likelihood of biological growth in the processor wash tank.**
7. Reinstall filter sump. **Hand tighten only, if a wrench is required to stop a leak between the sump and head, then the o-ring needs replacing or the replacement filter cartridge is too long. Utilizing a wrench to tighten the housing may cause it to crack.**
8. Close convenience outlet. Open water supply valves.

SERVICE

Vacuum Breaker

Located directly above the flowmeter, the vacuum breaker keeps water from the processor from backsiphoning into the city water supply. It is normal for the vacuum breaker to have a little overflow or splash when the system is turned off and on again. However, if it continues to leak water after the water pressure is constant it is possible that the float is not sealing properly. Normally it just needs to be disassembled and cleaned as followed:

1. Shut-off water supply. Relieve pressure. Remove the two screws that hold cap on vacuum breaker.
2. Use crescent wrench to remove brass float guide by turning brass tee counter-clockwise.
3. Remove white plastic float and clean rubber gasket. If damaged, replace (# WVBR-1).
4. Clean seat on bottom of brass float guide.
5. Replace float and brass float guide. Be sure guide is in center of float.
6. Replace cap and pressurize, check for leaks.

Flowmeter

Located directly above the mixing valve is the flowmeter. It consists of five major components. The (1)Sight Tube, (2)Threaded Brass Adapters, and (2) Union Nuts. If necessary to disassemble the flowmeter the following procedure is recommended.

1. Shut-off water supply. Relieve pressure. Turn the two union nuts counterclockwise to loosen.
 2. When the union nuts are loose the sight tube will slide straight out.
 3. The sight tube can be disassembled simply by turning upside-down.
 4. To replace the sight tube you must first loosen the brackets screws holding the top piping assembly.
 5. Replace O-rings and lubricate with O-ring lubricant or silicone.
 6. Lift up on top pipe assembly and insert sight tube. Hand tighten bottom union nut.
- Important: It is not necessary to use a wrench or a heavy amount of hand torque to tighten union nuts. Tighten until the nut seats.*
7. Tighten top union nut before retightening bracket screws.
 8. Pressurize and check for leaks. If water does leak around union, it may be necessary to replace o-ring.

Check Valves

Located on hot and cold water supply before the mixing valve. The check valves prevent crossover of water supplies. For example, if the cold water supply fails hot water will pass thru the mixing valve and the check valve will act as a one-way valve stopping the flow of hot water. Normally the check valve will be fully open, with the slotted screw head adjustment turned fully counter-clockwise. If a difference in pressure exists between the hot and cold water supplies it may be necessary to restrict the flow of the higher supply by turning the slotted adjustment clockwise to compensate. This is only necessary if the mixing valve has difficulty controlling temperature. If the check valve needs servicing disassemble as follows:

1. Shut-off water supply. Release pressure by opening convenience outlet.
2. Remove hex nut caps on check valve by turning counterclockwise.
3. Check valve assembly will come out with slotted screw adjustment.
4. Replace gasket and spring, reassemble.

Temperature Gauge

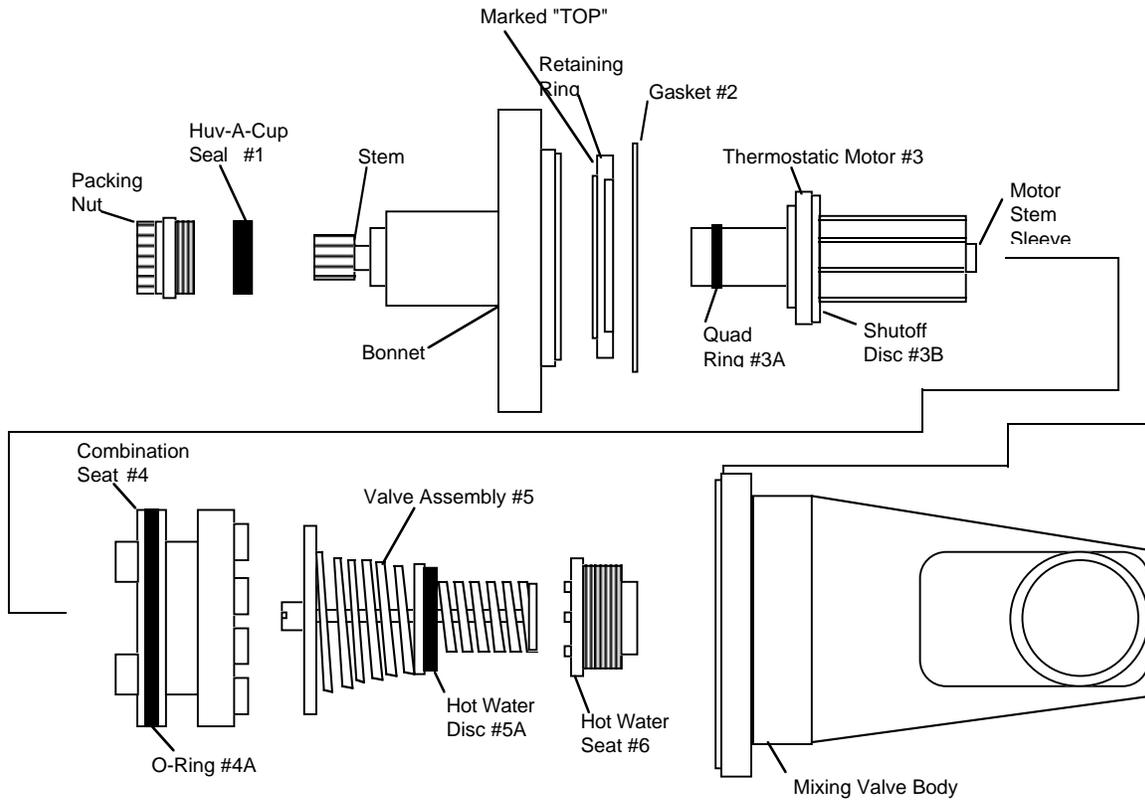
Occasionally a temperature gauge may need to be calibrated. The temperature gauge has a calibration adjustment screw located on the back of the case. It is a small slotted hex nut that will turn but not unscrew. Turning this screw will turn the numbered dial inside of the case which enables you to calibrate to your temperature standard.

Thermostatic Mixing Valve

The hot and cold water supplies enter the mixing valve and mix in the chamber containing the valve assembly. Then the mixture flows over the thermostatic motor. The thermostatic motor positions the valve assembly to maintain the desired temperature. If the temperature of the mixer is higher than the control point, the thermostatic motor expands and decreases the flow of hot water by moving the valve assembly towards the hot water seat. An increase in cold water flow and decrease in hot water flow will adjust the delivery temperature to the desired level. The process is reversed if the mixture temperature is lower than the desired control point. Upon cold water failure, the hot water will shut off because of expansion of the thermostatic motor and seating of the hot water disc. See troubleshooting guide for replacement parts and repair information.

Mixing Valve Access

1. Remove chrome button in middle of acrylic knob. (Snap off)
2. Remove single screw in middle of acrylic handle. Remove handle.
3. Remove two screws, one on either side, fastening trim ring.
4. Remove four screws holding bonnet to valve body.
5. Replace parts, reassemble in reverse order.



**Thermostatic Mixing Valve
Exploded View Drawing**

Symptom

1. Water leak at stem and/or bonnet.
2. Flow of water continues after mixer turns off.
3. Variable or untempered discharge temperature.
4. Flow of water continues after mixer is turned off due to hot water seat (6).
5. Variable discharge temperature continues after replacement of motor (3).
6. Flow of water continues after mixer is turned off and 3b, 6 have been replaced.

Std. Capacity
Low Capacity

Repair Kit

- 227-338
- 227-338
- 227-339
- 227-340
- 227-340
- 227-351
- 227-445

Included Parts

- 1,2,3A,3B,4A,5A
- 1,2,3A,3B,4A,5A
- 2,3,3A,3B
- 2,4A,5,5A,6
- 2,4A,5,5A,6
- 2,4A,4
- 2,4A,4

MISCELLANEOUS PARTS

Filter Wrench	10-W	Vacuum Breaker Repair Kit	WVBR-1
Flowmeter O-Ring	FM-O	Flowmeter Union Nut	FM-N
Temperature Gauge	TG-1	Checkstop	CKS-1
Cold Filter Hsing O-ring	10-OS	Hot Filter Hsing O-ring	10H-O