



RO BOOSTER PUMP SYSTEM

Installation and Operation Instructions

The SHURflo Reverse Osmosis (RO) Booster Pump System enables most RO filtration units to be used anywhere there is electrical power and water. The system was developed for areas where the average incoming water pressure may be below 40 psi., or even from a non-pressurized source (tank). The booster pump maintains a high RO feed water pressure, ensuring a consistent production of high quality RO water. The system includes an accumulator tank pressure switch, which turns off the booster pump once the tank is full. The compact design of the system and minimal connections allow it to be easily installed under a sink. Quiet and safe, SHURflo RO Booster Pump Systems will provide years of service.

◆ 85 Series "High Flow" pumps are for RO filtration units that produce between 35–100 GPD [132–284 LPD]

CAUTION: 85 Series RO Booster Pump Systems **MUST** be used in conjunction with RO filtration units rated to produce at least 35 GPD. Failure to do so may result in excessive pressure (125 psi. [8.5 bar]), resulting in damage to RO membrane, filter housings, and possible premature wear to the booster pump.

◆ 70 / 80 Series "Low-Flow" pumps are for RO filtration units that produce up to 35 GPD. The 70-121 does not require regulated inlet water, internal bypass is not affected by inlet pressure.

INSTALLATION GUIDELINES

1. The enclosure/pump should be placed as close to the RO unit as possible. Located in an area that is dry, with ambient temperatures between 40°–90°F [5°–35°C].

2. 70 Series pumps may be mounted in any position. If mounting vertically the pump head should be in the down position so in the event of a leak, water will not enter the motor. Secure the rubber feet with #8 hardware (not provided). **DO NOT** compress the feet. Compressing the feet reduce their ability to isolate vibration/noise.

3. 80 & 85 Series have a "keyhole" slot on the back of the enclosure for vertical mounting. A vertical position ensures air can purge from the booster pump. If necessary, the booster pump may be positioned horizontally.

4. Turn OFF the incoming water supply line and relieve pressure at the water faucet.

NOTE: RO filtration units may be configured with an outlet connection at the Pre-Filter. RO units of this type permit the booster pump to be plumbed between the "Pre" and "Post" filters. Refer to the alternate plumbing routings shown in the illustration.

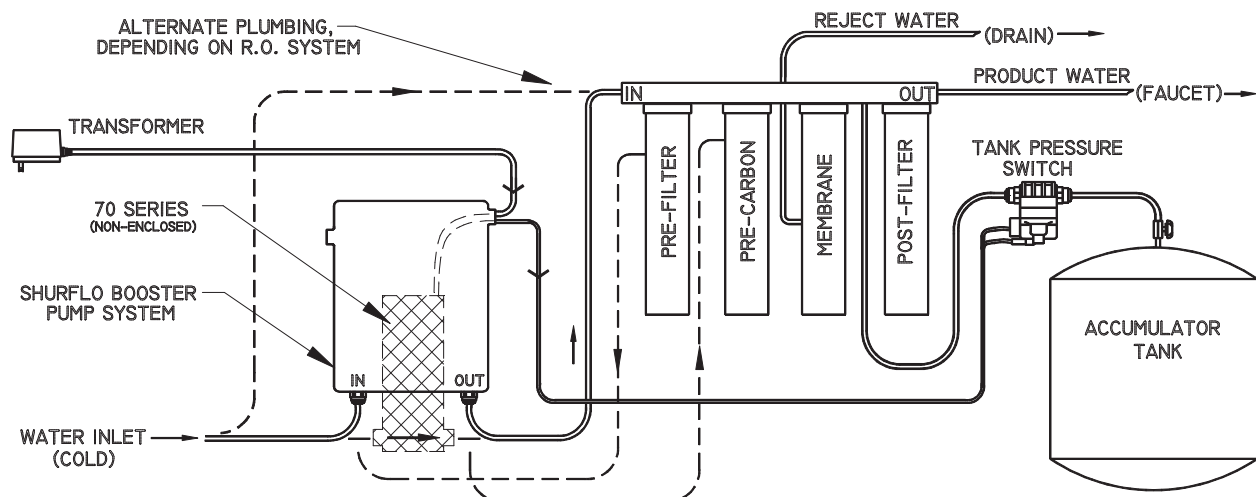
4. Connect the cold water Inlet (1/4" or 3/8" O.D. flexible polyethylene) to the "INLET" port of the enclosure/pump. Tubing ends should have clean, square cuts to prevent leaks. Install the tubing into the John Guest® Quick Connect fittings by pushing the tube in firmly until it stops.

5. Connect a suitable length of tubing from the "OUTLET" of the enclosure/pump to the RO unit.

6. Install the tank pressure switch into the accumulator tubing. Insure proper connection of transformer and tank switch.

7. Turn ON incoming water supply.

8. Plug the transformer into a **GROUND** outlet. The pump will operate until the accumulator tank is pressurized. The pump will then operate whenever the accumulator pressure drops below the pressure switch "turn on" setting.



APPLICATION TIPS

- A. RO feed water pressure from the pump is dependent upon restrictions within a particular RO filtration unit. Nominal booster pump system pressure will be between 75–110 psi. [5–7.5 bar].
- B. Re-check all water connections for leaks after the RO unit has completely filled the accumulator and the booster pump shuts off.
- C. In the event of a power failure, the drinking water system will operate on normal city water pressure. A lower quantity and quality of water may be produced during this period. Once the power is restored, drain the reservoir and allow the system to produce new supply of water.
- D. The pump design permits brief periods of dry operation; however, extended dry operation will decrease its performance/longevity.
- E. Refer to SHURflo Service Bulletin #1052 for further information regarding RO Booster Pump System, maintenance, troubleshooting, and repair.

TECHNICAL SPECIFICATIONS

SERIES	85-120	85-121	80-120	80-121	70-121
Feed Water Flow Rate (pump output)	10-18 GPH [38-68 LPH] @ 75-110 psi [5-7.5 bar] ③④		3-10 GPH [11-38 LPH] @ 75-110 psi [5-7.5 bar] ④		5-60 GPH [19-23 LPH] @ 70 psi. [5-7.5] bar ④
Voltage (Transformer)	115VAC/24VDC 50VA, 60Hz ① 220VAC/24VDC 50VA, 50/60Hz①		115VAC/24VDC 20VA, 60Hz ②or 220VAC/24VDC 20VA, 60Hz ②		
Inlet Water Regulator	Regulates large variations in inlet pressure to 12–15psi. [0.8–1 bar] dynamic				Not affected by inlet pressure
Fittings	John Guest® Quick Connect fittings Inlet & Outlet (1/4" or 3/8" available)				1/4" John Guest®
Tank Switch (Full Tank Shut-off)	Controls pump / switch opens (pump off) at 40 ± 2 psi. [2.7 ± 0.13 bar], closes (pump on) at 25 ± 5 psi [1.7 ± 0.27 bar].				
Pump Design	Three chamber diaphragm pump with 80 psi. [5.4 bar] internal bypass				

- ① With replaceable fuse
- ② With internal, non-replaceable fuse.
- ③ When used with RO filtration units that produce up to 35 GPD [132 LPD].
- ④ Dependent upon RO restrictions and membrane

SHURflo RO BOOSTER PUMP SYSTEM LIMITED WARRANTY

SHURflo warrants the 85-120 & 85-121 series to be free of defects in material and workmanship under normal use, for one (1) year, with proof of purchase. This limited warranty will not exceed eighteen (18) months from the date of manufacture, in any event.

SHURflo warrants the 70-121, 80-120 & 80-121 series to be free of defects in material and workmanship under normal use, for two (2) years, with proof of purchase. This limited warranty will not exceed thirty (30) months from the date of manufacture, in any event.

The limited warranty will not apply to Booster Pump Systems that were improperly installed, misapplied, damaged, altered, or incompatible with components not manufactured by SHURflo.

All SHURflo Booster Pumps Systems should be returned to freight prepaid to the Authorized SHURflo Distributor where originally purchased. SHURflo shall not be liable for freight damage incurred during shipping, package returns carefully.

For complete Water Products Limited Warranty details consult Service Bulletin #1053



SHURflo reserves the right to update specifications, prices, or make substitutions.

SHURflo ★
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