



Model 30621-Series

**PAR-MAX4**  
**3.8GPM/14,4LPM 'Water System'**

*Automatic Multi-Outlet  
 Water System with Accumulator  
 Tank and Pumpgard Strainer*

**IDEAL FOR UP TO 3 OR 4 OUTLETS**

**FEATURES**

- Self-Priming
- Run Dry Ability
- Super Quiet
- Smooth Even Flow
- Reduced Battery Drain
- Easy Installation
- **Snap-in** Hose & 1/2" Threaded (QUEST\* Type) Port Fittings
- Meets USCG Regulation 183.410 and ISO MARINE for Ignition Protection.
- Tank with Internal Bladder

-  Models Available

**SPECIFICATIONS**

**Pump Body:** Glass Filled Polypropylene  
**Pump Design:** Multi-Chamber Diaphragm  
**Suction Lift:** Self-Priming to 5 ft. (1,5 m)  
**Ports:** 1/2" Hose or 1/2" Threaded  
**Motor:** Permanent Magnet with Thermal Overload Protection  
 EMC Models Available<sup>††</sup>  
**Shipping Weight:** 7 lb (3,2 kg) approx.

Tank-hygienic, light, compact, impact and pressure resistant plastic construction Tank capacity – 1 liter (33 fl oz)



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**APPLICATIONS**

The PAR-MAX Automatic Water System Pump is designed for self-contained boats and RV's with multiple outlet water systems. The system operates automatically. When an outlet is opened, the pump instantly begins operation to provide a smooth constant flow from tank to faucet. Closing the faucet automatically discontinues pump operation. The accumulator tank smooths water flow and reduces on/off cycling of the pump by lessening the variation in pressure and flow between the pump and the outlets in the system.


The even flow of water gives better control of hot water temperature *especially noticeable with instantaneous gas water heaters and showers.*

The reduced on/off cycling reduces noise from the pump motor and from shock pressures (pipe hammer). It also reduces battery drain and gives longer pump life.

MODEL	GPM/ LPM		NOMINAL psi (bar)		AMP DRAW @ 10 psi	FUSE/ BREAKER <sup>†</sup>
	VOLTAGE	CUT-IN	CUT-OUT			
30621-0012	3.8/14,4	12 Vdc	20 (1,4)	40 (2,8)	7.6	10
30621-0024	3.8/14,4	24 Vdc	20 (1,4)	40 (2,8)	4.1	7
30621-0212	3.8/14,4	12 Vdc	10 (0,7)	20 (1,4)	7.6	10
30621-0224	3.8/14,4	24 Vdc	10 (0,7)	20 (1,4)	4.1	7

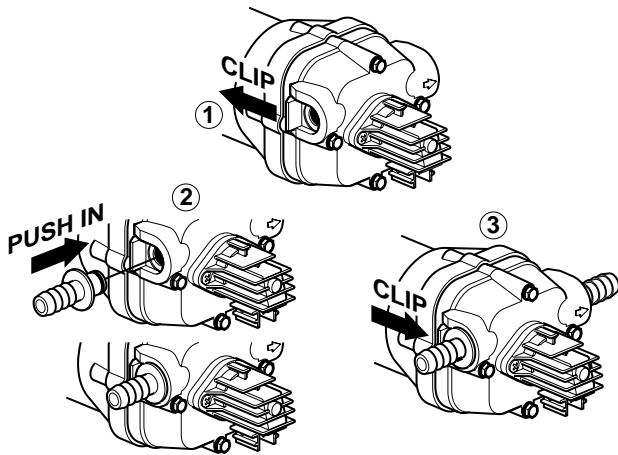
<sup>†</sup> Customer supplied, not included with pump.

\* QUEST is a registered trademark of U.S. Brass.

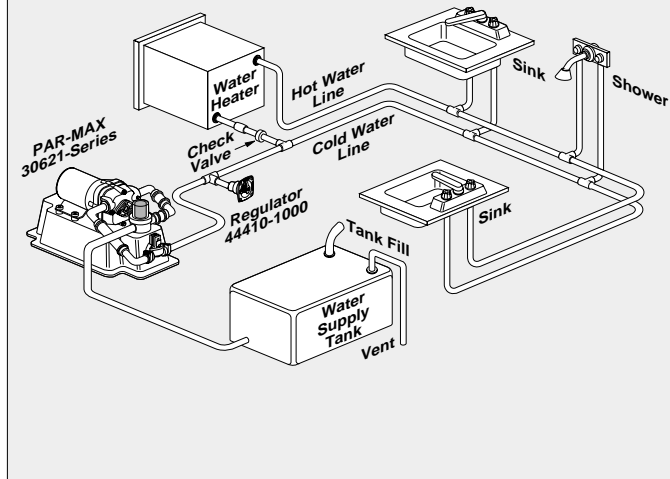
<sup>††</sup> For  models with EMC motors substitute a "9" for the "1" or "2" in the third digit of the dash number

# INSTALLATION

## QUICK EASY INSTALLATION VERSATILE SNAP-IN PORTS FIT BOTH PUMP AND ACCUMULATOR TANK



## TYPICAL INSTALLATION



## MOUNTING

The PAR-MAX pumps are self-priming and may be located above or below the fresh water tank in a dry location. To vertically mount these units, it is best to do so with the motor on top. This will prevent water dripping on motor in the event of a leak.

## PLUMBING

Select one of the port adaptors supplied to match your plumbing system. **Flexible potable water hose or polybutylene tubing is recommended instead of rigid piping at pump.** If you choose to use rigid piping, provide a short length of hose between pipe and the pump to avoid noise and vibration. Use clamps at both ends of hose to prevent air leaks into the water line. NOTE: Intake hose must be minimum 1/2" (13 mm) ID reinforced hose. Main distribution line from pump outlet should also be 1/2" (13 mm) ID with branch and individual supply lines to outlets no smaller than 3/8" (10 mm). A Jabsco "Pumpgard" 36400-Series in line strainer has been installed at the pump inlet to keep debris out of system. Fresh water tank must be vented. Avoid any kinks or fittings which could cause excessive restrictions. Remember to periodically clean faucet and "Pumpgard" screens.

**WARNING** Explosion hazard. Do not pump gasoline, solvents, thinners or other flammable liquids. To do so can cause an explosion resulting in injury or death.

## WIRING

In an easily accessible location, install a switch (Jabsco 44960-Series) to control electricity to the pump. Turn the pump off when not used for extended periods, or when tank is out of water.

The electrical circuit should be protected with an overcurrent protection device in the positive lead. See chart for proper size. The pump circuit should not include any other electrical loads. The open terminal on the switch is positive. Black Wire from the motor is negative.

Select wire size from chart below. Use total length of wire from electrical source to pump and return. Chart allows for 3% voltage drop. If in doubt, use next larger wire size.

Total length in feet	0-20 (0-6 m)	20-35 (6-11 m)	35-55 (11-17 m)
12 Volt	#14 AWG (2.5 mm <sup>2</sup> )	#12 AWG (4 mm <sup>2</sup> )	#10 AWG (6 mm <sup>2</sup> )
24 Volt	#16 AWG (1.5 mm <sup>2</sup> )	#14 AWG (2.5 mm <sup>2</sup> )	#12 AWG (4 mm <sup>2</sup> )

**WARNING** Fire hazard. Wiring must comply with applicable electrical standards and include a properly sized fuse or circuit breaker. Improper wiring can cause a fire resulting in injury or death.

**If you are not familiar with applicable electrical standards, have the unit installed by a qualified electrician.**

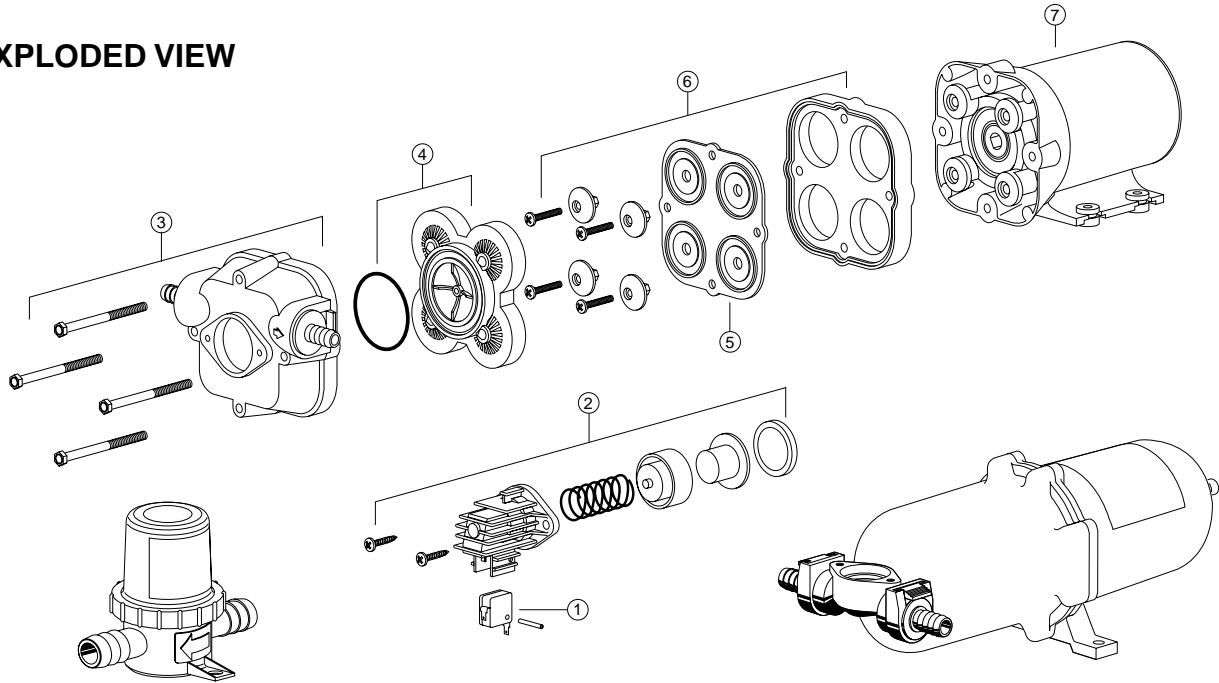
After installation, check the voltage at the pump motor. Voltage should be checked when pump is operating along with all the inside electrical fixtures. Full voltage must be available at the pump motor at all times.

## OPERATION

1. Check level of water in tank.
2. Open all faucets hot and cold.
3. Switch pump to on position and wait for hot water tank and water lines to fill.
4. Close each faucet as flow becomes steady and free of air (close cold water faucet first). Pump should shut off soon after closing last faucet.
5. Pump is now ready for automatic operation. It will start when faucet is opened and stop when faucet is closed.
6. If pump will be inoperative for a considerable length of time, turn off circuit to pump and bleed system by opening faucets.

**DANGER** Motor case will get hot. Prolonged contact during operation may cause a burn.

## EXPLODED VIEW



## PARTS LIST

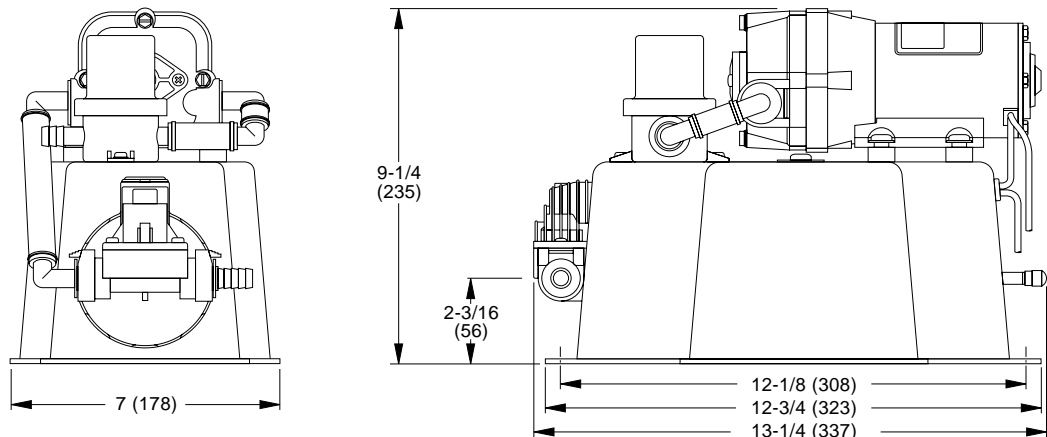
KEY	DESCRIPTION	QTY	PART NUMBER
1	Micro Switch	1	18753-0141
2	Std. Pressure Switch	1	37121-0010
	Low Pressure Switch	1	44814-1000*
3	Body Kit	1	30608-1000
4	Valve Kit	1	30613-1000
5	Diaphragm Kit	1	30617-1000
6	Plate/Piston Kit	1	30682-1000
7	Motor Kit 12 Vdc	1	18753-0463
	Motor Kit 12 Vdc EMC	1	18753-0577
	Motor Kit 24 Vdc	1	18753-0464
	Motor Kit 24 Vdc EMC	1	18753-0578
NOTE:	Optional Port Kits: 1/2" barb	2	30654-1000
	3/4" barb	2	30653-1000
	1/2" Threaded (QEST) Type	2	30649-1000
	1/2" barb 90°	2	30651-1000
	3/4" barb 90°	2	30642-1000
	Garden Hose Thread	2	30650-1000

\* Low Pressure Switch used on -0212 and -0224 models.

NOTE: For complete replacement; Pump use Model 30620-Series, Accumulator Tank use 30632-0000, Pumpgard use 36400-0000

## DIMENSIONS

Inches  
(Millimeters)



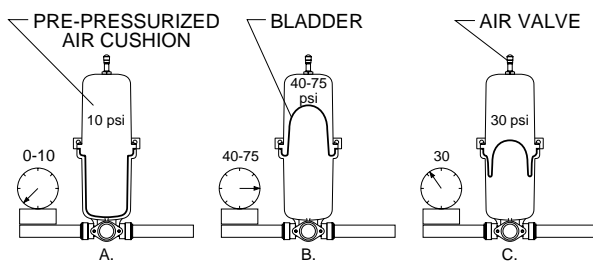
## PRECHARGE PRESSURE ADJUSTMENT

The accumulator tank is precharged at 10 psi (0,7 bar). To increase air pressure in tank, shut pump off, open a faucet to relieve system pressure and adjust precharge pressure using an ordinary tire gauge and tire pump at valve in end of tank. Pressure should be checked from time to time. To check tank pressure: turn off power to water pump, open a faucet to relieve pressure. Check tank pressure, adjust if necessary. Close faucet and turn on power to pump. For best results, do not pressurize tank above 10 psi (0,7 bar).

## SAFETY RELIEF VALVE RECOMMENDED

It is recommended that a relief valve with a setting of no more than 125 psi be installed. Often a relief valve is already installed at the water heater. Check its setting. This will protect the system in case the pressure switch fails.

## HOW THE PRESSURE ACCUMULATOR WORKS



- Factory installed precharged air cushion.
- When pump starts, water enters the reservoir. At maximum pressure, system is filled. Pump shuts off.
- When water is demanded, pressure in the air chamber forces water into the system. Pump stays off until minimum pressure is reached. Then pump turns on.

**⚠ DANGER** Do not overpressure tank. Pressures over 125 psi (8.6 bar) may rupture tank and cause personal injury.

## TROUBLESHOOTING

### PULSATING FLOW – PUMP CYCLES ON AND OFF

- Restricted pump delivery. Check discharge lines, fittings and valves for undersizing or clogging. Clean screens in faucets. Some filters or purifiers are highly restrictive. Filters/purifiers with high pressure drop may require a separate line.

### FAILURE TO PRIME – MOTOR OPERATES, BUT NO PUMP DISCHARGE

- Restricted intake or discharge line.
- Air leak in intake line.

- Punctured pump diaphragm.
- Debris under flapper valves.
- Crack in pump housing.

### PUMP FAILS TO TURN OFF AFTER ALL FIXTURES ARE CLOSED.

- Empty water tank.
- Punctured pump diaphragm.
- Discharge line leak.
- Defective pressure switch.
- Insufficient voltage to pump.
- Debris under flapper valves.

### LOW FLOW AND PRESSURE

- Air leak at pump intake.
- Accumulation of debris inside pump and plumbing.
- Worn pump bearing (excessive noise).
- Punctured pump diaphragm.
- Defective motor.

### MOTOR FAILS TO TURN ON

- Loose wiring connection.
- Pressure switch failure.
- Pump circuit has no power.
- Defective motor.
- Blown fuse/Thermal Protector Tripped.

**⚠ DANGER** PAR-MAX pumps have thermal overload protected motors. The motor will automatically shut off as temperature rises due to an overload condition. If the motor shuts off in this manner, close all nozzles, faucets or valves. After a cooling off period the pump will automatically re-start.

### WINTERIZING YOUR WATER SYSTEM

To winterize, it is not necessary to drain the water from the entire water system. Blowing into the lines to remove the water from your water system is not satisfactory due to the check valve mechanism built into the pump.

Follow these steps to remove all water from your water system:

- Drain water by opening tank drain, or open a fixture to allow pump to operate until tank is dry.
- Open the lowest outlet in water system to drain lines.
- To remove any remaining water (about a cup), remove outlet hose on pump and activate pump. To blow out lines, attach air nozzle where outlet hose was removed. Make sure all fixtures are open before starting.
- Your water system is now winterized. Don't forget to reattach the outlet hose and close all fixtures.

**⚠ DANGER** DO NOT USE AUTOMOTIVE TYPE ANTIFREEZE. IT IS POISONOUS. USE OF THIS TYPE ANTI-FREEZE WILL CAUSE SERIOUS INTERNAL INJURY OR DEATH

# Jabsco



THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE JABSCO ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

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