

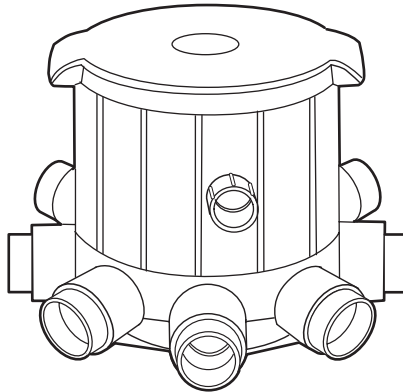
CARETAKER™  
**8-port valve**  
the powerhouse



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## Installation and Maintenance Guide

SERIAL NUMBER



### **⚠ WARNING**

**FOR YOUR SAFETY - This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed where such state or local requirements exist. In the event no such state or local requirement exists, the installer or maintainer must be a professional with sufficient experience in pool equipment installation and maintenance so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation will void the warranty.**

#### **Caretaker**

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855.280.6465 toll-free | 801.484.4449 phone | 801.906.6701 fax |  
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# Table of Contents

<b>Important Safety Information .....</b>	<b>3</b>	Connecting Electrical Components .....	11
<b>For Customer Service or Support.....</b>	<b>4</b>	Controller .....	11
<b>Introduction.....</b>	<b>5</b>	Pressure Switch Connection.....	11
8-Port Components .....	5	Valve Connection .....	12
<b>Installation.....</b>	<b>6</b>	Install Motor Assembly .....	13
Site Planning .....	6	Preparing the System.....	14
Plumbing the System.....	7	Cut Stub-ups .....	14
Feed Lines for Cleaning Heads.....	7	Install Collars .....	15
Cleaning Head Risers .....	7	Starting the System .....	16
8-Port Valve.....	8	Install the Cleaning Heads.....	16
Auxiliary Equipment .....	9	Operating the System.....	16
Pressure Testing .....	9	<b>Operation &amp; Routine Maintenance..</b>	<b>17</b>
Before the pressure test, isolate the plumbing so that the filter, pump, and heater are not subjected to the pressure test. Pressure-test the system at a minimum of 35 psi (241 kPa) for 24-48 hours or as code requires. Keep the water valve secure and under pressure throughout construction process. ....	9	Cleaning the Filtration System.....	17
Controller Cable Burial .....	10	Changing Cleaning Heads.....	17
		Winterizing.....	18
		<b>Troubleshooting .....</b>	<b>20</b>
		<b>Head Loss Curve .....</b>	<b>22</b>

# Important Safety Information

## READ AND FOLLOW ALL INSTRUCTIONS.

### **WARNING**

Read these instructions completely before starting the procedures. If these instructions are not followed exactly, a fire or electric shock could result, causing property damage, personal injury, and/or death.

### **WARNING**

This product must be installed and serviced by authorized personnel, qualified in pool/spa installation. Improper installation and/or operation can create an unwanted electrical hazard which can cause serious injury, property damage, or death. Improper installation and/or operation will void the warranty.

### **WARNING**

Installation of this equipment should be performed by a licensed electrician and conform to the National Electrical Code® (NEC)®. All applicable local installation codes and regulations must be followed.

### **WARNING**

This manual contains important information about the installation, operation, and safe use of this product. This information should be given to the owner/operator of this equipment.

### **WARNING**

To reduce the risk of electrical shock:

- Install all electrical equipment at least 5 feet (1.5 m) from inside wall of pool or spa.
- Disconnect power before servicing this equipment.

### **WARNING**

To reduce the risk of injury, do not allow children to handle this equipment unless they are closely supervised.

### **CAUTION**

- Use supply wires suitable for 140-167°F (60-75° C).
- Connect only to a circuit protected by a Class A ground fault circuit interrupter (GFCI).
- Use copper conductors only.

To ensure complete cleaning and to qualify for the 99% cleaning guarantee, the pool builder must fax or email a Design Fact Sheet along with a scaled pool plan for FREE In-Floor Design Service prior to plumbing the pool.

Email: [design@zodiac.com](mailto:design@zodiac.com)  
Fax: (801)-906-6701

If the pool design or dimensions change during excavation, a new design plan must be drawn, or the cleaning guarantee will be void.

Install the valve above ground and the finished pool water level. Do not bury valve after installation.

Install cleaning heads and nozzles according to the Design Plan.

If pool includes an elevated spa, install a check valve on the line feeding the spa heads to avoid spa draining. Install other check valves (as normal) to avoid spa return jets and suction lines from draining.

## SAVE THESE INSTRUCTIONS.

### For Customer Service or Support

**To contact Caretaker:** Customer Service  
66 East 3335 South  
Salt Lake City, UT 84115  
  
toll-free: 855.280.6465  
phone: 801.484.4449  
email: [caretaker.custsupport@zodiac.com](mailto:caretaker.custsupport@zodiac.com)  
  
[www.caretakersystem.com](http://www.caretakersystem.com)

# Introduction

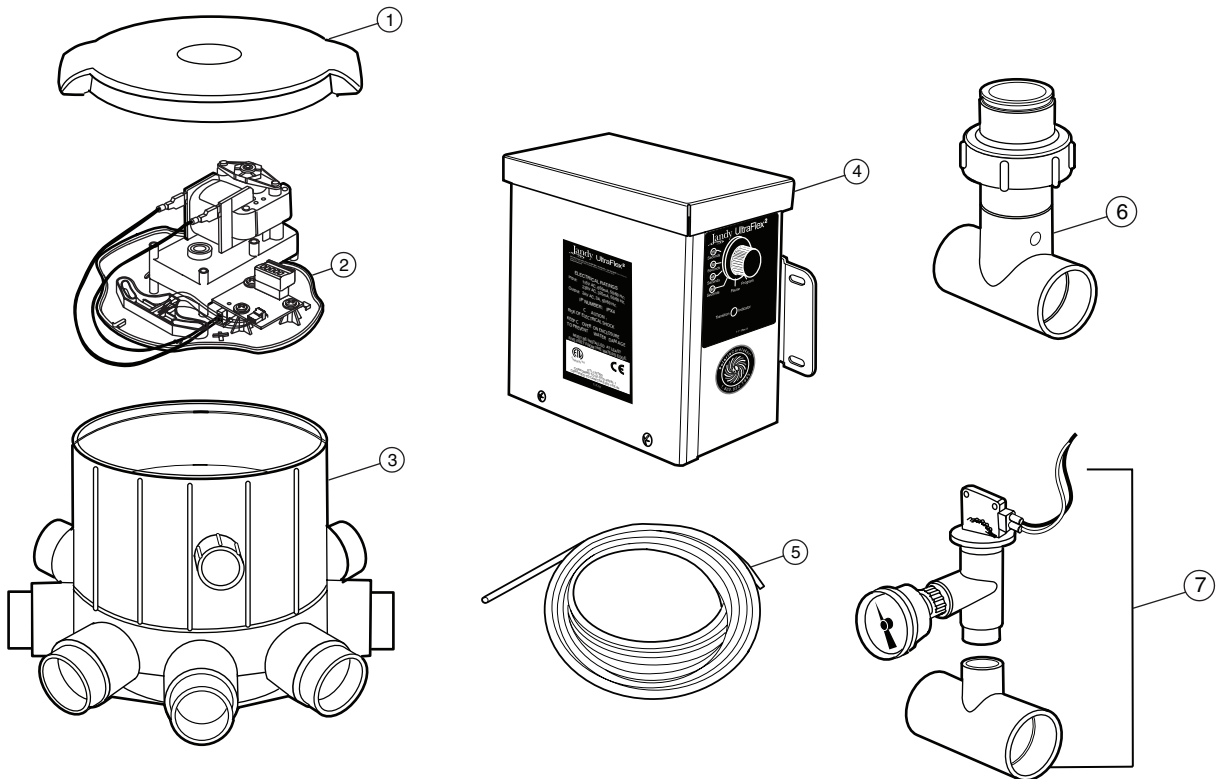
The 8-Port valve is an electronically-driven, 8-port water valve for Caretaker™ in-floor pool cleaning systems. The molded 8-port valve provides high capacity cleaning capabilities for larger pools.

**8-port valves are factory sealed, ready for installation without adjustment.**

Installation of this equipment should be performed by a licensed electrician and should comply with all national electric code guidelines (NEC®, Australian, etc.) and all applicable local laws, ordinances, codes, and regulations. Failure to follow recommended installation methods and maintenance procedures could cause damage to pool equipment and/or personal injury, and may void the warranty.

## 8-Port Components

1. Valve Lid
2. Motor Plate Assembly with Sensor
3. Valve Housing
4. Controller
5. 18 Gauge Burial Cable
6. Capped 2" (5.1 cm) Tee/Union Assembly
7. Pressure Switch/Gauge Assembly with 2" (5.1 cm) x 3/4" (1.8 cm) Tee



# Installation

## 1 Site Planning

Verify that the excavated pool matches the Zodiac Pool Systems, Inc. ("Zodiac") certified pool plan. Check the break, width, depth, and designated step/bench locations. Zodiac® design dimensions are from **finished** pool, not excavation. **If any dimensions have changed, a new plan must be drawn to ensure cleaning and warranty.**

Position the valve as close as possible to the swimming pool or water feature to reduce piping and improve performance. Valve must be at least 5 feet (1.5 m) away from the water's edge.

**Install the valve so that the bottom housing and outlet ports are above ground and the finished pool water level.** If the valve must be installed below water level, check valves or manual valves on the inlet and outlet ports are required to prevent flooding of the valve.

Lay out system so feed pipes enter the pool in the center of the wall closest to the pool equipment and valve. Use a check valve on the feed line in elevated spas to prevent draining.

**Follow the design plan to position and stake the cleaning head locations.** Each head has a designated nozzle that has a precise cleaning radius. Perimeter heads have a 1 ft. (0.3 m) overlap. Mark the cleaning radius around each stake to verify cleaning coverage (see Figure 2).

Flare steps and benches to ensure debris does not get cornered (see Figure 1). Heads should be positioned 2 in. (5.1 cm) from the outer edge on steps and benches.

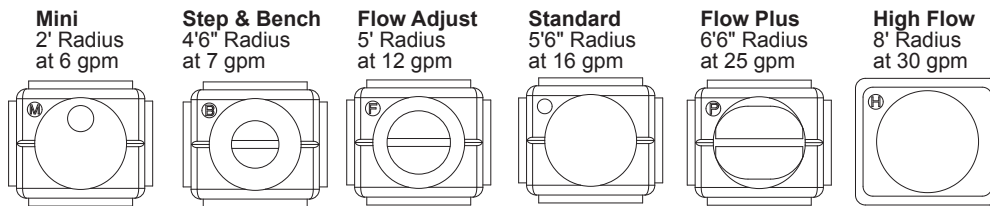


Figure 1. Nozzle options

# 2

## Plumbing the System

### Feed Lines for Cleaning Heads

The Zodiac® certified pool plan indicates which cleaning heads will be plumbed together to form a bank. Run all feed lines to the top of the bond beam to facilitate easy valve hookup. Number the lines according to the design plan (see Figure 1).

- Excavate niche in pool wall, 6" x 24" (15 cm x 61 cm) down to the pool floor.
- Make line trench depth sufficient to cover all pipes with 6" (15 cm) of soil.
- Do not cross lines in floor.
- Use 2" (5.1 cm) Schedule 40 PVC pipe.
- Use 45° and sweep elbows where possible to preserve flow.

#### For Vinyl Liner Pools:

- Stake but do not plumb lines until walls are set, plumbing lines are fed under walls.
- Vinyl collars are not adjustable, stub-ups **must be** perpendicular to finished pool floor.
- Dig trenches 8" (20.3 cm) below excavation grade to accommodate setting of fittings.

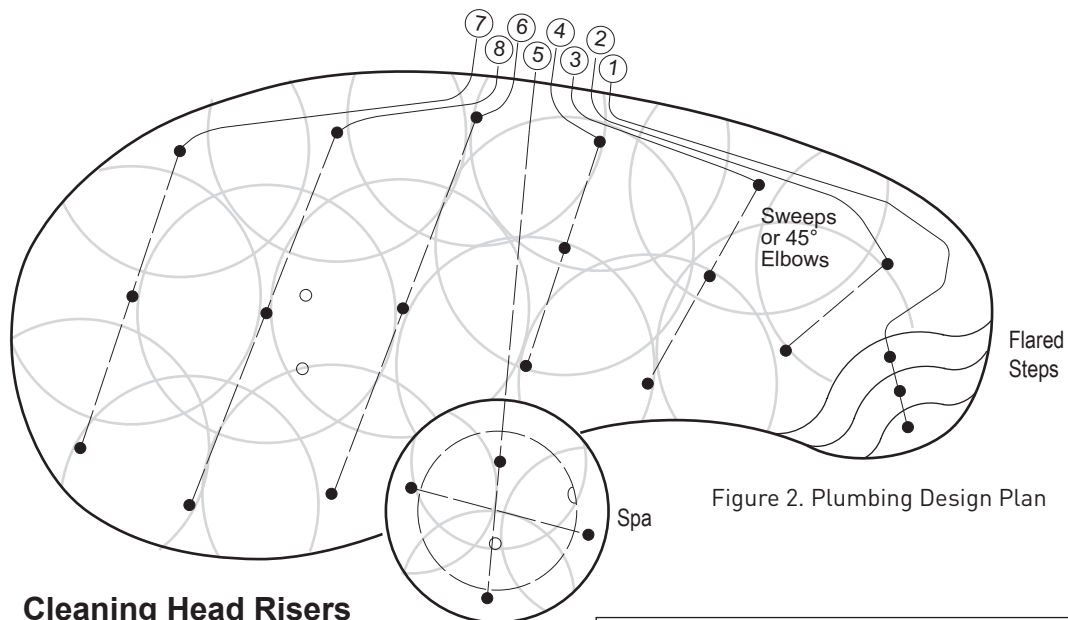


Figure 2. Plumbing Design Plan

### Cleaning Head Risers

The cleaning head collars require either 2 1/2" (6.35 cm) Schedule 40 PVC (part #5-9-150) or 2" class 200 (stub-up) risers (part #WK000001). Use the prefabricated stub-ups that glue directly into the 2" (5.1 cm) tee, 90-degree elbow, or coupling on the feed lines (see Figure 3).

- Position stub-up perpendicular (90°) to the slope of the finished pool floor.
- Stub-ups must be 6" (15.2 cm) above finished elevation.
- During gunite application, leave a 1" (2.5 cm) deep x 1" (2.5 cm) wide well around each stub-up.

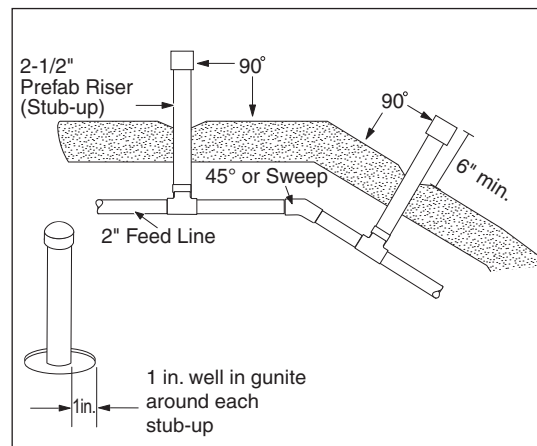


Figure 3. Cleaning Head Stub-up Risers

**Note: If 2" schedule 40 stub-ups are used, pipe reamer (part # 4-17-2) is required.**

## 8-Port Valve

The valve is shipped ready for installation. **Do not loosen or remove the top plate prior to pressure testing.** Do not install the motor plate assembly (Start-Up Kit) until the construction phase is complete.

Plumb the pressure switch/gauge into the valve supply line at the pool equipment to ensure flow to the valve (see Figure 4).

Plumb the tee/union assembly into the valve supply line to facilitate clearing lines at startup and when winterizing (see Figure 4).

Install a 2-way valve in the valve supply line to simplify flow adjustments, valve maintenance and clearing of the lines (see Figure 4).

Connect the water source from the pool pump to the valve inlet. Do not get glue in the valve housing as this will void the warranty. Installation Tip: Do not turn valve upside down to glue inlet pipe, glue may drip into valve.

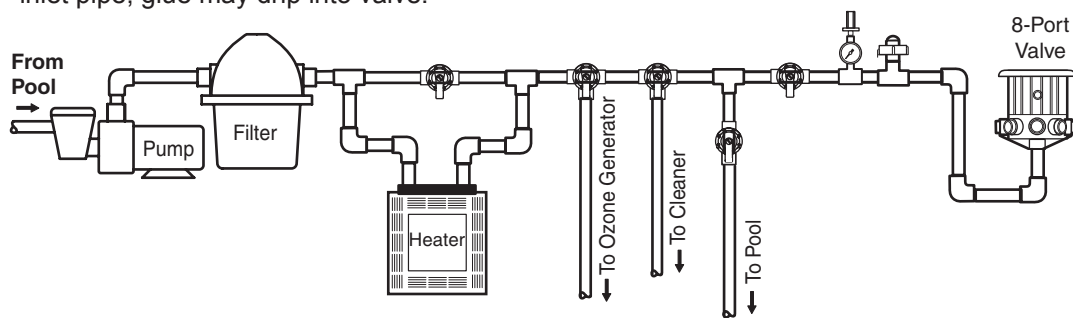


Figure 4. Example of 8-Port Valve Installation

## Discharge Lines

The distribution system is designed to rotate from the shallow end to the deep end; pushing debris to the drain. Port 1 should always be the step or bench port, followed by the shallow bank, etc. Looking down on the valve, it rotates clockwise. If a spa is included, it will require a dedicated line from the valve. Follow the design plan to install the lines in the correct order (See Figure 5).

- Use heavy bodied PVC glue to connect the PVC fittings to the 2" (5.1 cm) nipples at the outlet ports on the 8-port valve. **CAUTION: Do not get glue inside the housing as this will void the warranty.**
- If your system requires winterization, see winterizing on page 19.
- Install the discharge lines from the valve in a stacked or flat configuration (See Figure 5). **CAUTION: Ensure pipes do not touch each other.**
- Install all lines with a minimum of 6" (15.2 cm) cover or in accordance with local codes.

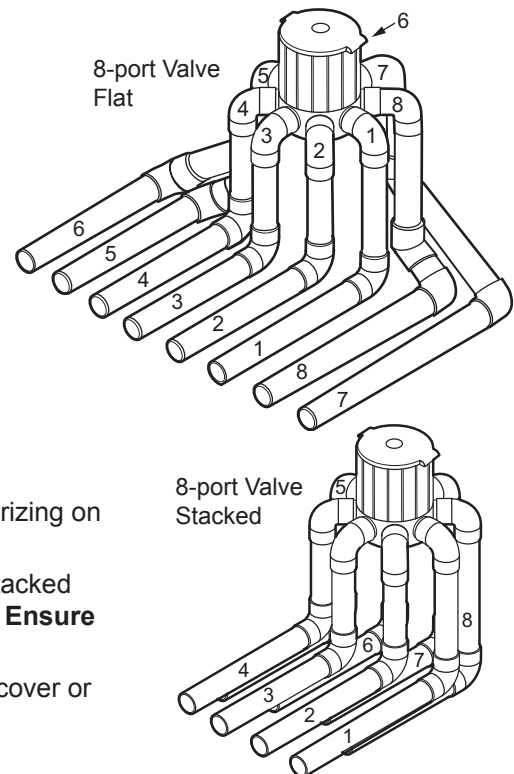


Figure 5. 8-Port Valve Stacked and Flat Configuration



- If all outlet ports on the valve are not needed, **double-port** the line by tying the unused port into an active port. Customarily, **double-port** lines to the hardest-to-clean area. Refer to the design plan for the proper connections.

Note: Skipping a line, that is tying port #1 to port #3 instead of #2, is not necessary.

- If a port is used as a return line, install an eyeball fitting at the pool wall to create back pressure on the line and install a check valve.

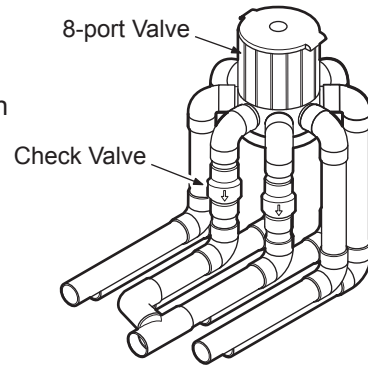


Figure 6. Check Valve Installation

## Auxiliary Equipment

**Heaters:** To compensate for heater system pressure drops, plumb heaters in a bypass line before the water valve, even if the heater has an internal bypass. Perform a temperature rise test to determine where to set the bypass valve (see Figure 7). Ensure proper water flow can be reached.

**Chlorinators:** In-floor systems can be used with erosion feeders, ozone generators, and in-line salt-chlorine generators. Consult manufacturers' instructions for proper installation to protect the water valve and other pool equipment from high concentrations of chlorine or chlorine gas.

**Automatic Pool Cleaners:** When using an automatic pool cleaner with the in-floor system, plumb the dedicated cleaner line (booster pump if applicable) before the valve (see Figure 7).

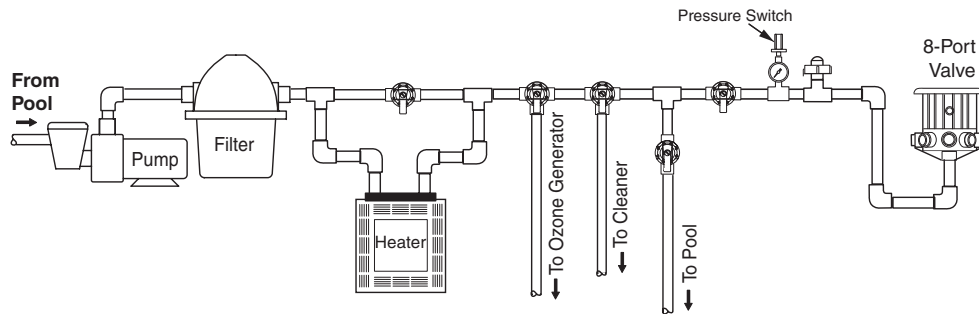


Figure 7. Plumbing Example for a Dedicated Cleaner Line

## Pressure Testing

Before the pressure test, isolate the plumbing so that the filter, pump, and heater are not subjected to the pressure test. Pressure-test the system at a minimum of 35 psi (241 kPa) for 24-48 hours or as code requires. Keep the water valve secure and under pressure throughout construction process.

### ⚠ WARNING

Pressure testing applies only to the plumbing and not to the pool equipment such as the filters, pumps, and heaters. To minimize risk of severe injury or death the filters, pumps, and heaters should not be subjected to the piping pressurization test. Refer to the manufacturer's instructions for the pumps, filters, and heaters for instructions regarding the maximum pressures the pool equipment can be subjected to.

## Controller Cable Burial

Since there is an open plumbing trench from the equipment to the water valve location, it is most convenient to complete the electrical cable installation during the plumbing phase.

Use only the 18-gauge burial cable provided for this electrical connection as it has specific ratings and certification for the product.

1. Install flexible conduit between the water valve and the controller.
2. Reference national electric codes (NEC®, Australian, etc.) for minimum burial depth requirements.
3. Leave approximately 5 feet (1.5 m) of excess wire at both the controller location and the valve location.

When all connections are complete and it is clear that the system is holding pressure, backfill, tamp, and level all trenches.

# 3

## Connecting Electrical Components

### **WARNING**

Disconnect power to the system at the main circuit breaker before performing this procedure to avoid risk of electric shock which can result in property damage, severe injury or death. Installation of this equipment should be performed by a licensed electrician and conform to the National Electrical Code® (NEC)®. All applicable local installation codes and regulations must be followed.

### **Controller**

The controller is factory set for 240V (230-240V- 50/60 Hz, output 24V~, 3A, 50/60 Hz) but can be connected to either a 120V or 240V power source. For 120V power, modify the transformer connection as diagrammed in Figure 8 (and noted inside the controller box cover).

- Mount controller on wall or vertical surface near the pool equipment.
- Install flexible conduit to house the wiring.
- Use no less than 12-gauge wire to make connections to power supply.
- Use proper connectors to connect the transformer.

### **Pressure Switch Connection**

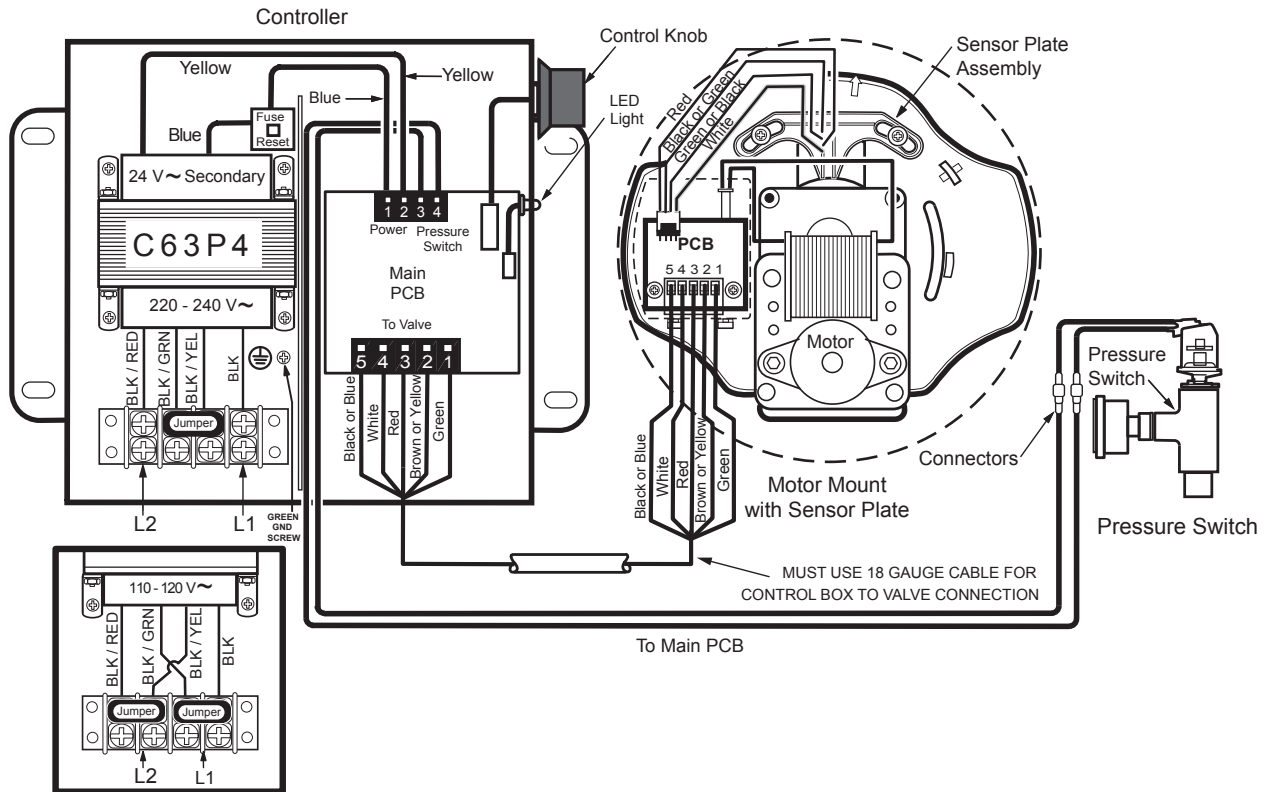
Connect the pressure switch, plumbed into the valve supply line, to the controller.

- Install flexible conduit to house the wiring.
- Use no less than 22-gauge wire to make connection.
- Use 18-22 gauge, fully insulated male push-on connectors at the switch.
- Connect the pressure switch leads to terminal positions 3 and 4 of the 4-pin terminal plug on the top of the controller PCB.

## Valve Connection

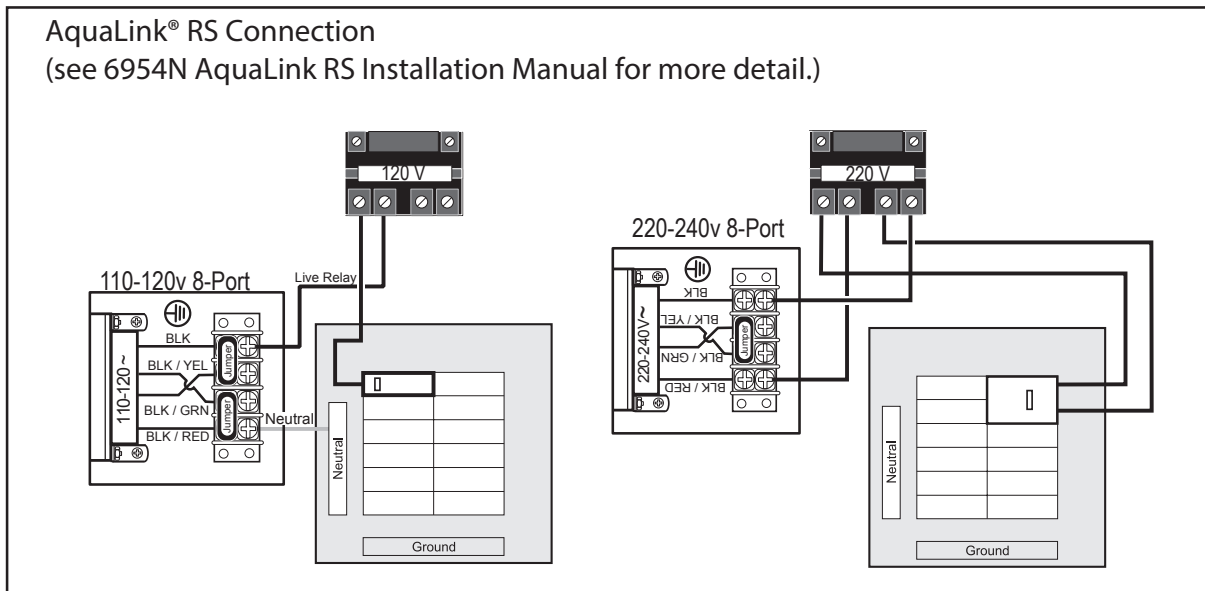
If the plumber did not do the burial cable installation, install flexible conduit from the valve to the controller and use the cable provided (this cable is specifically certified for the product) for the connection. Follow national code for minimum burial depth requirements.

- Connect the 18-gauge burial cable to the bottom terminal plug on the controller PCB, matching the pin/wire color sequence (i.e. black wire to terminal pin #5) at both locations (see Figure 8). Insert the 18-gauge burial cable through the cable port on the side of the valve.



## AquaLink® RS Connection

(see 6954N AquaLink RS Installation Manual for more detail.)



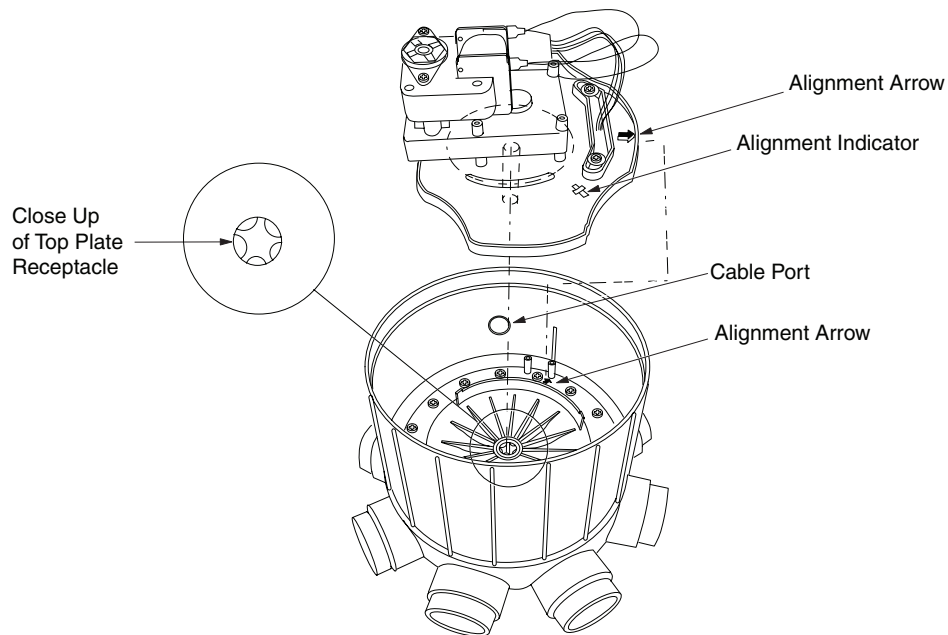
## Install Motor Assembly

### **⚠ WARNING**

Disconnect power to the system at the main circuit breaker before performing this procedure to avoid risk of electric shock which can result in property damage, severe injury or death. Installation of this equipment should be performed by a licensed electrician and conform to the National Electrical Code® (NEC)®. All applicable local installation codes and regulations must be followed.

The drive shaft of the motor assembly has a unique configuration that engages with the tee assembly located below the top plate inside the valve.

1. Verify the burial cable is properly installed and inserted through the valve's cable port. If necessary, trim the burial cable wires to length.
2. Insert the motor assembly drive shaft into the top plate receptacle.
3. Rotate until the arrow on the motor assembly lines up with the arrow on the top plate. Push the assembly down into place, making sure the raised tabs on the top plate are flush and in line with the alignment indicators on the motor assembly (see Figure 9).
4. Connect the 18-gauge burial cable to the 5-pin terminal on the valve's motor plate PCB (see Figure 8).
5. When motor installation is complete, secure the valve lid with the screws provided.



**Figure 9. Aligning the Motor Assembly**

# 4

## Preparing the System

### Cut Stub-ups

1. Verify that the system is holding pressure (minimum of 35 psi), then relieve system pressure.
2. Cut each stub-up
  - **For 2" collars:** Cut ½" (1.3 cm) above the cement.
  - **For 2-1/2" collars:** Cut flush with the cement

**Tip: Use the UltraFlex® Collar Template (part #1-17-7) (see Figure 10).**

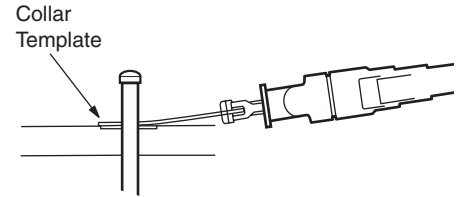


Figure 10. Collar Template

3. **Use a sander/grinder to sand each stub-up smooth and level** with the shell finish to ensure proper glue adhesion with collar setting. Insert test plug in each stub-up.
4. Close the 2-way valve on the pump side of the capped tee/union assembly in the equipment area and remove the plug from the tee.
5. Attach a blower assembly unit (blower, check valve, air/water supply and connectors; call Caretaker for assembly instructions) to the tee (see Figure 11). Turn on blower and water supply to fill the lines.
6. Starting at the cleaning head farthest from the valve, remove test plug and flush the pipe, blocking and releasing pressure several times to ensure a clear line. Replace test plug and repeat for each riser.

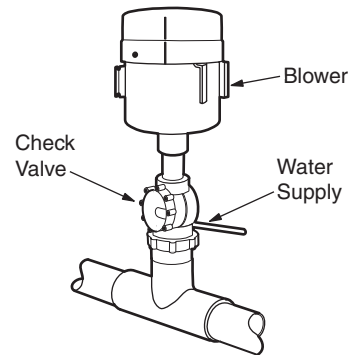


Figure 11. Blower Assembly Installed

#### For Vinyl Liner Pools:

Set collar fittings before clearing lines.

1. Cut pipe stub-up flush with the pool floor. Then use an inside pipe cutter to cut it again 1-7/8" (4.8 cm) lower than the floor level.
2. **Use ABS to PVC glue to secure the collar fitting. (Primer can be used on the pipe but not the fitting. Use glue on both.)** Insert collar to a full stop to ensure proper height.
3. Excavate an area 12" (30.5 cm) around head and 8" (20.3 cm) below excavated floor. Fill with concrete to form a "thrust block" to eliminate movement of the cleaning head.
4. Clear lines and insert test plugs limiting water use as there is no solid pool bottom.

## Install Collars

When the pool interior is completely clean and ready for the final finish application, install the collars (see Figure 12).

1. Set blue protective caps in collars.
2. Use heavy bodied PVC glue to secure the cleaning collars. (Primer can be used on the stub-ups but not the collars. Use glue on both.)
3. Push collar firmly into pipe with a 1/4 turn.
4. Ensure collar is perpendicular with pool shell; you can rotate the Ultraflex® collar up to 10°.

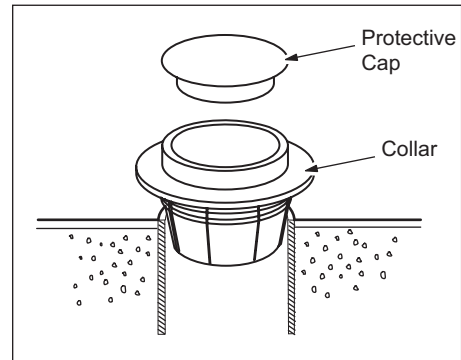


Figure 12. Install Collar

### For Vinyl Liner Pools:

Pool liner must be in final position before installing collars and cleaning heads (see Figure 13).

1. Press locking ring firmly into place in groove on collar fitting. **Installation Tip:** Turn collar upside down and use as a tool to press ring into place.
2. Use a razor knife to cut liner inside the locking ring, leaving at least a 1/4 in. (0.6 cm) edge around the ring perimeter.
3. Tighten the collar into the collar fitting, turning clockwise until the collar lip fits snugly against locking ring.
4. Insert Metal Combination Tool (part #3-17-7) into collar and rotate clockwise until collar is firmly seated.

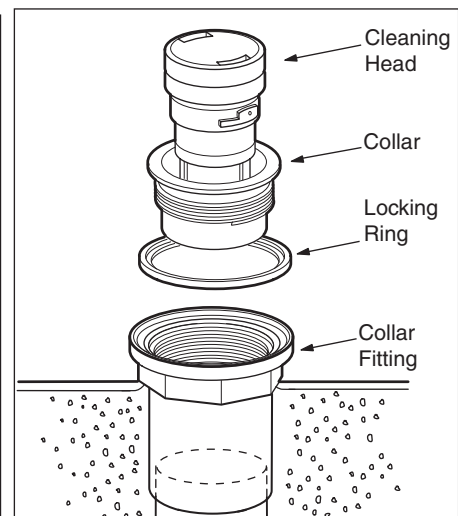


Figure 13. Collar Installation in a Vinyl Liner Pool

# 5

## Starting the System

Before initiating the system, open a discharge line before the valve and flush the pool pump and filtration system.

- Clear debris from all filters and screens.
- Remove the protective caps from the collars.
- **Run the in-floor system without cleaning heads installed for 24 hours to ensure the lines are clean.**

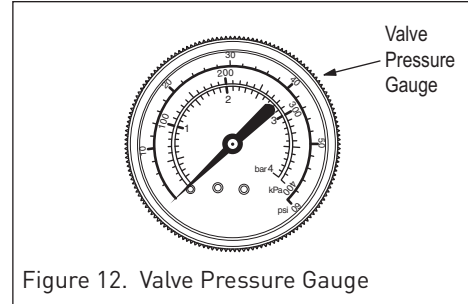


Figure 12. Valve Pressure Gauge

# 6

## Install the Cleaning Heads

1. Install the nozzles into the cleaning head. Refer to the design plan to verify nozzle size.
2. Attach the Head Removal Tool (part #3-17-8) to the pool pole.
3. Snap tool into the head. Set head in collar; make sure the head is completely in the collar.
4. Turn clockwise (about 1/4 turn) to lock the head into position.
5. Lift straight up to release head from the removal tool.
6. Run the system for a complete cycle to confirm that all cleaning banks operate and that each head advances during pop-up and retraction.
7. Verify proper water pressure at the gauge on the water valve. Optimum level is 14-22 psi (97 - 152 kPa).

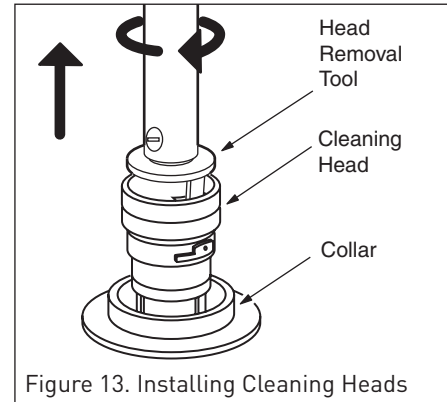


Figure 13. Installing Cleaning Heads

# 7

## Operating the System

**The 8-port valve operates with a photocell for indexing. The valve lid must be in place for the valve to operate properly.**

1. Verify that there is discharge from only one valve port at a time and that pressure drops during valve rotation, then increases when rotation is complete. If not, adjustment may be necessary:

- First, verify that motor assembly is properly aligned and secure. Alignment arrows should line up and the window on the sensor wheel (seen through slot) should line up with the colored tab on the motor plate (see Figure 14).
- If needed, loosen the sensor plate screws, rotate the sensor plate counter-clockwise 1/8" (3.2 mm) and retighten. Repeat if necessary.

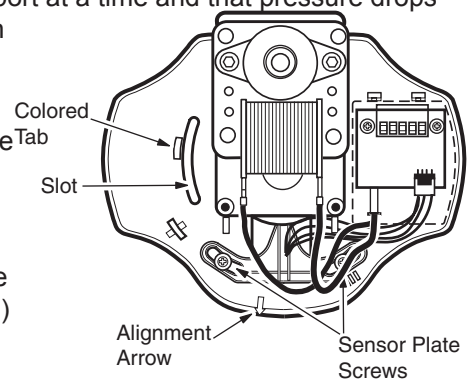


Figure 14. Motor Alignment

2. Confirm that all cleaning banks operate and that each head advances during pop-up and retraction.
3. Use the six (6) operational timer options to increase coverage (leave valve in each zone for a longer period), increase rotation times or even pause the system as needed for the specific application.

- Position 1: 15 seconds
- Position 2: 30 seconds
- **Position 3: 45 seconds**  
(Recommended)
- Position 4: 60 seconds
- Position 5: Pause mode
- Position 6: Programmable  
(adjustable from 3 - 10 seconds)



# Operation & Routine Maintenance

The 8-port cleaning heads are designed to operate at a specific gallonage and pressure. To maintain flow through the heads, run the system whenever the pump is on.

Cleaning times will vary according to application and environment. To determine the optimum cleaning time, run the system 24 hours a day to start. Reduce run times by two hours every two days until minimum cleaning time is determined. Six hours a day is recommended.

If you have a variable speed pump, you can run the pump at lower speeds throughout the day for circulation purposes, however, you still need to have a cleaning session at full speed to get the heads to clean at their full cleaning radius.

## Cleaning the Filtration System

For optimum cleaning efficiency, routinely clean the pool pump basket, skimmer, and filter screens. Backwash the pool filter whenever pressure increases 3 psi (20.7 kPa) above normal clean filter operating pressure.

Follow the pump manufacturer's recommended instructions on how to properly clean the pool pump basket. Follow the filter manufacturer's recommended instructions on how to properly backwash the filter.

## Changing Cleaning Heads

**The cleaning head must be in the full down position before removal.**

1. Attach the Head Removal Tool (part #3-17-8) to the pool pole (see Figure 13).
2. Snap tool into the head.
3. Turn counter-clockwise to release head from collar.
4. Pull and lift head out of collar.

To reinstall, insert head into collar and turn clockwise to lock it into position.

## Winterizing

### CAUTION

To prevent freeze damage in cold climates, remove water from the feed lines that are above the freeze line and seal the valve.

There are four (4) alternative methods to winterize the valve:

**Expansion Plug with Blow-Thru Valve Method:** Uses rubber tapered (winterizing) expansion plugs with blow-thru valves to seal system.

**Standard Expansion Plug Method:** Uses regular rubber tapered (winterizing) plugs to seal the system.

**Two Way Valve Method:** Uses 2-way valves installed on each port to seal system.

**Backer Rod Method:** Uses (polyethylene foam) to winterize the valve and requires the installation of tee fittings at each outlet line of the valve.

### ⚠ WARNING

### ELECTRICAL SHOCK HAZARD

Before winterizing, disconnect the power/sensor cable from the circuit board at the valve. Failure to comply may cause a shock hazard, resulting in severe personal injury or death.

Before winterizing, disconnect the power/sensor cable from the circuit board at the valve.

1. Remove the motor assembly, top plate, tee assembly, and tee assembly O-rings. Store the motor assembly, tee assembly, and O-rings in a dry, protected location.
  2. Lower the water level of the pool to below the tile level.
  3. Seal the valve.
- **2-way valve:** Follow the same instructions for the expansion plug, but, instead of using the expansion plug, close the 2-way valve to seal the system. Insert an expansion plug into each port to prevent water from getting into the ports and to be used as a back-up seal (see Figure 15).
  - **Expansion plug methods:** Using an air compressor/blower at the filter system, blow out the supply line to the valve. Place a #11 winterizing plug into the inlet line at the valve (see Figure 16).

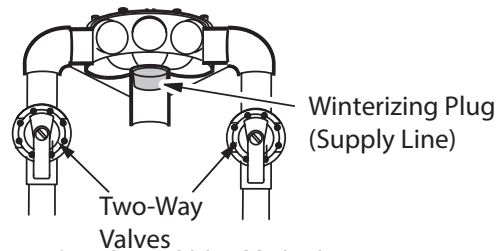


Figure 15. 2-way Valve Method

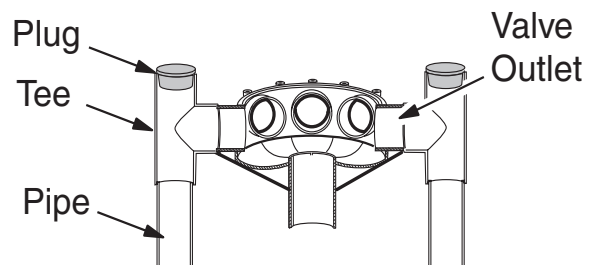


Figure 16. Expansion Plug Method

- **Expansion plug with blow-thru valves:** Place expansion plugs with blow-thru valves into each outlet port inside the valve. Use an air compressor with an air chuck at the valve to blow out the outlet lines. Blow each line until air can be seen coming from the line in the pool/spa floor (see Figure 17).
- **Standard expansion plug:** Use an air compressor or 2-1/2 hp spa blower with an adapter to blow out the outlet lines at the valve until air can be seen coming from the line in the pool/spa floor. Place an expansion plug into each outlet port.
- **Backer Rod method:** Remove the 2" (5.1 cm) plugs from the tee plumbed on the eight (8) outlet lines of the valve. Place a 2" (5.1 cm) diameter section of Backer Rod (polyethylene foam) into each outlet line until it reaches the bottom of the plumbing line. (The plumbing line must extend a minimum of 24" (61 cm) below the freeze line.) Cut the foam level with the top of the tee fitting and thread the 2" (5.1 cm) plug halfway onto the fitting.

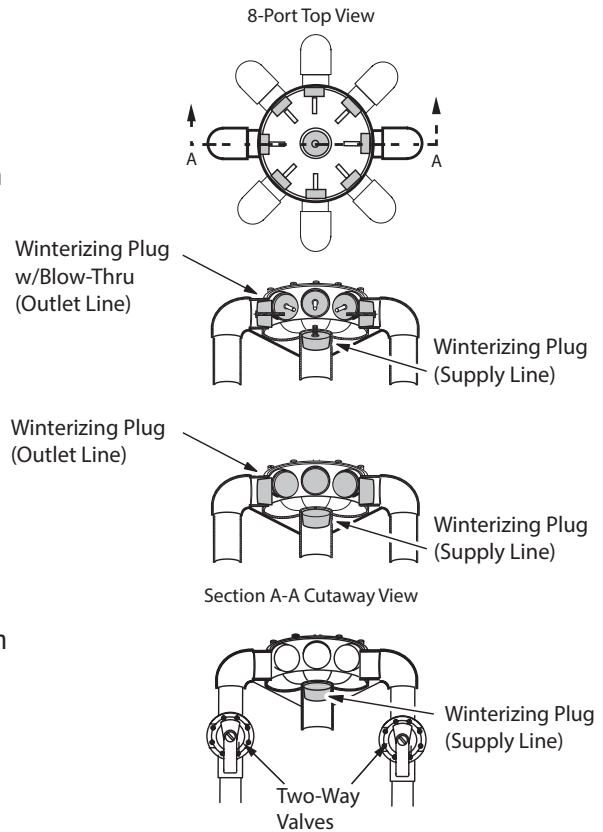


Figure 17. Expansion Plug with Blow Thru Valves

4. If cleaning heads are located above the freeze line (i.e. steps, benches, etc.) remove the heads and seal the lines with expansion plug.
- **Expansion plug and 2-way valve methods:** Use the air compressor to blow out the line and place a #10-1/2 expansion plug into the collar.
- **Backer Rod method:** Push 1-1/2" (3.8 cm) diameter foam into the collar until it reaches the bottom of the plumbing line below the pool/spa. Place a #10-1/2 rubber tapered expansion (winterizing) plug into the collar.
5. Reinstall the top plate and the valve cover for the winter season.

At spring startup, apply lubricant to the motor assembly drive shaft before inserting it into the top plate receptacle.

# Troubleshooting

If the 8-port displays any of these actions, adjustments may be necessary to restore performance. Refer to exploded parts diagram for part references.

**Action: Dirty spots appear.**

- Solution:
1. Clean the pool filter, pump basket and skimmer basket(s).
  2. Make sure all auxiliary valves (surface returns, waterfall, spa overflow, etc.) are closed.
  3. Increase the cleaning time at the controller timer knob.
  4. Ensure proper pressure, heads are rotating, proper nozzles are installed, and valve is rotating from zone to zone.

**Action: Dirt is trapped between heads.**

- Solution:
1. Verify that the heads on each side of dirt are not pointed in the same direction. Advance a head, if necessary, using the head removal tool to ratchet the head up and down until nozzle points in the correct direction.
  2. Increase the cleaning time.
  3. May need to flow balance.

**Action: Cleaning head advances but is not cleaning.**

- Solution:
1. Check for debris in the nozzle.
  2. Remove cleaning head and run pump for two (2) full cycles on problem bank. Check nozzle and reinstall head.

**Action: Cleaning head will not pop up or will not go down.**

- Solution:
1. Remove the head. Inspect the cleaning head and collar for plaster remnants or debris.
  2. With system running on the problem bank, lightly depress the problem head using a telescoping pool pole.

**Action: Pressure is lower than normal.**

- Solution:
1. Clean the pool filter, pump basket, and skimmer basket(s). Backwash pool filter.
  2. Make sure all auxiliary valves (surface returns, waterfall, spa overflow, etc.) are closed.
  3. Confirm that the pool pump is operating properly.
  4. Check for leaking or worn o-rings. Replace if necessary.
  5. Check heater bypass.

**Action: The valve does not cycle.**

- Solution:
1. Clean the pool filter, pump basket, and skimmer basket(s). Backwash pool filter.
  2. Make sure all auxiliary valves (surface returns, waterfall, spa overflow, etc.) are closed.
  3. Verify valve is not in pause mode.
  4. Make sure GFCI is not tripped and check the main power source connections.
  5. Check pressure switch wiring.
  6. Verify that terminal pin number (ex: pin #1-5) and wire color sequence match on both ends of electrical connections.
  7. If the red indicator LED is on or blinking but the valve is not rotating, check under the top plate for mechanical restrictions like debris or a damaged o-ring.

**Action: Two (2) ports are discharging water at the same time.**

- Solution:
1. Check for proper port alignment. Adjust sensor plate if necessary.
  2. If feed lines are double-ported, verify that check valves are installed on both lines.

**Action: Valve does not pause at an outlet port.**

- Solution:
1. Verify valve lid is in place.
  2. Check sensor and replace if necessary.

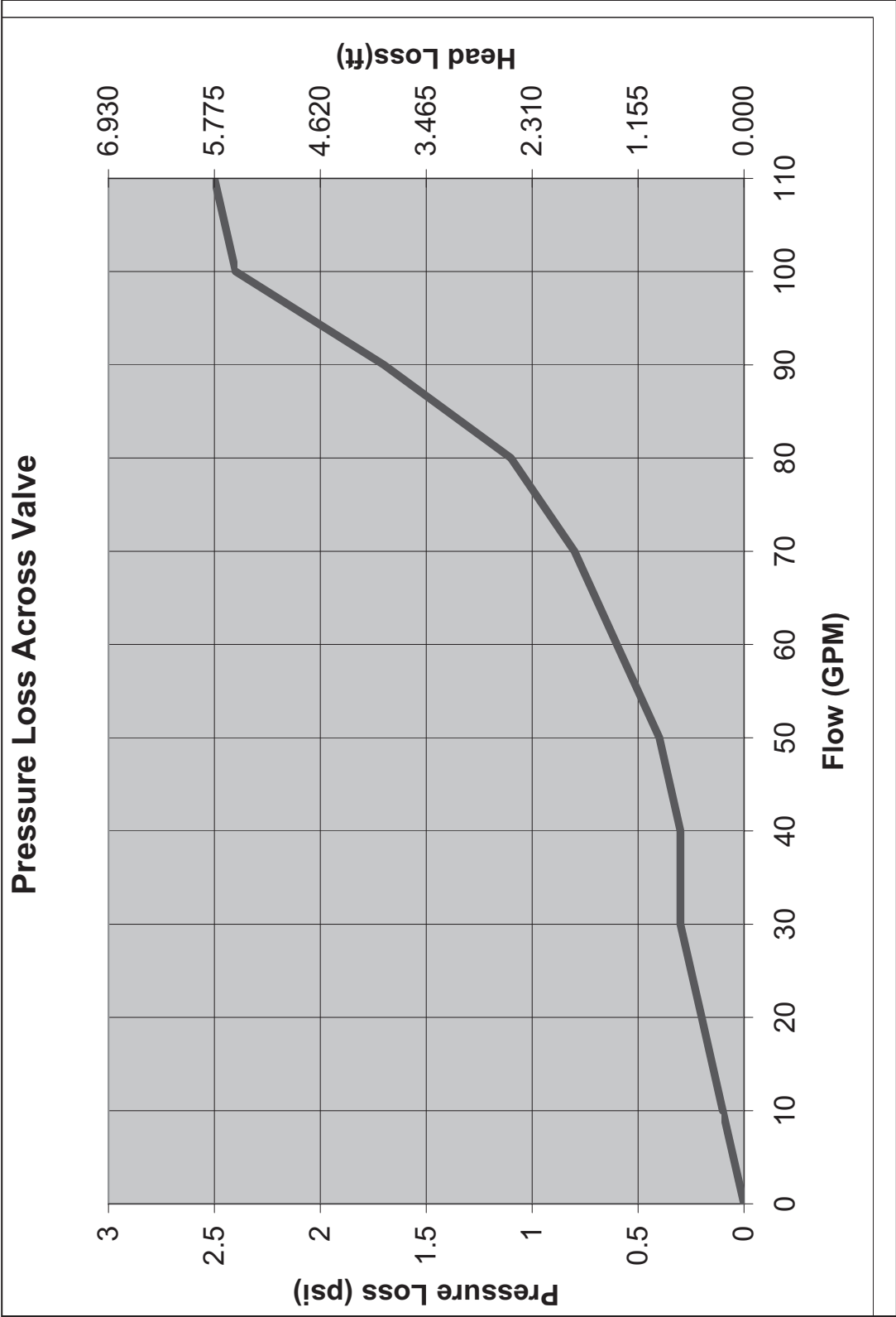
**Action: Valve is leaking.**

- Solution:
1. Check for debris underneath the top plate or around the face seal o-ring, and clean as needed.
  2. Verify that top plate is tight. Replace face seal o-ring if necessary.
  3. Shaft seal is leaking, replace.

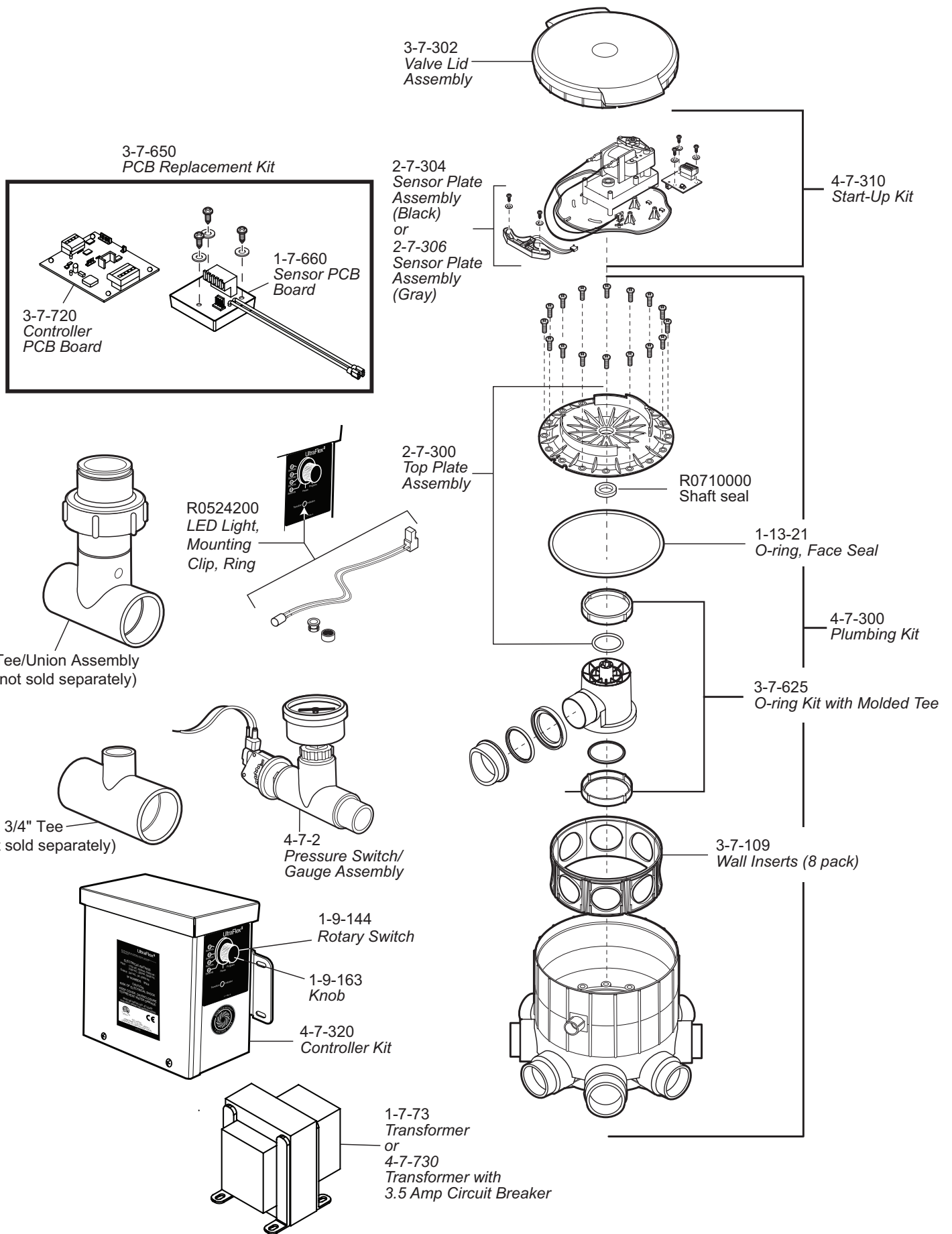
**Action: Valve makes squealing noise.**

- Solution:
1. Check for proper port alignment. Adjust sensor plate if necessary.
  2. Check for worn tee o-rings. Replace if necessary.

# Head Loss Curve



# 8-Port Electronic Valve Parts (UltraFlex® 2)



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