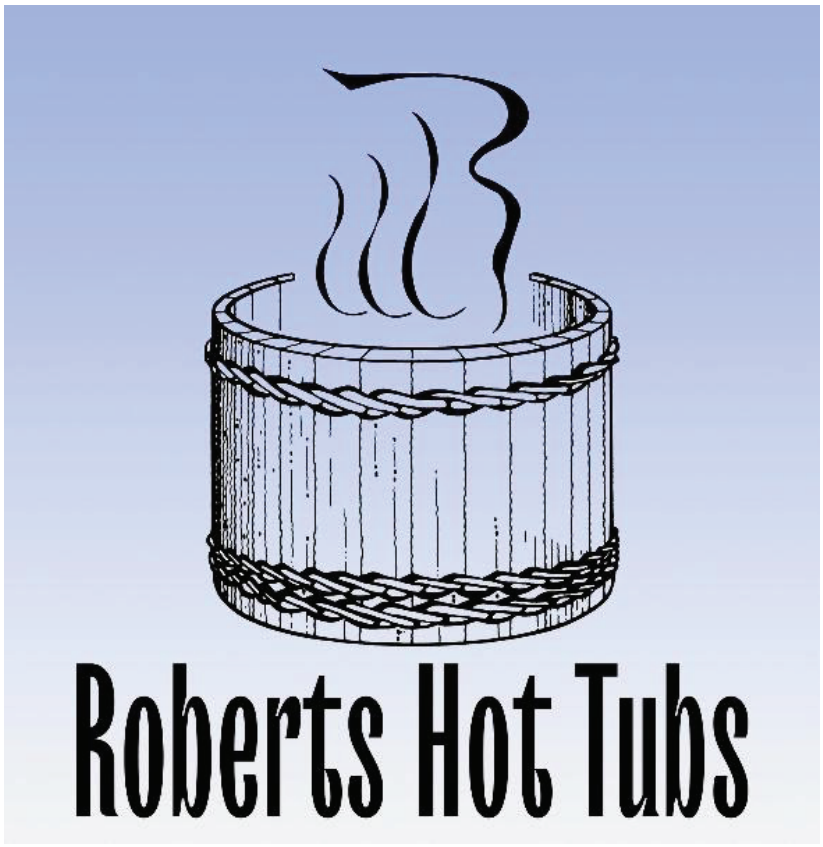

Heat Pump/Chiller Equipment Manual

Contact Information

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Roberts Hot Tubs

** If you have rim decks, please install them prior to plumbing the tub.*

Tools and Materials Needed

1. PVC Cutters
2. Drill
3. Drill bits
4. Teflon® Tape
5. 2.5" Hole Saw Bit
6. Extra PVC
7. PVC Glue and Primer (ecotubs only)

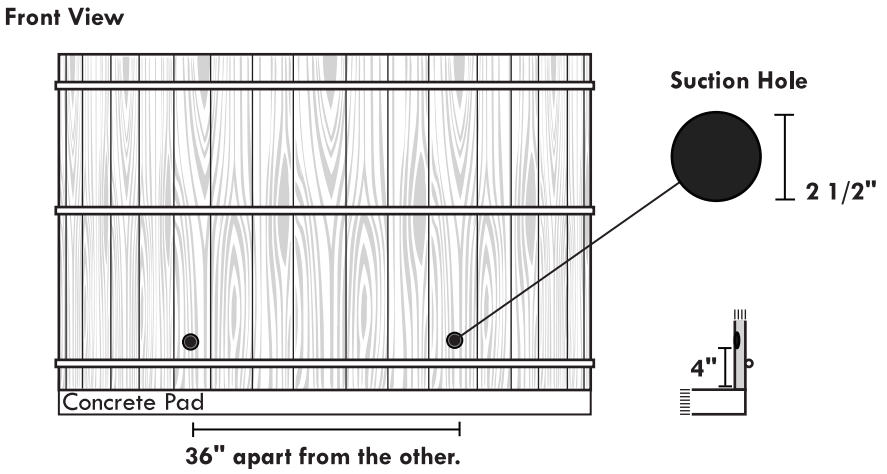
Roberts Hot Tubs

Installing the Suctions

The suctions should be installed along the side of the tub. The suctions must be separated by at least 36" and 4" above the floor on center. Suctions require a 2 ½" hole. Use both primer and glue to connect PVC.

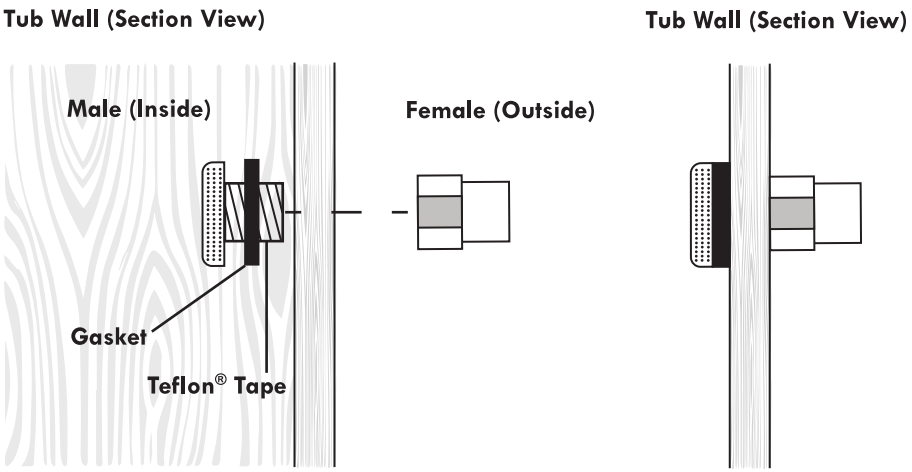
1. Slip Male Thread Through Wall Fitting

Wrap Teflon® tape five times to the end of male threads. Slip the male thread through the wall of the tub. (The gasket goes on the inside of the tub).



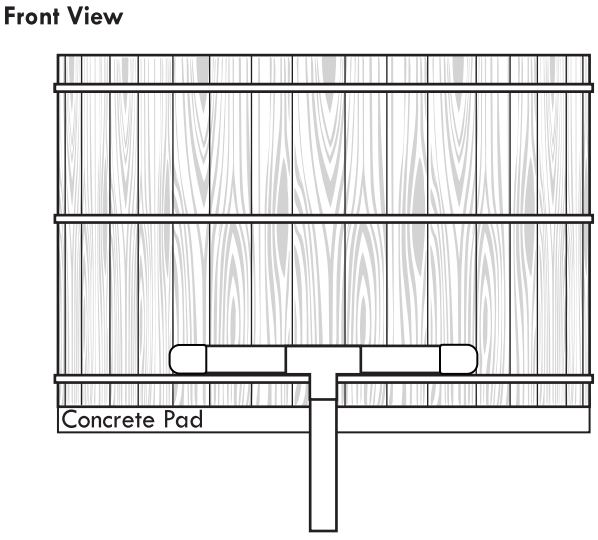
2. Screw on Female Threaded Suction Nut

Screw the female threaded suction nut onto the thru wall fitting. A snug hand tightening is all that is necessary.



3. Connect Suctions

Plumb suctions to the outside of the tub using a street 90 elbow to connect to the T-fitting.

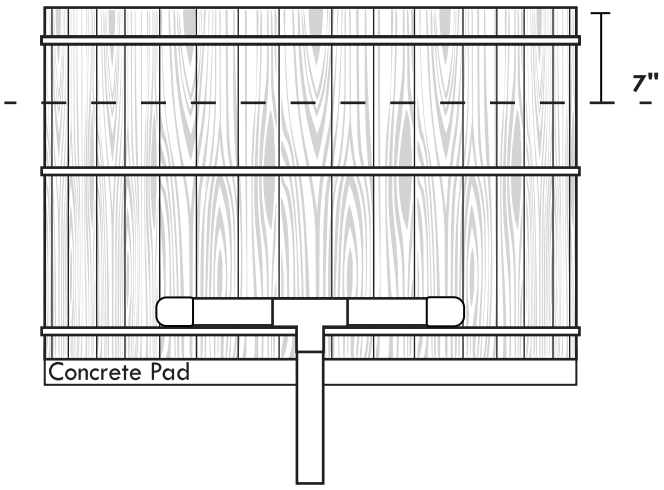


Jet Installation and Location

1. Decide Where You Would Like the Jets

The highest jet should be no less than 7" from the top of the tub on center.

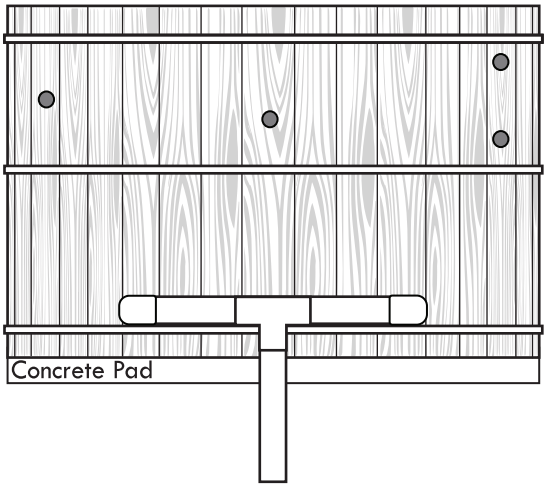
Front View



2. Create Holes for Jets

Standard jets require a 2 ½" hole.

Front View



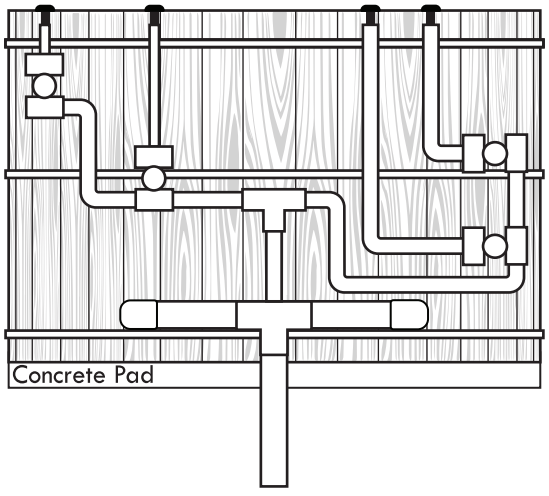
Suctions

3. Install Jets

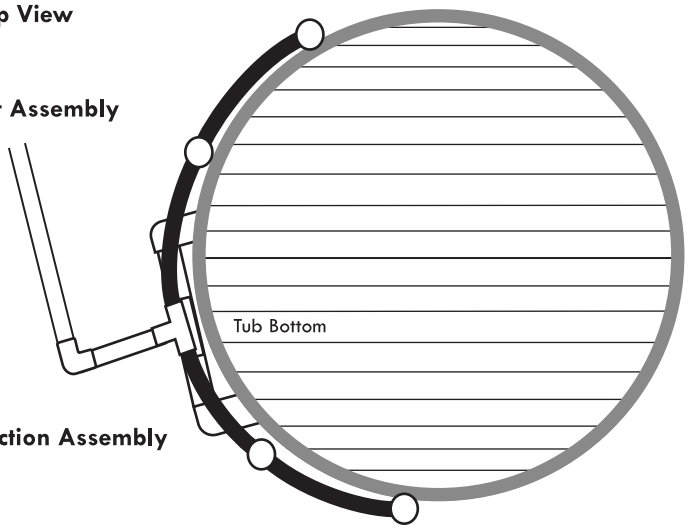
Apply five wraps of Teflon® tape to the end of male threads. Slip through the wall fitting into hole. The gasket goes on the inside of the tub. Screw the jet body onto the through-wall. Hand tighten.

When plumbing the string of jets, the pipe feeding them from the equipment should 'T' into the middle of the four jets for a balanced flow.

Side View

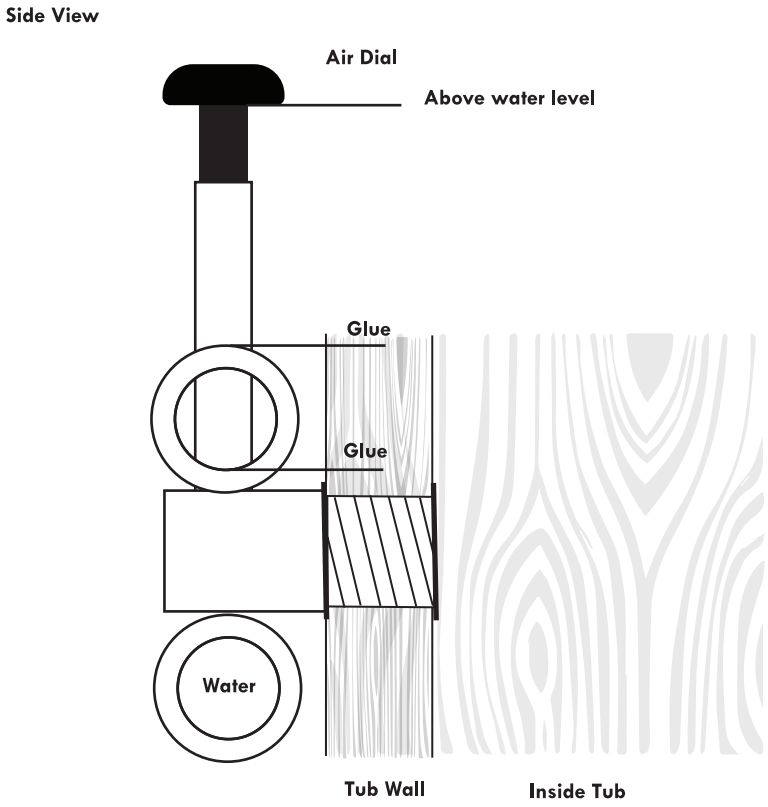


Top View

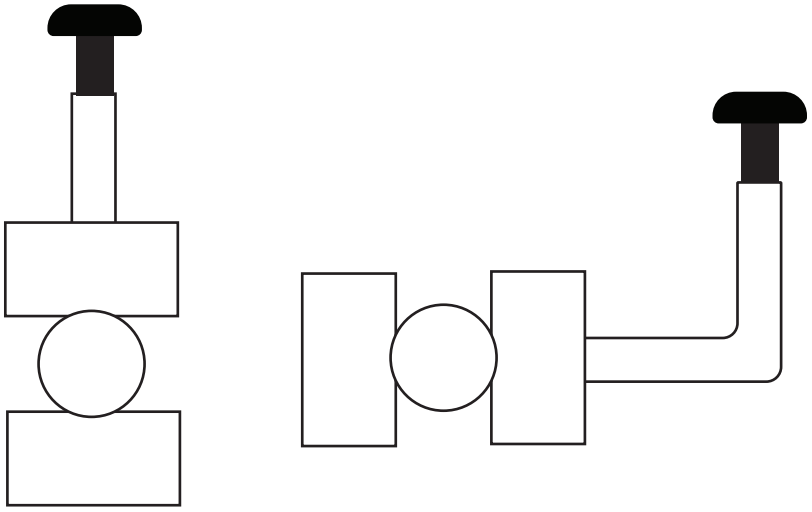


4. Install Air Fittings

Using 1/2" PVC route air links for each jet from the inside of the jet body to each air dial. Air dials must be above the water line and friction fit onto 1/2" rigid PVC.



* Jets may be plumbed upright or horizontal.

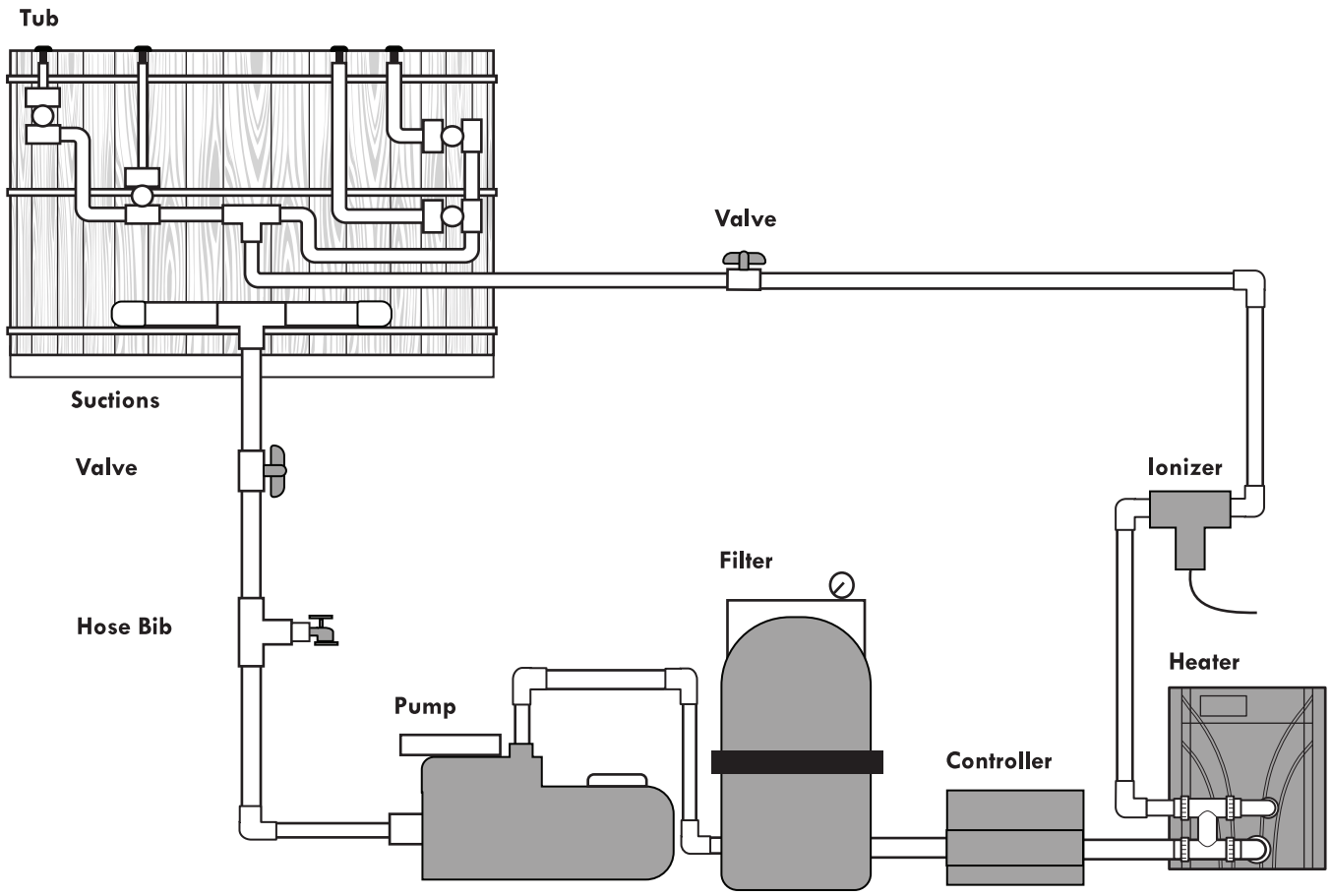


Installing Equipment with ACC Pack 2000 Pack with Heat Pump/Chiller

* **Note before proceeding:** It is recommended that you consult with a professional contractor and electrician for your own safety and to ensure you are compliant with national and local building codes.

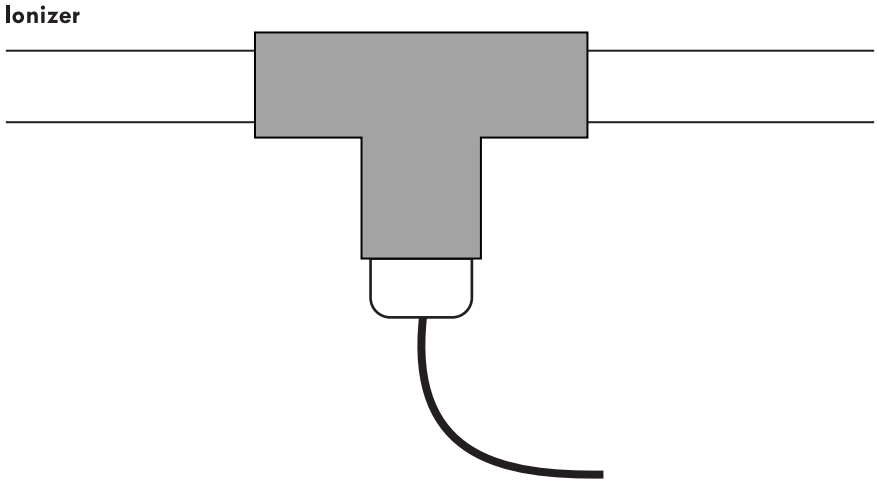
  Equipment should be secured to a pad.

  Familiarize yourself with the equipment orientation and installation order.



* The hose bib has the option of being installed in the PVC using a T-fitting.

Note: The Ionizer is positioned so that the grey wire is hanging downward through the bottom of the T-fitting.



Spa Side Controller

* **Note:** The Spa Side Controller performs best when protected from direct sunlight.

1. Select Location for Spa Side Controller

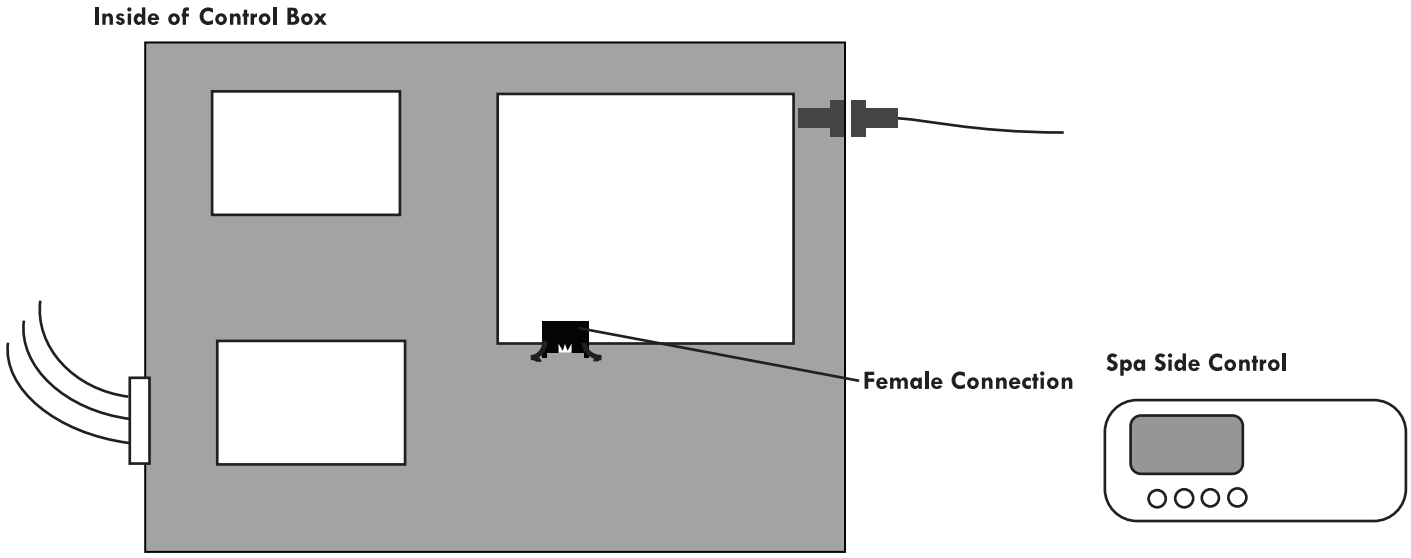
The Spa Side Control is low voltage and may be placed adjacent to the tub, near the equipment area, or some other location near the tub.

2. Ensure the Controller is Water Tight

In order to keep watertight, Spa Side Controller should be mounted horizontally, with the face of the control pointed towards the sky with the cables hanging downward.

3. Connect Ribbon Cable

The Spa Side control comes with a 15' ribbon cable. If there is more than 5' between the tub and your equipment, you will need low voltage 1" conduit. Make the connector on the spa side control connect to the circuit board. The wifi connector plugs into the female connection on the spa side controller.



Ionizer Installation

Plug into ACC with the ozone connector.

Heat Pump/Chiller

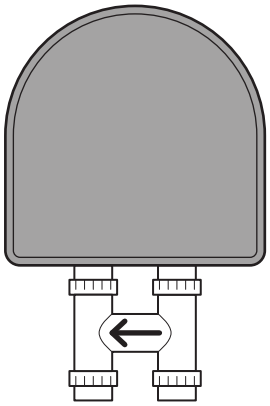
1. Locate Fireman's Cord

2. Open the Front Panels

You will need to open the side of the heater along with the electrical box inside of the heater/chiller.

3. Install wire

Remove the jumper between ports 5 and 6 and connect the controller. Polarity does not matter. Connect the other end of the cable into the Firemans port of the ACC Controller.



4. Install Bypass to Heat Pump

Screw unions onto front of heat pump, plumb a T onto both uninions and plumb check valve between the T's. Flow direction arrow points from in to out.

Connecting ACC Controller to Pump

1. Locate Back of The Pump

The pump power cord will be connected to the terminal strip located at the back of the pump motor.

2. Install Stress Relief and Feed Cable Through

Open back of the pump and remove the plug from threaded hole. Screw stress relief into the hole, feed cable through, and plug into appropriate ports.

Grn to Green Ground screw
Wht to upper #1 connecter (Common)
Black to middle #2 connector (High Speed)
Red to Lower #3 connector (Low Speed)

Further Wiring

1. Wifi

Connect the Wifi unit ribbon cable to the grey Female piggyback connector on Spa Side Ribbon Cable.

2. Bonding

All exterior wiring should be bonded with solid core copper.

Start Up Procedure:

1. Open All Valves

There are two water valves.

2. Fill Up The Tub

To get the tub to start to swell we must get the water hot. In the case there is excessive leaking, the tub must only be filled to just above the suctions. This is to prevent the equipment from running dry. If this is done, please heat the water and turn off your equipment for the night so it does not automatically come on and run dry.

3. Prime The Pump

Open the leaf trap and fill up the leaf basket of the pump.

4. Turn On The Equipment and Pump.

5. Bleed The Filter

Open the black value on the top of your filter until water sprays out.

6. Turn power on to both the heater and contoller

7. Program the Controller

a. Hit jets button to turn on the pump. Wait til the pump is fully primed and there is no air left in the pipes

b. Hold up arrow til temperature flashes on the display.

c. Press up arrow til desired set temperature is reached.

d. Press set.

e. Wait til heater light is lit.

8. Program the heater

a. Press lock icon til the heater beeps

b. Press the up arrow til temperature reaches 104

c. It takes up to 3 min for the heater to turn on.

Safety Instructions

Owners of a hot tub should become well acquainted with the following safety instructions. It is the owner's responsibility to inform guests and family of these safety precautions and to see that they are followed.

1. When installing and using electrical equipment, these basic safety precautions should always be followed:
   a) To reduce the risk of injury, do not permit children to use this product unless they are always closely supervised.
   b) All electrical power supplied to this system must be connected to a ground-fault circuit-interrupter at the power source.
   c) The GFCI should be tested regularly. Push the test button on the GFCI. The product should not operate. Now push the reset button on the GFCI. The product should now operate normally. If the product fails to perform in this manner, there is a chance that there could be a ground current flowing, indicating the possibility of an electric shock. Disconnect the power until the fault has been identified and corrected.
   d) Bonding lugs are provided where appropriate and should be used to connect a minimum No. 8 AWG (8.4mm2) solid copper conductor between the equipment and any metal objects.

2. Risk of Electric Shock.
   a) The actual tub or spa should be installed at least 5 feet (1.5 m) from all metal surfaces. As an alternative, it may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum No. 8 AWG (8.4 mm2) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.
   b) Do not permit any electric appliance, such as a light, telephone, radio, or television, within 5 feet (1.5 m) of the tub.

3. Risk of Accidental Drowning.
   a) Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use the tub unless they are always supervised.
   b) The use of alcohol, drugs, or medication before or during hot tub use may lead to unconsciousness with the possibility of drowning.

4. When installing and using electrical equipment, these basic safety precautions should always be followed:
   a) The suction fittings in this system are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the hot tub if any part of the suction fittings is broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original fitting.
   b) The water in the hot tub should never exceed 104° F (40° C). Water temperatures between 100° F and 104° F (38° and 40° C) are considered safe for a healthy adult. Lower water temperatures are recommended for the elderly, for young children and when hot tub use exceeds 10 minutes.
   c) Since excessive water temperatures have a high potential for causing fetal damage during the early months of pregnancy, pregnant or possibly pregnant women should limit water temperatures to 100° F (38° C).
   d) Before entering a hot tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature-regulating devices varies.
   e) The elderly, obese persons, and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a hot tub.
   f) Persons using medication should consult a physician before using a hot tub since some medication may induce drowsiness while other medication may affect heart rate, blood pressure, and circulation.
   g) High water temperature and prolonged periods of exposure can raise internal body temperature excessively and impair the body's ability to regulate temperature. This effect is even heightened in children. High body temperature affects people differently. Excessive exposure may result in nausea, dizziness, or fainting. Until you become familiar with your own body's reaction to hot water immersion at various temperatures, you should limit your initial time in the water to 10 minutes at a maximum temperature of 100° F.
   h) Do not use the hot tub immediately following strenuous exercise.
   i) People with open sores or infectious conditions should not use the hot tub.
   j) Do not jump or dive into the hot tub, which can result in serious injury or death.
   k) Wet surfaces surrounding hot tubs are slippery and care must be used when entering and exiting. Installation and use of handrails are recommended.
   l) Glass and other breakable objects should not be brought into or near the hot tub.
   m) When not in use, the hot tub should be covered with a rigid cover (such as our Vinyl Insulating Cover). The cover should be completely removed prior to the use of the hot tub. Do not sit, stand, or lie on the vinyl insulating cover as it is not meant to support such weight. The cover should be locked or latched when the hot tub is not in use to prevent unauthorized use or entry, especially by small children.
   n) All outdoor installations should comply with local fencing codes, and some method should be employed to prevent unauthorized use or entry to the area around the tub
   o) Do not use attachments unless recommended by the manufacturer. Use the equipment in this system only for its intended use.
   p) Never drop or insert any object into any opening. Prevent small objects such as beads, buttons, etc. from entering the system through the jets or suction fittings. Remove loose fitting jewelry (such as earrings) before entering the hot tub.
   q) Bathers with long hair should tie their hair up or use a bathing cap to prevent hair from entering the system.
   r) Never operate this unit without the guard (screen cover) over the suction fittings, which can result in serious injury and possible drowning.
   s) Install the equipment so that access for future servicing is provided.
   t) Never service the unit without first interrupting the power supply by turning off the main circuit breaker in the homes electrical panel box.

Warranty

Warranty on all equipment will be provided by and vary based on manufacturer of the product. Please refer to product manual for warranty of each piece of equipment.

On all Roberts Hot Tubs equipment please see warranty below:

1 Year manufacturer warranty on all Roberts Hot Tubs equipment:

Roberts Hot Tubs warrants our equipment to the original end user, to be free from defects in material and workmanship, under normal usage, for a period of 1 years (12 months) from the date of manufacturing to the original end user. Such limited warranty does not cover damages caused by animals, fire, vandalism, excessive chemicals, improper installation and strain, abuse or abrasion, acts of God or use for purposes other than that for which the equipment was designed. Ordinary wear and tear, and improper installation are not considered to be a defect in workmanship or material. Any expressed or implied warranty is limited in duration to 1 years (12 months) from the date of manufacturing to the original end user. Roberts Hot Tubs shall not be liable for any incidental or consequential damages.

Any equipment deemed by Roberts Hot Tubs to have failed due to defects in materials or workmanship within 1 years (12 months) from date of purchase will be repaired or replaced, at our option, without charge for materials or labor (excludes cost of freight FOB Richmond, CA).

WARRANTY DOES NOT COVER IMPROPER USE OR ANY OF THE FOLLOWING:

- Equipment has been subjected to alteration, misuse, abuse, or if any repairs on the product are attempted by anyone other than our authorized representatives, unless express written approval is given.
- Damage due to excessive use of chemicals of water or contact with other chemicals on the equipment.
- Fading of color is not considered a defect and will naturally occur due to normal exposure to the elements and aging.|
- Damage caused by improper installation or during transportation from the dealer to purchaser.
- Any damage resulting from any misuse, abuse, negligence, acts of God, accident or alteration, (i.e. cover lifts, animals and excessive weight or wind).

Implied Warranties: The only express warranties are set forth herein. Any implied warranties, including the warranties of merchantability and fitness for a particular purpose, are limited in duration to that of the expressed warranties. This warranty does not cover consequential damagesor incidental damages including damage to property or injury arising for the use or inability to use this product. Some states do not allow the exclusion or limitation of consequential of incidental damages, so the above limitation may not apply to you.