HYDROMASSAGE JETTED BATH HEATER INSTALLATION INSTRUCTIONS

3191754
CONFORMS TO
UL STD 1975

Field Installable Heater

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS

WARNING

FOR YOUR SAFETY – This product should be installed by a professional service technician, qualified in hydrotherapy bath installation. Improper installation and/or operation could cause serious injury, property damage or death. Improper installation and/or operation will void the warranty.

INSTRUCTIONS PERTAINING TO RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSON

WARNING – When using this unit, basic precautions should always be followed, including the following:

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. DANGER: To reduce the risk of injury, do not permit children to use this unit unless they are closely supervised by an adult at all times.
3. Use this unit only for its intended use as described in this manual. Do not use attachments not recommended by the manufacture.
4. Never drop or insert any object into any opening.
5. Do not operate this heater without the guard over the suction fitting.
6. The heater must be connected only to a supply circuit that is protected by a Ground Fault Circuit Interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. Te test the GFCI, push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the FGCI is defective. If the GFCI interrupts power to heater without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this heater. Disconnect the heater and have the problem corrected by a qualified service representative.

SAVE THESE INSTRUCTIONS

IMPORTANT - READ THIS FIRST BEFORE STARTING

INSTALLATION INSTRUCTIONS

WARNING

When using electrical products, basic precautions should always be followed, including the following:

1. **DANGER: RISK OF ELECTRIC SHOCK. Connect only to a circuit protected by a Ground Fault Circuit Interrupter.**
2. **Grounding is required. The unit should be installed by a qualified service representative and grounded.**
3. **Install to permit access for servicing.**

Your bathtub manufacture has provided a plastic plumbing system to carry the water from the pump to the hydromassage jets. The heater has been designed to be installed in that plumbing system with a minimum of effort. To install the heater in the plumbing system of the hydrotherapy bath, the installer will first be required to perform a simple task of marking two cuts through the plastic circulation system piping with a wire saw provided with your heater. Once you have successfully cut through the plastic piping, you will be able to install your heater by following these instructions and by doing so, you can be assured that a proper installation will be achieved (even by folks that do not consider themselves to be “handy”). The wire saw and PVC cement provided with the heater will be the only special tool and additional material you will need to install your heater. (See Fig. 1 for parts identification. Note: your parts may look different than in the picture).

IMPORTANT: Follow the instructions below **EXACTLY** and **IN THE ORDER LISTED**. Once installed, your heater will provide years of successful operation in maintaining the water temperature comfort level of your hydrotherapy bath as you wish.

STEP-BY-STEP INSTALLATION

Part identifications: (note: due to different models, your parts may look different than shown in the picture)

Parts list:

1. 1ea Heater
2. 2ea 1” socket tail pieces
3. 2ea 1-1/2” socket tail pieces
4. 2ea flat-oring gaskets
5. 1ea flat gasket (Tee heater only)
6. 1ea #8x36” copper wire
7. 1ea installation instructions booklet

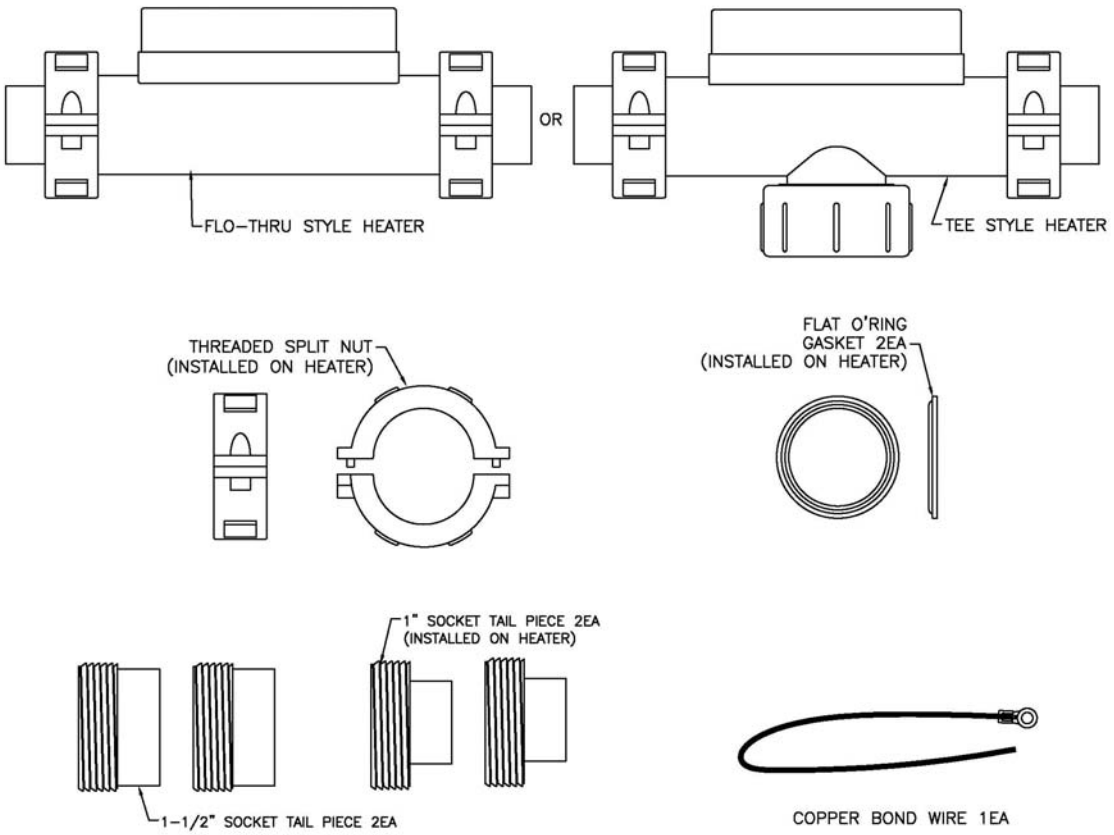


Figure 1

Step 1 - Disconnect all electrical power to the bathtub hydrotherapy system. Locate the breaker in the electrical panel that will supply power to the plug where the heater will be plugged in. Turn the breaker OFF (Note) This circuit must be protested by a GFCI, either at the breaker or at the heater plug in. Drain all water from the bathtub and hydrotherapy jet system piping before starting the heater installation.

Turn the breaker OFF

Step 2 - Locate the circulation pump in the plumbing system of the hydrotherapy tub. The water enters the pump on the inlet side of the pump in a horizontal direction (SUCTION) and exits the pump on the discharge side of the pump in a vertical direction (PRESSURE). Two styles of heaters can be used on almost all tubs. The first style is a straight FLO-THRU style that installs in the PRESSURE piping system, on either side of the pump DISCHARGE. The second style is a TEE style that connects direct to the discharge port (PRESSURE) of the pump.

Pressure piping system

Step 3. Before starting installation, you will need to verify that your heater is the correct model for your model bathtub. This is accomplished by locating the discharge port of the pump. To install a TEE style heater, a minimum of 5-1/2" of clearance from the top of the pump discharge port (with discharge port union removed) to the top of the tub is required. This will leave sufficient room for the heater to rest on top of the pump, and still have clearance between the heater top and any obstructions, such as the tub itself.
If there is insufficient space on top of the pump discharge for the TEE style heater, then the FLO-THRU style heater should be used. The FLO-THRU style heater is installed in-line on either side of the pump discharge tee. Pick a location as close to the pump as possible for the heater installation. Again, check the piping location for clearance on the top of the heater. 2" of top clearance is required from the top of the piping to allow space for a FLO-THRU style heater.

IMPORTANT: if your heater style does not allow for the minimum clearances specified herein, return the heater to the place where it was purchased and exchange it for the proper model heater before proceeding further.

Step 4. If you are using a TEE style heater, do not remove the factory installed tee union fitting from the discharge of the pump until you have successfully cut through the plastic circulation piping to make horizontal space for the heater. The factory installed plumbing tee will support the circulation piping until the piping has been cut to make space for the heater. If you are installing a FLO-THRU style heater, carefully support the piping on each side of the cut when cutting through the piping as described below (see figure 2)

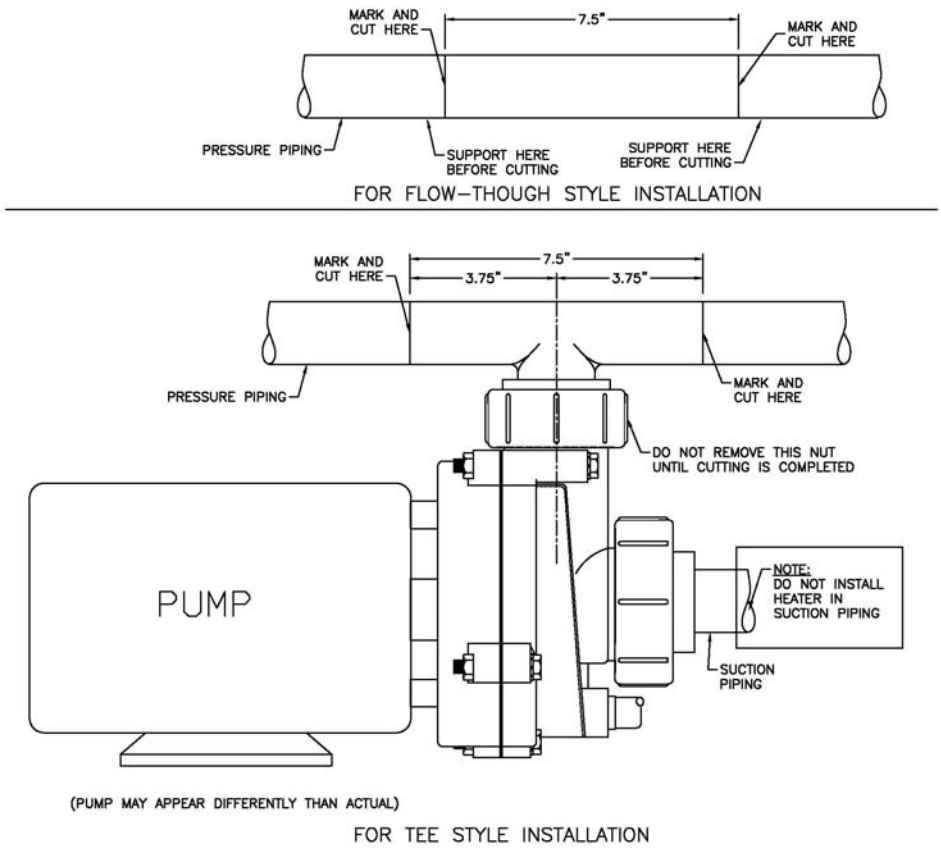


Figure 2

Step 5. You will need to make a void space in the piping of 7.5” between the two cuts you will be making in the piping. This means that the first cut will be 7.5” from the second cut. When the cuts are complete, you will remove the plastic piping between the two cuts and discard it. Mark both cuts with a pencil before cutting and confirm the distance between the two cuts. For TEE style heaters the cuts will be 3.75” and 3.75” from the center of the pump discharge, in both directions, resulting in an opening that is equal distance from the centerline of the pump discharge, and 7.5” apart from one another. Using a wire saw (pictures with wire saw shown), or a hack saw to make the cuts.

Step 6. Cutting can begin by slowly. DO NOT CUT QUICKLY! While it takes only a few seconds to cut through the plastic piping and with little pressure being applied, moving the saw back and forth too rapidly can develop heat in the cut and the cut-out portion of the piping and stationary parts of the piping may fuse back together slightly from the heat generated by the saw. Fusing will not leave the cut as smooth upon completion of the cut as it will if you saw slowly. CUT SLOWLY AND BE PATIENT! – IF FUSING OCCURES, RE-CUT A SECOND TIME TO SEPARATE THE PARTS. (see figure 3)

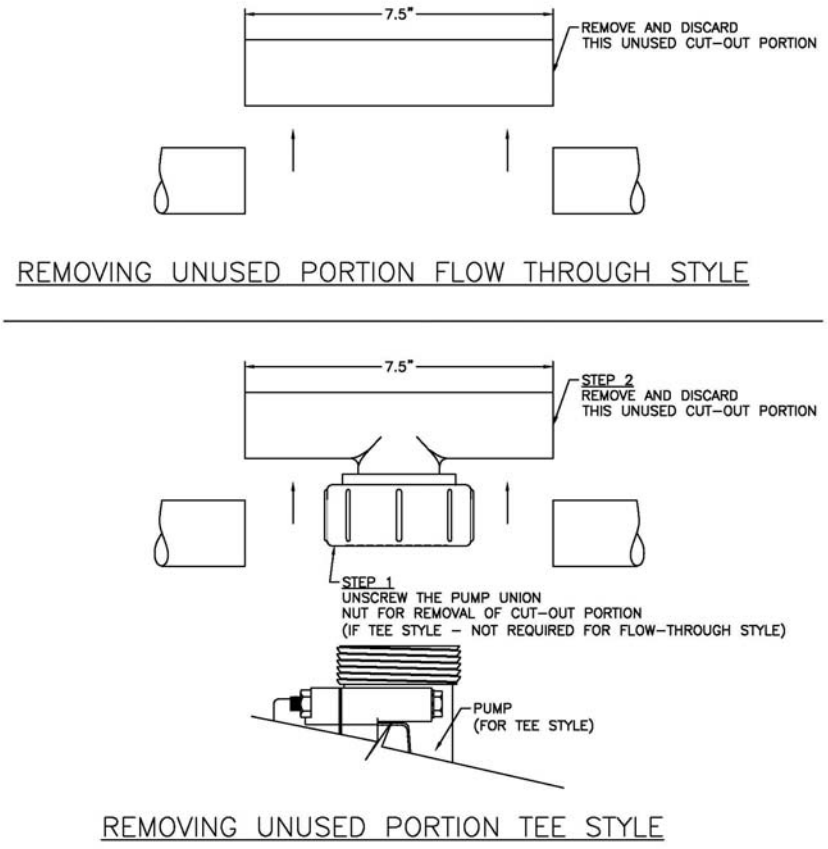


Figure 3

Step 7. When you have successfully completed the first cut, repeat the cut at the second location spaced 7.5” from the first cut.

Step 8. Once you have successfully cut through both cuts of the circulation piping, the unused portion of the piping (not attached to the piping system) can be removed from the piping system. If you are installing a TEE style heater, remove the unused portion of the piping by unscrewing the large union nut that attaches the cut-out portion of the piping to the pump discharge. If you are installing a FLO-THRU style heater, completing the second cut will allow the unused portion of the plastic piping to be removed from the piping system. Discard the unused portion of the plastic piping. (see figure 3)

Step 9. Check the cuts on the remaining portion of the plastic piping and remove any loose plastic burrs left on the fittings to ensure a proper installation of the heater.

Step 10. Remove the heater from its package. Installed on your heater you will find two (2) 1” socket white plastic threaded tail pieces and packed with your heater you will also find two (2) 1-1/2” socket white plastic tail pieces. Determine the diameter of your tub’s piping and discard the two tail pieces that do not match your piping size. The remaining two tail pieces will be glued onto the newly cut ends of the piping system. Also, installed with the 1” socket tail pieces on your heater, you will find two black round flat rubber donut shaped gaskets. The gaskets can be found by unscrewing the tail pieces from the two large gray SPLIT NUTS installed on opposite ends of the heaters. The gaskets are installed on the tail pieces where the tail pieces contact the metal heater housing. Set the tail pieces and gaskets aside. The gaskets will be installed back onto the tail pieces after the tail pieces are glued into place.

Step 11. You will note that there are two large gray SPLIT NUTS on opposite ends of the heater. Tee style heaters will have a third large non-removable nut to attach the heater to the pump. If

your tub's piping is rigid, then the two SPLIT NUTS will need to be removed from the heater for use later in the installation. If you can spread your tub's piping at least 2" from the cut location, then there is no need to remove the SPLIT NUTS, as the open space in the piping will allow the heater union tail pieces to be glued into the piping system, and then the piping and tail piece can be spread apart to install the heater. (see figure 4)

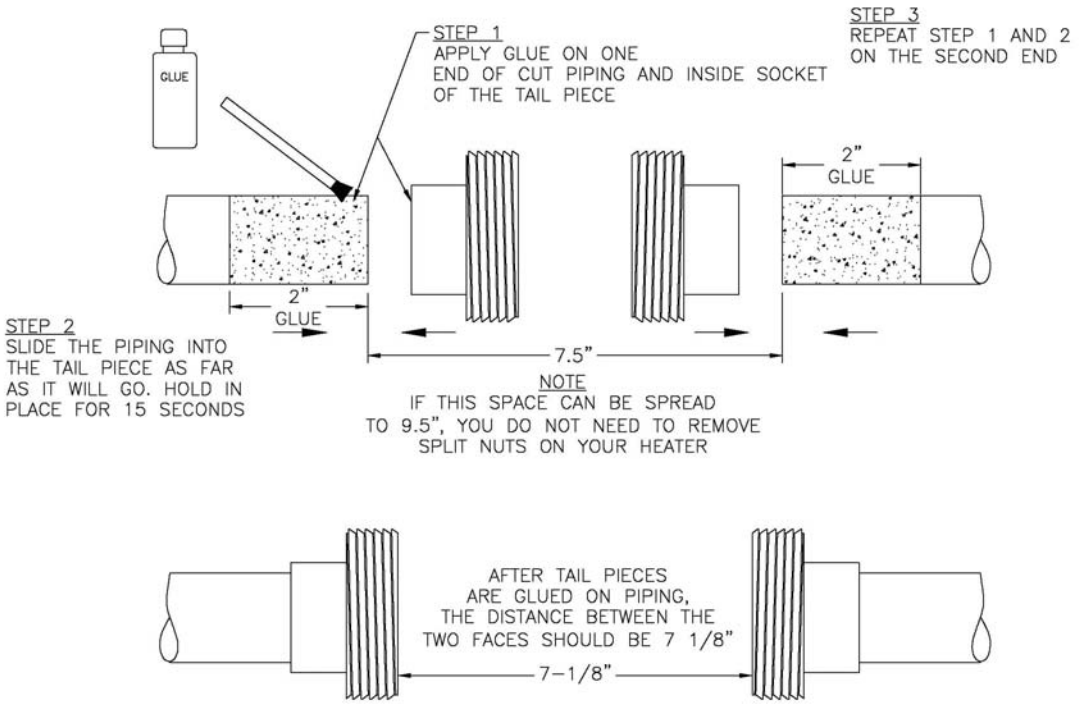


Figure 4

Step 12. You are now ready to install the white plastic tail piece onto the cut ends of the piping. Using the PVC glue, first apply the glue to one of the ends of the cut piping, spreading the glue evenly and generously up 2" onto the pipe exterior from the cut end. Quickly apply the glue to the inside socket of the tail piece. Before the glue dries on either the piping or the tail piece, slide the piping into the tail piece as far as it will go (a stop is built into the tail piece) and hold it for 15 seconds to allow the glue to set-up. Repeat the gluing process on the second tail piece. When both tail pieces are glued onto the piping, measure the distance between the two faces of the tail pieces. Your dimension between the two faces should be 7-1/8". If you have another dimension between the faces of the two tail pieces, make sure the two tail pieces can be either pulled apart or pulled together to make the 7-1/8" dimension. This is the dimension that will allow the heater to be installed. Install the two black gaskets onto the tai pieces by placing the ridge of the gasket into the recess on the face of the tail pieces.

Step 13. (Disregard Step 13 if you do not need to remove the SPLIT NUTS) if you need to remove the SPLIT NUTS from the heater, unscrew the two screws that hold the two halves of each SPLIT NUT together. Disengage the two halves from the heater. KEEP THESE HALVES IN PAIR FOR EACH END AS THEY WERE REMOVED FOR LATER INSTALLATION. Repeat on the opposite end.

Step 14. Now that the SPLIT NUTS are removed from the heater and the tail pieces are glued into the piping. You will note that the distance left between the two gaskets that you have

previously installed on the heater tail pieces nearly exactly matches the length of the heater. Slide the heater into the space left between the gaskets. If the heater is a TEE style, secure the heater to the pump by the pump union nut located on the tee portion of the heater, being careful to first place the sealing gasket provided onto the pump outlet where it mates up against the black plastic tee on the heater. Tighten the pump union nut by hand until it is secure.

Step 15. You will now attached the heater to the system's piping by taking the two thread halves of gray SPLIT NUTS that you've remove on step 13 and place them around the heater body and over the threads of the heater tail piece. The metal flange on the each end of the heater is to be located in front of the retaining portion of the two SPLIT NUT threaded halves and is to come to rest against the gaset on each end of the heater tail pieces. Make sure that you have aligned the threads of the two SPLIT NUT threaded halves with the threads on the heater tail pieces before you secure them in place with the two screws that were removed in step 13. (see figure 5). Repeat this procedure on the opposite end of the heater.

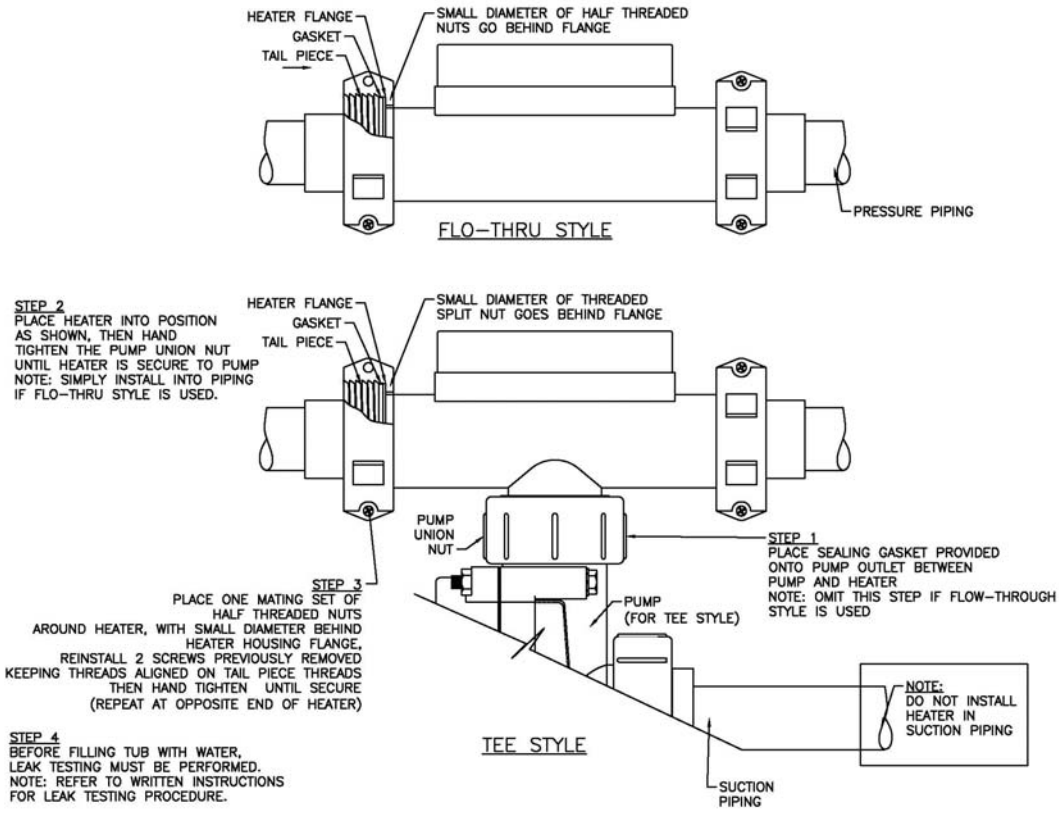
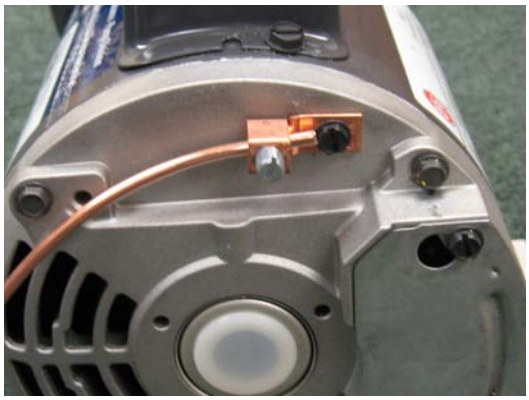


Figure 5

Step 16. Once proper alignment of the flange and threads is established and secured the two threaded halves with the two screws, verify that all of the heater's threaded components are properly aligned with the thread surfaces that they mate to. Firmly hand tighten all SPLIT NUTS (and pump union nut if you are installing TEE style heater) so that they are firm and secure up against the mating sealing surfaces and they cannot be tightened further using only bare hands. If a wrench is used to tighten the plastic nuts, they can be cracked, so use a wrench very carefully and do not over-tighten.

Step 17 – Prior to testing your installation, you must complete the electrical bonding of your heater to the bonding system of your tub. Your tub's manufacturer has provided a bonding means to electrically bond the heater to the electrical system of your tub. Read the manufacturer's instructions to locate the bonding lug provided for electrical bonding of the heater.

Packed with your heater is a 36” #8 bare copper wire. This is provided to be used to complete the electrical bonding of the heater to the manufactures provided bonding lug.



Bonding lug provided by tub’s manufacture

Step 18 – Secure one end of the #8 copper wire to the bonding lug provided on the heater and the other end of the #8 copper wire to the manufacturers bonding lug. Securing is accomplished by placing the #8 copper wire into the pressure connector on the bonding lug, and tightening the pressure connector screw with a screwdriver. Bonding shall be done as specified in Article 680, National Electrical Code. If you are unsure of how to electrically bond your heater, contact a Licensed electrician to perform the electrical installation and bonding of your heater for you. DANGER - RISK OF ELECTRICAL SHOCK – RISK OF INJURY OR DEATH IF ELECTRICAL INSTALLATION AND BONDING IS NOT DONE PROPELY. If in doubt, call a Licensed electrician!

DANGER – RISK OF ELECTRICAL SHOCK – RISK OF INJURYOR DEATH IF ELECTRICAL INSTALLATION AND BONDING ARE NOT DONE PROPERLY. If you are in doubt, have this important work done by a Licensed Electrician!

Bonding wire installed

Step 19 – **FOR 120V HEATERS INSTALLATION ONLY**: Your heater is provided with a 36 inch grounded power cord. Your heater can **only** be powered from a single 20 Amp 120V GFCI protected 3-wire power source equipped with a duplex receptacle.Plug the heater into a 120V grounded GFCI electrical outlet.

DANGER! – IF YOU HAVE A 240V HEATER, WIRING CONNECTION MUST BE DONE ONLY BY A LICENSED ELECTRICIAN!

Plug power cord into GFCI
protected 120V electrical outlet

Step 20 – Return to the electrical panel and turn the breaker back ON.

Turn breaker back ON

Step 21 – Your installation MUST be hydrostatically checked for leaks to make sure you have successfully installed your heater. This is accomplished by first filling the tub SLOWLY with water until the water is above the level of the heater. IMPROPER INSTALLATION OF THE HEATER CAN RESULT IN WATER LEAKING FROM THE PIPING SYSTEM! WATER DAMAGE CAN OCCUR TO SPACES BELOW OR ADJACENT TO THE HYDROTHERAPY BATH. Do not leave the tub unattended during the testing process and only fill the tub with enough water to raise the level of water in the tub to above the RH heater. FILL THE TUB SLOWELY SO FILLING CAN BE STOPPED IF A LEAK IS DETECTED. DRAIN THE TUB IMMEDIATELY IF A LEAK IS DETECTED AND CORRECT THE LEAKING PROBLEM BEFORE RE-TESTING THE SYSTEM.

Step 22 – If the hydrostatic test of the piping system verifies that no leaks are present, you can perform the final REQUIRED hydrostatic leakage test by first filling the tub with water above the level of the heater, checking visually for leaks and if none are present, turn the hydrotherapy

pump on. It is suggested that the system run for 30 minutes minimum. If the tub is filled with cold water, check the HEATER ON light visible on the cover of the heater.

USER MAINTENANCE INSTRUCTIONS

GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the bathtub without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this hydromassage bathtub. Disconnect the hydromassage bathtub and have the problem corrected by a qualified service representative before using.

CONCLUSION

If you experience any difficulty in the installation of your heater, you may contact us by giving us a call 909-888-2882

Thank you for selecting our heater for your installation. We are confident that you will find it to be a great comfort accessory for your hydrotherapy bath enjoyment.

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS