

PENNER MANUFACTURING  
Cascade Premier and Elite Premier  
Bathing Systems with Aqua-Aire®  
**Installation / Assembly Instructions**



Premier



Elite Premier

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**360745P Revision B – 10/01/09**

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## Introduction:

These instructions are for the installation of Cascade Standard and Elite Premier Bathing System Cabinets and Tubs. The Reservoir is included in the cabinet of this system, which is to be pre-filled prior to placing the resident into the tub. Then the water in the reservoir can be released into the tub. This shortens the time required before the tub is full.

When the terms “left” or “right” are used with reference to the tub, this means left or right as you look at the control panel from the seat end of the tub.

## Terminology and Symbols Meanings:



**Meaning: Safety warning. Failure to understand and obey this warning may result in injury to you or to others.**

### CAUTION

Meaning: Failure to follow these instructions may cause damage to parts or systems.

**Note:** Refer to the “Tub Controls” section of this manual for the location of any of the controls referenced.

## Regulatory Information



61LN

MEDICAL EQUIPMENT  
WITH RESPECT TO ELECTRIC SHOCK  
FIRE AND MECHANICAL HAZARDS ONLY  
IN ACCORDANCE WITH UL2601-1, AND  
CAN/CSA C22.2 NO. 601.1

FDA Medical Device Compliant

Regulation Number: 890.5100  
Regulatory Class: II  
Product Code: ILJ  
General Regulation: 21 CFR Part 820

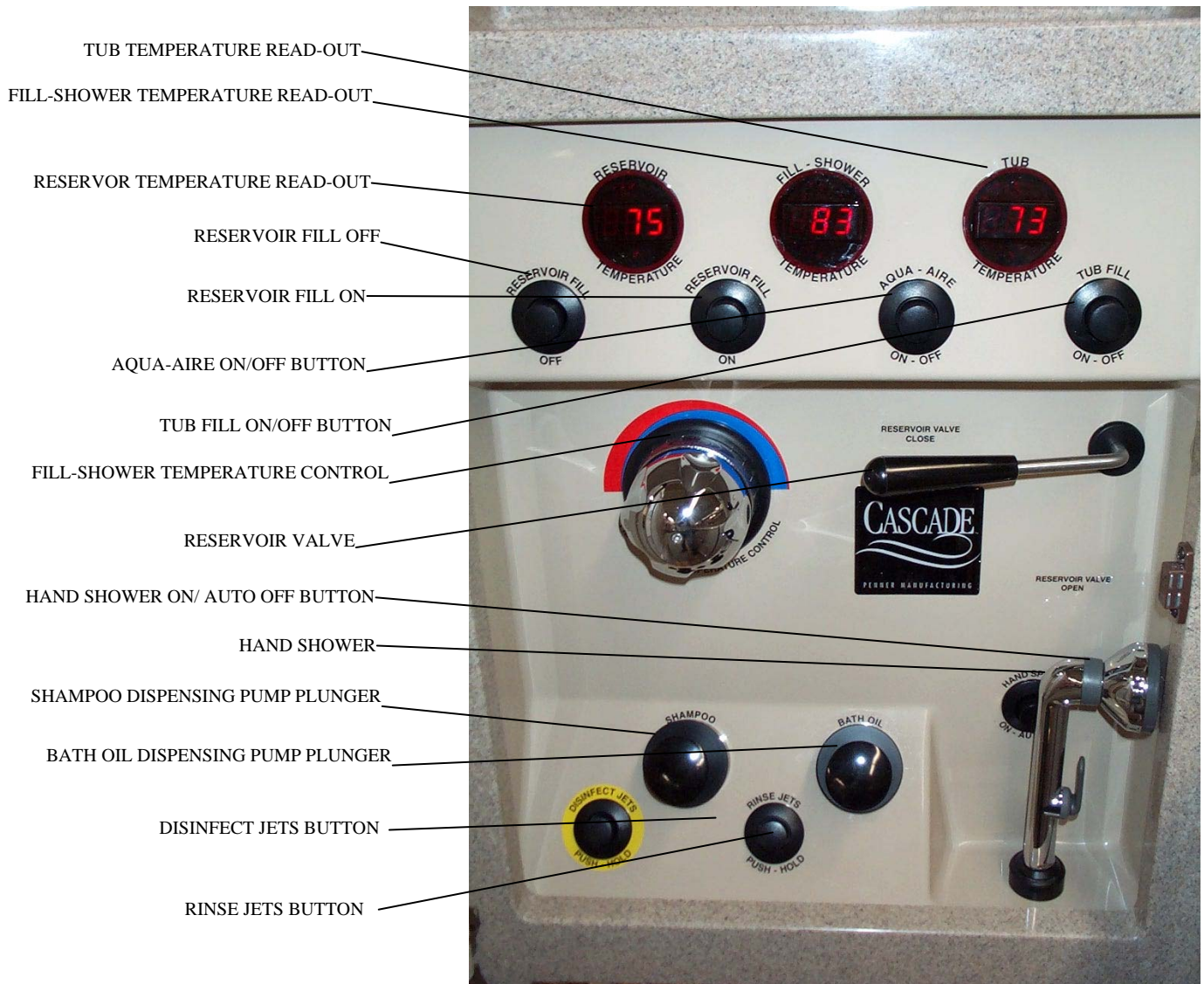
American National Standard for Plastic Bathtubs

ANSI Z124.1.2 Certified

## Plumbing Requirements:

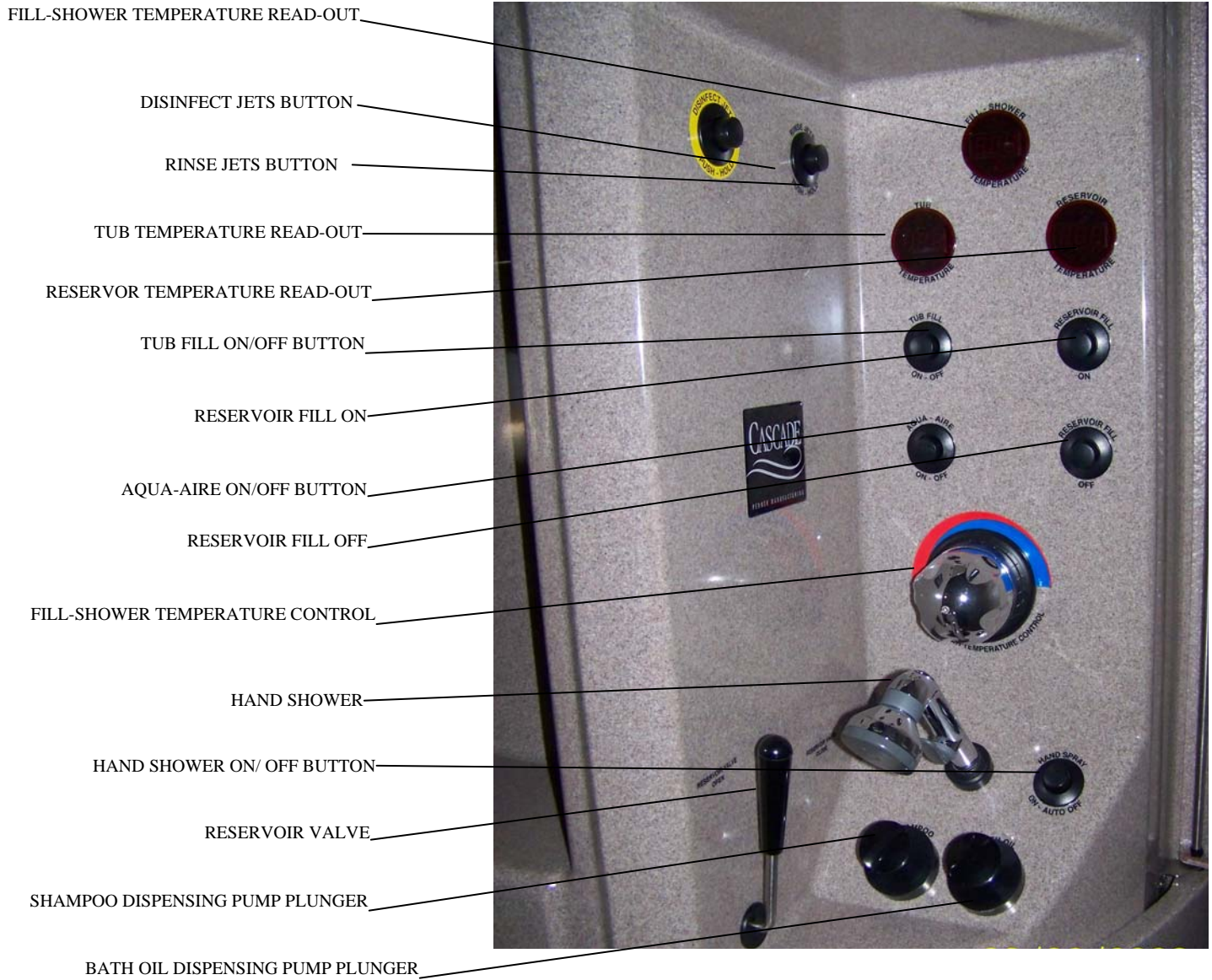
**It is required that a licensed plumber make all plumbing connections. He can select the best method of connection and if Reduced Pressure Zone Backflow Preventers are required.**

## System Controls: Cascade Standard Premier



**Figure 1**  
**Tub Controls**

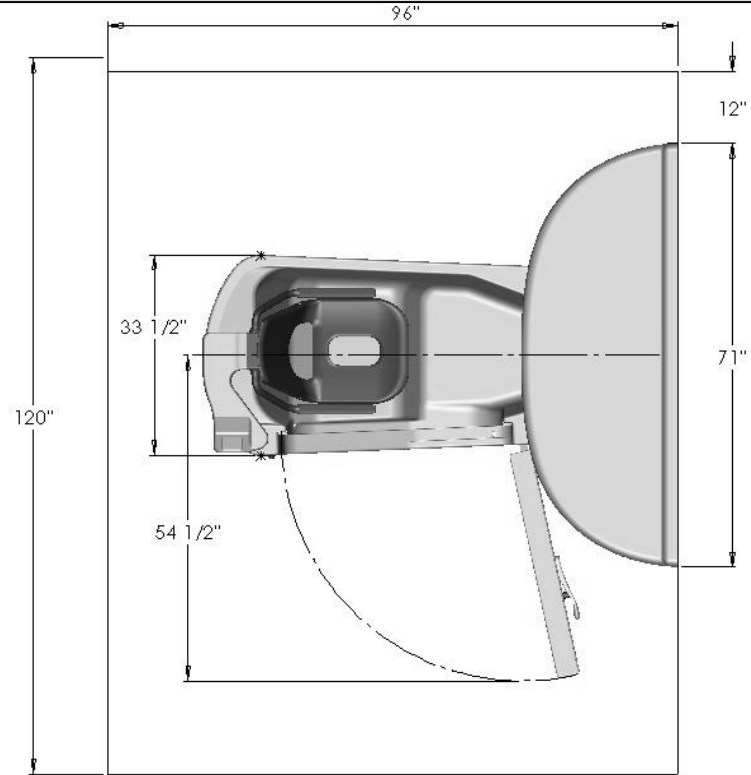
## System Controls: Cascade Elite Premier



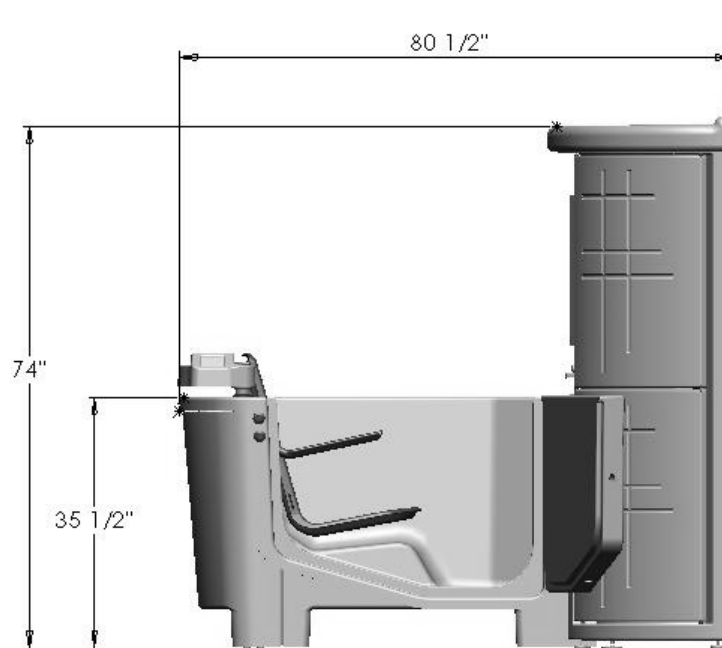
**Figure 2**  
**Tub Controls**



**Basic Room Dimensions Elite Premier with Swivel Lift Tub**

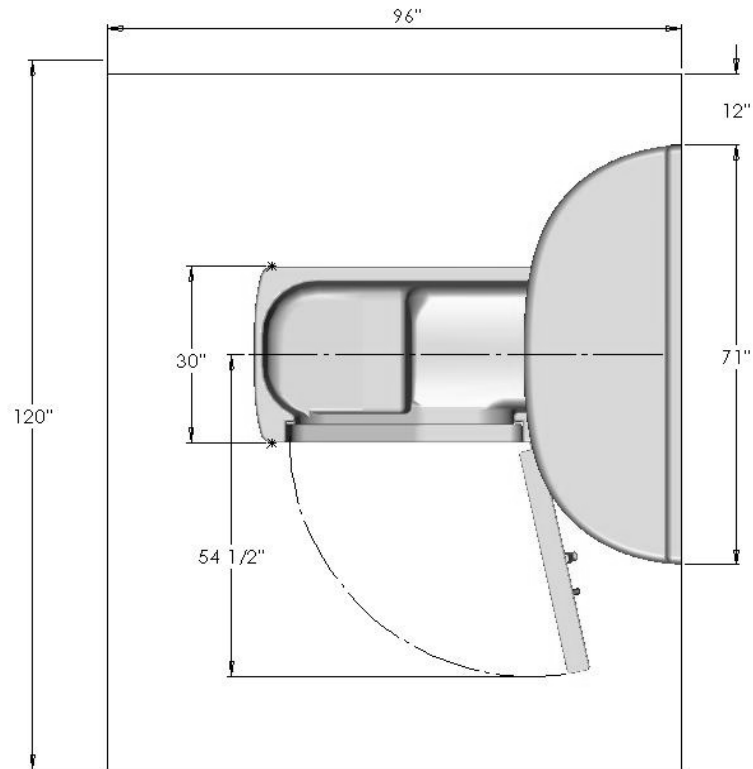


**Figure 4**  
Top View

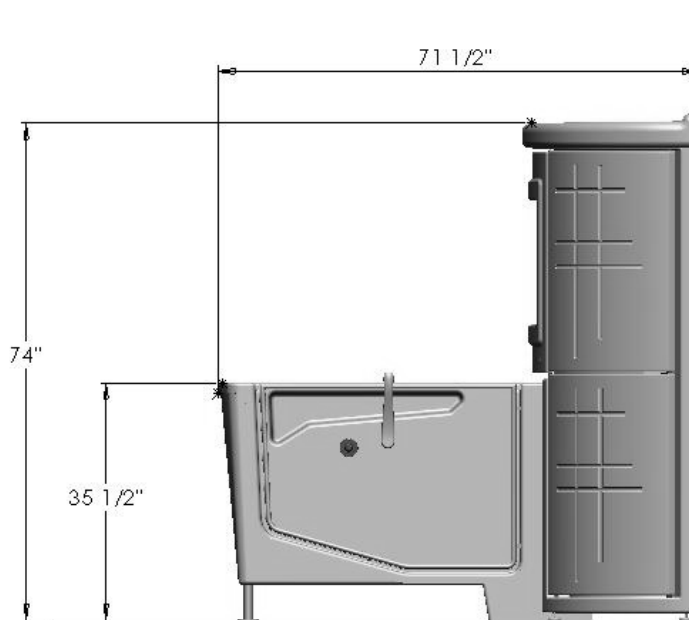


**Figure 5**  
Side View

**Basic Room Dimensions Elite Premier with Side Entry**



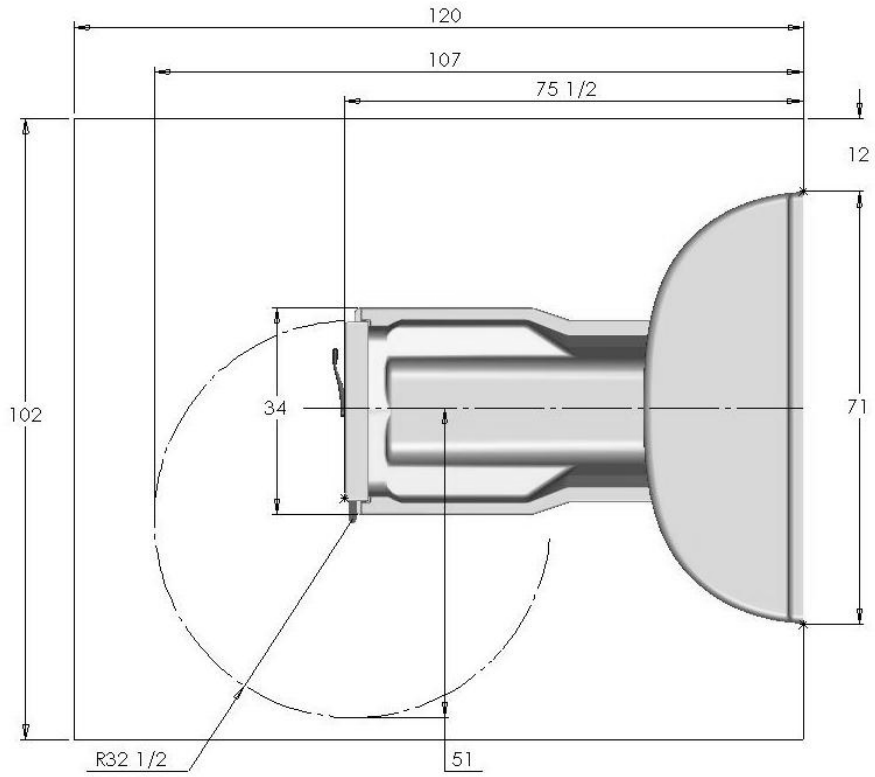
**Figure 6  
TopView**



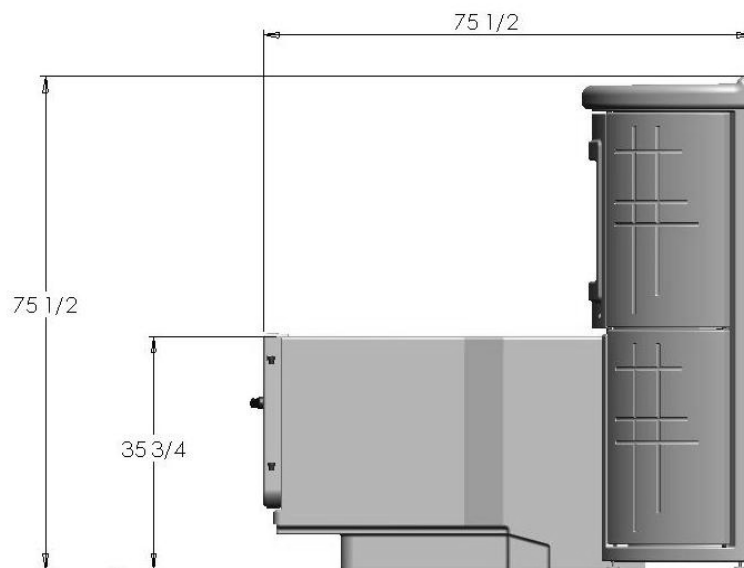
**Figure 7  
Side View**



# Basic Room Dimensions Elite Premier End Opening Entry



**Figure 8**  
**Top View**



**Figure 9**  
**Side View**

# Cascade Standard Premier Rough in Specifications

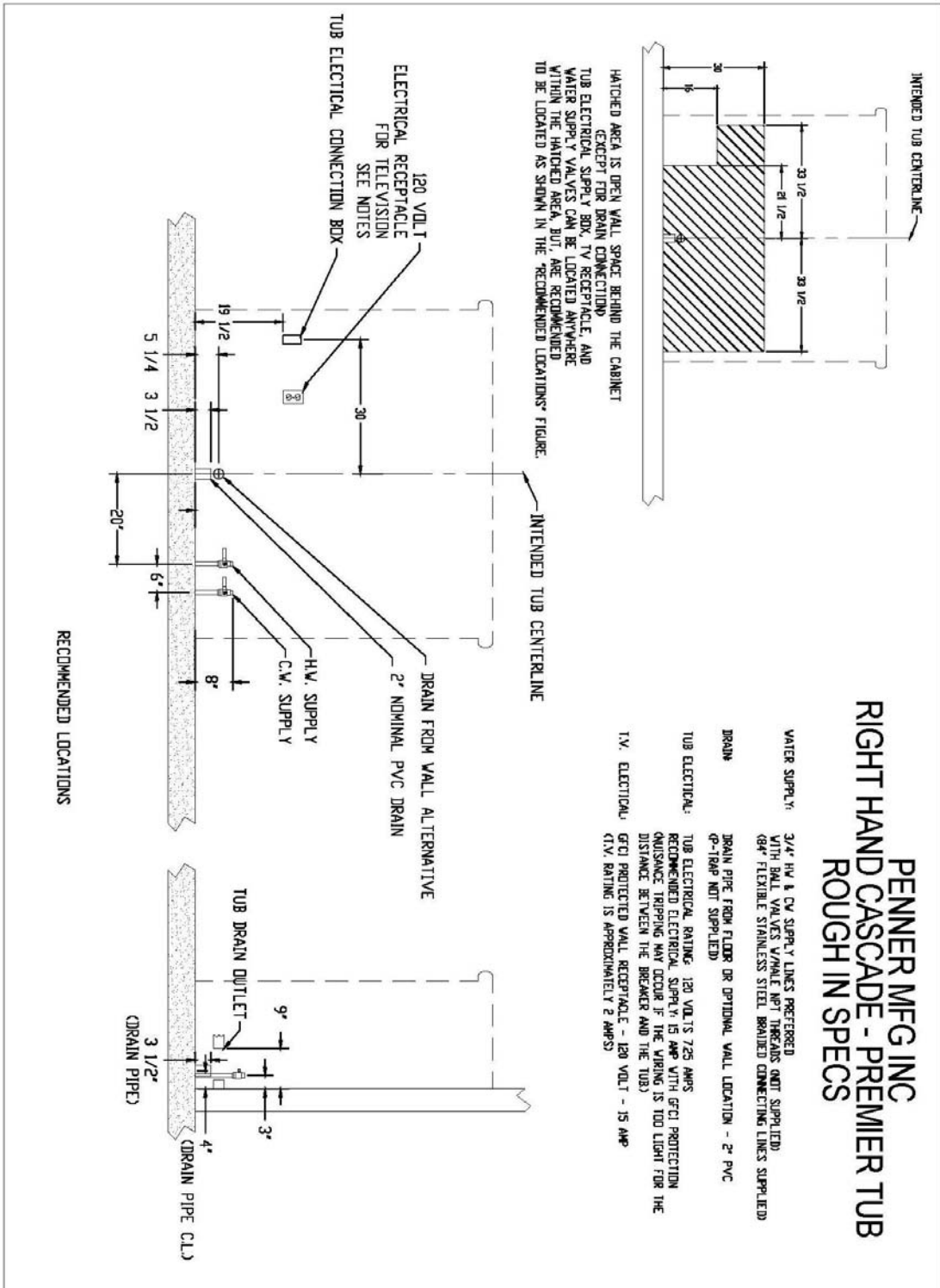
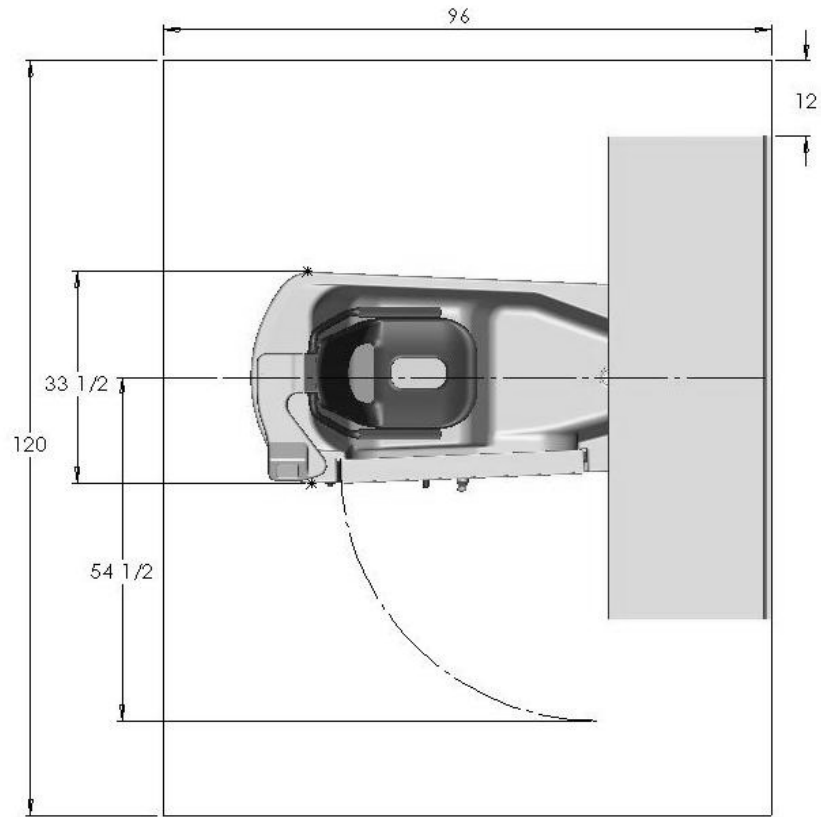
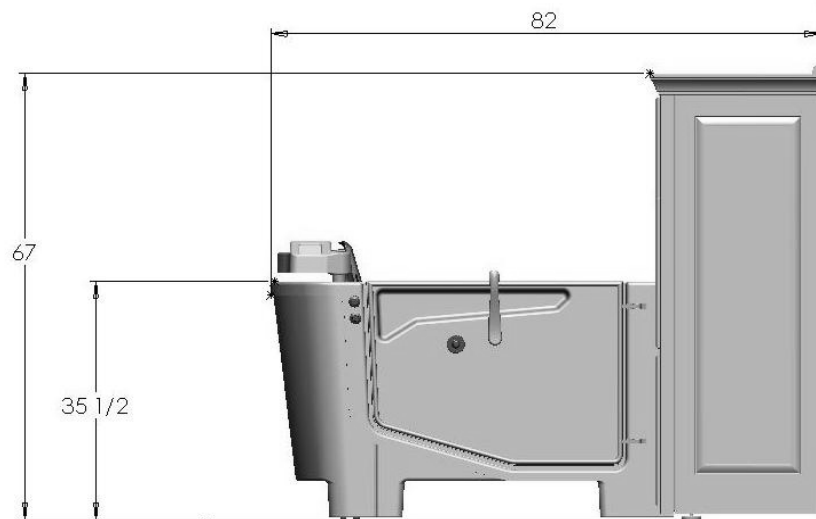


Figure 10

**Basic Room Dimensions Standard Premier with Swivel Lift Tub**

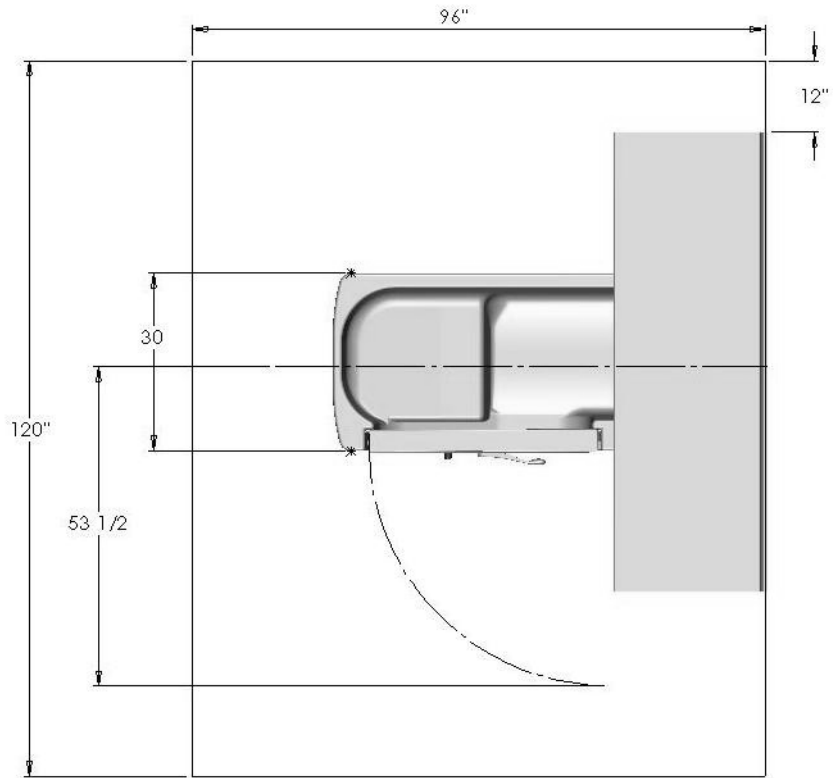


**Figure 11  
Top View**

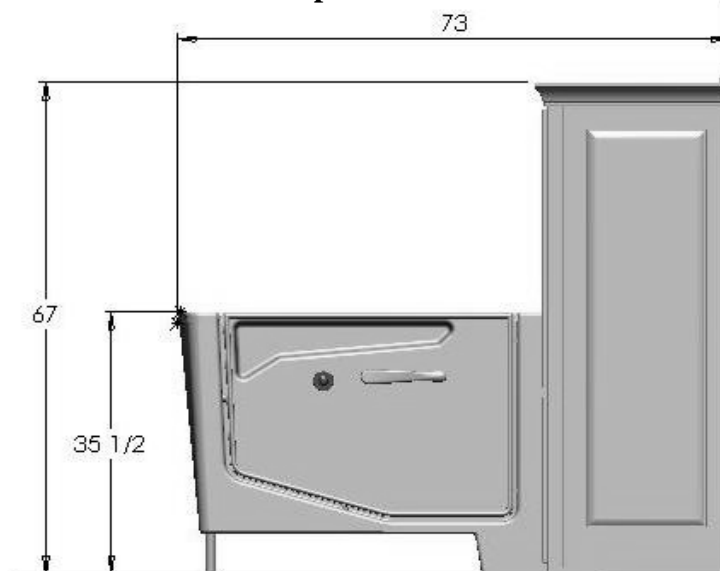


**Figure 12  
Side View**

**Basic Room Dimensions Standard Premier Side Entry**

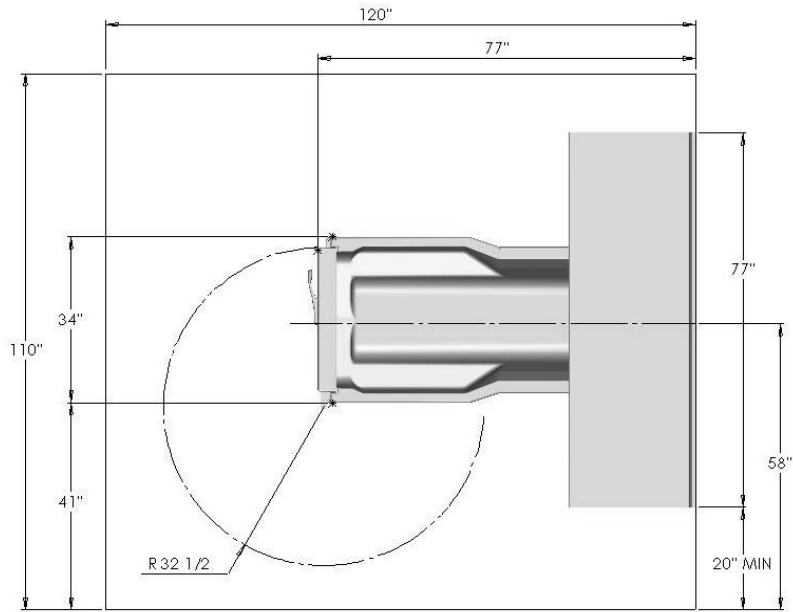


**Figure 13  
Top View**

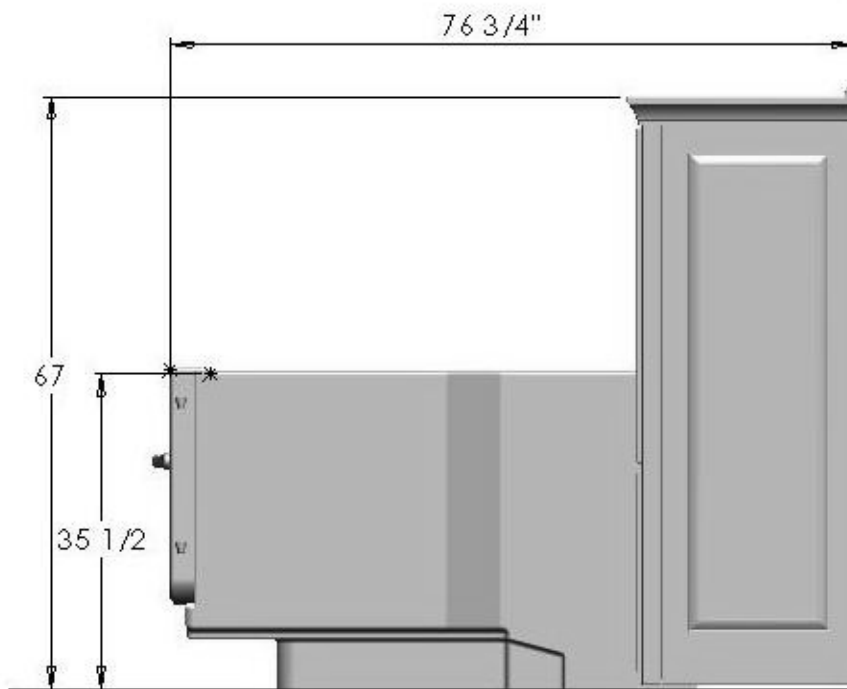


**Figure 14  
Side View**

**Basic Room Dimensions standard Premier End Opening Entry**



**Figure 15  
Top View**



**Figure 16  
Side View**

## **Drain requirements:**

**Figure 3 & 10** shows two different options for roughing in the drain pipe – from the floor or from the wall. The tub is equipped with a 2” nominal (2 3/8” O.D.) PVC drain pipe. Refer to Figures 3 & 10 for drain pipe end approximate distance from the wall.

**It is required that a licensed plumber make all plumbing connections. He can select the best method of connection for the particular situation and if Reduced Pressure Zone Backflow Preventers are required.**

## **Hot and cold water supply requirements:**

3/4” supply lines with on/off valves with 3/4” NPT Male threads. We recommend 3/4” ball valve with 3/4” NPT female ports. (Valves supplied by others.) See figure 5 for recommended locations.

For optimum performance, dynamic pressures should be nominally equal between hot and cold supplies.

Maximum static supply pressure: 145 PSI.

Maximum dynamic/maintained supply pressure: 81 PSI.

Maximum supply Hot water temperature: Consult local requirements for maximum allowed supply temperatures. (Not recommended over 120 F)

## **Electrical requirements:**

The Cascade Premier tub Aqua-Air is rated at 9.5 Amps, 120 Volts AC.

20 amp GFCI circuit is required.

(The TV is to be plugged into an existing approved outlet near the Cabinet) Insure installation is in compliance with NEC and local and state regulations.

## **Unpacking the tub:**

1. Remove the Tub from the shipping crate.
2. Locate and save the installation parts.

## **Unpacking Premier Cabinet:**

1. Remove the Cabinet from the shipping crate.
2. Locate and save the installation parts.
3. Remove the Top or lid, and the two end panels and place to the side out of the way.

## Assembly and Installation of the Tub and Cabinet:

1. Place the cabinet approximately 2 feet from the wall directly in front of the intended final location.
2. Install the television into the cabinet and onto the television mounting bracket and secure with provided screw. See mounting bracket instructions (provided) for adjustment instructions.
3. Connect television power cord to the receptacle in the back of the television and route the plug end of the cord through the hole at the lower back side of the television opening of the cabinet. This will be plugged into a wall receptacle after locating the cabinet and tub in their final location.
4. Move the tub directly in front of the tub with the foot end of the tub just in front of the tub opening in the cabinet.
5. To avoid damaging the seal at the top of the tub opening of the cabinet, tip the cabinet back and then slide the tub into the opening of the cabinet. Lower the cabinet back down.
6. Connect the tub and cabinet frames together with the bolts, flat washer, and hex nuts provided. Use the flat washers under the heads of the bolts and under the hex nuts to protect the powder coated finish of the frames. Note: Some adjustment of the leveling feet of the tub may be needed to align the bolt holes in the frames.
7. Connect the air line manifold of the tub to the union connection of the cabinet plumbing located inside the lower left side door.
8. Connect the tub temperature probe to the tub at the probe fitting in the foot well of the tub just above the drain outlet. Tighten the compression nut slightly. Further tightening is needed only if the connection leaks with the tub full of water.
9. Connect the clear 3/8" I.D. drain tube from the bottom of the air system check valve to the barb fitting located on the tub drain base shoe. Secure the connection with the provided clamp.
10. Connect the overflow tee of the cabinet to the drain outlet of the tub and tighten.
11. With the help of 2 or 3 additional people, slide the cabinet and tub into the final location. Note: The leveling pads of the tub have non-skid pads on them. So it is not easy to slide. Picking up on the tub as it is pushed helps. The tub and cabinet are heavy and are not easy to move. Anchoring to the floor is not required **except** on the built in Swivel Lift tub. The Swivel Lift tub must be anchored to the floor.

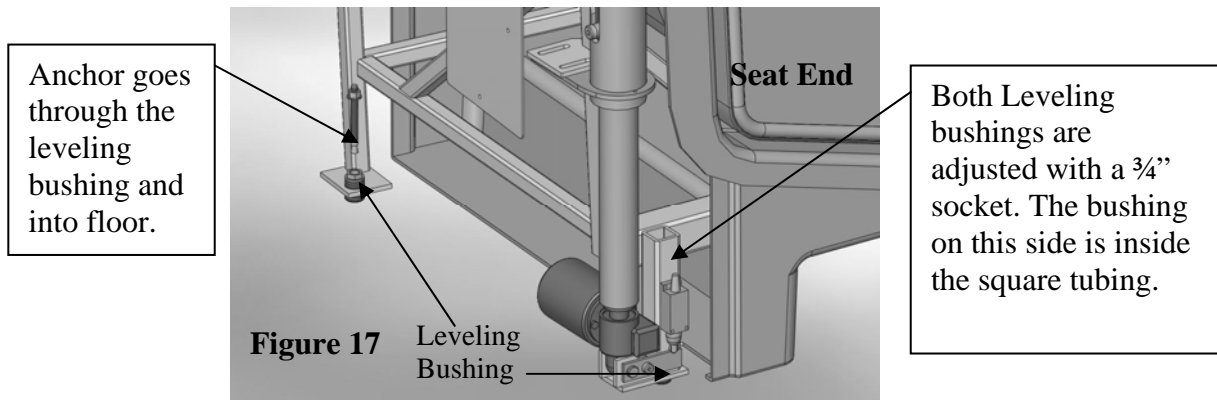
## Anchoring the Cascade Swivel Lift Tub/Reservoir:



**Warning:** The Elite Cascade Premier Tub with the built in Swivel lift System must to be anchored to the floor. Failure to anchor the Built in Swivel Lift Tub to the floor could result in injury to the operator or resident.

Note:

These instructions for anchoring the swivel lift tub are written with the assumption that the installation is being done on a concrete floor. If this is not the case, consult an Architect. There are three anchoring locations, two at the control end, and one at the seat end of the tub (see **Figure 17**). Anchoring the Reservoir is not necessary.



1. Remove the end panel, at the seat end of the tub, and set it to the side.
2. The tub is heavy and is not easy to move. Picking up on the tub as it is pushed helps. With the help of 2 or 3 additional people, place the tub/cabinet in the final installation position.
3. The leveling bushings are to be adjusted and can be done with a  $\frac{3}{4}$ " socket as show in **Figure 17**.
4. Using a  $\frac{3}{8}$ " masonry bit, drill through the one leveling bushing into the concrete floor as shown in **Figure 17**. (2" deep)
5. Clean the drilled holes and clean the drilling dust from the area.
6. Insert the provided  $\frac{3}{8}$ " anchor through the leveling bushing and into the anchor hole just drilled.
7. Tighten the anchor nuts.
8. Re-install the end panel on the tub.

## Water Supply and Drain Connections:

### CAUTION

**Note:** Every installation is different. So the connecting fittings and the p-trap are not provided with the tub. A licensed plumber is required to make the drain connection.

1. Connect the tub drain outlet to the drain pipe.
2. The connecting fittings with the connecting hoses are provided. Do not open The Supply valves yet.



## Drain requirements:

The tub is equipped with a 2" nominal (2 3/8" O.D.) PVC drain pipe. As shown in Figure 4, the tub's drain pipe is approximately 9" from the wall and 5 1/4" above the floor. Figure 4 shows two different options for roughing in the drain pipe – from the floor or from the wall.

**It is recommended that a licensed plumber make all plumbing connections. He can select the best method of connection for the particular situation.**

## Hot and cold water supply requirements:

3/4" supply lines with on/off valves with 3/4" NPT Male threads. We recommend 3/4" ball valve with 3/4" NPT female ports. (Valves supplied by others.) See figure 5 for recommended locations. For optimum performance, dynamic pressures should be nominally equal between hot and cold supplies.

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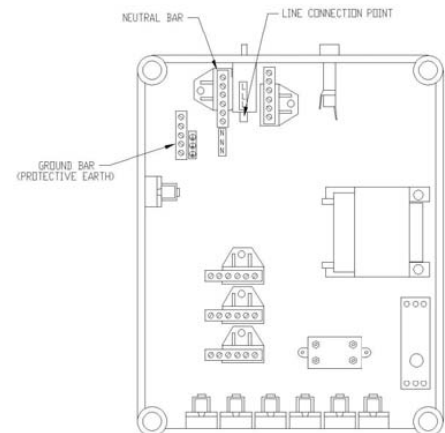
## Electrical Connections:



### Warning:

**This unit is to be connected only by a licensed electrician. A minimum of 20 amp 120 volt service is required with ground fault circuit interrupter.**

1. Remove the cabinet's electrical box cover and locate the connecting points within the box. See figure 12.
2. Ensure that the supply power has been turned OFF.
3. Connect the power cord from the tub lift electrical box to the cabinet electrical box (**figure 18**). Black to line bar, white to neutral bar, green to ground bar.
4. Run flex conduit and power wires from the wall mounted supply box to the connection hole of the electrical box located on the upper left side of the box.
5. Connect the line, neutral and ground wires to the appropriate connections within the electrical box. A female wire terminal is provided for connection of the line wire to the tub circuit breaker.
6. Replace the electrical box cover and turn off the tub's circuit breaker on the top of the box.
7. Turn ON the supply power.
8. Switch ON the tub circuit breaker. All the temperature gages located inside the upper right hand door of the cabinet should now be lit up.
9. Route the T.V. power cord to the wall receptacle and plug it in.



**Fig. 18 Tub Electrical Box**



**Warning:**

**Do not use an extension cord to connect the T.V. to the wall receptacle or allow the cord to touch the floor. Failure to heed this warning may result in injury to a resident or operator.**

10. The tub is now ready to be checked for leaks. Turn off the tub circuit breaker.

### **System Check:**

1. Ensure that the tub water door is closed.
2. Turn ON water supply valves and check for any leaks. Tighten any leaky connections as needed.
3. Switch ON the tub circuit breaker and switch off any water valves or the blower if they are ON by way of the control panel buttons.
4. On each of the water systems (Tub Fill, Reservoir Fill, Disinfect Jets, Rinse Jets, and Hand shower), and checking only one system at a time, turn ON the valve by pressing the appropriate control panel button. Look for any leaks and tighten connections as needed. Note: The hand shower needs to be directed into the tub before starting it.
5. Place the drain plug in the drain and partially fill the tub. Remove the drain plug and check the drain system for any leaks and repair if needed.
6. Close the reservoir (release) valve by moving the “Reservoir Valve” lever to the closed position. Place the drain plug in the tub drain and fill the reservoir by pressing the “Reservoir Fill ON” button. Watch the “Fill - Shower” temperature read out and adjust the mixing valve to get the desired temperature. The “Reservoir Temperature” read-out indicates the temperature of the water already in the reservoir.
7. Wait until the reservoir stops filling. Should it stop filling before the water level in the reservoir reaches the float switch, then the timer, within the electrical box needs to be adjusted to a longer time. The float switch is the primary system to turn OFF the reservoir fill. The timer is a back up system in the event that the float switch fails.
8. Check for any leaks.
9. Release the reservoir water into the tub by moving the “Reservoir Valve” lever to the “Open” position. Check for any leaks in that plumbing.
10. With the tub nearly full, check that there is no leaking around the temperature probe of the tub. Tighten the compression fitting if needed.
11. Start the Aqua-Aire blower by pressing the button. Note: The blower takes a few seconds to start and winds up to full speed somewhat slowly. This is normal. The bubbles should start flowing from each of the jets in the bottom of the tub shortly there after.
12. Stop the blower and drain the tub.
13. Install the end panels and the cabinet top.

## Finishing up:

1. Once the tub/reservoir has been connected to the drain, checked for leaks (and fixed if needed), and is connected to power, the access doors can be installed.
2. Train all operators of this equipment before using it per the Safe Operation & Daily Maintenance Instruction Manual.



### **Warning!**

Because this equipment requires a trained operator, and to assure that these benefits are realized, **do not operate** your PMI equipment until an authorized member of your staff has reviewed the Safe Operation & Daily Maintenance Instruction Manual and spoken to your PMI Representative. Failure acquire this training could result in damage to the equipment or injury to the operator and resident. If needed, Your PMI Products Representative will assist you with questions you may have in the operation of this equipment.

**For your nearest distributor, contact:**

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