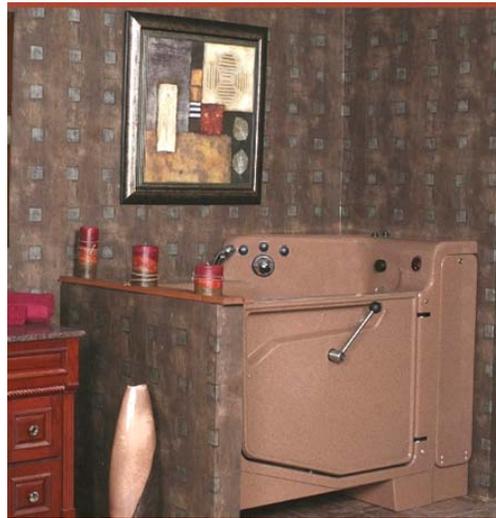


PENNER MANUFACTURING

# *ALCOVE with AQUA-AIRE Installation / Assembly Instructions*



**361910-1A, 361910-1I, 361910-XA, 361910-XI**

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360745A Revision A – 10/26/07

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## Table of Contents

<b>TABLE OF CONTENTS</b> .....	<b>2</b>
<b>INTRODUCTION:</b> .....	<b>3</b>
<b>TERMINOLOGY AND SYMBOLS MEANINGS</b> .....	<b>3</b>
<b>TUB CONTROLS:</b> .....	<b>3</b>
<b>BASIC DIMENSIONS:</b> .....	<b>3</b>
<b>ROUGH IN SPECIFICATIONS:</b> .....	<b>5</b>
<b>DRAIN REQUIREMENTS</b> .....	<b>9</b>
<b>HOT AND COLD WATER SUPPLY REQUIREMENTS:</b> .....	<b>10</b>
<b>ELECTRICAL REQUIREMENTS</b> .....	<b>10</b>
<b>UNPACKING THE TUB</b> .....	<b>12</b>
<b>WATER SUPPLY HOSE CONNECTIONS</b> .....	<b>11</b>
<b>ANCHORING THE TUB – “ALCOVE INSTALLATION” (2 OR 3 WALLS)</b> .....	<b>11</b>
<b>ANCHORING THE TUB – “PENINSULA INSTALLATION” (1 WALL – BACK)</b> .....	<b>13</b>
<b>ANCHORING THE TUB – “PENINSULA INSTALLATION” (1 WALL – SIDE)</b> .....	<b>14</b>
<b>ELECTRICAL CONNECTIONS</b> .....	<b>14</b>
<b>WATER SUPPLY AND DRAIN CONNECTIONS:</b> .....	<b>14</b>
<b>FINISHING UP:</b> .....	<b>15</b>

## Introduction:

These instructions are for the installation of a Cascade Alcove tub in various configurations as shown below in figure 1. Follow the instructions for your particular installation configuration.

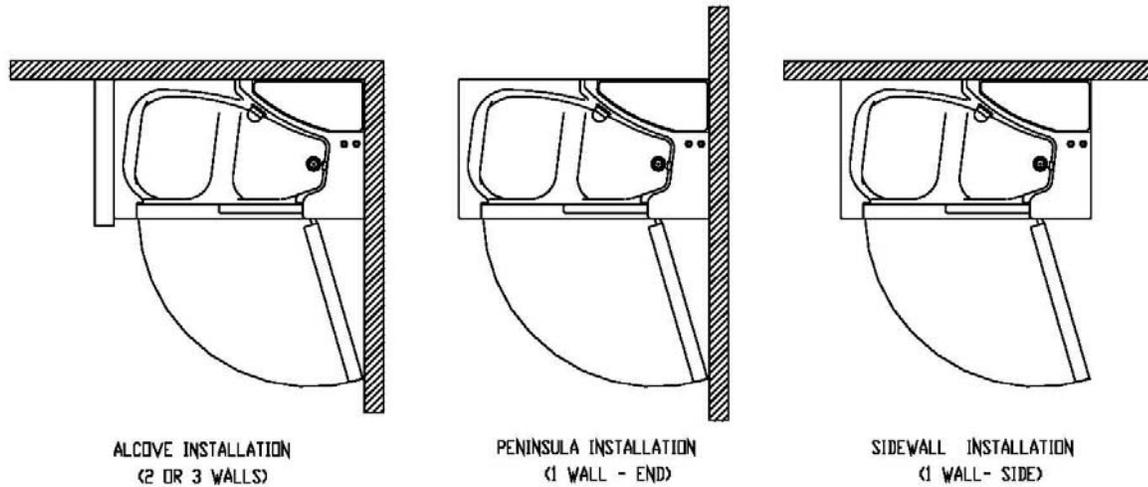


Figure 1

## Terminology and Symbols Meanings

When the terms “left” or “right” are used with reference to the tub, this means left or right as you look when seated in the tub.



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.

## Tub Controls:

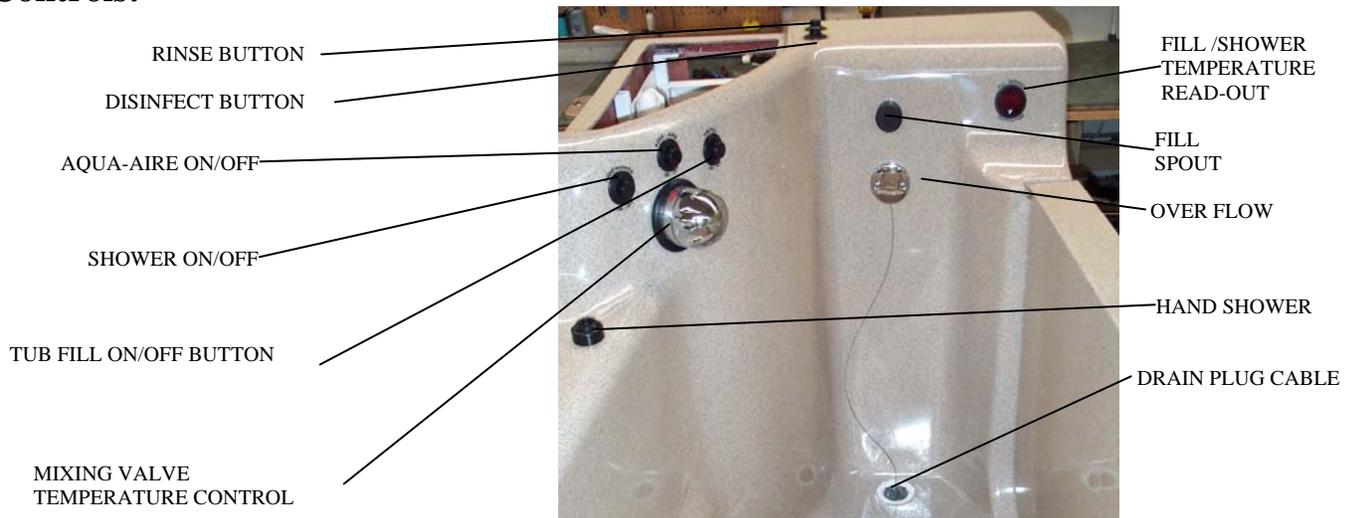


Figure 2  
Tub Controls

## Basic Dimensions:

PENNER MFG INC.  
ALCOVE CASCADE TUB  
DIMENSIONS

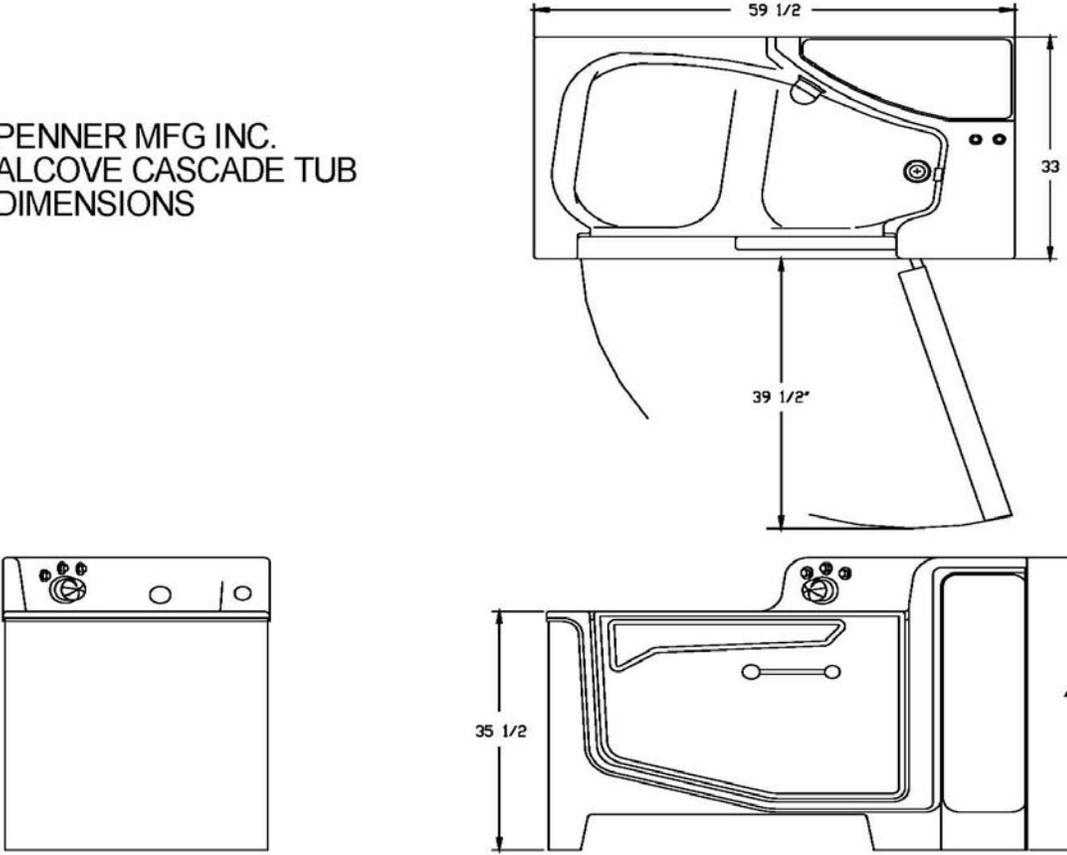


Figure 3  
Basic Dimensions Cascade Alcove

**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.

**Rough in Specifications:**

(Alcove Installation 2 or 3 walls and Peninsula Installation 1 wall – end)

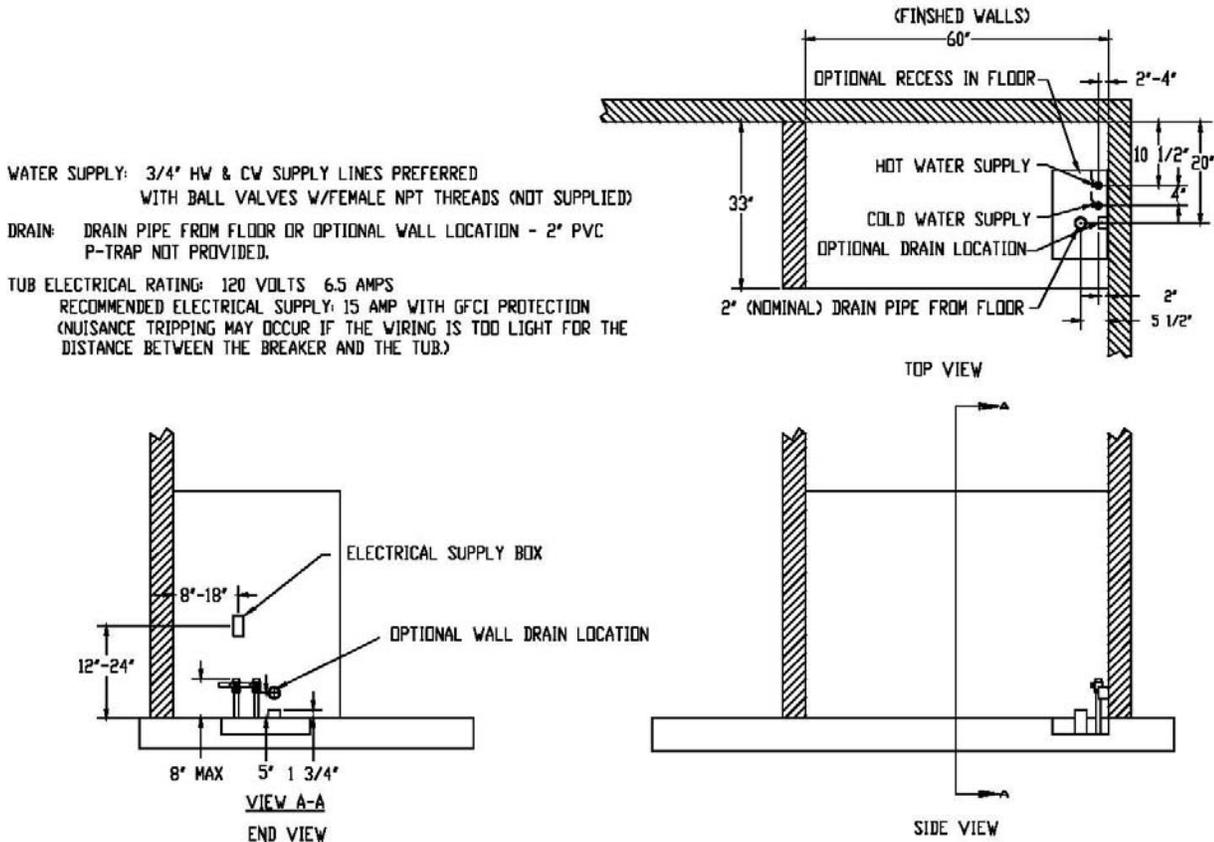


Figure 4  
Rough-in Specifications  
Cascade Alcove and Peninsula Installation – 1 wall –  
back  
(Reference figure 1)

WATER SUPPLY: 3/4" HW & CW SUPPLY LINES PREFERRED  
 WITH BALL VALVES W/FEMALE NPT THREADS (NOT SUPPLIED)

DRAIN: DRAIN PIPE FROM FLOOR - 2" PVC  
 P-TRAP NOT PROVIDED.

TUB ELECTRICAL RATING: 120 VOLTS 6.5 AMPS  
 RECOMMENDED ELECTRICAL SUPPLY: 15 AMP WITH GFCI PROTECTION  
 (NUISANCE TRIPPING MAY OCCUR IF THE WIRING IS TOO LIGHT FOR THE  
 DISTANCE BETWEEN THE BREAKER AND THE TUB.)

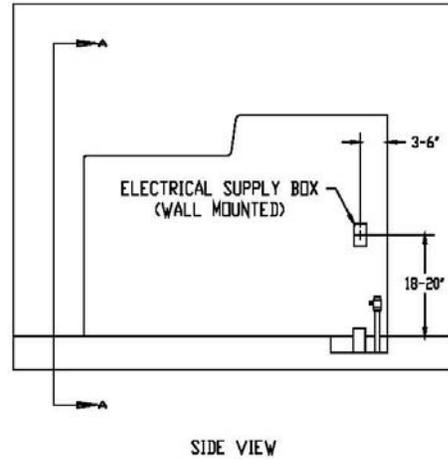
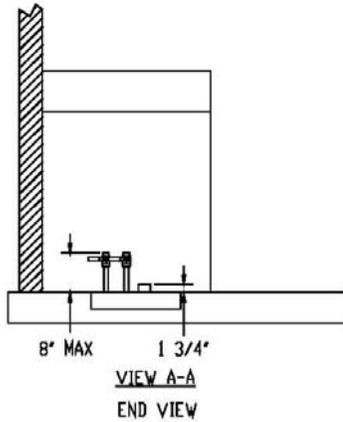
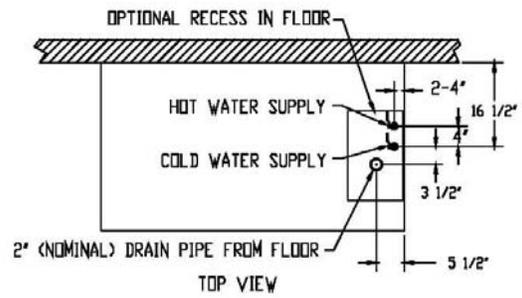


Figure 5

Rough-in Specifications Peninsula Installation – 1 wall – Side plumbing from the floor  
 (Reference figure 1)

WATER SUPPLY: 3/4" HW & CW SUPPLY LINES PREFERRED  
 WITH BALL VALVES W/FEMALE NPT THREADS (NOT SUPPLIED)

DRAIN: DRAIN PIPE FROM FLOOR - 2" PVC  
 P-TRAP NOT PROVIDED.

TUB ELECTRICAL RATING: 120 VOLTS 6.5 AMPS  
 RECOMMENDED ELECTRICAL SUPPLY: 15 AMP WITH GFCI PROTECTION  
 (NUISANCE TRIPPING MAY OCCUR IF THE WIRING IS TOO LIGHT FOR THE  
 DISTANCE BETWEEN THE BREAKER AND THE TUB.)

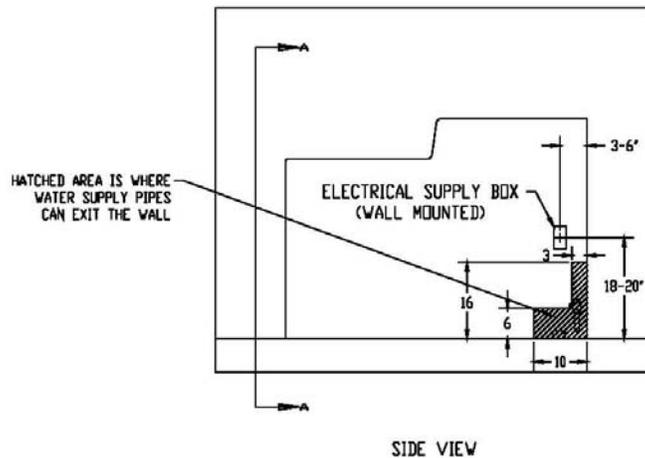
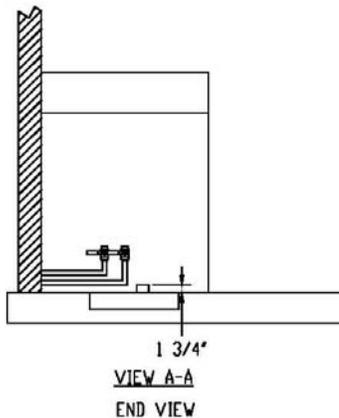
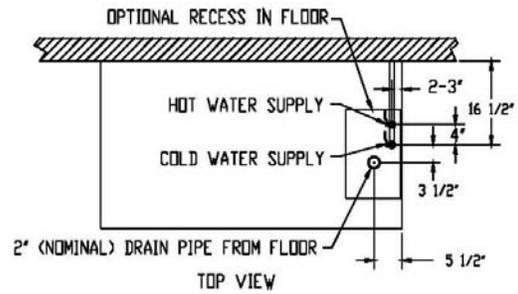


Figure 6

Rough-in Specifications Peninsula Installation – 1 wall – Side plumbing from the back wall

**PENNER MFG INC.  
ALCOVE CASCADE TUB - ISLAND  
ROUGH-IN SPECIFICATIONS**

WATER SUPPLY: 3/4" HW & CW SUPPLY LINES PREFERRED  
WITH BALL VALVES W/FEMALE NPT THREADS (NOT SUPPLIED)

DRAIN: DRAIN PIPE FROM FLOOR OR OPTIONAL WALL LOCATION - 2" PVC  
P-TRAP NOT PROVIDED.

TUB ELECTRICAL RATING: 120 VOLTS 6.5 AMPS  
RECOMMENDED ELECTRICAL SUPPLY: 15 AMP WITH GFCI PROTECTION  
(NUISANCE TRIPPING MAY OCCUR IF THE WIRING IS TOO LIGHT FOR THE  
DISTANCE BETWEEN THE BREAKER AND THE TUB.)

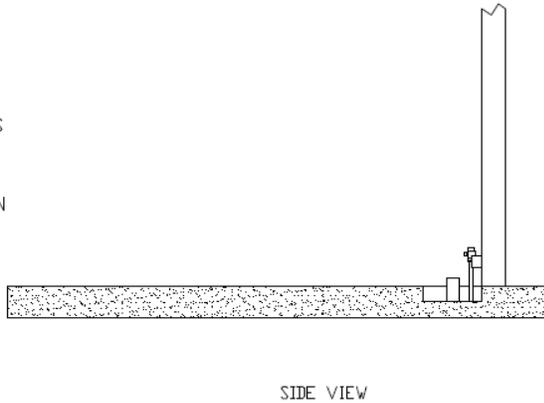
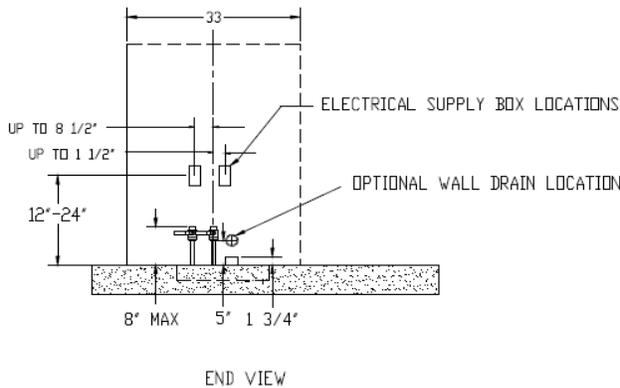
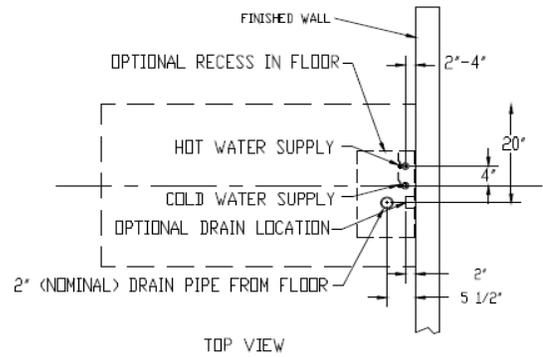


Figure 7

**Drain requirements**

The tub is equipped with a 2" nominal (2 3/8" O.D.) PVC drain pipe. Figure 3, 4 & 5 show three different options for roughing in the drain pipe – from the floor, from the side wall, and from the back wall. The connections for those two options are shown in figures 7 & 8

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

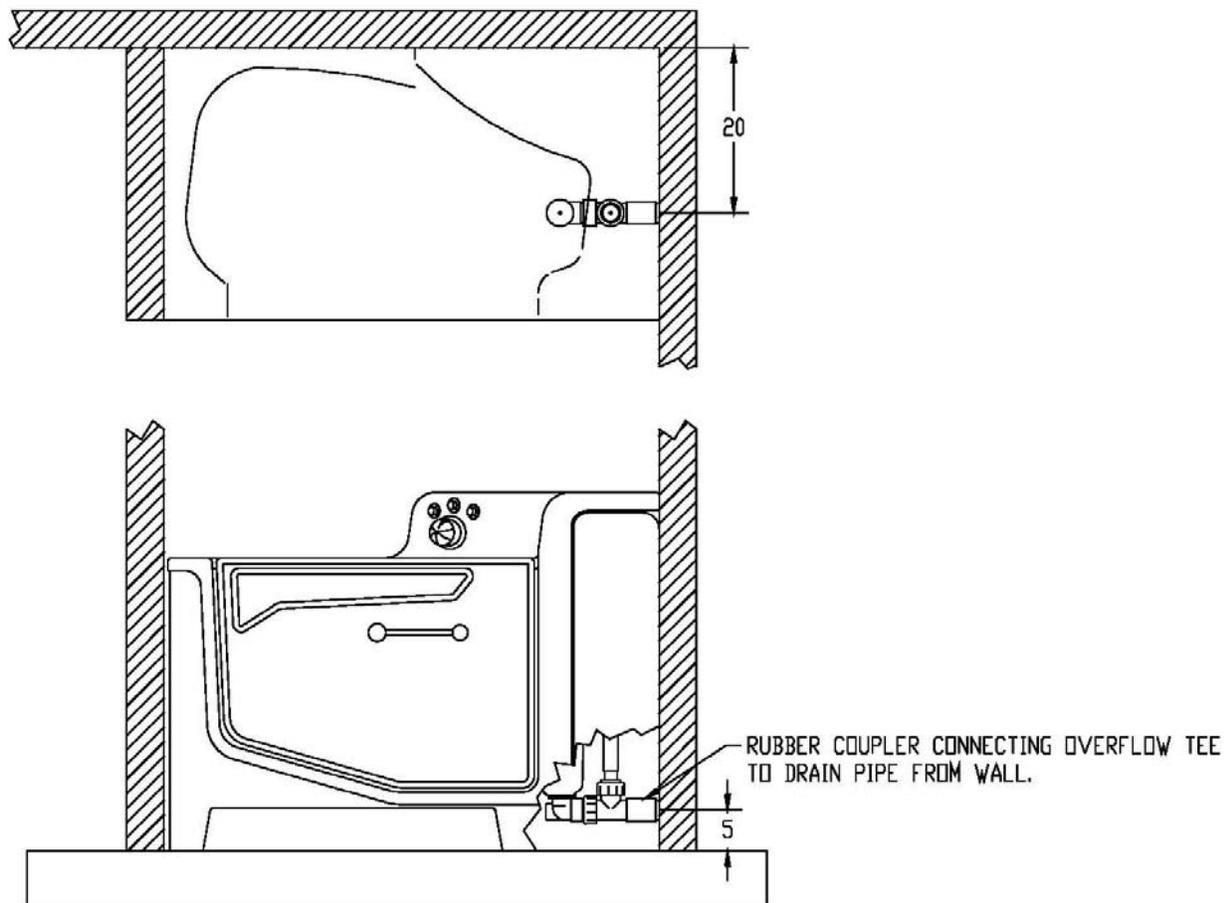


Figure 8  
Drain pipe from the wall.

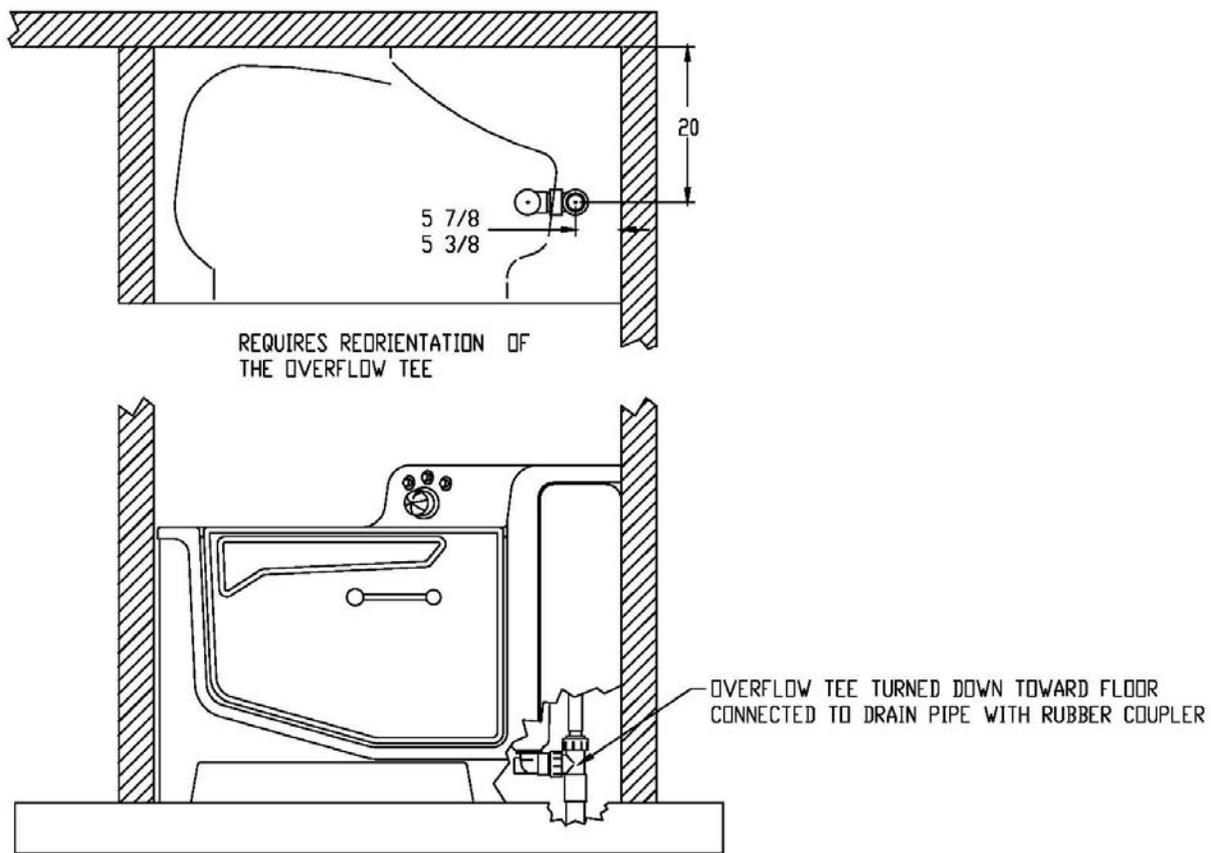


Figure 9  
 Drain pipe from floor at 20" location.

### Hot and cold water supply requirements:

3/4" supply lines with on/off valves with 3/4" NPT female threads. We recommend 3/4" ball valve with 3/4" NPT female ports. (Valves supplied by others.) See figure 4, 5 & 6 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 Alcove tub is rated 6.5 amps at 120 Volts AC.

A 15 amp GFCI circuit is required.

See Figure 4, 5 & 6 for the location of a small junction box from which the power supply will come. It will be connected via flex conduit to the field wiring box of the tub. It is located inside the side access door of the tub below the larger electrical box. See figure 9.

It is recommended that the power wires and conduit be connected to the supply box prior to moving the tub into place. Then, connect the conduit to the tub's field wiring box and make the final wiring connections after the tub is in place.



A licensed electrician is required to make all electrical connections.

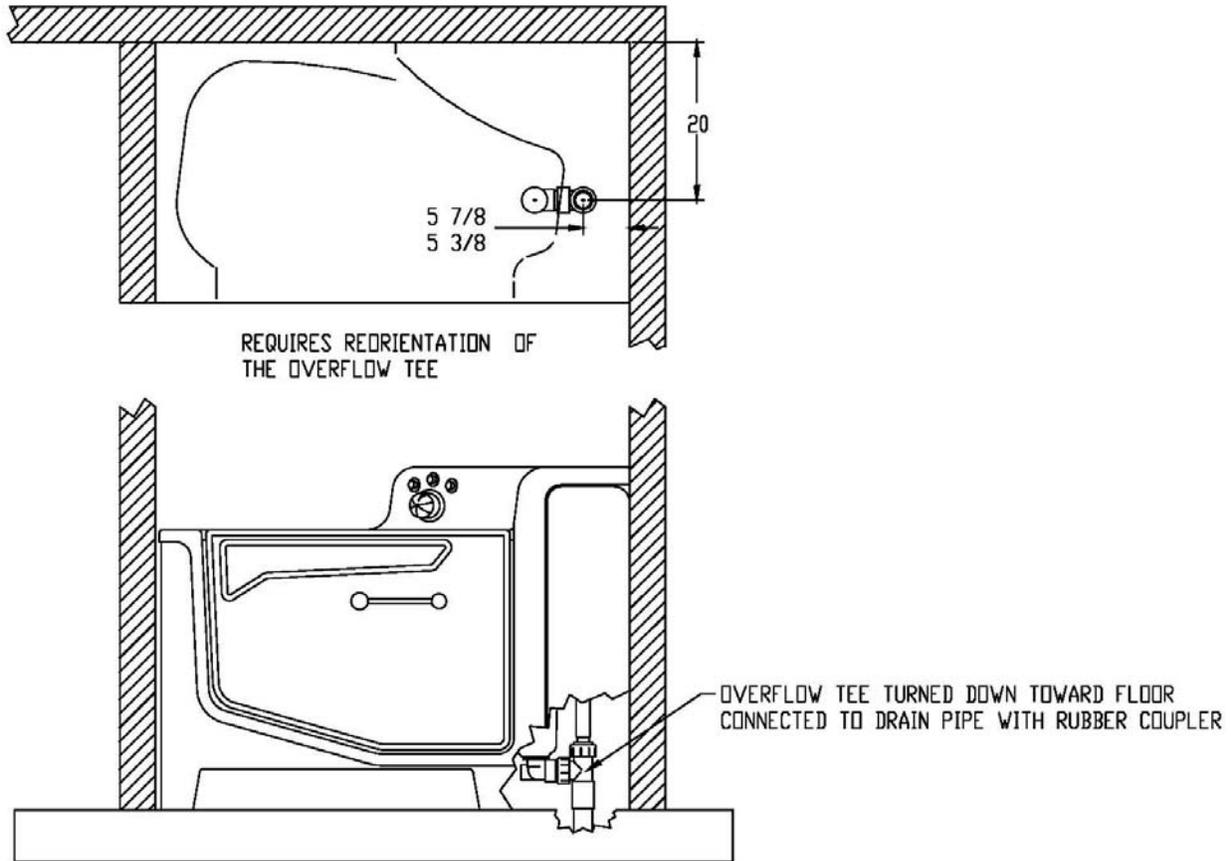


Figure 10  
Electrical Supply  
Alcove Installation 2 or 3 walls  
Or Peninsula installation – one wall – end  
(Reference Figure 1)

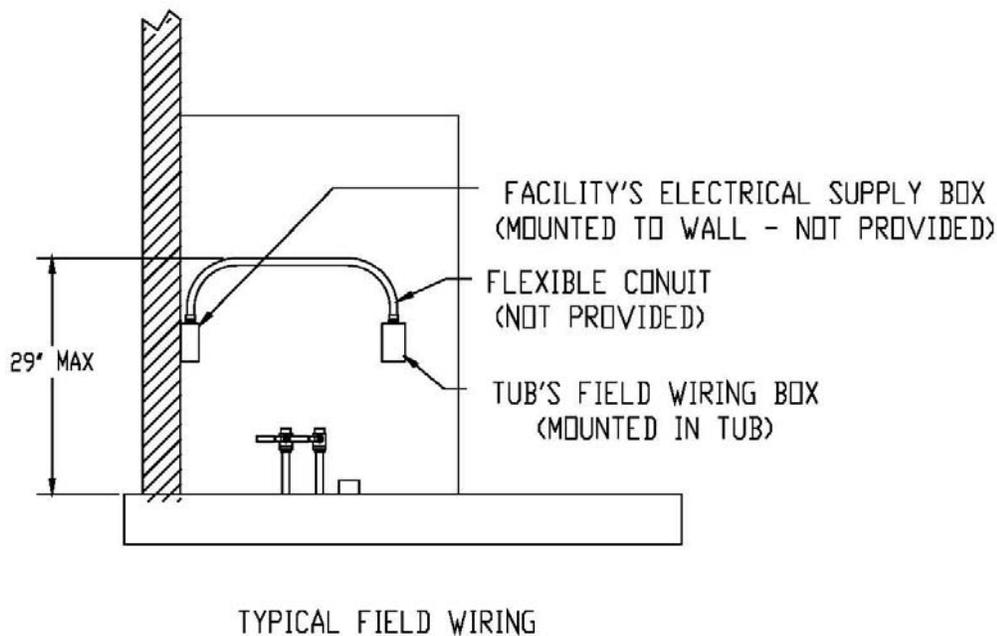


Figure 11  
 Electrical Supply  
 Peninsula Installation – one wall – side  
 (Reference Figure 1)

### Unpacking the tub

1. Remove the tub from the shipping crate.
2. Locate and save the installation parts.
3. Remove all access doors and place them where they will not be damaged during the installation process.

### Water Supply Hose Connections

With an installation where the left side of the tub will be against a wall, connect the hot and cold water lines to the supply valves prior to moving the tub into place. Use thread tape or pipe sealant to make the male thread connections. The supply hose to tub connection uses a gasket to make the seal, so no thread tape or sealant is needed.

Note: Two ¾ inch female x female couplers have been included with the tub just in case the supply valves have male threads.

1. Locate the provided connecting hoses (packed with the tub) and connect the male thread end to the hot water supply ball valves.
2. Connect the male threaded end of the other provided connecting hose to the cold water supply ball valve.

### Anchoring the Tub – “Alcove Installation” (2 or 3 Walls)

This anchoring procedure describes the steps for anchoring the tub in a 2 or 3 wall type installation as shown in figure 1 under “Alcove Installation”.

1. Ensure that the wall mounted electrical supply box has been fitted with flex conduit and wiring for later connection to the field wiring box of the tub. Also ensure that the provided water supply lines have been connected to the supply valves.
2. If the drain connection is to be made with a rubber coupler, it may need to be in place (loosely on the drain pipe) prior to moving the tub into place.
3. Anchor the provided anchor board to the wall as shown in figure 8 with appropriate anchors for the wall type (Stud wall, concrete block, or whatever it might be). Counter sink or counter bore the anchors into the wood to ensure that the anchors do not protrude out from the surface of the anchor board.
4. Carefully slide the tub into place. Ensure that the supply lines or the electrical flex conduit do not get pinched.
5. Once the tub is in place, anchor the tub with a lag screw and washer through the provided anchor hole as shown in figure 11. **DO NOT OVER-TIGHTEN THE LAG SCREW.**

**CAUTION**

**Over tightening of the lag screw could crack the fiberglass of the tub!**

6. It is recommended that the crack between the tub and the wall be caulked with silicone to seal it up. (This will also aid in locking the tub in place.)

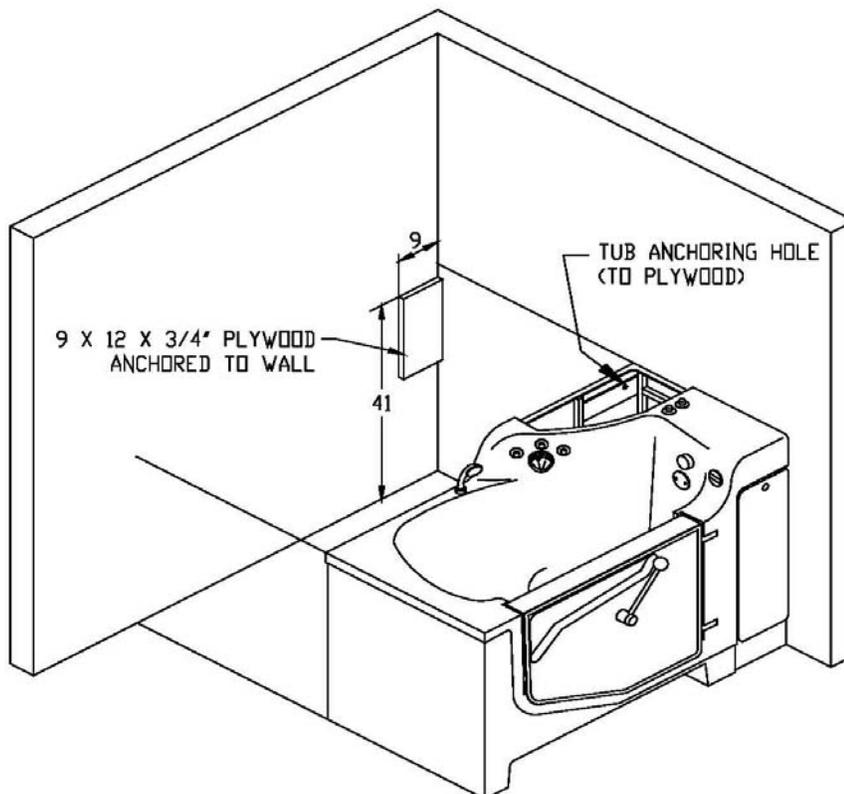


Figure 12  
Anchoring Alcove Installation - 2 or 3 Walls

## Anchoring the Tub – “Peninsula Installation” (1 Wall – Back)

This anchoring procedure describes the steps for anchoring the tub in a single wall type installation as shown in figure 1 under “Peninsula Installation - 1 Wall - Back”.

1. Ensure that the wall mounted electrical supply box has been fitted with flex conduit and wiring for later connection to the field wiring box of the tub. Also ensure that the provided water supply lines have been connected to the supply valves.
2. If the drain connection is to be made with a rubber coupler, it may need to be in place (loosely on the drain pipe) prior to moving the tub into place.
3. Carefully slide the tub into the desired position.
4. There are two anchor holes provided in the fiberglass return flange of the tub. One on each side, just inside the side access doors. See figure 13. Install floor anchors through these holes. Two 5/16 x 2 concrete anchor bolts have been provided for this purpose. If the floor is something other than concrete, consult the building engineer for anchor selection.

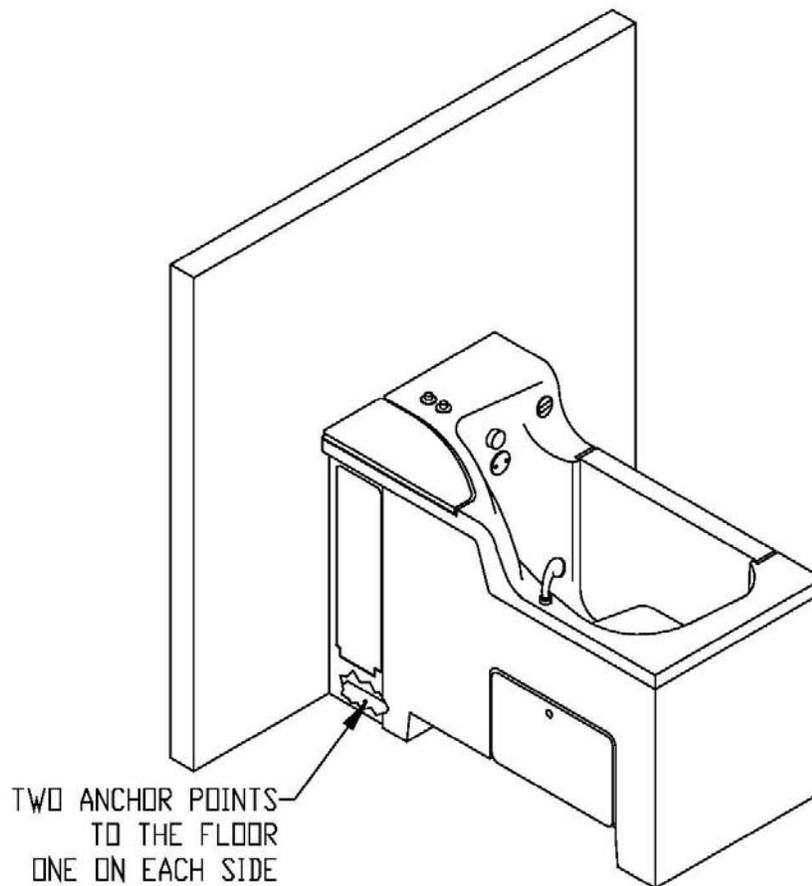


Figure 13  
Anchoring  
Peninsula Installation - 1 Wall - Back

## **Anchoring the Tub – “Peninsula Installation” (1 Wall – Side)**

This anchoring procedure describes the steps for anchoring the tub in a single wall type installation as shown in figure 1 under “Peninsula Installation - 1 Wall - Side”.

1. Follow the steps for anchoring the tub under “Anchoring the tub – “Alcove Installation” (2 or 3 Walls)”
2. Install an additional anchor into the floor just inside the access door on the side opposite from the wall.

## **Electrical Connections**

This unit is to be connected only by a licensed electrician. A minimum of 15 amp 120 volt service is required with ground fault circuit interrupter.



**Warning: Ensure that the power supply is turned off before attempting to connect to the tub. Failure to do this could result in injury or death to the installer.**

1. Remove the cover from the small field wiring junction box mounted to the tub frame. It is located inside the access door on the right side of the tub and below the larger electrical box.
2. Connect the electrical supply conduit to the small field wiring junction box top.
3. Connect the line wire (normally black) to the black wire of the tub. Connect the neutral wire (normally white) to the white wire of the tub. Connect the ground wire (normally green or yellow & green) to the green and yellow wire of the tub. These connections can be made with wire nuts.
4. Push the wires back into the box and replace the lid.
5. Turn ON the power to the tub.
6. Turn ON the tub’s circuit breaker located on the top of the larger electrical box. That box is mounted to a sliding “drawer” that can be pulled out through the access door opening.
7. If the blower motor starts running, find the “Aqua-Aire ON/OFF” button on the control panel of the tub and press it once to turn off the blower.
8. Switch the tub’s circuit breaker, located on the top of the electrical box, to the OFF position.

## **Water Supply and Drain Connections:**

**Note: It is highly required that a licensed plumber make the final connections of the hot and cold water supply and the connection to the drain.**

1. Connect the supply hoses (hot and cold water supply) to the respective ports on the tub. Ensure that there are sealing gaskets within the swivel fittings on the hoses.
2. Connect the drain (waste) of the tub to the facility’s drain system.
3. Close the water door of the tub, place the drain plug into the drain, and open the facility’s supply valves to the tub and check for leaks.

4. Pull the electrical box “drawer” out far enough to be able to check the solenoid valves for leaks when needed.
5. Switch ON the tub’s circuit breaker, located on top of the electrical box. If water is flowing from either the tub fill or the hand sprayer, turn it off by pressing the appropriate control button once.
6. Check each system (Tub fill, Hand shower, Disinfect Jets, and Rinse Jets) one at a time, for leaks by turning it on and looking for leaks as it is flowing water. If no leak is found, turn off the system. Note: The “Tub Fill” and “Hand Shower” are ON/OFF switches. The “Disinfect Jets” and “Rinse Jets” buttons are momentary type switches and will only remain on as long as you push and hold the buttons.
7. If any leaks are found, tighten the connection to stop the leak.
8. Open the tub drain and check the drain system for any leaks and fix if needed.
9. Slide the electrical box “drawer” back into the tub and install the access door covers onto the tub.

### **Finishing up:**

There are a few adjustments that need to be made by the Penner Patient Care Representative. **Do not operate this equipment until it is inspected by an authorized Penner Patient Care Representative.**



### **Warning!**

**Do not** attempt to operate this equipment before an authorized Penner Patient Care Representative inspects it and selected personnel are trained in the operation of the equipment. The use of this equipment before inspection, adjustment, and training by the Penner Representative could result in damage to the equipment or injury to the operator and resident.

**For your nearest distributor, contact:**

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