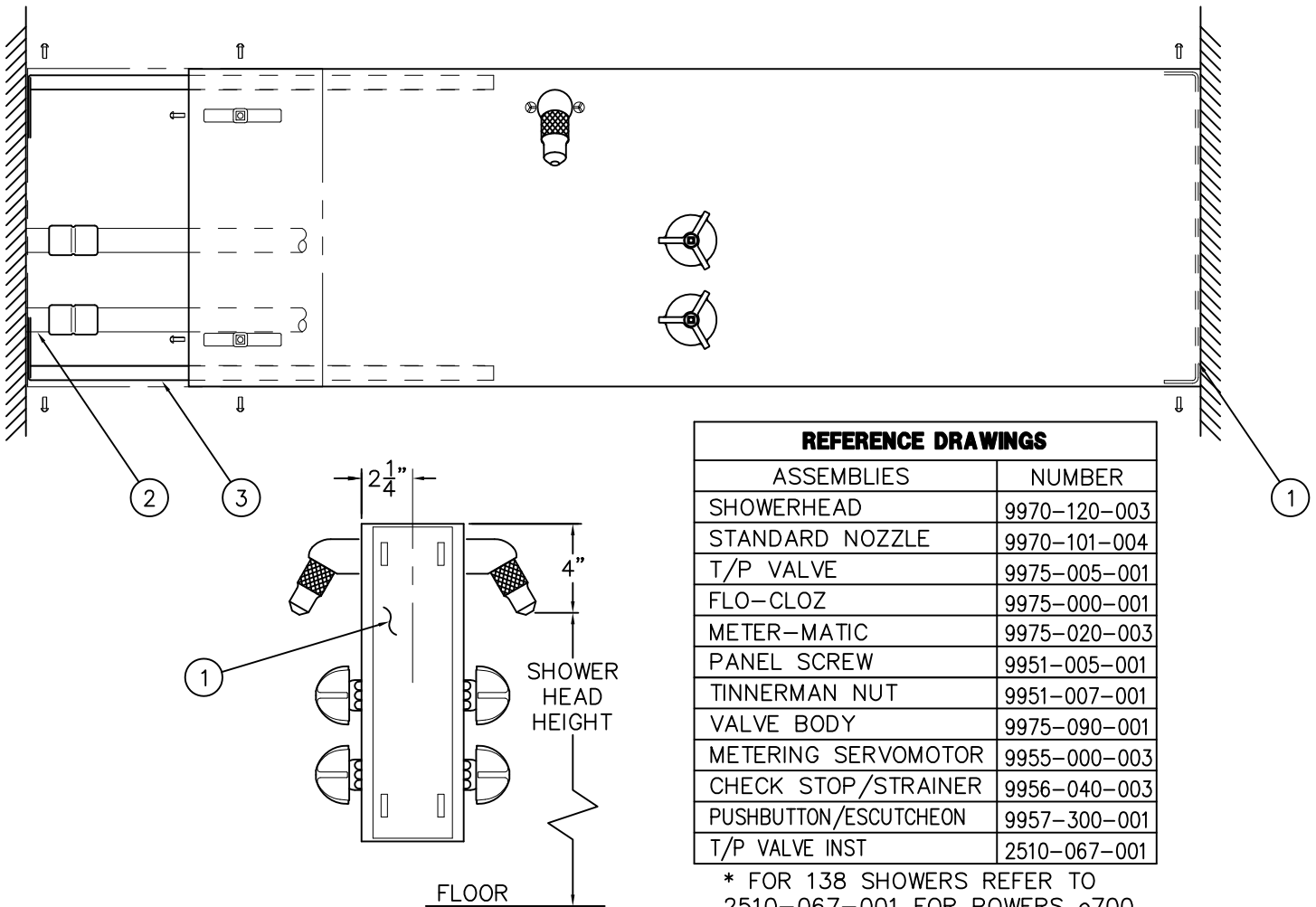
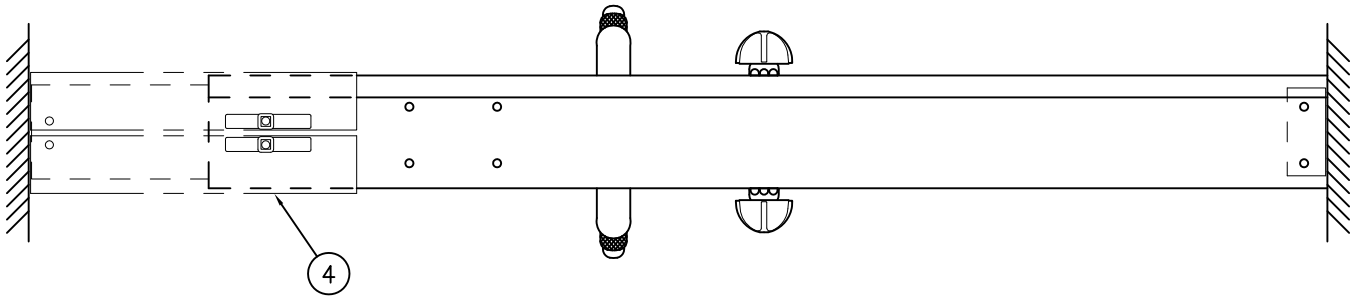




REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
SHOWERHEAD	9970-120-003
STANDARD NOZZLE	9970-101-004
T/P VALVE	9975-005-001
FLO-CLOZ	9975-000-001
METER-MATIC	9975-020-003
PANEL SCREW	9951-005-001
TINNERMAN NUT	9951-007-001
VALVE BODY	9975-090-001
METERING SERVOMOTOR	9955-000-003
CHECK STOP/STRAINER	9956-040-003
PUSHBUTTON/ESCUTCHEON	9957-300-001
T/P VALVE INST	2510-067-001

* FOR 138 SHOWERS REFER TO 2510-067-001 FOR POWERS e700 INSTALLATION SHEETS.

INSTALLATION INSTRUCTIONS:

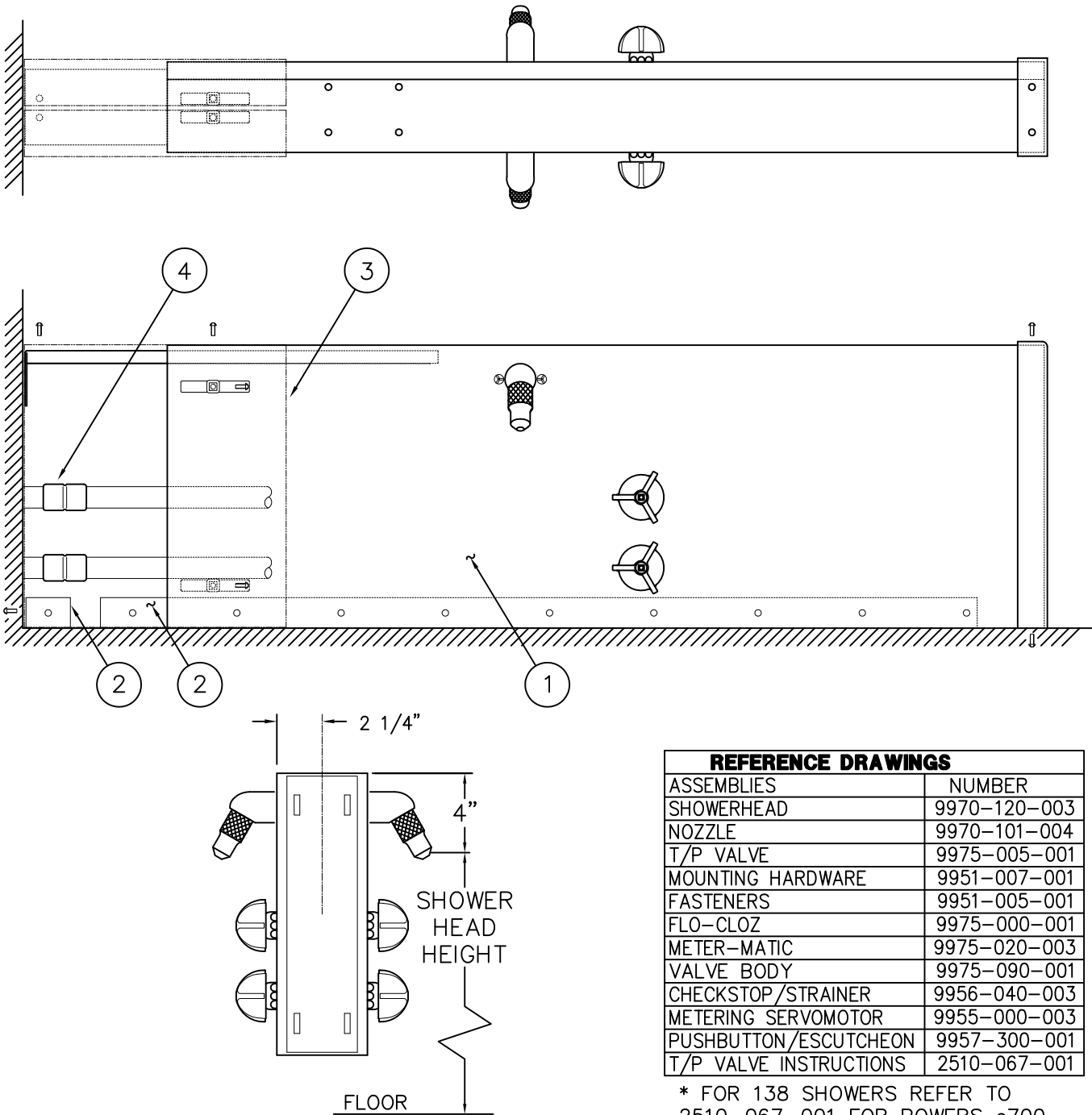
- A-ESTABLISH SHOWER HEAD HEIGHT AT WALL MOUNTING LOCATIONS. REMOVE AND USE FIXED BRACKET ① AS TEMPLATE. MARK FOR DRILLING AND INSTALLATION OF WALL ANCHORS ON ALL WALLS.
- B-INSTALL FIXED BRACKET ① TO WALL.
- C-MEASURE AND CUT SUPPLY TUBING ② BEFORE HANGING UNIT ON THE WALL.

- D-REMOUNT SHOWER TO FIXED BRACKET ① WHILE AT THE SAME TIME LOCATING AND MOUNTING ADJUSTABLE BRACKET ③ TO THE WALL.
- E-SOLDER SUPPLY CONNECTIONS. ALL SUPPLY COUPLINGS AND FITTINGS ARE FURNISHED BY OTHERS.
- F-ATTACH ADJUSTABLE COVER(S) ④.



ACORN ENGINEERING COMPANY
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15125 Proctor Ave Industry, CA 91746
(626) 336-4561 FAX (626) 961-2200

TITLE ACME BACK-TO-BACK SHOWERS-ADJUSTABLE & FIXED BRACKET 130 SERIES		
MANUFACTURE DATE DECEMBER 1976 TO PRESENT	DATE ISSUED 12/01/89	DRAWING NUMBER 9900-120-001
	DATE REVISED 03/15/12	



REFERENCE DRAWINGS

ASSEMBLIES	NUMBER
SHOWERHEAD	9970-120-003
NOZZLE	9970-101-004
T/P VALVE	9975-005-001
MOUNTING HARDWARE	9951-007-001
FASTENERS	9951-005-001
FLO-CLOZ	9975-000-001
METER-MATIC	9975-020-003
VALVE BODY	9975-090-001
CHECKSTOP/STRAINER	9956-040-003
METERING SERVOMOTOR	9955-000-003
PUSHBUTTON/ESCUTCHEON	9957-300-001
T/P VALVE INSTRUCTIONS	2510-067-001

* FOR 138 SHOWERS REFER TO
2510-067-001 FOR POWERS e700
INSTALLATION SHEETS.

INSTALLATION INSTRUCTIONS:

- A- POSITION SHOWER UNIT ① ON WALL WITH HOUSING COMPONENT(S) IN PLACE.
- B- MARK THE OUTLINE OF THE UNIT AS IT SETS ON THE WALL.
- C- REMOVE UNIT ① FROM WALL. DISASSEMBLE LOWER MOUNTING CHANNEL ② AND COVER ③ FROM HOUSING. POSITION CHANNEL ② ON WALL WITHIN THE OUTLINE.

- D- USING CHANNEL ② AS A TEMPLATE, DRILL WALL FOR ANCHORING DEVICES (BY OTHERS). SECURE MOUNTING CHANNEL TO WALL.
- E- REASSEMBLE SHOWER UNIT ① TO CHANNEL ②.
- F- SOLDER SUPPLY CONNECTIONS ④.
- G- REATTACH COVER ③ TO HOUSING. USE FASTENERS AS PROVIDED.



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TITLE

ACME BACK-TO-BACK SHOWERS-DWARF WALL INSTALLATION

MANUFACTURE DATE

DECEMBER 1976
TO PRESENT

DATE ISSUED

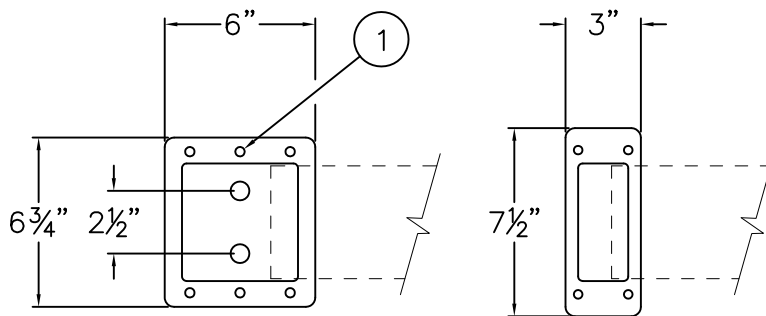
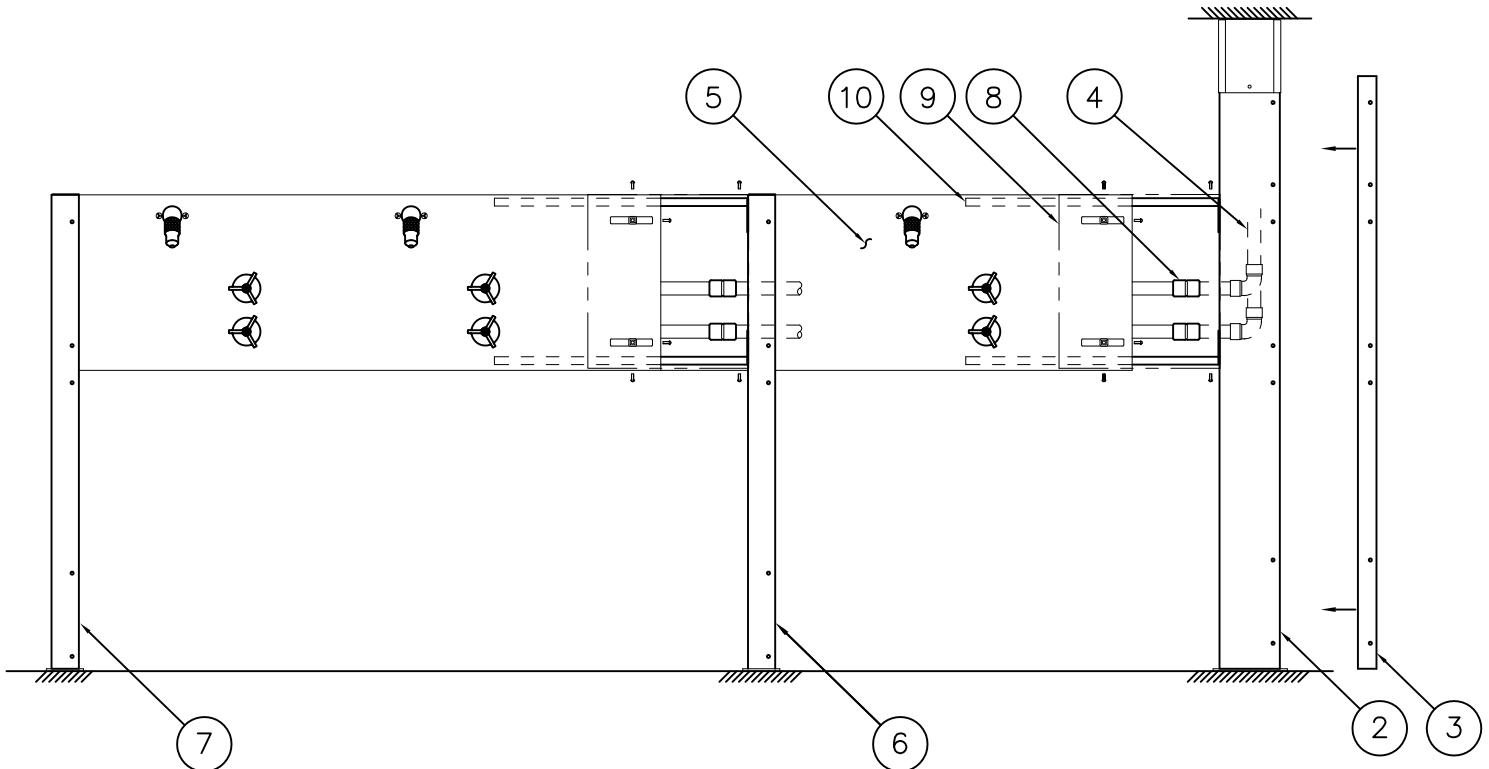
12/01/89

DATE REVISED

03/15/12

DRAWING NUMBER

9900-124-001



WIDE NARROW
STANCHION FLANGE DIMENSIONS

REFERENCE DRAWINGS

ASSEMBLIES	NUMBER
SHOWERHEAD	9970-120-003
NOZZLE	9970-101-004
T/P VALVE	2510-067-001
MOUNTING HARDWARE	9951-007-001
FASTENERS	9951-005-001
FLO-CLOZ	9975-000-001
METER-MATIC	9975-020-003
VALVE BODY	9975-090-001
CHECKSTOP/STRAINER	9956-040-003
METERING SERVOMOTOR	9955-000-003
PUSHBUTTON/ESCUTCHEON	9957-300-001
T/P VALVE INSTRUCTIONS	2510-067-001
DWAF WALL INSTALLATION	9900-124-001

* FOR 138 SHOWERS REFER TO 2510-067-001 FOR POWERS e700 INSTALLATION SHEETS.

INSTALLATION INSTRUCTIONS:

- A- LAYOUT FLOOR ANCHOR LOCATIONS ①. MARK FOR DRILLING AND INSTALLATION OF FLOOR ANCHORS. REFERENCE INDIVIDUAL JOB PLAN VIEWS FOR STANCHION LOCATIONS.
- B- WHEN SUPPLIES ARE TO BE ENCLOSED WITHIN A STANCHION ②, START INSTALLATION AT THE SUPPLY SIDE. INSTALL (IN THIS CASE) THE FLOOR-TO-CEILING STANCHION ②. REMOVE ACCESS PANEL ③. INSTALL SUPPLIES ④. MEASURE AND CUT SUPPLY INLETS TO SIZE BEFORE INSTALLATION.
- C- INSTALL FIRST SHOWER PANEL ⑤ TO STANCHION ②

BY MEANS OF ADJUSTABLE BRACKET ⑩. WHILE SUPPORT PANEL ⑤, INSTALL MIDDLE STANCHION ⑥. INSERT SHOWER PANEL ⑤ THRU STANCHION OPENING. ADJUST, DRILL AND TAP SHOWER PANEL ⑤ TO STANCHION ②. FASTEN WITH TRI-SLOT SCREWS AS PROVIDED.

- D- INSTALL ADJACENT SHOWER PANEL(S) ⑦ IN THE SAME FASHION.
- E- MAKE SUPPLY CONNECTIONS ⑧ (CONNECTORS BY OTHERS).



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TITLE

ACME BACK-TO-BACK SHOWERS-STANCHION MOUNTED

MANUFACTURE DATE

**DECEMBER 1976
TO PRESENT**

DATE ISSUED

12/01/89

DATE REVISED

03/15/12

DRAWING NUMBER

9900-125-001

POWERS™

HydroGuard® T/P

Series e700

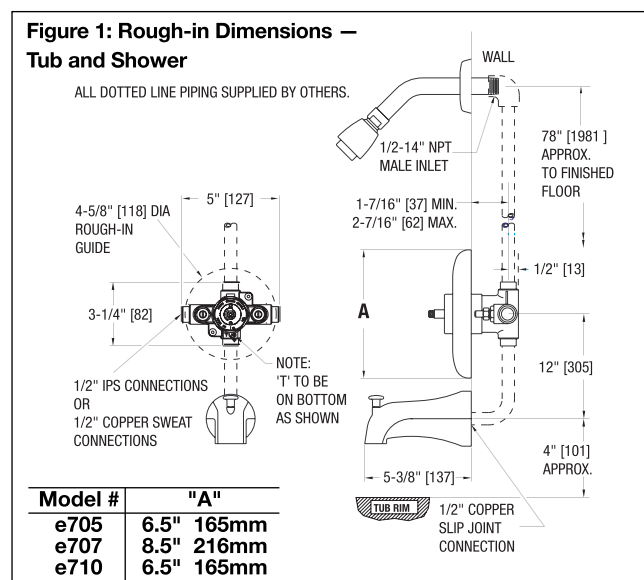
Note: Installation should be in accordance with accepted plumbing practices. Flush all piping thoroughly before installation.

TO INSTALL

- Position mixer 1-15/16" ± 1/2" [49mm ± 13mm] from inlet center to finished wall surface. The tub outlet port is marked "TUB" and should face down. Facing front of mixer, connect hot water to left side and connect cold water to right side. The valve has "C" and "H" cast into the body near the appropriate inlet ports.
- Valve is factory-set for standard inlets. If **reversed inlets** are required due to back-to-back installation (Cold water supply on the left and Hot water supply on the right), follow instructions a-d below:
 - Connect **cold inlet to hot port ("H")** and **hot inlet to cold port ("C")**. **Note:** Do not turn valve upside down. If valve is upside down, water will not flow properly through tub spout or showerhead.
 - Turn water off with checkstops, remove bonnet and cartridge.
 - Reinstall cartridge. "H" on the cold side of the valve body and "C" should be on the hot side of the valve body.
 - Reinstall bonnet with high temperature limit stop on it.

Note: Be certain that valve opens in full cold!

 - Hot and Cold inlets should be re-identified for reversed inlets to avoid confusion during future maintenance.
- For **tub and shower installations**, see Figure 1. Pipe bottom outlet port "TUB" directly to the diverter tub spout. The mixer body is designed to operate without the use of a twin ell. Pipe top outlet port "S" to the showerhead.
- For **shower only installation**, see Figure 2. Pipe top outlet port "S" directly to the showerhead and plug bottom port.
- Rough-in guide installation...
 - When piping installation is completed and before doing the finished wall, slide rough-in guide onto the mixer stem and press fit into place. (See Figure 4.)
 - The rough-in guide will insure the proper size opening for mixer and checkstop shut-off and repair accessibility, as



INSTALLATION INSTRUCTIONS

well as protect the chrome-plated sleeve from damage during drywall and tile installation.

- To install dial gaskets, peel backing off gaskets and attach gaskets to inside of dial plate.
- (a) **For e707**
Attach indicator plate gasket to the back of the trim plate making sure horizontal holes on the gasket matches horizontal holes on the trim plate. Indicator plate locator hole matches diagonal hole on the trim plate. Peel off backing of the trim plate gasket and attach to the inside top edge of the trim plate. Gasket should be approximately 1/16" beyond the plate edge.
- (a) **For e705 & e710**
After wall is completed, remove rough-in guide. Install O-ring on the bonnet. Slide sleeve on the bonnet and attach dial assembly and handle to mixer body with the screws furnished.
- (b) **For e707**
 - Install trim plate.
 - Snap on the indicator plate. Guide on the back of the plate goes into the locator hole.
 - Install sleeve O-ring on the bonnet. Slide sleeve on the bonnet.

CAUTION: Indicator plate must be installed before sleeve.

- Install handle and tighten the setscrew.

CAUTION: When soldering during installation process, do not heat the valve any higher than the temperature required to flow solder. Excessive overheating of the valve may cause damage to the cartridge mechanism. **By following this recommendation, you will be able to solder the valve without removing either the cartridge or the checkstop internals.** If either brazing or resistance (electric) solder is to be used, all valve internals must be removed.

- Maximum temperature setting adjustment (see Figure 5) must be set on the job to in no case greater than 110°F [43°C]. The high temperature limit stop is located on the bonnet. Rotate handle to the maximum desired outlet temperature. With an open-end wrench, screw high temperature limit stop into bonnet until it touches stem's shoulder. Close valve and open it to full hot to verify settings.

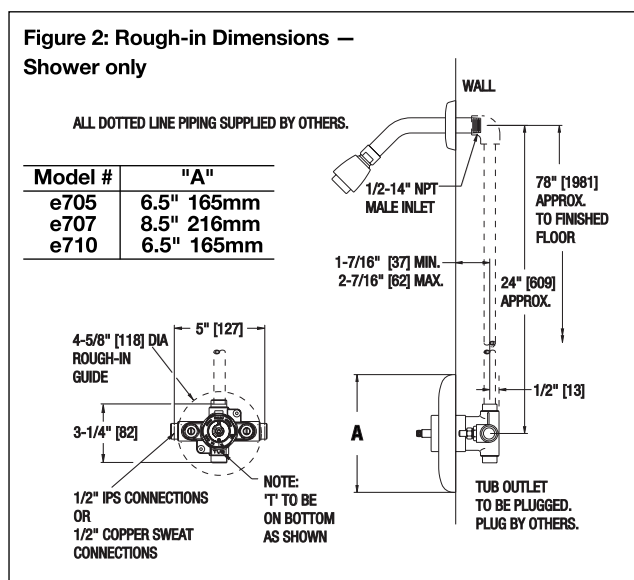
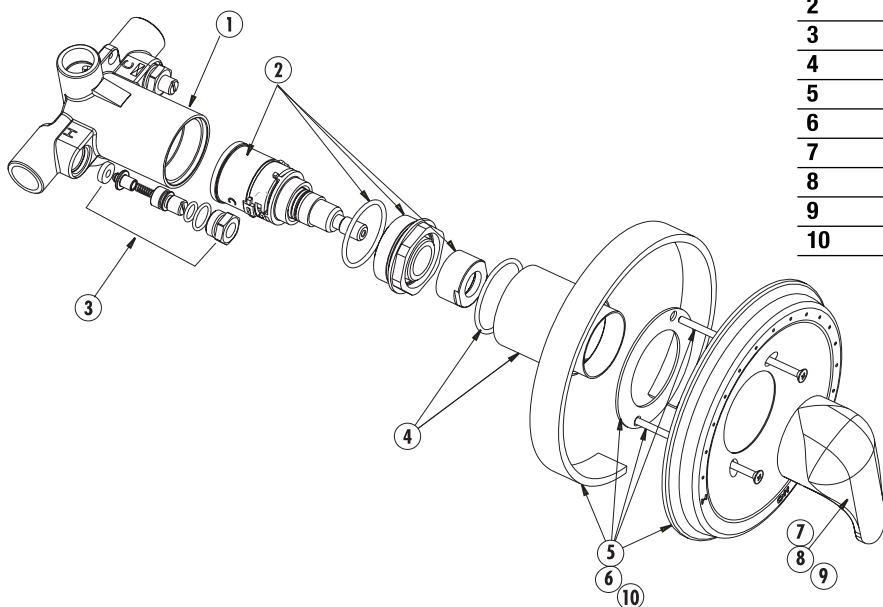


Figure 3



ITEM#	KIT#	DESCRIPTION
1	N/A	Valve Body
2	220 060	Cartridge Kit
3	900 050	Checkstop Replacement Kit
4	220 054	Sleeve Kit
5	220 051	Metal Trim Plate Kit
6	220 053	ABS Trim Plate Kit
7	220 050	Metal Handle Kit
8	220 052	ABS Handle Kit
9	220 079	Dome Metal Handle Kit
10	220 078	Metal Flat Trim Plate Kit



Figure 4: Rough-In Guide

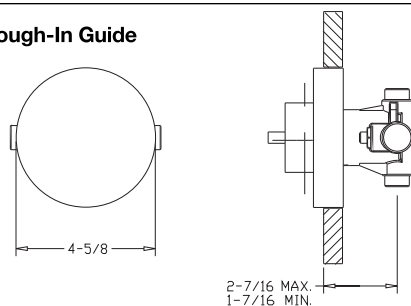
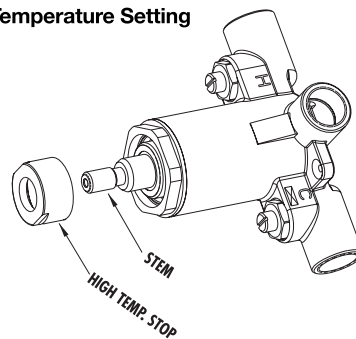


Figure 5: Max. Temperature Setting



TROUBLESHOOTING

Description	Troubleshooting	Repair Kit No.
Cartridge Kit	- Water leaks at valve stem and/or bonnet. - Water leaks at valve shutoff. - Water temperature changes during shower.	220 060
Checkstop Replacement Kit	Checkstop leaks or will not shut off completely.	900 050

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: www.watts.com/prop65

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