

REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
SHOWERHEAD	9970-120-003
STANDARD NOZZLE	9970-101-004
T/P VALVE (SHOWN)	9975-005-002
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
-PPZ INSTALLATION	9927-223-001
T/P VALVE TEMP ADJUST	9900-007-001
T/P VALVES PRIOR TO JUNE 2014	9975-006-001

**INSTALLATION INSTRUCTIONS:**

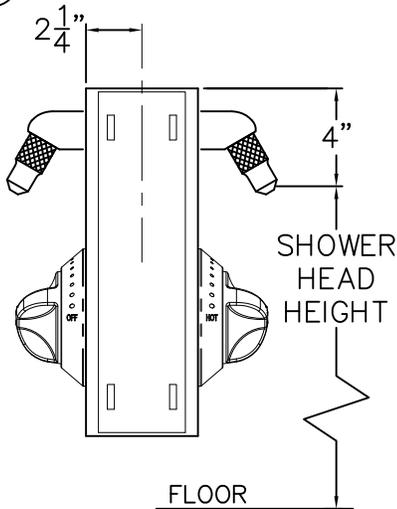
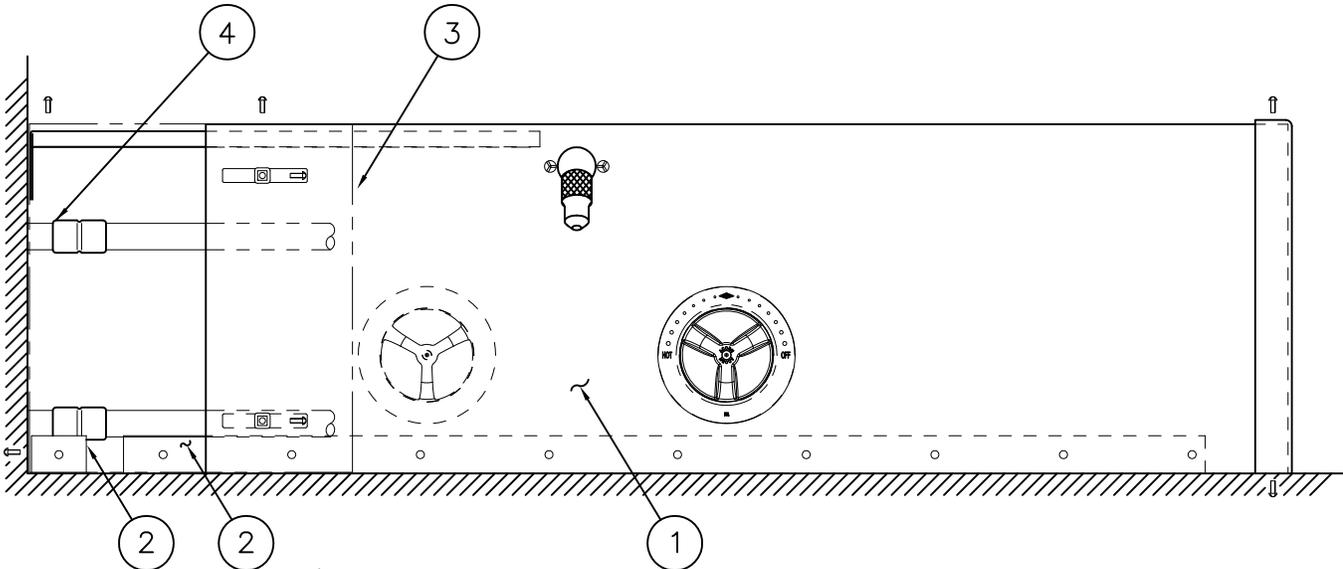
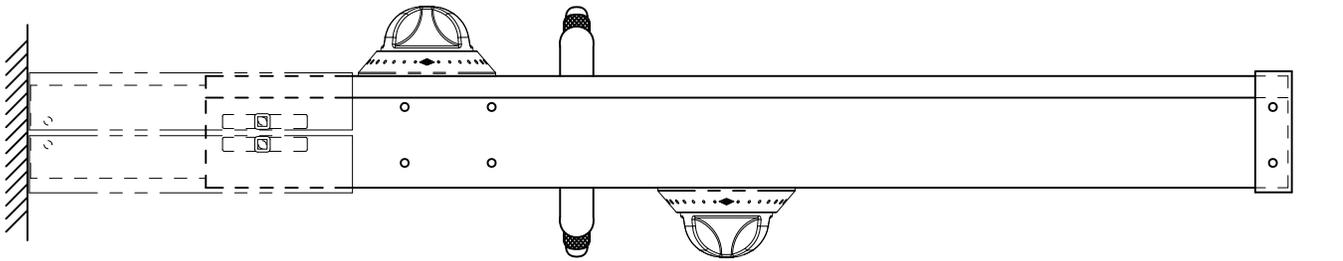
- A-ESTABLISH SHOWER HEAD HEIGHT AT WALL MOUNTING LOCATIONS. REMOVE AND USE FIXED BRACKET ① AS TEMPLATE. MARK FOR DRILLING AND INSTALLATION OF WALL ANCHORS ON ALL WALLS.
- B-INSTALL FIXED BRACKET ① TO WALL.
- C-MEASURE AND CUT SUPPLY TUBING ② BEFORE HANGING UNIT ON THE WALL.

- 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.



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

TITLE <b>ACME BACK-TO-BACK SHOWERS-ADJUSTABLE &amp; FIXED BRACKET 130 SERIES</b>		
MANUFACTURE DATE <b>DECEMBER 1976 TO PRESENT</b>	DATE ISSUED <b>12/01/89</b>	DRAWING NUMBER <b>9900-120-001</b>
	DATE REVISED <b>06/01/14 I</b>	

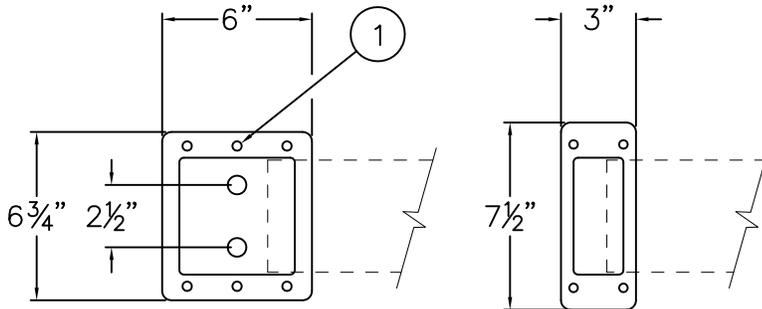
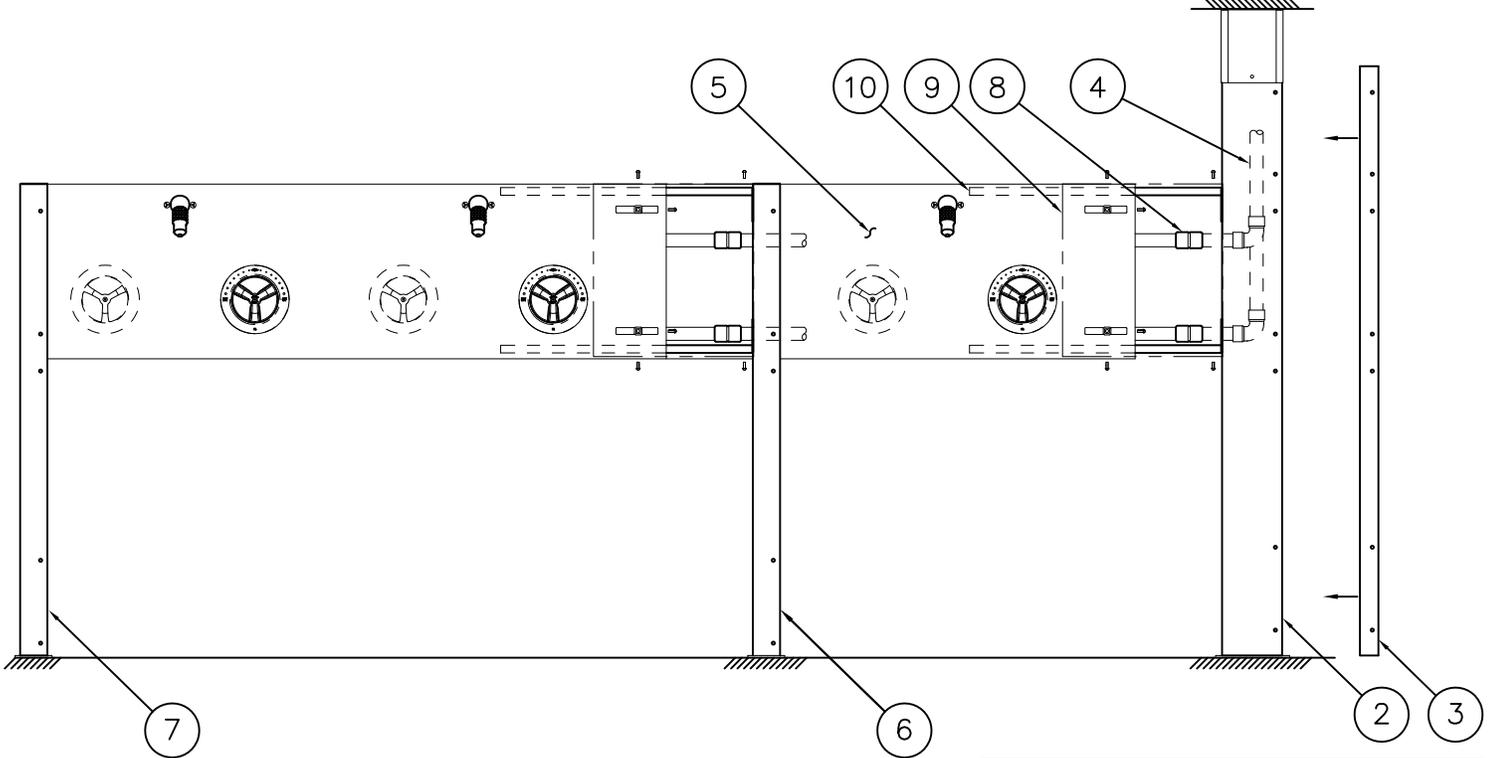


REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
SHOWERHEAD	9970-120-003
NOZZLE	9970-101-004
T/P VALVE (SHOWN)	9975-005-002
MOUNTING HARDWARE	9951-007-001
FASTENERS	9951-005-001
FLO-CLOZ	9975-000-001
METER-MATIC	9975-020-003
VALVE BODY	9975-090-001
CHECKSTOP/STRAINER	9956-040-003
METERING SERVOMOTOR	9955-000-003
PUSHBUTTON/ESCUTCHEON	9957-300-001
-PPZ INSTALLATION	9927-223-001
T/P VALVE TEMP ADJUST	9900-007-001
T/P VALVES PRIOR TO JUNE 2014	9975-006-001

**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.

<p>ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200</p>	<p>TITLE <b>ACME BACK-TO-BACK SHOWERS-DWARF WALL INSTALLATION</b></p>		
	<p>MANUFACTURE DATE <b>DECEMBER 1976 TO PRESENT</b></p>	<p>DATE ISSUED <b>12/01/89</b></p> <p>DATE REVISED <b>06/01/14 I</b></p>	<p>DRAWING NUMBER <b>9900-124-001</b></p>



WIDE NARROW  
**STANCHION FLANGE DIMENSIONS**

REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
SHOWERHEAD	9970-120-003
NOZZLE	9970-101-004
T/P VALVE (SHOWN)	9975-005-002
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
-PPZ INSTALLATION	9927-223-001
T/P VALVE TEMP ADJUST	9900-007-001
T/P VALVES PRIOR TO JUNE 2014	9900-007-001
DWARF WALL INSTALLATION	9900-124-001

**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 <b>ACME BACK-TO-BACK SHOWERS-STANCHION MOUNTED</b>		
MANUFACTURE DATE <b>DECEMBER 1976 TO PRESENT</b>	DATE ISSUED <b>12/01/89</b>	DRAWING NUMBER <b>9900-125-001</b>
	DATE REVISED <b>06/01/14 I</b>	



## Programable Piezo Pushbutton Programming Instructions (Flow Time Adjustment)

The Button is factory set an 8 sec. timing cycle, if an 8 sec. cycle is adequate, then **no** programming adjustment is required.



**NOTE:** Read the entire document before trying to program the piezo pushbutton.

### **THE TIME SETTINGS PROGRAM USES 3 DIFFERENT TIMING MODES:**

- **1 second timing mode:** Each push of the button adds 1 second to the total timing cycle.
- **5 second timing mode:** Each push of the button adds 5 seconds to the total timing cycle.
- **20 second timing mode:** Each push of the button adds 20 seconds to the total timing cycle.

To program the piezo pushbutton, you will need to be able to see the back of the piezo pushbutton.

Prevision must be made to access the back of the piezo pushbutton. There is an LED on the back of the piezo pushbutton under a layer of transparent epoxy, used as a programming indicator light.



**NOTE:** This programming procedure moves along rapidly, there is only about 2 or 3 seconds between programming operations.

In order to start the programming the piezo pushbutton, the button must be powered down. Disconnect the red power cable and wait 20 seconds, then reconnect the red power cable.

As soon as the cable is reconnected the LED will start flashing, it will flash 4 times, then stays on for 3 seconds. During the 3 second period, push the piezo button once, the LED will go out, now you are in the **1 sec timing mode** and each time the button is pushed the LED will flash, adding 1 sec to the total timing cycle.

To move on to the **5 sec timing mode**, pause and wait for the LED to flash 2 times, now you are in the 5 sec timing mode. Each time the button is pushed the LED will flash, adding 5 sec to the total timing cycle.

To move on to the **20 sec timing mode**, pause and wait for the LED to flash 3 times, now you are in the 20 sec timing mode and each time the button is pushed the LED will flash, adding 20 sec to the total timing cycle. After programing is complete, pause and wait for the LED to flash 4 times and then 5 times, which completes the programming.

- When a **timing mode is not required** then **do not** push the button and wait for the next timing mode.
- Each timing mode (1 sec, 5 sec or 20 sec timing mode) can be sequenced up to 100 times, that is the number of times, the button can be pushed, to increase the total timing cycle in each timing mode.



Please visit [www.acorneng.com](http://www.acorneng.com) for most current specifications.

# Programmable Piezo Pushbutton Programming Instructions (Flow Time Adjustment)

## WORKSHEET

**(FILL IN ALL BOXES, WHICH WILL SIMPLIFY THE PROGRAMMING PROCEDURE)**

Fill in all the Boxes below  
↓ ↓

Determine the number of seconds per timing cycle

1 Push = 1 Second  
 x 1 =  sec



- PROGRAMING STEPS:**
- Power down piezo button for 10 seconds.
  - Reconnect power.
  - LED flashes, then stay on.
  - While the LED is steady on, push button.
  - LED turns off.
  - You are in the 1 sec timing mode, immediately push the button, 1 push equals 1 sec added to the total timing cycle.
  - Pause and wait for the LED to flash 2 times.

**ADD** ↑ ↓

1 Push = 5 Seconds  
 x 5 =  sec



- You are in the 5 sec timing mode, immediately push the button, 1 push equals 5 sec added to the total timing cycle.
- Pause and wait for the LED to flash 3 times.

**ADD** ↑ ↓

1 Push = 20 Seconds  
 x 20 =  sec



- You are in the 20 sec timing mode, immediately push the button, 1 push equals 20 sec added to the total timing cycle.

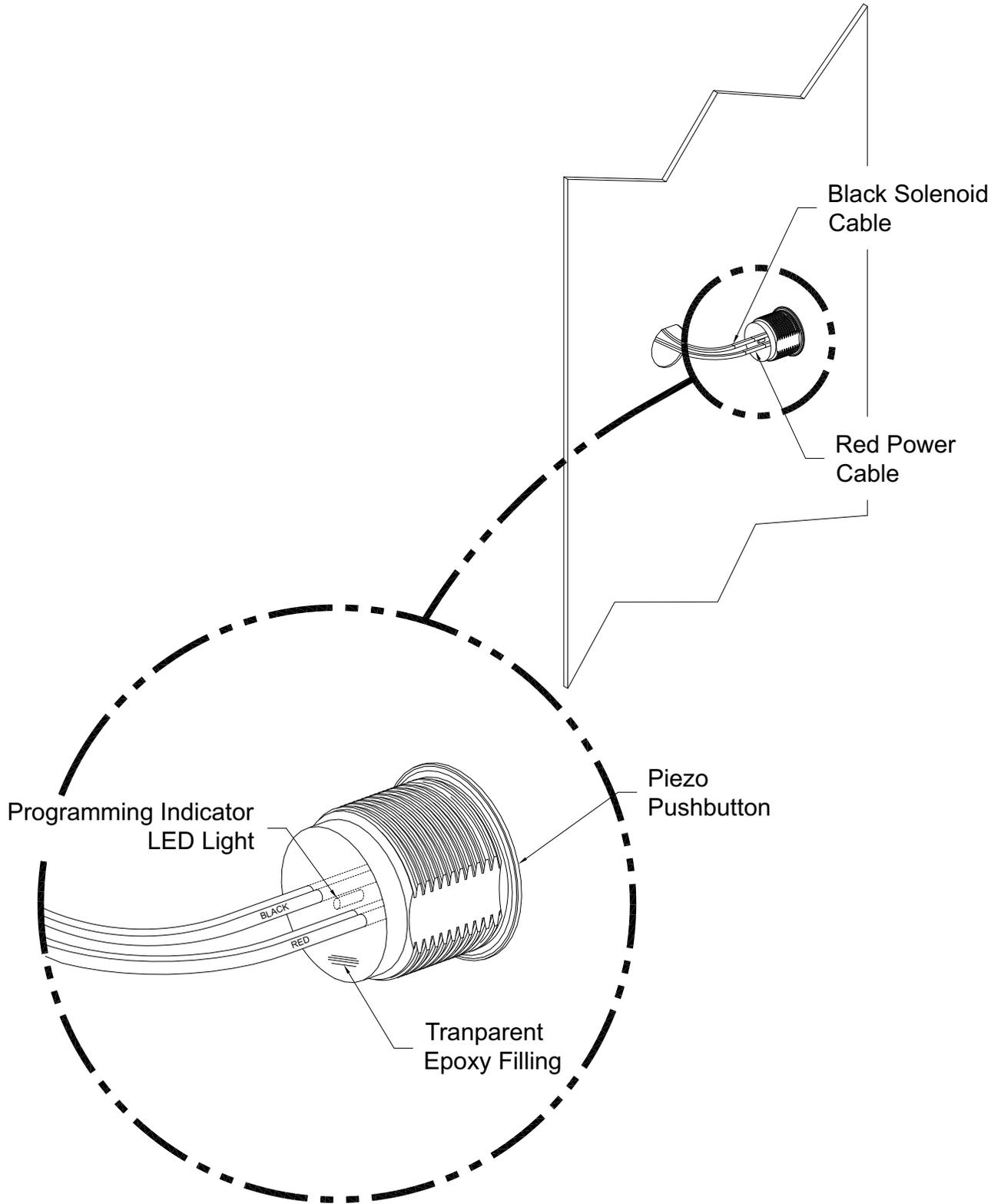
**EQUALS** ↓

Total timing cycle equals  
 seconds



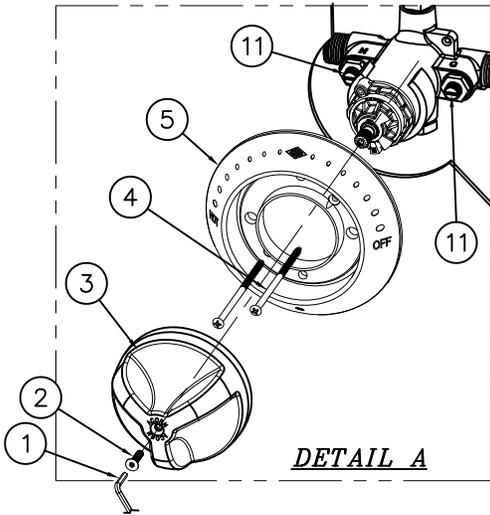
# INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit [www.acorneng.com](http://www.acorneng.com) for most current specifications.

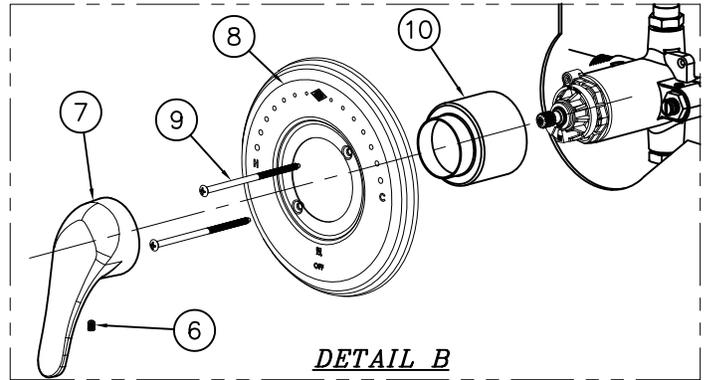




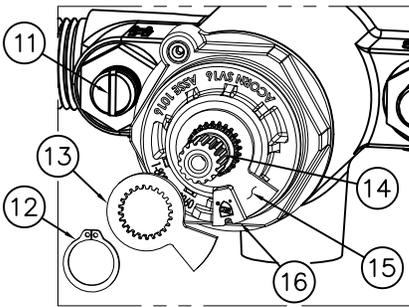
REFERENCE DRAWINGS	
ASSEMBLIES	NUMBER
T/P VALVE	9975-005-002



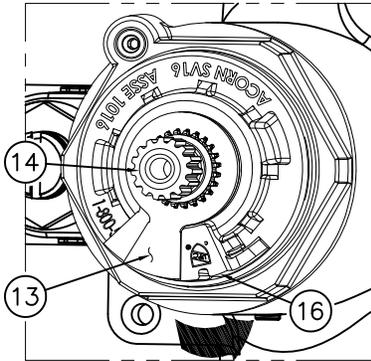
DETAIL A



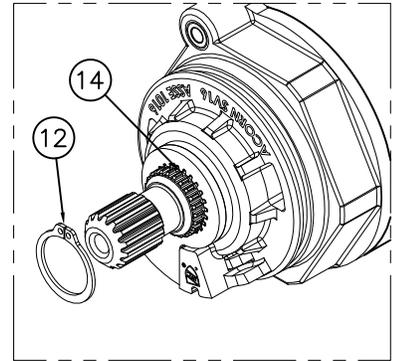
DETAIL B



DETAIL C



DETAIL D



DETAIL E

**INSTRUCTIONS:**

A-REMOVE TRI-LEVER HANDLE TRIM: SEE DETAIL A

- a- USING CENTER REJECT ALLEN WRENCH ① REMOVE HANDLE SCREW ② AND REMOVE HANDLE ③.
- b- REMOVE ESCUTCHEON ④ BY REMOVING SCREWS ⑤.

FOR OPTIONAL -LVR LEVER HANDLE TRIM: SEE DETAIL B

- a- REMOVE SET SCREW ⑥ AND HANDLE ⑦.
- b- REMOVE ESCUTCHEON ⑧ BY REMOVING SCREWS ⑨.
- c- PULL OFF VALVE SLEEVE ⑩.

**TEMPERATURE ADJUSTMENT:**

- B- ENSURE MAIN WATER SUPPLY IS ON.
- C- ENSURE CHECK STOPS ⑪ ARE OPEN.
- D- ENSURE VALVE IS IN THE OFF POSITION.
- E- USING SNAP RING PLIERS REMOVE RETAINING RING ⑫ AND THE FIRST TEMPERATURE LIMIT WASHER ⑬ ONLY FROM VALVE STEM ⑭. SEE DETAIL C.

NOTE: IF SECOND TEMPERATURE LIMIT WASHER ⑮ COMES OFF, RESETTING OF THE OFF STOP MAY BE REQUIRED, KEY AS CLOSE AS POSSIBLE ON THE COUNTER-CLOCKWISE SIDE OF BONNET STOP ⑯. USING HANDLE ③ OR ⑦ SLIGHTLY OPEN AND CLOSE VALVE TO ENSURE WATER WILL SHUT OFF. DETAIL C.

**TEMPERATURE ADJUSTMENT: CONTINUED:**

- F- USING HANDLE ③ OR ⑦ TURN VALVE STEM ⑭ COUNTER-CLOCKWISE TO INCREASE HOT, CHECKING OUTLET TEMPERATURE UNTIL DESIRED TEMPERATURE IS REACHED (RECOMMENDED 105° TO 110°). SLIDE FIRST TEMPERATURE LIMIT WASHER ⑨ OVER VALVE STEM ⑬ AND ENSURE SIDE OF WASHER RESTS AS CLOSE AS POSSIBLE TO CLOCKWISE SIDE OF BONNET LIMIT STOP ⑯. DETAIL D.
- G- WITH VALVE IN THE "ON" POSITION AND WATER RUNNING, USING SNAP RING PLIERS INSTALL RETAINING RING ⑫. ENSURE RETAINING RING ⑫ IS INSERTED PROPERLY INTO GROOVE ON VALVE STEM ⑭. DETAIL E.
- H- REINSTALL TRIM IN REVERSE ORDER.



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TITLE **-8 T/P TEMP/PRESS BALANCING MIXING VALVE - TEMPERATURE ADJUSTMENT**

MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
<b>APRIL 2014</b>	<b>05/01/14</b>	
<b>PRESENT</b>	DATE REVISED	<b>9900-007-001</b>
	<b>09/01/16 B</b>	