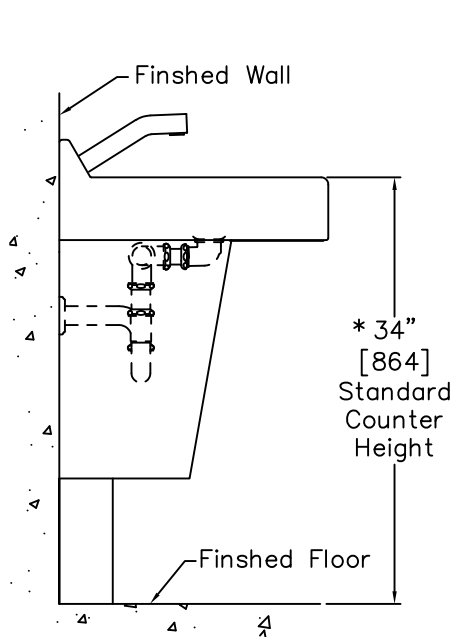
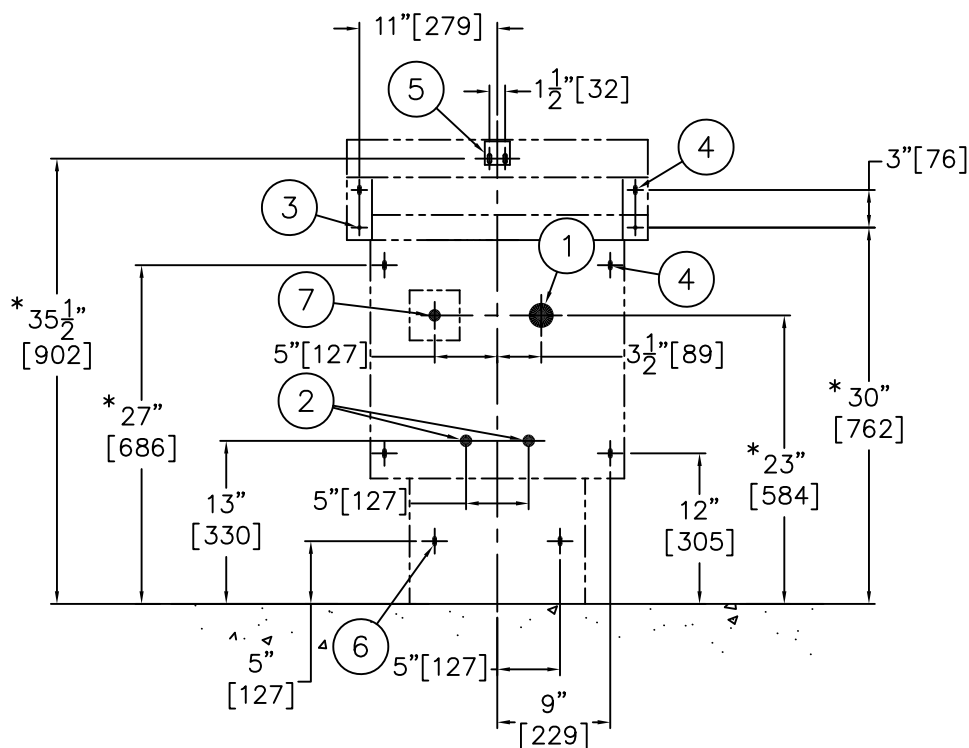


**SIDE VIEW****FRONT VIEW****ROUGH-IN FOR THE FOLLOWING:**

- 1- LAVY WASTE OUTLET – 1-1/2" O.D. TUBE FOR COMPRESSION JOINT.
- 2- MIXING VALVE INLET – 1/2" NPS HOT AND COLD VALVE SUPPLIES.
- 3- MOUNTING LOCATIONS – 9/16" DIAMETER MOUNTING HOLES (2) PLACES
- 4- MOUNTING LOCATIONS – 9/16" X 1-1/8" MOUNTING SLOTS (6) PLACES.
- 5- BACKSPASH MOUNTING – (1) "S" TYPE MOUNTING CLIP. CLIP HAS (2) 9/32" X 3/4" SLOTS FOR FASTENERS.
- 6- SCUFF PLATE MOUNTING – 3/8" X 1" SLOTS (2) PLACES.
- 7- FOR –SO SENSOR OPERATED CONTROLS. PROVIDE 120V/60Hz/3 AMPS (MAX.) ELECTRIC RECEPTACLE TO CONNECT FACTORY SUPPLIED 120 VAC TO 9VDC 100 mA PLUG-IN TRANSFORMER. NOTE: RECEPTACLE MUST BE WIRED TO A GFI PROTECTED CIRCUIT. FIXTURE MUST BE EARTH GROUNDED PER N.E.C. (NATIONAL ELECTRICAL CODE).

NOTE: * FOR –JH31 OPTIONS, SUBTRACT 3" FROM DIMENSIONS.

INSTALLATION INSTRUCTIONS:

SOME AVAILABLE OPTIONS FOR THIS UNIT MAY ALTER THESE ROUGH-IN INSTRUCTIONS. CONTACT FACTORY FOR DETAILS. UNIT IS INTENDED FOR INSTALLATION ON A FINISHED WALL WITH APPROPRIATE WALL BACKING. WALL ANCHORS

AND MOUNTING HARDWARE ARE NOT INCLUDED. UNIT INCLUDES WASTE PIPING AND 1-1/2" TUBULAR P-TRAP. VALVE ASSEMBLY IS SHIPPED LOOSE FOR MOUNTING TO WALL. INCLUDES VALVE AND TRAP ENCLOSURE, SHIPPED LOOSE.



ACORN ENGINEERING COMPANY
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TITLE

MULTILINEAR STN. STL. ROUGH-IN MODEL # 3711-2 & 3711-2-TZ (ON-FLOOR)

MANUFACTURE DATE

JANUARY 2005**TO PRESENT**

DATE ISSUED

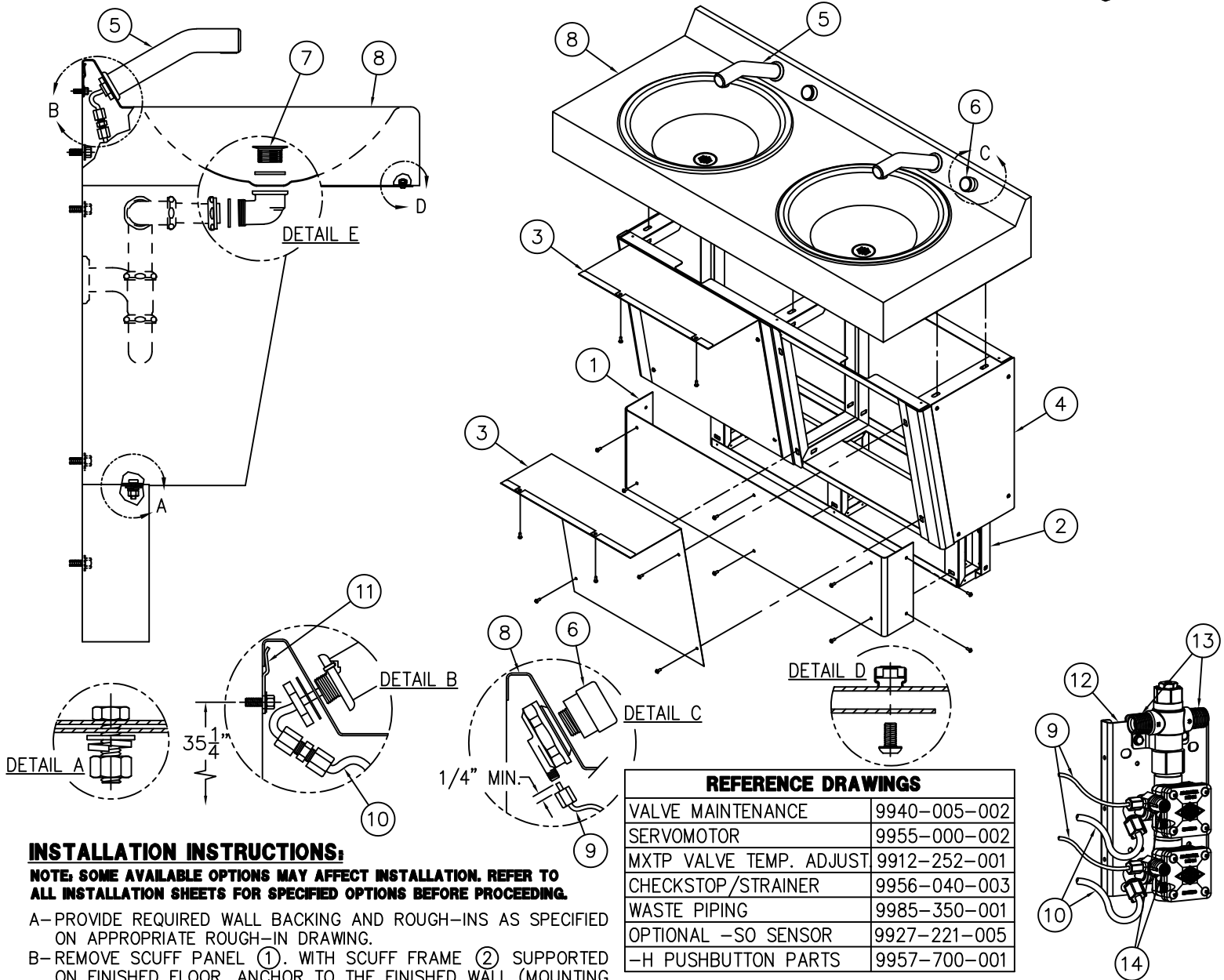
02/08/08

DATE REVISED

01/11/19 B

DRAWING NUMBER

9927-044-001



INSTALLATION INSTRUCTIONS:

NOTE: SOME AVAILABLE OPTIONS MAY AFFECT INSTALLATION. REFER TO ALL INSTALLATION SHEETS FOR SPECIFIED OPTIONS BEFORE PROCEEDING.

- A- PROVIDE REQUIRED WALL BACKING AND ROUGH-INS AS SPECIFIED ON APPROPRIATE ROUGH-IN DRAWING.
- B- REMOVE SCUFF PANEL (1). WITH SCUFF FRAME (2) SUPPORTED ON FINISHED FLOOR, ANCHOR TO THE FINISHED WALL (MOUNTING HARDWARE BY OTHERS).
- C- REMOVE FRONT COVERS (3). ASSEMBLE PEDESTAL FRAME (4) TO SCUFF FRAME (2) USING 5/16"-18 NUTS AND BOLTS PROVIDED. SEE DETAIL A. ANCHOR PEDESTAL FRAME (4) TO WALL (MOUNTING HARDWARE BY OTHERS).
- D- ASSEMBLE WATER SPOUTS (5) (SEE DETAIL B), PUSHBUTTONS (6) (SEE DETAIL C), AND GRID STRAINERS (7) (SEE DETAIL E) TO WASHBASIN (8). CONNECT POLYETHYLENE 1/8" O.D. AIR LINES (9) TO THE PUSHBUTTONS BY HAND TIGHTENING FERRULE NUTS PROVIDED. SEE DETAIL C. CONNECT POLYETHYLENE 1/4" O.D. WATER LINES (10) TO SPOUTS WATERTIGHT WITH FERRULE NUTS PROVIDED.
- E- MOUNT S-CLIPS (11) TO THE WALL AT 35-1/4" ABOVE FINISHED FLOOR (MOUNTING HARDWARE BY OTHERS). SEE DETAIL B. INSTALL WASHBASIN (8) ENGAGING BACKSPASH OVER S-CLIPS. USE BUTTON HEAD SCREWS PROVIDED TO ASSEMBLE SIDES OF WASHBASIN (8) TO PEDESTAL FRAME (4) (SEE DETAIL D); USE 5/16"-18 NUTS & BOLTS PROVIDED IN WASHBASIN CENTER ASSY. (SEE DETAIL A). ANCHOR WASHBASIN (8) TO WALL (MOUNTING HARDWARE BY OTHERS).

- F- INSTALL MIXING VALVE ASSEMBLY (12) ON THE WALL (MOUNTING HARDWARE BY OTHERS). CONNECT 1/8" O.D. AIR LINES (9) FROM PUSHBUTTONS (6) TO VALVE HAND TIGHT USING FERRULE NUTS PROVIDED. SEE DETAIL C. CONNECT 1/4" O.D. WATERLINES (10) FROM SPOUTS (5) TO VALVE WATERTIGHT WITH FERRULE NUTS PROVIDED.
- G- AFTER THOROUGHLY FLUSHING SUPPLY LINES, MAKE UP CONNECTIONS FROM 1/2" NPTE VALVE INLETS (13) TO SUPPLY STUB OUTS. CONNECTOR HOSES AND SUPPLY STUB OUTS ARE PROVIDED BY THE INSTALLER.
- H- NOTE: ALL WASTE PIPING AND CONNECTIONS TO WALL ARE FACTORY PROVIDED. ASSEMBLE WASTE PIPING. SEE APPROPRIATE REFERENCE DRAWING FOR PARTS. MAKE-UP LAVY WASTE CONNECTION (1-1/2" O.D. COMPRESSION).
- I- TURN ON WATER SUPPLY. TEST WASHFOUNTAIN FOR DESIRED TIMING CYCLE BY ADJUSTING TIMERS (14).
- J- INSTALL SCUFF PANEL (1) AND FRONT COVERS (3) WITH BUTTON HEAD SCREWS. SEE DETAIL D.



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TITLE

STRAIGHT FRONT WASHBASIN - #3711/3712/3713/3714 -2 ON THE FLOOR

MANUFACTURE DATE

JULY 1997

TO PRESENT

DATE ISSUED

7/18/97

DATE REVISED

01/11/19 E

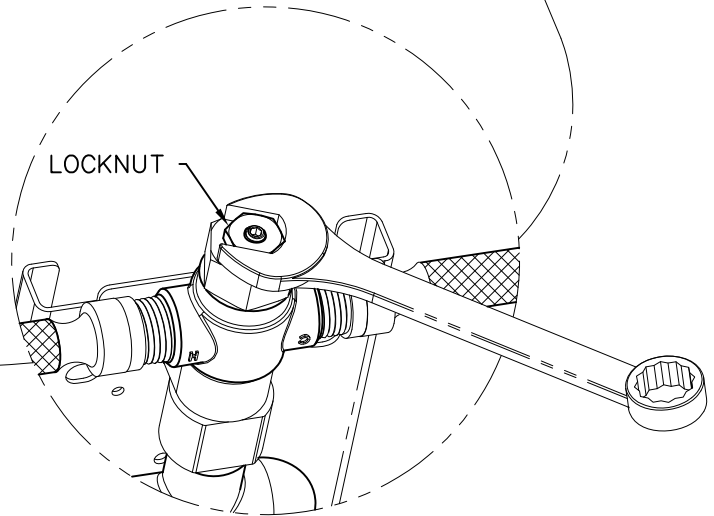
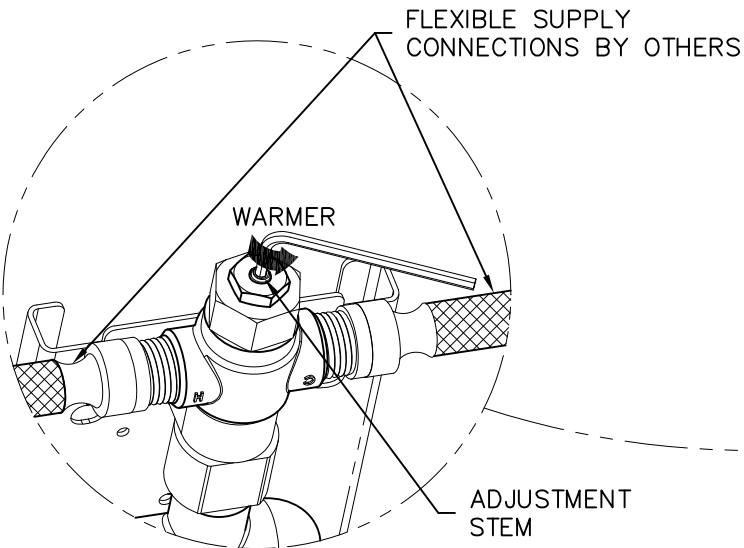
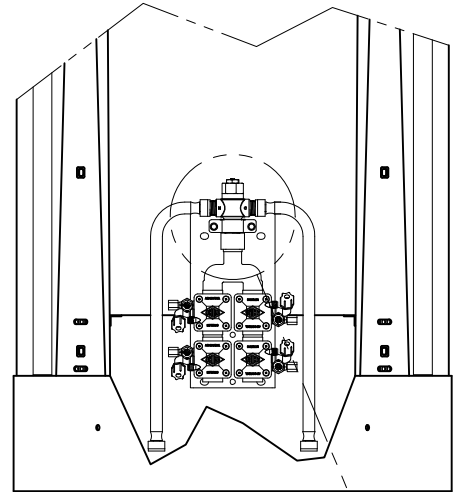
DRAWING NUMBER

9927-135-001



REFERENCE DRAWINGS

REPAIR PARTS	DRAWING
NON-METERING SERVOMOTOR (-F)	9955-001-003
METERING SERVOMOTOR (-H)	9955-000-003
AIR-CONTROL VALVE BODY	9975-090-001
CHECKSTOP (-ST Single Temp. Only)	9956-040-003
SENSOR/SOLENOID (-SO) (24VAC)	9955-015-002
SENSOR/SOLENOID/PPZ (-SO) (9VDC)	9955-019-002
HAND BUTTON	9957-300-001
FOOT BUTTON	9957-200-001



VALVE INSTALLATION:

- A- MX-T/P VALVES: AFTER THOROUGHLY FLUSHING SUPPLY LINES, MAKE UP CONNECTIONS TO SUPPLY STUB OUTS AND VALVE INLETS WITH INSTALLER PROVIDED FLEXIBLE HOSE. NOTE: MX-T/P VALVE SUPPLY INLETS ARE 1/2" NPT.
- B- OPTIONAL -ST (Single Temp): AFTER THOROUGHLY FLUSHING SUPPLY LINE, MAKE UP CONNECTION TO SUPPLY STUB OUT AND VALVE INLET WITH FLEXIBLE HOSE PROVIDED. NOTE: -ST VALVES INCLUDE FLEXIBLE HOSE WITH 1/2" NPSI CONNECTIONS. FLEXIBLE HOSE ENDS WILL ACCOMMODATE 1/2" NPT MALE ADAPTER.
- C- SEE APPROPRIATE SERVOMOTOR REFERENCE DRAWINGS FOR VALVE DETAILS AND TIMING INSTRUCTIONS.

MX T/P TEMPERATURE VALVE ADJUSTMENT

- D- LOOSEN LOCKNUT SHOWN.
- E- TURN ON FIXTURE AND RUN WATER FOR AT LEAST 2 MINUTES. ALLOW WATER TO STABILIZE.
- F- USE AN 1/8" ALLEN WRENCH TO TURN ADJUSTMENT STEM COUNTER-CLOCKWISE FOR WARMER OR CLOCKWISE FOR COOLER OUTLET WATER TEMPERATURE.
- G- TIGHTEN LOCKNUT TO PREVENT ACCIDENTAL OR UNAUTHORIZED TEMPERATURE ADJUSTMENT.
- H- RE-CHECK OUTLET TEMPERATURE.



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TITLE

VALVE INSTALL & MIXING VALVE ADJUSTMENT

MANUFACTURE DATE

**MARCH 2014
TO PRESENT**

DATE ISSUED

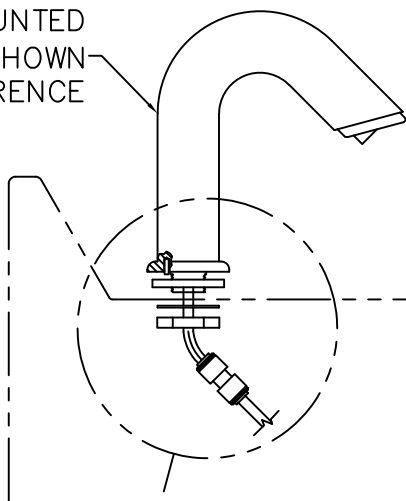
03/25/14

DATE REVISED

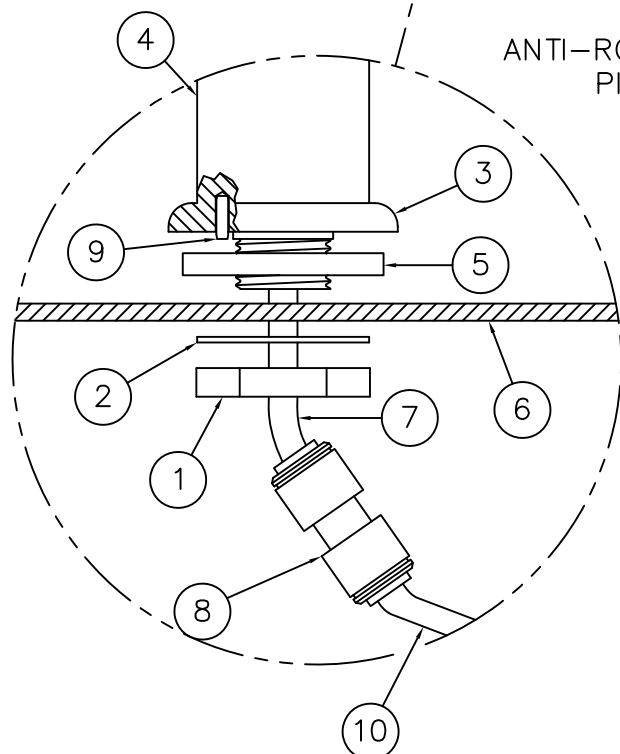
DRAWING NUMBER

9912-252-002

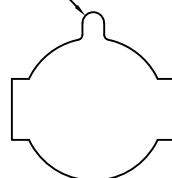
—DMJ DECK MOUNTED
"J" SPOUT SHOWN
FOR REFERENCE



REFERENCE DRAWING	
DECK MTD 'L' SPOUT	9957-730-001
DECK MTD 'J' SPOUT	9957-731-001
BACKSPLASH MTD SPOUT	9957-732-001
—SO —PPZ 9VDC	9955-019-002
—SO —PPZ INSTALLATION	9927-221-005

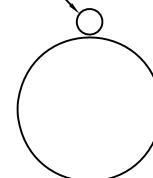


ANTI-ROTATION
PIN SLOT



PUNCH DETAIL
STAINLESS STEEL

ANTI-ROTATION
PIN SLOT

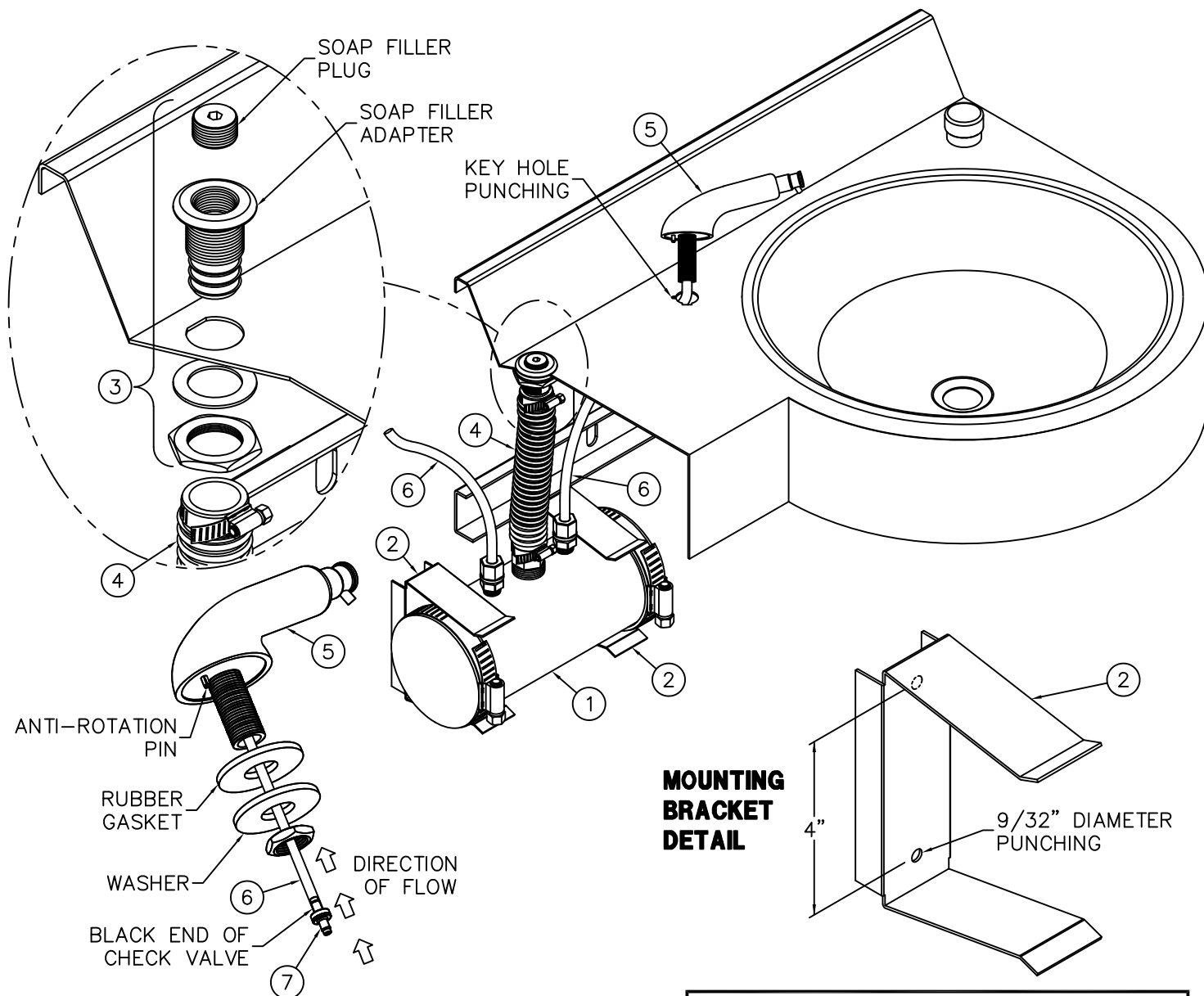


PUNCH DETAIL CORTERRA
SOLID SURFACE

INSTALLATION INSTRUCTIONS:

NOTE: INSTALL SPOUTS PRIOR TO SECURING
FIXTURE TO WALL.

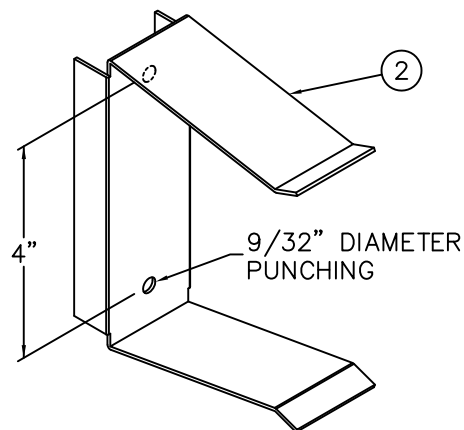
- A—REMOVE BRASS NUT ① AND WASHER ② FROM THE
BASE ③ OF SPOUT ④. DO NOT REMOVE RUBBER
GASKET ⑤.
- B—FROM ABOVE DECK ⑥: MAKE SURE RUBBER GASKET
⑤ IS PROPERLY SEATED WITHIN THE BASE ③ OF
SPOUT ④. FEED TUBE ⑦ AND UNION FITTING ⑧
THRU PUNCHED OPENING. POSITION SPOUT ③ ON
DECK ⑥ WITH ANTI-ROTATION PIN ⑨ THRU DECK
PUNCHING ANTI-ROTATION SLOT.
- C—FROM BELOW DECK ⑥: REASSEMBLE BRASS NUT ①
AND WASHER ② TO THE BASE ③ OF SPOUT ④.
MAKE SURE THAT PIN ⑨ IS IN THE PUNCHING SLOT
AND THAT GASKET ⑤ SEALS PROPERLY BEFORE
TIGHTENING.
- D—CONNECT POLYETHYLENE 1/4" O.D. WATER LINE ⑩ TO
UNION FITTING ⑧ WATERTIGHT WITH THE FERRULE
NUT PROVIDED. REFER TO THE GENERAL INSTALLATION
INSTRUCTIONS FOR ADDITIONAL DETAILS.



FOR BEST RESULTS INSTALL SOAP RESERVOIR FILL HOLE DIRECTLY BELOW SOAP FILLER ON DECK WITH REFILL TUBE AS SHORT AND STRAIGHT AS POSSIBLE TO FACILITATE REFILL OF SOAP WITHOUT BACKUP OR OVERFLOW.

- A- INSTALL SOAP RESERVOIR (1) TO WALL INSIDE THE TRAP ENCLOSURE USING THE MOUNTING BRACKETS (2) PROVIDED. WALL ANCHORS AND FASTENERS ARE BY OTHERS.
- B- INSTALL SOAP FILLER ASSEMBLY (3) TO DECK.
- C- ATTACH THE 1-1/4" O.D. REFILL TUBE (4) TO SOAP FILLER ASSEMBLY (3) & SOAP RESERVOIR (1) WITH THE HOSE CLAMPS PROVIDED.

**MOUNTING
BRACKET
DETAIL**



REFERENCE DRAWING

REFERENCE DRAWING	
ASSEMBLY	NUMBER
SOAP DISPENSER	9965-075-002

- D- INSTALL SOAP DISPENSER(S) (5) ONTO DECK BY ALIGNING ANTI-ROTATION PIN WITH KEY HOLE. NOTE THAT GASKET AND WASHER ARE LOCATED BENEATH THE DECK.
- E- ATTACH THE 3/8" O.D. TUBING (6) TO THE DISPENSER(S) (5) & RESERVOIR (1). NOTE: CHECK VALVE(S) (7) MUST BE FIELD SPLICED INTO TUBING (6) & INSTALLED WITH RESPECT TO DIRECTION OF FLOW.
- F- TO FILL SOAP RESERVOIR, REMOVE THE FILLER PLUG FROM THE SOAP FILLER ADAPTER. SLOWLY POUR SOAP DOWN OPENING AND REPLACE PLUG.

TITLE **-PDM SOAP DISPENSER INSTALLATION DETAIL**

MANUFACTURE DATE

**JUNE 2001
TO PRESENT**

DATE ISSUED

08/24/01

DATE REVISED

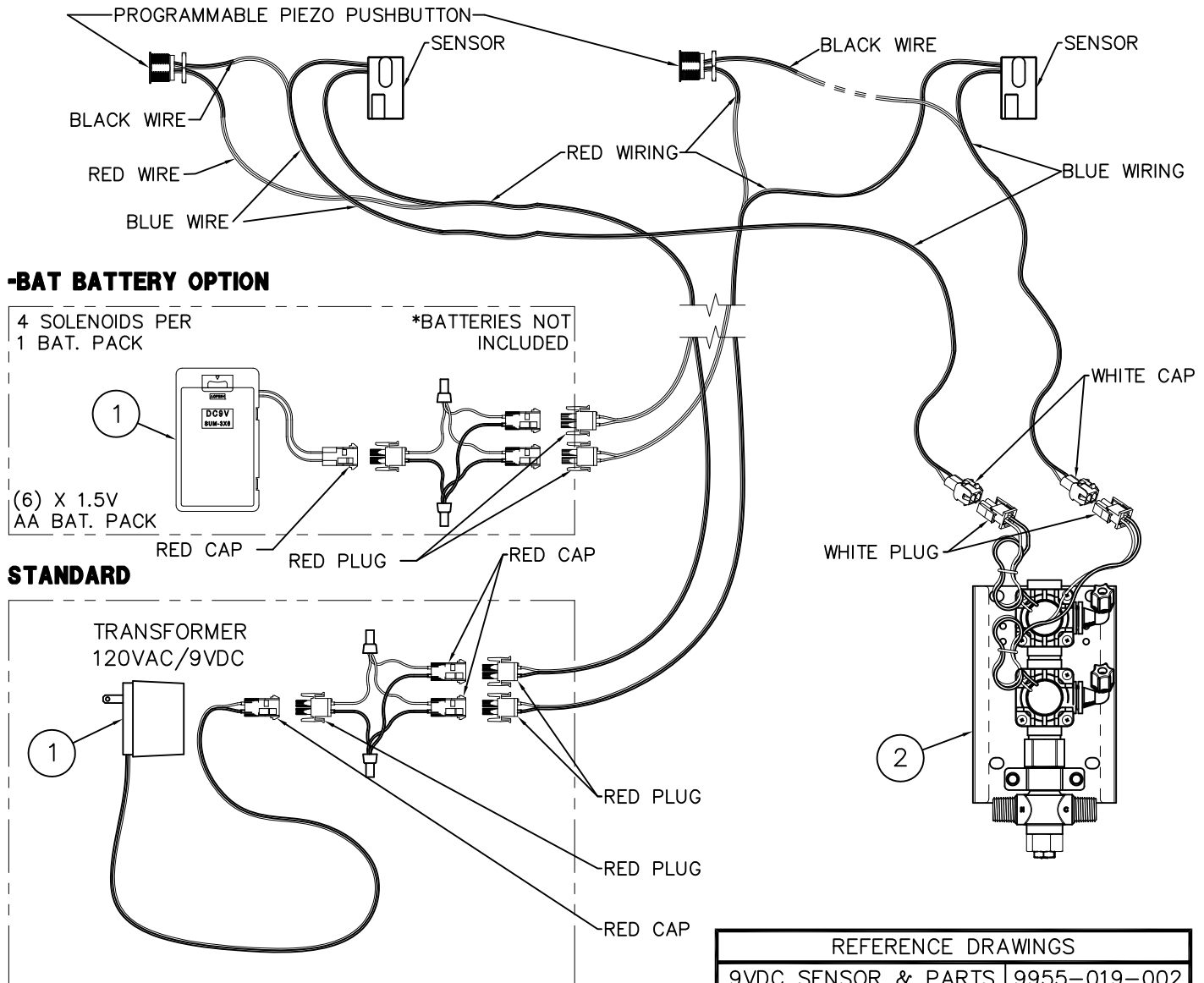
06/22/04

DRAWING NUMBER

9927-210-003



TWO STATION WIRING DIAGRAM SHOWN



REFERENCE DRAWINGS

9VDC SENSOR & PARTS	9955-019-002
PIEZO PB PROGRAMMING	9940-009-001

INSTALLATION INSTRUCTIONS:

A- USING APPROPRIATE INSTALLATION INSTRUCTIONS, MOUNT FIXTURE TO WALL AND MAKE-UP WASTE PIPING CONNECTIONS. SENSOR OR ELECTRONIC PUSHBUTTON ARE FACTORY INSTALLED. POWER SUPPLY ① AND VALVE ② SHIPPED LOOSE.

B- INSTALL SOLENOID VALVE ASSEMBLY ② ON THE WALL (FASTENERS AND WALL ANCHORS BY OTHERS), MAKING SURE THAT THE VALVE WILL BE WITHIN BOTTOM ENCLOSURE.

C- CONNECT WATER SUPPLY (AFTER FLUSHING LINES) TO VALVE, AND VALVE RISER TO SPOUTS AS PER UNIT INSTALLATION INSTRUCTIONS.

D- CONNECT SOLENOID VALVE, POWER SUPPLY AND SENSOR WIRING AS SHOWN ON DETAIL.

E- COMPLETE THE INSTALLATION OF THE UNIT ACCORDING TO THE UNITS INSTALLATION INSTRUCTIONS.

NOTE:

1- PLUG-IN TRANSFORMER INCLUDES BUILT-IN SECONDARY FUSE. IN THE EVENT OF POWER SURGE TRANSFORMER MAY REQUIRE REPLACEMENT.

2- ELECTRICAL RECEPTACLE MUST BE WIRED TO A GFI PROTECTED CIRCUIT. FIXTURE MUST BE EARTH GROUNDED PER N.E.C. (NATIONAL ELECTRICAL CODE).



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TITLE

-SO SENSOR/ -PPZ PIEZO ELECTRONIC PUSHBUTTON INSTALLATION

MANUFACTURE DATE

OCTOBER 2009
TO PRESENT

DATE ISSUED

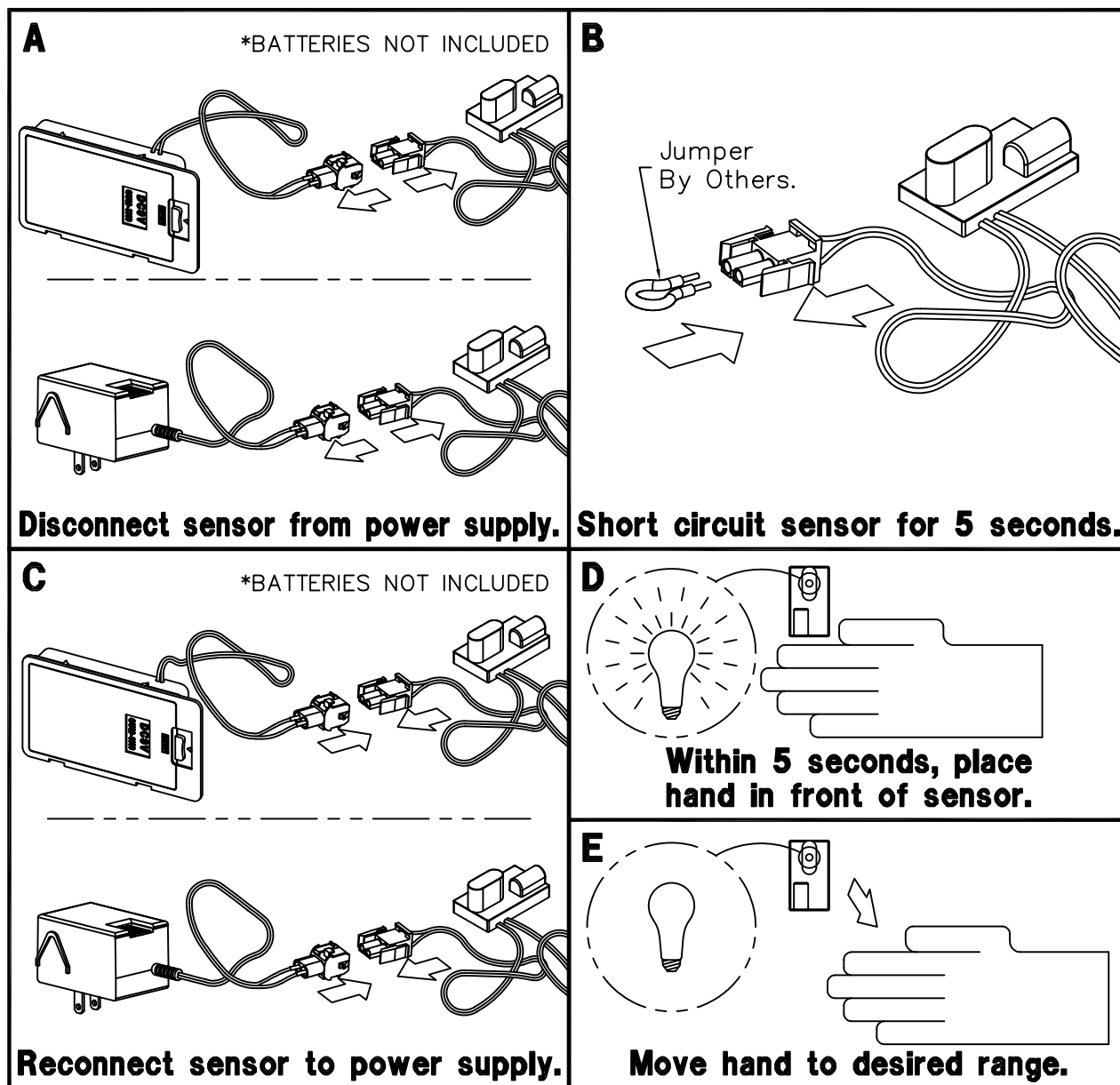
09/06/13

DATE REVISED

03/25/14

DRAWING NUMBER

9927-221-005



NOTE: THESE INSTRUCTIONS ONLY APPLY TO 9 VOLT SENSORS THAT DO NOT HAVE A RANGE ADJUSTMENT SCREW ON THE BACK. SEE DRAWING # 9927-222-001.

INSTRUCTIONS:

- A- Disconnect sensor from power supply.
- B- Create a short circuit between the positive and negative connections on the sensor for five seconds. **WARNING:** Do not create a short circuit on the power supply or while the sensor is connected to the power supply.
- C- Reconnect the sensor to the power supply.

- D- Within 5 seconds of making the connection, place hand 2 to 4 inches from the sensor.
- E- Once red light begins flashing quickly, move hand to preferred distance and wait for light to stop flashing.
- F- Check distance. If unsatisfactory, repeat steps A through E.

 MORRIS GROUP INTERNATIONAL P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	TITLE 9 VOLT DC SENSOR RANGE ADJUSTMENT		
	MANUFACTURE DATE SEPTEMBER, 2001 TO PRESENT	DATE ISSUED 09/06/01	DRAWING NUMBER 9927-222-002
		DATE REVISED 02/18/14	

**MUST SPECIFY:**

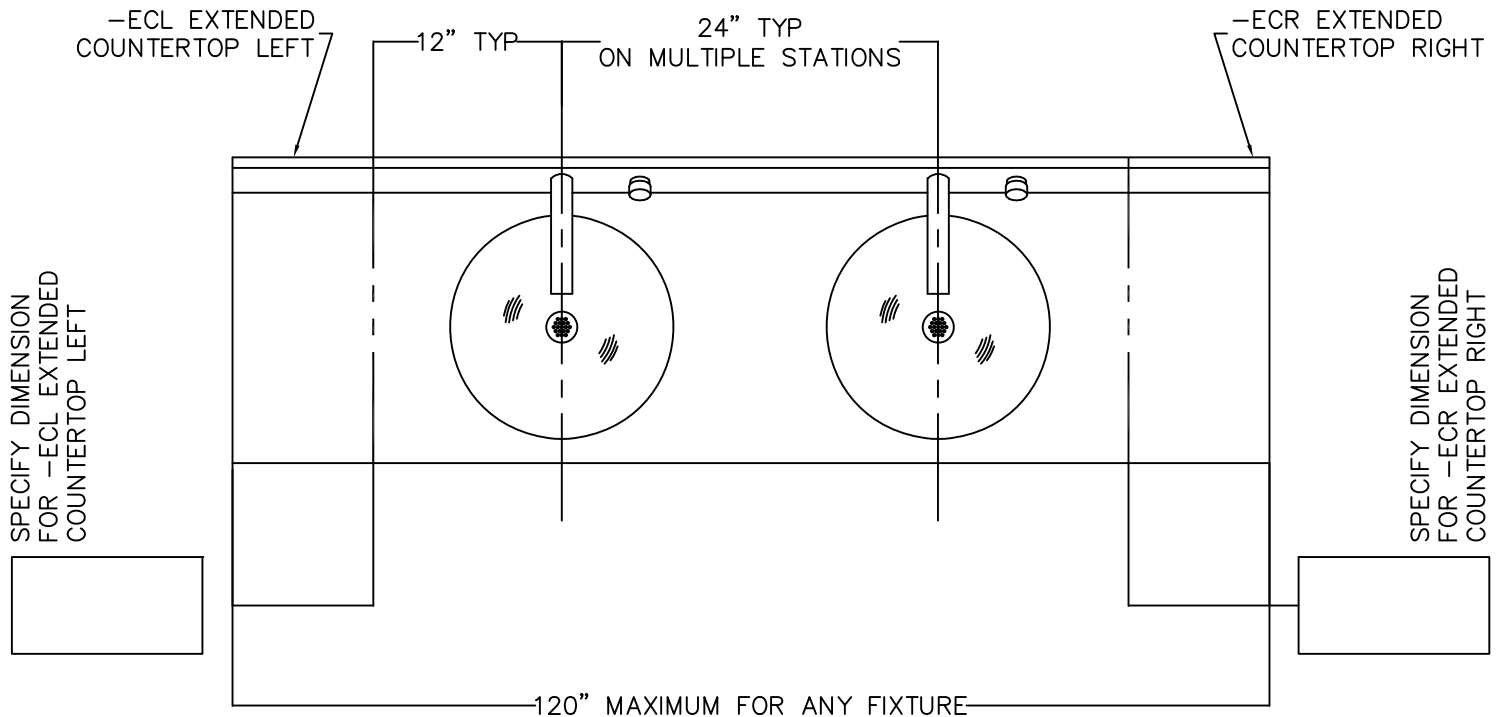
3711 UNI-BASIN QUANTITY:	☐ -ECL	☐ -ECR
3712 DUAL-BASIN QUANTITY:	☐ -ECL	☐ -ECR
3713 TRI-BASIN QUANTITY:	☐ -ECL	☐ -ECR
3714 QUAD BASIN QUANTITY:	☐ -ECL	☐ -ECR

STANDARD WIDTHS *LESS -ECL/-ECR

3711 UNI-BASIN	19"
3712 DUAL-BASIN	49"
3713 TRI-BASIN	79"
3714 QUAD-BASIN	109"

SPECIFY EXTENDED COUNTERTOP WIDTH BELOW.

**MERIDIAN® STAINLESS STEEL
DUAL-BASIN, 3702 SHOWN FOR
REFERENCE ONLY.**

**ORDERING INSTRUCTIONS:**

SPECIFY WHERE INDICATED COUNTERTOP SIDE(S) TO BE EXTENDED AND DIMENSION(S) REQUIRED. MAXIMUM OVERALL WIDTH IS 120".

NOTE: WHEN -ECL OR -ECR OPTIONS ARE SELECTED, ONLY THE COUNTERTOP IS EXTENDED; TRAP ENCLOSURES REMAIN THE SAME AS STANDARD. LENGTHS ARE SUBJECT TO FACTORY APPROVAL. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCE OF PLUS OR MINUS $\frac{1}{4}$ " WITH OVERALL TOLERANCE OF PLUS OR MINUS $\frac{1}{2}$ ".



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TITLE

3710 SERIES MULTI-BASIN FIXTURES -ECL / -ECR

MANUFACTURE DATE

AUGUST 1997
TO PRESENT

DATE ISSUED

07/15/10

DATE REVISED

01/10/19 A

DRAWING NUMBER

9927-127-001



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.



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

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.

1 Push = 1 Second

x 1 = sec



- 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
for most current specifications.

