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MERIDIAN® 3791-LO

MODEL# 3791-LO-1-SO-DV LEFT SIDE OFF-SET

CONFIGURATION

MERIDIAN® **MODEL** 3791-LO

CORTERRA® ADA-COMPLIANT KURVE SINGLE BASIN



TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER: 1.800.591.9360

Technical Assistance E-mail: Fieldservice@acorneng.com Please refer to the Link or QR code provided.

For Cleaning & Care Guide:

https://www.acorneng.com/uploads/fileLibrary/9900-008-001.pdf

REQUIRED ITEMS FOR INSTALLATION - NOT SUPPLIED

- ∠ Chalk Line
- ∠ Hammer
- Carpenters Level
- 1/2" NPS Supply Angle Stops And 1/2" NPS Supply Flex Hose(s)
- 1/4" Slotted Tip Screwdriver For Metering Adjustment

- ✓ Plumbers Putty
- (and Appropriate Tools) - For 3/8" Punching (13 Count)

ACORN ENGINEERING COMPANY

P.O. BOX 3527 • CITY OF INDUSTRY, CA 91744 U.S.A. TOLL FREE 800-488-8999 :: LOCAL 626-336-4561

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Part #: 9927-140-001

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Important: Some options may slightly alter installation. To ensure proper installation review the manual thoroughly and verify rough-ins before beginning any work. File this manual with the owner or maintenance personnel upon completion of installation.

Industry standard wall backing, for wall hung fixtures, is required. Installer provided wall anchors and wall anchoring hardware must be appropriate for wall construction.

ANSI, UFAS or ADA compliance is subject to the interpretation and requirements of the local code authority and is the responsibility of the installer for verification.

Single Temp Valve Assembly: Recommended working water pressure is 30 psi (2.07 bars) minimum to 100 psi (6.89 bars) maximum. Maximum temperature is 130°F (54.4°C). Maximum outlet temperature is recommended is 105°F (40.6°C). Valve assembly must be drained prior to being subjected to freezing temperatures. A checkstop is provided with this valve assembly.

T/P Mixing Valve Assembly: Recommended working water pressure is 30 psi (2.07 bars) minimum to 125 psi (8.62 bars) maximum. Maximum hot water temperature is 180°F (82°C). Temperature adjustment range is 85-115°F (29-46°C). Valve assembly must be drained prior to being subjected to freezing temperatures. The valve assembly has checks integral to the inlets however, angle stops are to be provided by the installer.

Prior to installation, supply lines must be flushed of all foreign material such as pipe dope, chips, or solder. Debris or foreign material in water supply may damage valve.

Teflon tape is recommended on all threaded waste and supply connections to reduce the possibility of leaks.

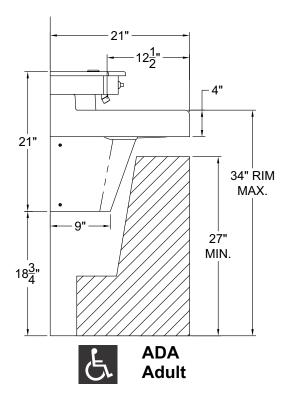
Provide 110-120VAC/60Hz/3A (MAX) electrical receptacle for factory supplied 120VAC/9VDC, 100mA plug-in transformer.

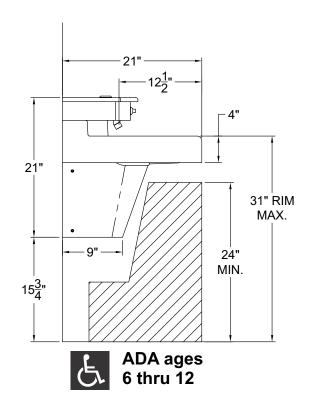
NOTE: Receptacle(s) must be wired to a GFCI protected circuit. Fixture must be earth grounded per N.E.C. (National Electrical Code).

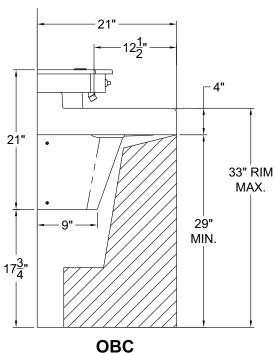


MERIDIAN® 3791-LO

ACCESSIBILITY OVERVIEW







Part #: 9927-140-001

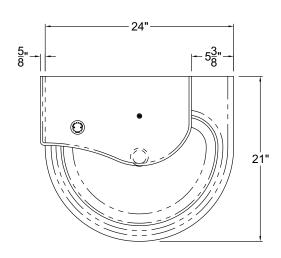
Page 3 of 26

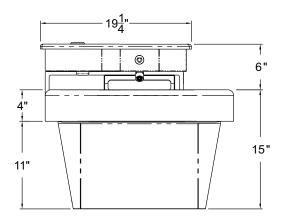


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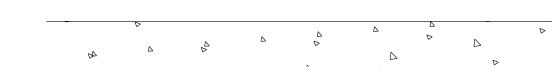


DIMENSIONAL DATA





FIXTURE WEIGHT: 110LBS.



Part #: 9927-140-001

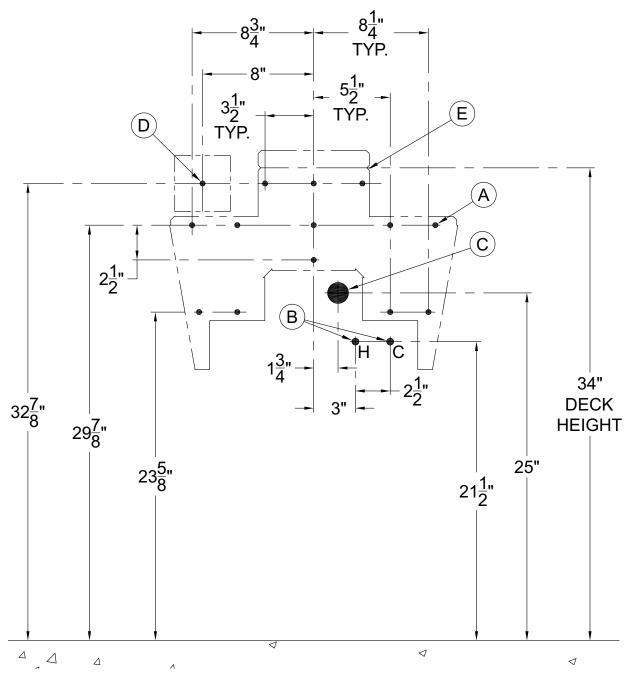
Page 4 of 26



MERIDIAN® 3791-LO

ROUGH-IN DIMENSIONS -ADA (Adult)





- A 3/8" Diameter Mounting Holes, For Anchoring Points, 13 Places.
- ®-Supply Stub-Outs with Stops for Valve 1/2" NPT Hot & Cold Supply Inlets.
- ©-Waste Outlet for 1-1/2" O.D. P-Trap.
- ©-120VAC, 60 Hz, 3A (Max.) GFCI Protected, Electrical Receptacle.
- ©-Frame "V" Notch.

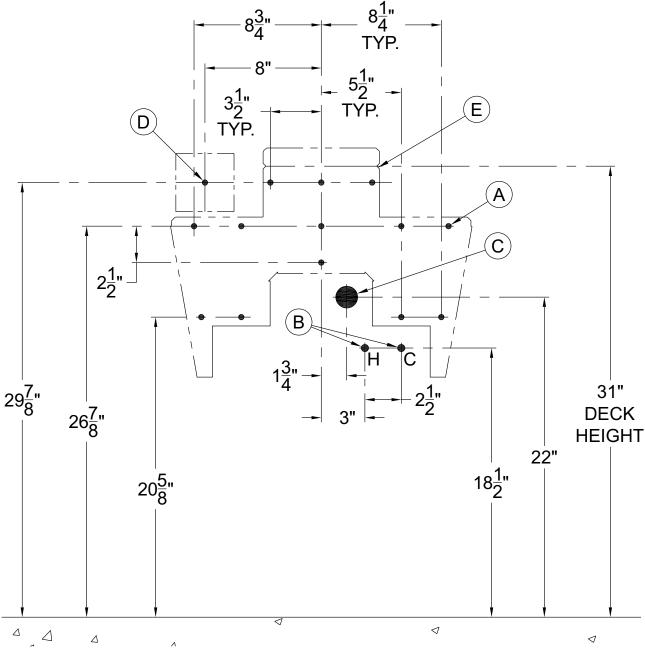


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ROUGH-IN DIMENSIONS -ADA AGES 6 THRU 12 YEARS





- (A) 3/8" Diameter Mounting Holes, For Anchoring Points, 13 Places.
- ®-Supply Stub-Outs with Stops for Valve 1/2" NPT Hot & Cold Supply Inlets.
- ©-Waste Outlet for 1-1/2" O.D. P-Trap.
- ©-120VAC, 60 Hz, 3A (Max.) GFCI Protected, Electrical Receptacle.
- ©-Frame "V" Notch.

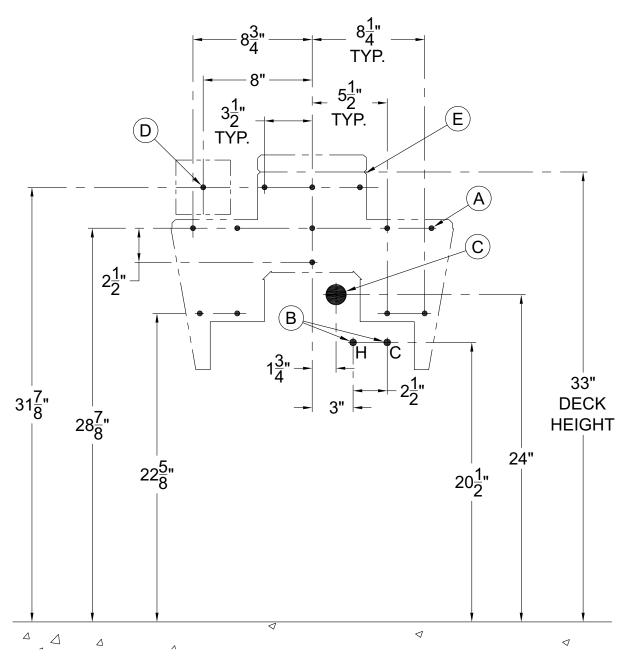
Part #: 9927-140-001

Page 6 of 26



MERIDIAN® 3791-LO

ROUGH-IN DIMENSIONS -OBC ONTARIO BUILDING CODE



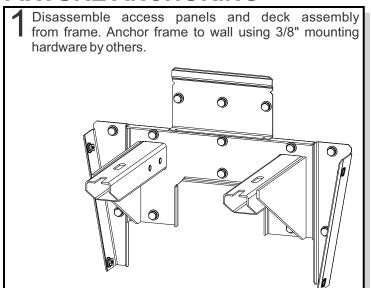
- A 3/8" Diameter Mounting Holes, For Anchoring Points, 13 Places.
- ®-Supply Stub-Outs with Stops for Valve 1/2" NPT Hot & Cold Supply Inlets.
- ©-Waste Outlet for 1-1/2" O.D. P-Trap.
- ①-120VAC, 60 Hz, 3A (Max.) GFCI Protected, Electrical Receptacle.
- ©-Frame "V" Notch.



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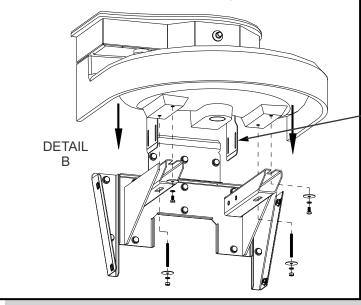
FIXTURE ANCHORING

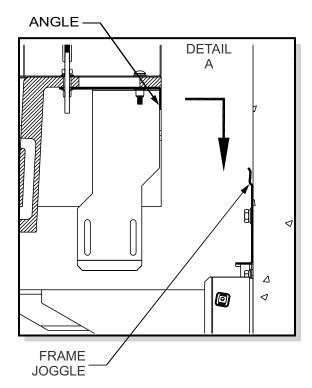


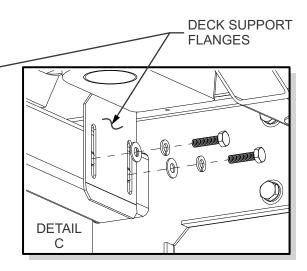


-See DETAIL B. Assemble underside of bowls to frame with 1/4-20 x 1/2" long hex bolts and 1/4-20 x 2-1/2" long threaded studs, 1/4" lock washers, fender washers and 1/4-20 hex nuts provided.

-See DETAIL C. Assemble deck support flanges to outside of frame using 1/4-20 x 1" long hex bolts, 1/4" lock washers and 1/4" flat washers provided.







Part #: 9927-140-001

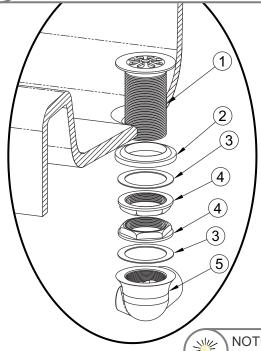
Page 8 of 26

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MERIDIAN® 3791-LO



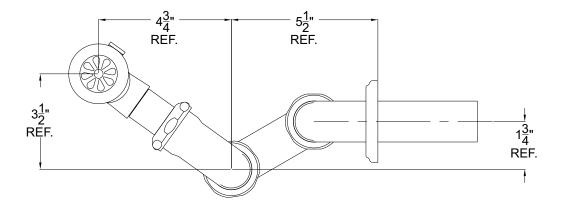
HINT: Teflon tape is recommended on all threaded waste and supply connections.



3 Install grid strainer and close elbow to bowl using plumber's putty.

- ① Grid Strainer w/ 1-1/2" -16 UNE Threads
- ② Rubber Gasket
- 3 Flat Fiber Washer
- 4 1-1/2" -16 UNI Rough Chrome Brass Jam Nut
- ⑤ 1-1/2"-16 x 1-1/4" UNI Close Ell with 3/8" NPT Clean-Out Plug

NOTE: Waste assembly may require field cutting and fitting by the installer.



Assemble waste piping using teflon tape on all threaded connections and make up waste connections to 1-1/2" P-trap.



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VALVE INSTALLATION & ADJUSTMENT

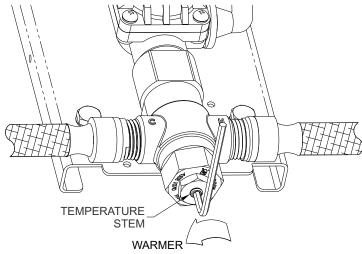
Valve Assembly Installation:

NOTE: Installation should be in accordance with accepted plumbing practices.

- 1) Locate suitable place for mounting the valve assembly. Valve assembly should be accessible for service and adjustment and as close to the point-of-use as possible. Wall anchors and anchoring hardware, for Ø3/8" mounting holes, provided by installer.
- 2) Connect hot and cold water to supply valve using 1/2" NPTE connections.
- 3) Connect outlet of tempering valve to spout(s) using 1/4" O.D. tube connections provided.
- 4) Turn on hot and cold water supplies. If any leaks are observed, hand tighten connections as necessary to stop leaks before proceeding.
- 5) Turn on fixture and allow water to flow for 2 minutes. Measure water temperature at outlet. If water is not at desired temperature, adjust as necessary.



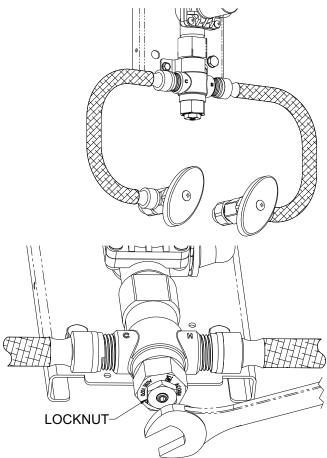
HINT: Angle stops are recommended and is the responsibility of the installer.



Page 10 of 26



Flush supply lines of all foreign material such as pipe dope, pipe chips, solder, sand etc. before making up supply connections.



Temperature Adjustment:

- 1) Loosen locknut.
- Turn on fixture and run water for at least 2 minutes. Allow supply temperature to stabilize.
- Turn temperature stem counter-clockwise for hotter or clockwise for colder outlet temperature.
- 4) Tighten locknut to prevent accidental or unauthorized temperature adjustment.
- 5) Re-check outlet temperature.

REVISED B: 10/5/2023



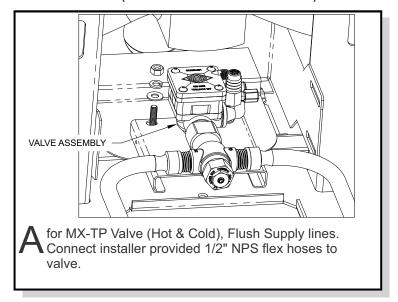
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VALVE INSTALLATION

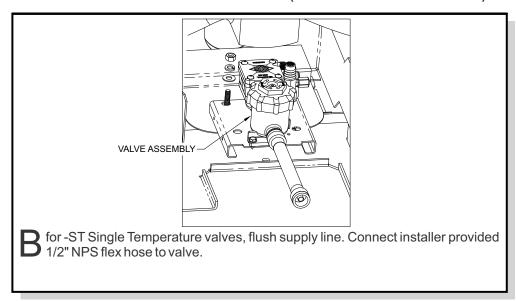


Before making up the supply connections, the supply lines must be flushed of all foreign material such as pipe dope, pipe chips, solder, sand, etc.

MX-TP VALVE (-H HAND OPERATED SHOWN)



-ST SINGLE TEMPERATURE VALVE (-H HAND OPERATED SHOWN)



Part #: 9927-140-001

Page 11 of 26

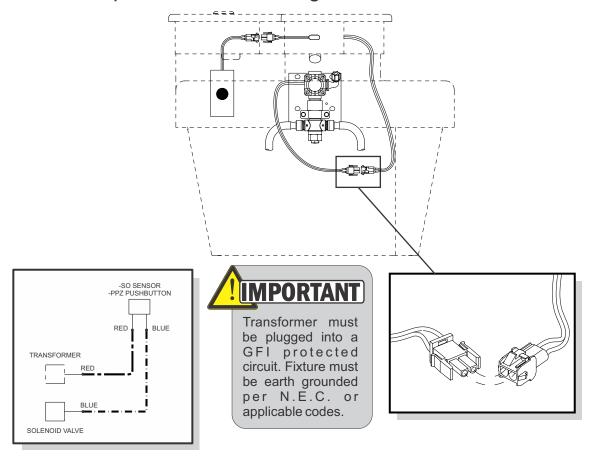


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SENSOR OPERATION & CONNECTIONS

-SO Sensor Operation or -PPZ Programmable Piezo Pushbutton



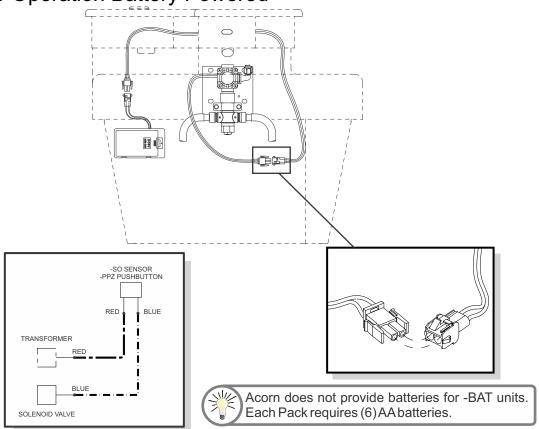


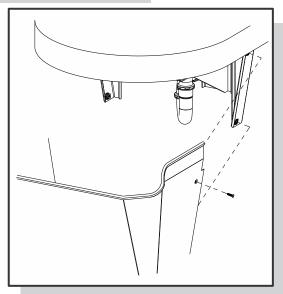
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SENSOR OPERATION & CONNECTIONS -BATTERY OP

-SO-BAT Sensor Operation Battery Powered





To service or install batteries remove access panel by removing (4) 10-32 x 3/4" screws from front of fixture using allen head bit provided (socket & driver by others). Replace access panel when finished.

Part #: 9927-140-001

Page 13 of 26

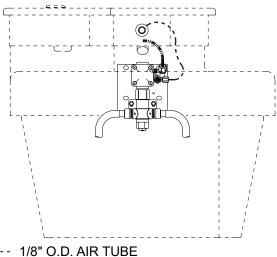


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HAND OPERATION & CONNECTIONS

-H Hand Operated



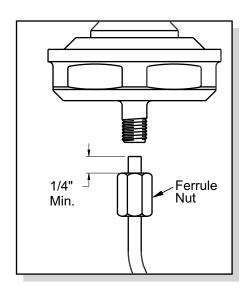
------ 1/8" O.D. AIR TUBE ------ 1/4" O.D. WATER LINE

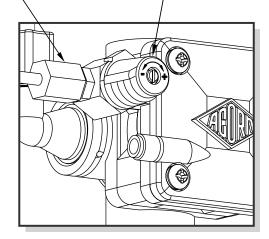
Timing Screw
To adjust timing,
turn timing screw.





Do not over tighten ferrule nuts.







Turn timing screw clockwise to increase timing.

!IMPORTANT

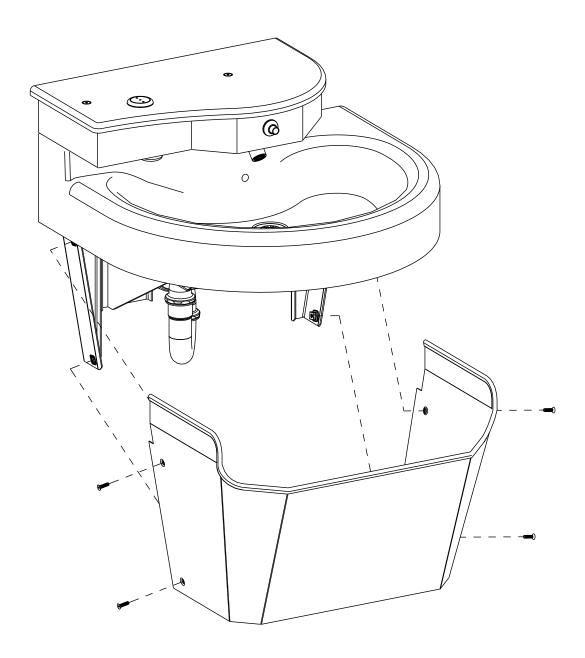
Leave a minimum 1/4" of polyethylene tubing through the Ferrule Nut on the pushbutton assembly. This is necessary to ensure proper tubing connection.

Part #: 9927-140-001

Page 14 of 26

MERIDIAN® 3791-LO

ACCESS PANEL INSTALLATION



Install front and side access panels using 10-32 x 3/4" center reject hex head screws provided.



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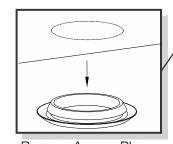
Install soap filler

-DV SOAP OPTION RETRO-FIT & INSTALLATION

WARNING Some soaps contain corrosive additives that can cause rust in soap dispensers. Acorn Engineering Company recommends user/ maintenance personnel review MSDS reports of soap and possible corrosive additives noted.

Do not exceed the capacity of the soap tank. Overfilling may result in spilling and pooling of soap solution within the sprayhead enclosure and outside the soap tank.

- Remove top cover from unit. To remove cover, use Allen head bit provided and unscrew 10-32 x 3/4" long vandal resistant fasteners shown. Hex bit driver is installer provided.
- Remove Corterra plug from top cover and soap access plug from bottom of sprayhead enclosure.
- Position and install soap tank in sprayhead enclosure as shown and install soap dispenser by aligning dispenser with drain adapter and fixing with set screws as shown
- 4 Install soap filler assembly to top cover and replace.
- **5** Fill soap tank by removing filler cap and pouring soap directly into tank. Do NOT overfill.



Remove Access Plug

NOTE: Soap Tank Capacity = 0.5 Gallons

Remove Corterra Plug

Sprayhead Enclosure

Part #: 9927-140-001

Page 16 of 26

Install Soap Tank

Install soap dispenser

MERIDIAN® 3791-LO

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.

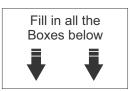
- When a timing mode is not required then do not push the button and wait for the next timing mode.
- Each timing mode (1 sec, 5 sec or 20 sec timing mode) can be sequenced up to 100 times, that is the number of times, the button can be pushed, to increase the total timing cycle in each timing mode.

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Programmable Piezo Pushbutton Programming Instructions (Flow Time Adjustment)

WORKSHEET

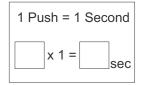
(FILL IN ALL BOXES, WHICH WILL SIMPLIFY THE PROGRAMMING PROCEDURE)



Determine the number of seconds per timing cycle

PROGRAMING STEPS:

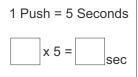
- Power down piezo button for 10 seconds.
- Reconnect power.
- LED flashes, then stay on.
- While the LED is steady on, push button.
- LED turns off.





- 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.

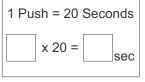
ADD N





- 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.

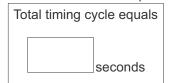
ADD 1





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

EQUALS

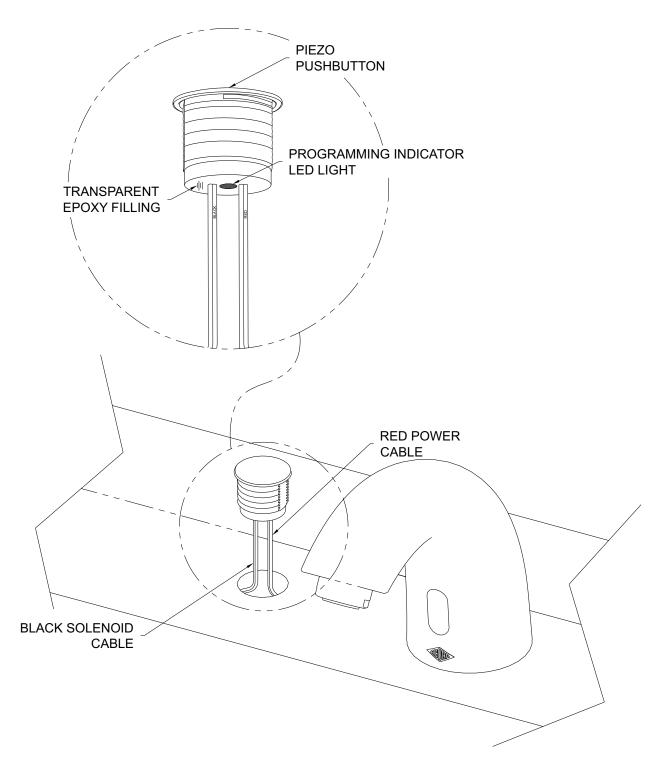


Part #: 9927-140-001

Page 18 of 26

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MERIDIAN[®] 3791-LO



Part #: 9927-140-001

Page 19 of 26

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INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

MERIDIAN[®] 3791-LO

TROUBLE SHOOTING FOR 9 VOLT DC SENSOR OPERATED VALVES

TROUBLE SHOOTING FOR 9 VOLT DC SENSOR OPERATED VALVES			
Normal Valve Function: 9 Volt DC sensor operated valve has flow time of 90 seconds maximum. To reactivate, the user must move out of and return to the sensing area.			
CONDITION: WATER DOES NOT FLOW			
Indicators	Probable Cause	Solution	
Sensor flashes continuously every 2 seconds when hands are within range.	Low battery warning	Replace battery	
	Circuit breaker tripped.	Reset circuit breaker	
	Battery completely used up.	Replace battery	
	Defective 9V DC transformer	Replace transformer.	
Sensor does not flash	Transformer polarity crossed	Replace transformer (sensor may be damaged and need replacement).	
when the user's hands are within range.	Unit is in "Security Mode" after 90 seconds of constant detection.	Remove sources of detection and wait 30 seconds before checking.	
	Sensor is picking up a highly reflective surface.	Eliminate cause of reflection and wait 30 seconds before checking.	
	Defective sensor.	Replace sensor.	
	Stops or water main closed.	Open stops or water main.	
	Bad sensor to solenoid connection.	Ensure wires make proper contact.	
Sensor flashes once	Debris or scale in solenoid assembly.	Remove solenoid, pull out plunger and spring, and clean with scale remover solution or pressurized air.	
when user's hands are within range.	Debris or scale in diaphragm.	Remove diaphragm and clean	
	Debris or scale in strainer.	Remove strainer and clean.	
CONDITION: FALSE TRIGGERING; WATER FLOWS CONTINUOUSLY			
Indicators	Probable Cause	Solution	
Sensor flashes when user's	Debris or scale in diaphragm	Remove diaphragm and clean.	
hands are within range.	Diaphragm is defective or torn.	Replace diaphragm.	
Sensor does not flash when	Sensor is dirty or covered.	Clean or uncover sensor and wait 30 seconds.	
users hands are within range.	Range too long or highly reflective surface, sunlight, bright lights etc. are triggering sensor.	Eliminate cause of reflection or correct lighting problem.	
CONDITION: WATER FLOWS CONTINUOUSLY BUT STOPS WHEN HANDS ARE WITHIN RANGE			
Indicators	Probable Cause	Solution	
Water runs continuously when sensor not activated. Sensor flashes when hands are within range and water shuts off.	Solenoid polarity crossed.	Disconnect solenoid and reverse polarity.	



MERIDIAN® 3791-LO

TROUBLE SHOOTING FOR OPTIONAL PUSHBUTTON OPERATED VALVES

Normal Valve Function: Ha	nd pushbutton operated	d valve has an adjus	table flow time from
5 to 60 seconds.		•	

CONDITION: WATER DOES NOT FLOW



Probable Cause	Solution	
Water main closed.	Open water main.	
Checkstops closed.	Open checkstops.	
Debris or scale in checkstop strainer	Remove checkstop strainer and clean.	
Air leaks from 1/8" O.D. tubing or fittings.	Replace damaged tubing or fitting.	
Pushbutton air diaphragm leaks.	Replace pushbutton air diaphragm.	
Servomotor diaphragm center hole is blocked.	Remove blockage.	
Servomotor upper diaphragm is damaged.	Replace servomotor upper diaphragm.	
Low or no water pressure at supplies.	Increase water pressure to 30 PSI minimum.	

CONDITION: WATER DRIPS, WON'T SHUT OFF



Probable Cause	Solution
Servomotor diaphragm offset hole is blocked.	Remove blockage.
Servomotor seat is damage	Replace servomotor seat.
Servomotor plate or diaphragm is obstructed.	Remove cause of obstruction.
Servomotor timer assembly is damaged.	Replace servomotor timer assembly.

CONDITION: REDUCED WATER FLOW



Probable Cause	Solution	
Valve riser tubing is crimped.	Straighten valve riser tubing.	
Debris or scale in checkstop strainer	Remove checkstop strainer and clean.	
Blockage in valve flow control.	Remove blockage.	
Low water pressure at supplies.	Increase water pressure to 30 PSI minimum.	
Lime deposits in hot water pipes.	Remove lime deposits with appropriate cleaning solution.	

CONDITION: PREMATURE WATER SHUT OFF





Solution
Replace damaged tubing or fitting.
Replace pushbutton air diaphragm.



MERIDIAN[®] 3791-LO

COMPONENTS & REPAIR PARTS

COMPONENTS & REPAIR PARTS			
Description	Part No.	Diagram	
1/4"-20 Hex Nut	0302-005-000		
1/4"-20 Threaded Stud	0243-024-000		
Allen Head Bit With Center Reject	0296-025-199		
COMBINED WASTE ASSEMBLY			
P-trap Assembly	4970-001-001		
Elbow Grid Strainer	4926-062-001		
PUSHBUTTONS			
Blank Piezo Pushbutton	0709-067-001		
Pushbutton Assembly	2566-050-001		
ENCLOSURES			
Cover Plate	6214-150-001		

Part #: 9927-140-001

Page 22 of 26

INSTALLATION, OPERATIONS & MAINTENANCE MANUAL Please visit **www.acorneng.com** for most current specifications.

MERIDIAN® 3791-LO

COMPONENTS & REPAIR PARTS

Description	Part No.	Diagram
MOUNTING HARDWARE		
10-32 UNF x 3/4" Center Reject Hex Socket Head Screw	0152-006-000	
1/4"-20 UNC x 1" Hex Head Cap Screw	0206-002-000	
1/4"-20 UNC x 1/2" Hex Head Cap Screw	0206-004-000	
1/4" Lock Washer	0337-050-000	
1/4" Flat Washer	0331-005-000	
1/4" Fender Washer	0331-031-000	



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COMPONENTS & REPAIR PARTS

Description	Part No.	Diagram	
DV- SOAP OPTION			
Corterra Plug Contact factory for color selection	6214-109-101		
Access Plug	6213-129-000		
Soap Filler Assembly	6214-004-001		
Soap Tank Drain Adapater	6214-012-199		
Soap Dispenser Assembly	6214-009-001		
Soap Tank -1/2 Gal. Capacity	6214-206-199		



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MERIDIAN[®] 3791-LO

COMPONENTS & REPAIR PARTS

Description	Part No.	Diagram
SPOUTS ASSEMBLIES		
Nozzle Assembly	6214-005-001	
Spanner Key For Spout Aerator And Soap Filler	2998-055-199	
ELECTRONIC HARDWARE		
9 VDC Plug-In Transformer	0711-410-001	
9 VDC Solenoid	2563-326-001	
9 VDC Battery-Pak Assy (6 AA Batteries Not Included) Battery-Pak Mounting Bracket	0710-358-001 6155-013-199	
Sensor Assembly	2562-373-001	



Please visit **www.acorneng.com** for most current specifications.

MERIDIAN® 3791-LO

COMPONENTS & REPAIR PARTS

Description	Part No.	Diagram	
VALVE			
T/P 1-Station, 9VDC Solenoid, ASSE 1070, Mixing Valve Assembly	2598-231-001		
Optional T/P 1-Station, Hand Operated, ASSE 1070, Mixing Valve Assembly	2598-201-001		
Optional 2-Station, 9VDC Solenoid, Single Temp Valve Assembly	2598-331-001		
Optional 1-Station, Hand Operated, Single Temp, Metering Valve Assembly	2598-301-001		