Installation, Operations & Maintenance Manual
BestCare Ligature Resistant Faucets

Whitehall Manufacturing®
Manufacturer of Healthcare and Rehabilitation Products since 1946



WH3375-SO/-BAT



WH3376-WSF-SO/-BAT





WH3375-HC-SO/-BAT

TECHNICAL ASSISTANCE TOLL FREE TELEPHONE NUMBER:
1-800-743-8259
Technical Assistance E-mail: Fieldservice@acorneng.com

IMPORTANT

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.

Manual covers installation of Faucets and standard valve assemblies used on basins **other than** Whitehall.
For "L" Designated Valve installation and location of valve, refer to ***specific*** Whitehall Basin manual for details.

FAUCET FLOW RATES-NOZZLE DETAILS:

1. WH3375-SO and WH3376-HC-SO - 0.5 GPM (1.9 LPM) - Part Number: 2998-110-000
   Optional -LFK Laminar Flow Restrictor Kit - 1.2 GPM (4.5 LPM), 1.5 GPM (6.7 LPM) & 1.75 GPM 6.6 LPM) - Part Number: 2998-140-001
2. WH3376-WFS-SO - 0.35 GPM (1.3 LPM) - Part Number: 2998-111-000
   Part Number: 2998-110-000 - 0.5 GPM (1.9 LPM). **Not intended for use** with Whitehall Basins due to incompatible Spray Arc.

IMPORTANT

NOTICE TO 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.
- Identify all component parts, and hardware: fasteners, brackets, clips, etc.
- **NOTE: An ASSE 1070 mixing valve is recommended to be installed prior to valve assembly.**
- **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). Checkstop(s) are provided with this valve assembly.
- **T/P Mixing Valve Assembly**: Recommended working water pressure is 30 PSI (2.07 bars) minimum to 100 PSI (6.89 bars) maximum. Maximum hot water temperature is 180°F (82°C). Temperature adjustment range is 95°F-110°F (43°C-48°C). The valve assembly has internal checks on the inlets however, angle stop are to be provided by the installer.
- **Provide:** 110-120 VAC/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).
- **NOTE:** Faucets with -BAT option require (6) AA Batteries (not included). For proper operation, use only new, high quality Battery products.

Please refer to the Link or QR code provided.
For Cleaning & Care Guide:
Click Here

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For Terms, Conditions & Warranty:
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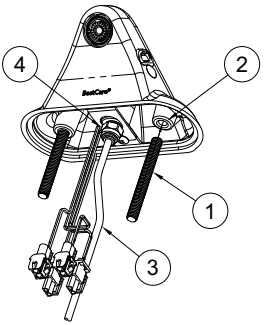
NOTE:

1. Provide 3-hole, 4" Centerset Deck openings with ø1" minimum to ø1-1/2" maximum holes for Faucet installation.

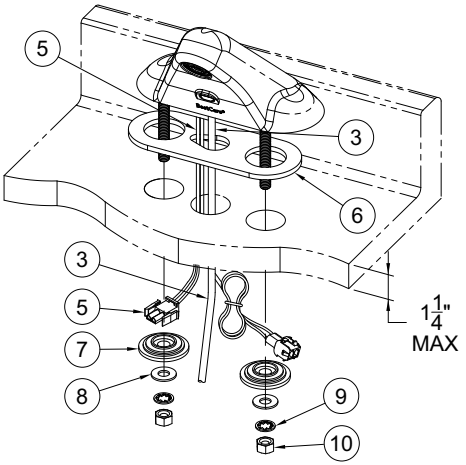
A- Install the Threaded Rod (1) to the Faucet Assembly (2) and 1/4" O.D. Supply Tube (3) into fitting (4).

Refer to page 5 for Push-in Fitting details.

WH3375-HC-SO/-BAT SHOWN

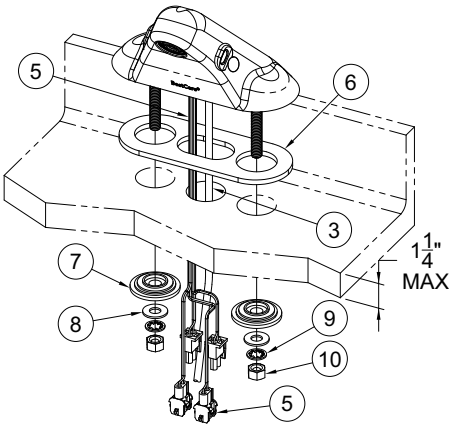


WH3375-SO/-BAT



B- Feed the Faucet Assembly Wires (5) and Supply Tube (3) through Center Hole of Gasket (6) then through center hole of basin deck and mount Faucet (2) onto the Basin and fasten using the provided Step Washer (7), Flat Washer (8), Lock Washer (9) and Hex Nut (10).

WH3375-HC-SO/-BAT



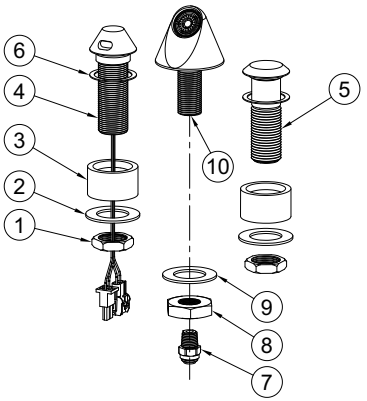
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NOTE:

1. Provide 3-hole, 6" Minimum Centerset Deck openings with ø1-1/4" minimum to ø1-3/8" maximum holes for Faucet installation.

WH3376-WSF-SO/-BAT

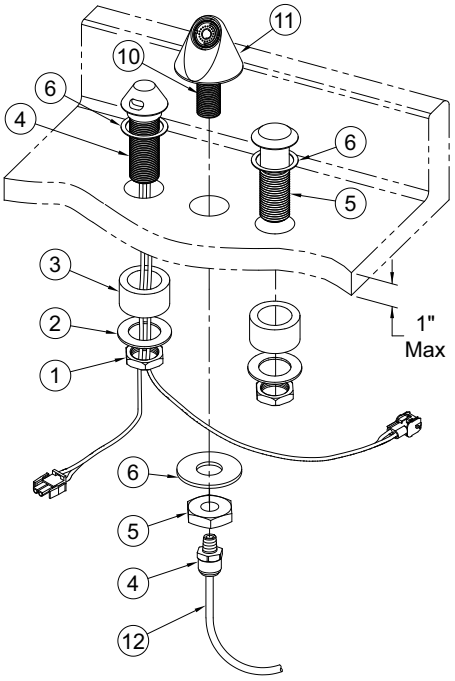
Disassemble



A- Prior to installing, remove Hex Nut (1), Washer (2) and Spacer (3) from the Sensor (4) and Blank (5) Assemblies. Ensure Gasket (6) does not slide off.

B- Remove the 1/4" OD x 1/4" NPT Push-In Fitting (7), Locknut (8) and Washer (9) from the Conical Faucet Adapter (10) .

Assemble



A- Fix the Sensor (4) to the Basin by passing Wires thru the hole ensuring Gasket (6) is in place and secure using the Hex Nut (1) , Washer (2) and Spacer (3).

B- Fix the Blank Assembly (5) to the Basin by passing the Shank thru the hole ensuring Gasket (6) is in place and secure using the Hex Nut (1) , Washer (2) and Spacer (3).

C- Mount the Faucet (11) to the Basin by passing adapter (10) thru hole. Secure using Washer (6) and Nut (5) to Faucet adapter (10) from the under the Deck. Assemble 1/4" NPT Push-In Fitting (4) to the Faucet Adapter (10) .

D- Insert 1/4" O.D. Riser Tube (12) into 1/4" NPT Push-In Fitting (4).

Refer to page 5 for details.

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PUSH-IN FITTING INSTALLATION

NOTE: FITTINGS AND TUBE SHOULD BE KEPT CLEAN, BAGGED AND UNDAMAGED PRIOR TO INSTALLATION.

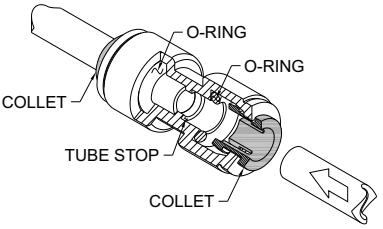
TO CUT TUBE:

Cut to fit length of 1/4" PE Tubing and remove any burrs or sharp edges. Ensure that the outside diameter is free from score marks. Tube ends should be square.

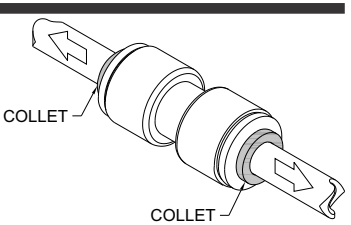


INSERTING THE TUBE:

1. Firmly and fully insert the Tubing end into the Push-In Fitting up to the Tube Stop located approximately 1/2" deep.

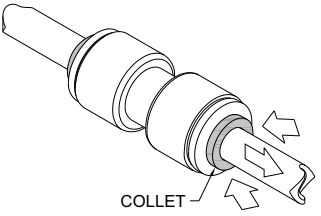


2. Pull on the fitted Tubing to ensure it is secure. Tube should not come free from the Fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.



DISCONNECTING THE TUBE:

Prior to disconnecting the Tube from the Fitting, ensure that the Water Line is depressurized. Push Collet Square towards the Push-In Fitting Body and hold. While holding the Collet in, pull on the PE Tubing to remove from the Push-In Fitting.



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Valve to Water Supply Installation

IMPORTANT

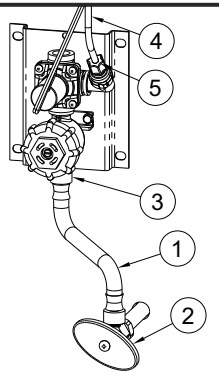
Before making up the supply connections, the supply lines must be flushed of all foreign material such as pipe dope, pipe chips, solder, sand, etc.

NOTE:

Installation should be in accordance with accepted plumbing practices. Angle stops are recommended and is the responsibility of the installer.

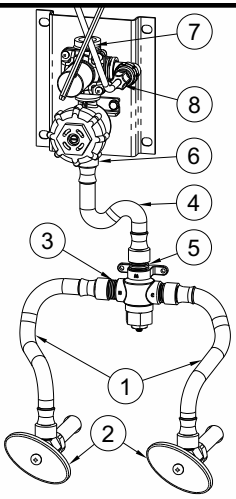
Single Temperature Valve

(WH3375-SO/-BAT & WH3376-WSF-SO/BAT)



A Connect provided 1/2" NPS flex hose (1) from installer provided stop (2) to valve inlet (3). Connect 1/4" O.D. tube (4) to outlet of valve (5).

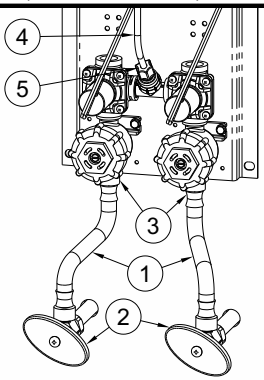
Optional -WHST70-12



B Connect installer provided 1/2" NPS flex hoses (1) from installer provided angle stops (2) to mixing valve inlets (3). Connect provided 1/2" NPS flex hose (4) from mixing valve outlet (5) to valve inlet (6). Connect 1/4" O.D. tube (7) to outlet of valve (8).

Hot & Cold Valve

(WH3375-HC-SO/BAT)



C Connect provided 1/2" NPS flex hoses (1) from installer provided angle stops (2) to valve inlets (3). Connect 1/4" O.D. tube (4) to outlet of valve (5).

Once all connections are made, turn on water supplies and observe for leaks. If any leaks are detected, hand tighten connections as necessary to stop leaks before proceeding.

Turn off water supplies and proceed to next step.

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-HWD Hardwired Power Converter

IMPORTANT

Ensure power supply is disconnected before handling any wiring terminals.

NOTE

Details below shown less cover plate for clarity.

A- Install provided junction box ***1***, must be wired to a GFCI protected circuit, and secure ground wire ***2*** with provided green hex screw ***3***.
Fixture must be earth grounded per N.E.C. (National Electrical Code).

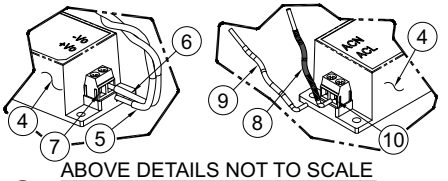
B- With converter ***4*** loose, insert and secure sensor lead wires ***5*** (Red) and ***6*** (Black) into converter terminals ***7*** as shown.

C- Cut and strip Two “jumper” wires ***8*** (black) and ***9*** (white), about 6” to 8” long. Insert and secure into converter terminals ***10*** as shown.

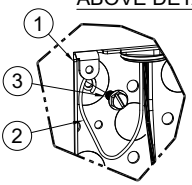
D- Secure converter ***4*** to installed junction box ***1*** using provided screws ***11***.

E- Make up connections as shown in schematic. Temporarily turn on power and connect cap ***12*** to Senor/-PPZ Button plug, see page (8) for details, and test faucet operation.

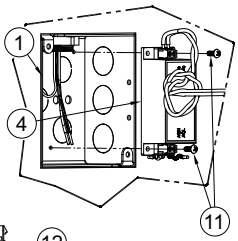
F- If operation is fine, close junction box by securing cover plate ***13*** to junction box ***1*** using provided screws ***14***.

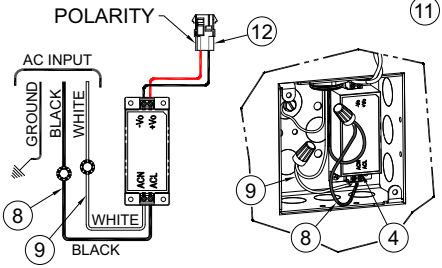


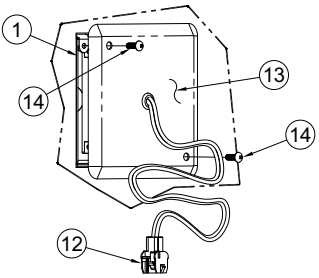
ABOVE DETAILS NOT TO SCALE



NOT TO SCALE







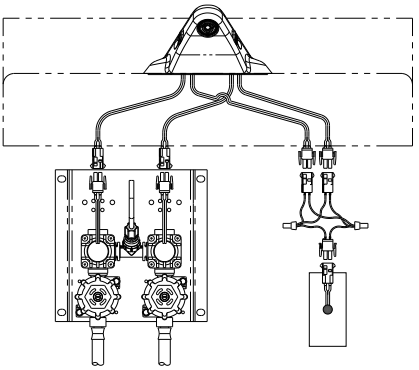
INSTALLATION NOTE:

Installation for the assembly shall be in accordance with local electrical codes and applicable NEC requirements. The junction box and associated wiring methods shall be suitable for permanent building wiring. The power supply component shall be designed for use in low-voltage Class 2 applications where applicable. The assembly is intended for indoor, dry-location use only. The power supply accepts an input voltage range of 85–264 VAC at 47–63 Hz and provides a regulated 9 VDC output. Maximum output power is rated at 15 watts. The unit utilizes fully isolated AC-DC conversion with a high-efficiency switching design and is rated for continuous operation. Line-voltage connection is hard-wired, with low-voltage DC output provided via lead wires for direct connection to the Electronic Faucet.

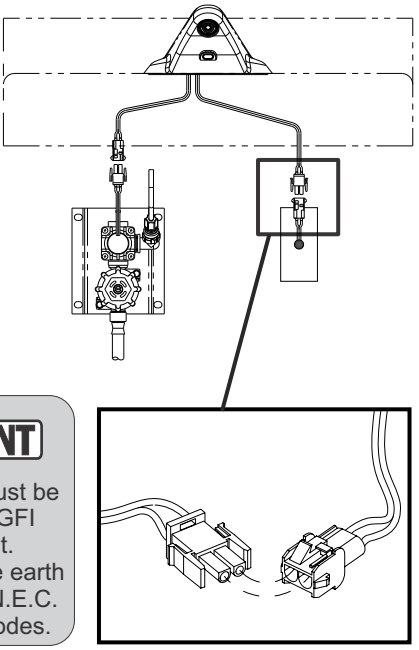
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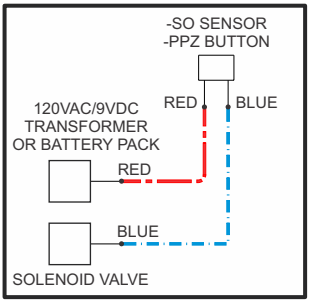
-SO Sensor Connections

WH3375-HC-SO



WH33775-SO





IMPORTANT

Transformer must be plugged into a GFI protected circuit. Fixture must be earth grounded per N.E.C. or applicable codes.

Please refer to the Link.
For Auto-Purge Sensor Adjustment and Troubleshooting:
Click Here

Once all connections are made, turn on water supplies, activate faucet and observe for leaks. If any leaks are observed, hand tighten connections as necessary to stop leaks before proceeding.

NOTE: For -WHST70-12 VALVE ONLY

1) 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. Refer to page 7.

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BACKGROUND

MGI® offers a unique Infra-red Sensor featuring an Auto-Purge function to ensure fresh water supply for users. These sensors are used with Whitehall Manufacturing Faucet models WH3375-SO, WH3375-SO-HC; and Murdock Manufacturing Stainless Steel Bottle Fillers models BF11S, BF12S. These Infrared Sensors feature an extreme amount of adjustable settings for range, timing of auto-purge and even lock-out settings and include very specific Factory pre-sets for Auto-Purge and specific defaulted settings for range.

ISSUE:

Applies to Whitehall Faucet model WH3375-SO, WH3375-SO-HC:
Upon start up certain site conditions including improper lighting, movement (false trigger), sunlight, reflection or another condition may affect the range setting and cause the Sensor Faucet to initiate and/or fail to activate.

RESOLUTION:

The following steps should be followed to remedy. Procedure may require two persons. Always use appropriate safety procedures and caution when working around electrical components:

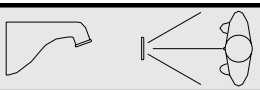
1. Ensure room has appropriate lighting to reflect the same light effects that will be present during normal use. Do not perform when sunlight fills the room and reflective glare is present and enveloping the Faucet and/or Hand Wash Basin.
2. Turn off power to the Sensor by unplugging the Transformer form power supply (duplex receptacle).
3. Using a clean sheet of white paper, place the paper approximately 3 to 4 inches away from the Infra-red Sensor lens. (The WH3375-SO-HC Hot and Cold Faucet has a lens on both sides of the Faucet.)
4. With the paper in place as described in step #3, Plug the Transformer into the power source.
5. The Sensor Lens will continuously flash; keep the paper in front of the Lens throughout this "Learning Mode."
6. Once the flashing stops, keep the paper in place for a second or two longer and then remove the paper away from the Lens.
7. The Sensor should now be working properly. Test the Sensor for proper activation.

If problems continue, you may contact MGI Field Service for assistance at (800)743-8259.

Troubleshooting 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 2 Times	Battery warning near end of life	Replace battery
Sensor flashes 3 Times	Battery warning past end of life	Replace battery
Sensor does not flash when the user's hands are within range.	Circuit breaker tripped.	Reset circuit breaker
	Battery completely used up.	Replace battery
	Defective 9V DC transformer	Replace transformer.
	Transformer polarity crossed	Replace transformer (sensor may be damaged and need replacement).
	Unit is in "Security Mode" after 20 seconds of constant detection.	Remove sources of detection and wait 30 seconds before checking.
	Range is too short.	Increase range.
	Range is too long.	Decrease range and wait 30 seconds.
	Sensor is picking up a highly reflective surface.	Eliminate cause of reflection and wait 30 seconds before checking.
	Defective sensor.	Replace sensor.
Sensor flashes once when user's hands are within range.	Stops or water main closed.	Open stops or water main.
	Bad sensor to solenoid connection.	Ensure wires make proper contact.
	Debris or scale in solenoid assembly.	Remove solenoid, pull out plunger and spring, and clean with scale remover solution or pressurized air.
	Debris or scale in diaphragm.	Remove diaphragm and clean
	Debris or scale in strainer.	Remove strainer and clean.

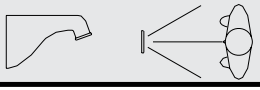
CONDITION: FALSE TRIGGERING; WATER FLOWS CONTINUOUSLY



Indicators	*Probable Cause*	*Solution*
Sensor flashes when user's hands are within range.	Debris or scale in diaphragm	Remove diaphragm and clean.
	Diaphragm is defective or torn.	Replace diaphragm.
Sensor does not flash when users hands are within range.	Sensor is dirty or covered.	Clean or uncover sensor and wait 30 seconds.
	Range too long or highly reflective surface, sunlight, bright lights etc. are triggering sensor.	Decrease range and wait 30 seconds.
		Eliminate cause of reflection or correct lighting problem.

CONDITION: WATER FLOWS CONTINUOUSLY BUT STOPS WHEN HANDS ARE WITHIN RANGE



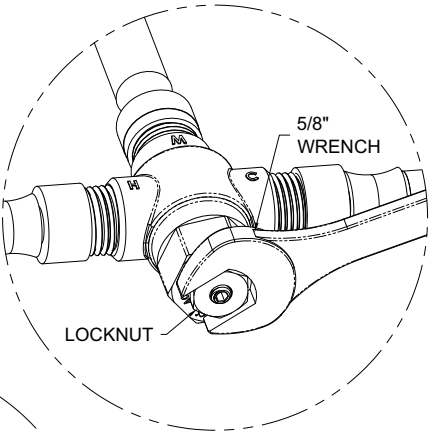


Indicators	***Probable Cause***	***Solution***
Water runs continuously when sensor not activated. Sensor flashes when hands are within range and water shuts off.	Solenoid polarity crossed.	Disconnect solenoid and reverse polarity.

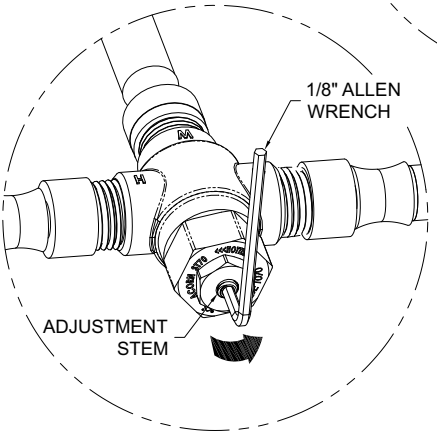
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Optional -WHST70-12 Temperature Adjustment

1. Loosen locknut. *Detail A*
2. Turn faucet on so water temperature can stabilize.
3. Using 1/8" allen wrench turn adjustment stem counter-clockwise for hotter or clockwise for colder outlet temperature. *Detail B*
4. Tighten locknut to prevent any unauthorized or accidental temperature adjustment.
5. Re-check temperature.



DETAIL A



DETAIL B

TROUBLE SHOOTING FOR OPTIONAL WHST70-12 MIXING VALVE

PROBLEM	CAUSE	SOLUTION
1. SET POINT DIFFICULT TO SET OR CANNOT BE REACHED	• SUPPLY TEMPS NOT WITHIN SPECIFIED LIMITS • HOT AND COLD SUPPLIES ARE REVERSED	• CHECK DIFFERENTIAL PRESSURE BETWEEN SUPPLIES AND OUTLET • REINSTALL VALVE WITH SUPPLIES CONNECTED TO MARKED INLETS
2. DOES NOT MAINTAIN OUTLET TEMPERATURE OR CHANGES OVER TIME	• FLUCTUATION IN SUPPLY PRESSURES • CHECK VALVE/FILTERS BLOCKED WITH DEBRIS	• CHECK DIFFERENTIAL TEMPERATURE BETWEEN SUPPLIES AND OUTLET • CLEAN CHECK VALVES/FILTERS
3. DISCHARGE TEMPERATURE TOO HOT OR TOO COLD	• VALVE NOT ADJUSTED PROPERLY	• READJUST VALVE TEMPERATURE PER INSTALLATION INSTRUCTIONS
4. CROSS FLOW	• CHECK VALVES FOULED	• CLEAN CHECK VALVES/FILTERS
5 NO FLOW FROM VALVE	• HOT AND COLD SUPPLY FAILURE OR SHUTOFFS CLOSED • CHECK VALVE/FILTERS BLOCKED WITH DEBRIS	• OPEN SHUTOFFS OR RESTORE HOT AND COLD SUPPLIES • CLEAN CHECK VALVES AND FILTERS

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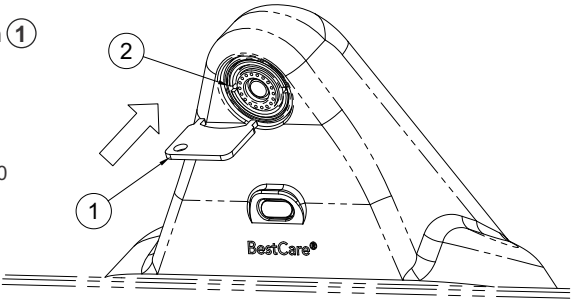
Nozzle Replacement: WH3375-SO & WH3375-HC-SO

IMPORTANT

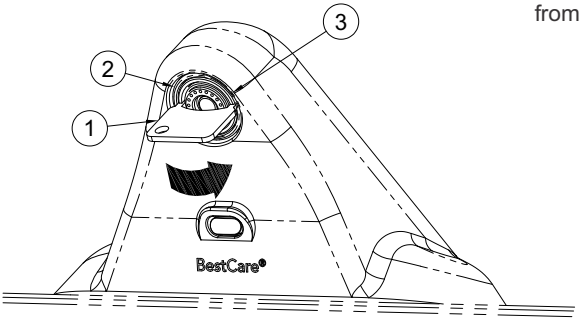
Before changing nozzle ensure the power and/or water to faucet is turned off.

1 Insert the Teeth of Spanner Wrench (1) into Notches of Nozzle (2).

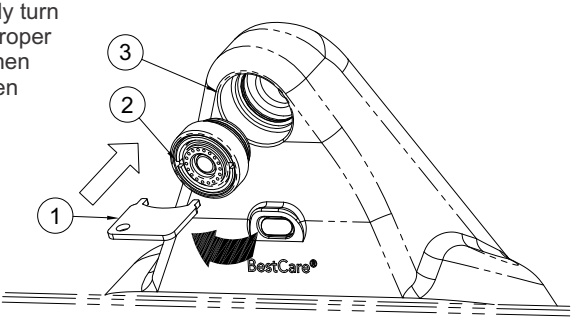
Standard Nozzle Part Number: 2998-110-000
-LFK Laminar Flow Restrictor Kit Part Number: 2998-140-001



2 With Spanner Wrench (1) firmly inserted into Nozzle (2), Turn Spanner Wrench (1) counter-clockwise to remove Nozzle (2) from Faucet (3).



3 Before inserting Nozzle (2) into Faucet (3) inspect the opening to ensure it is clean of debris. With your fingers, insert the new Nozzle (2) into the Faucet and slowly turn the Nozzle (2) clockwise ensuring proper engagement. Snug to finger tight, then using the Spanner Wrench (1) tighten Nozzle (2).



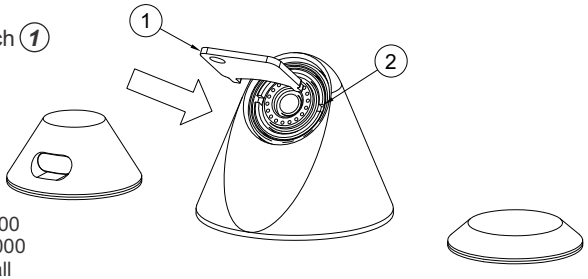
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Phone (800) 782-7706 • (626) 968-6681 • Web: www.whitehallmfg.com

Nozzle Replacement: WH3376-WFS-SO

IMPORTANT

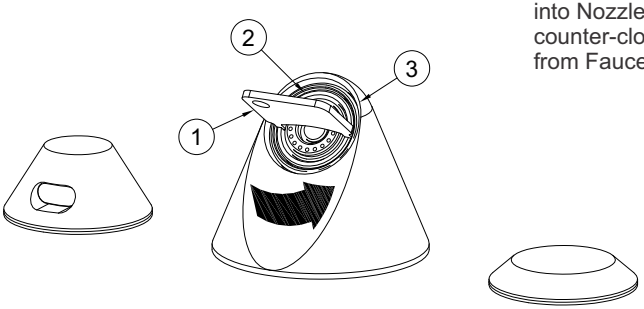
Before changing nozzle ensure the power and/or water to faucet is turned off.

1 Insert the Teeth of Spanner Wrench (*1*) into Notches of Nozzle (*2*).

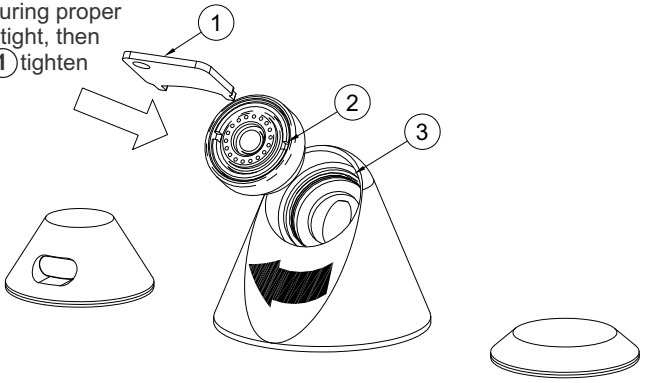


Standard Nozzle Part Number: 2998-111-000
-0.5 GPM Nozzle Part Number: 2998-110-000
NOTE: Not intended for use with Whitehall Basins due to incompatible Spray Arc.

2 With Spanner Wrench (*1*) firmly inserted into Nozzle (*2*), Turn Spanner Wrench (*1*) counter-clockwise to remove Nozzle (*2*) from Faucet (*3*).



3 Before inserting Nozzle (*2*) into Faucet (*3*) inspect the opening to ensure it is clean of debris. With your fingers, insert the new Nozzle (*2*) into the Faucet and slowly turn the Nozzle (*2*) clockwise ensuring proper engagement. Snug to finger tight, then using the Spanner Wrench (*1*) tighten Nozzle (*2*).



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