Installation, Operations & Maintenance Manual
BestCare Ligature Resistant Faucets

Whitehall Manufacturing®
Manufacturer of Healthcare and Rehabilitation Products since 1946



WH3378-HC



WH3377



WH3377-WSF



WH3377-8IN



WH3376



WH3376-WSF



WH3376-8IN

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. WH3376-HC - 0.5 GPM (1.9 LPM)
   Optional -LFK Laminar Flow Restrictor Kit - 1.2 GPM (4.5 LPM), 1.5 GPM (6.7 LPM) & 1.75 GPM 6.6 LPM)
2. WH3377, WH3377-WFS & WH3377-8IN, WH3376, WH3376-WFS & WH3376-8IN - 0.35 GPM (1.3 LPM)
   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.

Please refer to the Link or QR code provided.
For Cleaning & Care Guide:
https://www.whitehallmfg.com/uploads/fileLibrary/9900-008-W01.pdf

Please refer to the Link.
For Terms, Conditions & Warranty:
https://www.whitehallmfg.com/uploads/docs/WH_Terms_Fixture.pdf

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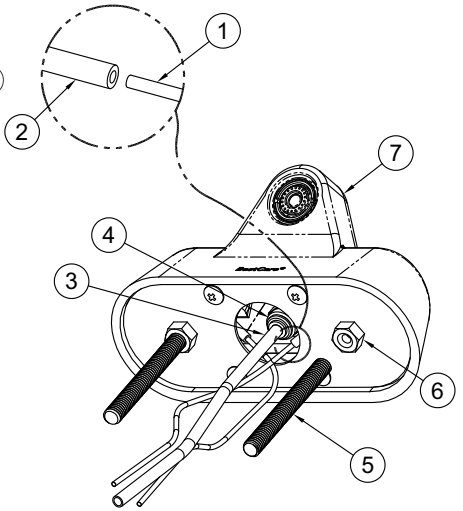
NOTE:

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

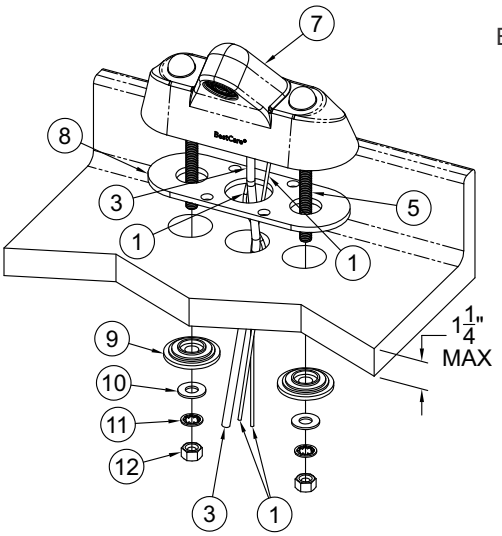
WH3378-HC

A- Insert 1/8" O.D. Air Tube (1) into 3/16" O.D. Vinyl Tube (2). Insert 1/4" O.D. Supply Tube (3) into fitting (4). Install the Threaded Rod (5) to the Hex Nut (6) on Faucet Assembly (7).

Refer to page 6 for Push-in Fitting details.



Detail Not to Scale



B- Feed the Faucet Assembly Air Tubes (1) and Supply Tube (3) through Center Hole of Gasket (8) then through center hole of basin deck and mount Faucet (7) onto the Basin, secure using the provided Step Washer (9), Flat Washer (10), Lock Washer (11) and Hex Nut (12) onto threaded rods (5).

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NOTE:

1. Provide 3-hole, 4" or 8" (4" shown) Centerset Deck openings with ø1" minimum to ø1-1/2" maximum holes for Faucet installation.

WH3376 & WH3377
WH3376-8IN & WH3377-8IN

A- Prior to installing, disassemble the Pushbutton Assembly(ies) (1) by remove the Pushbutton Escutcheon(s) (2) from the Pushbutton Sleeve Assembly (3) and Diaphragm Retainer Assembly (4) . See Pushbutton detail.

B- Fix the Pushbutton Sleeve(s) (3) to the Faucet Escutcheon Plate (5) with the Pushbutton Escutcheon (2).

C- Remove the 1/4" NPT Push-In Fitting (6), Locknut (7) and Washer (8) from the Conical Faucet (9).

D- Mount the Faucet Escutcheon (5) Pushbutton Rod Sleeve Assembly(ies) (3) and Gasket (10) to the Lavatory by aligning the Pushbutton Sleeves (3) with Lavatory hole openings (11).

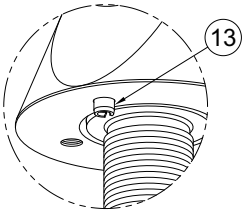
E- Add the Faucet Assembly (9) Escutcheon Plate (12) aligning the Anti-Rotation Pin (13) with the hole on the Escutcheon Plate (14) .

F- Install the Washer (8) and Nut (7) to Conical Faucet (9) from the Deck underside to secure. Assemble 1/4" NPT Push-In Fitting Inlet (6) to Faucet Adapter (15) .

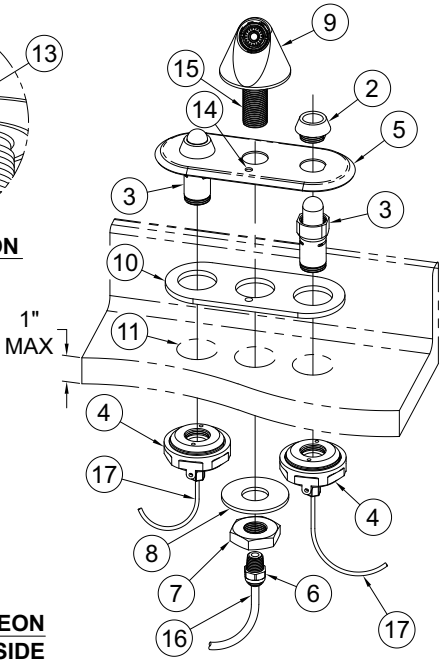
G- Reassemble Pushbutton Diaphragm Retainer Assembly (4) to Pushbutton Sleeves (3).

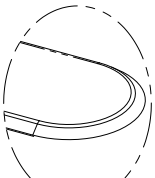
H- Connect 1/4" O.D. Riser Tube (16) to 1/4" NPT Push-In Fitting (6) and 1/8" Tubing (17) to Pushbutton Diaphragm Retainer Assembly (4).

Refer to pages 6 and 7 for connection details.

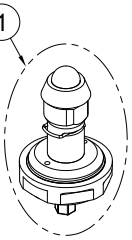


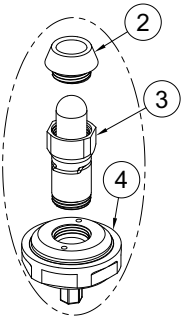
ANTI-ROTATION PIN DETAIL





WH3376 ESCUTCHEON BLANK ON RIGHT SIDE





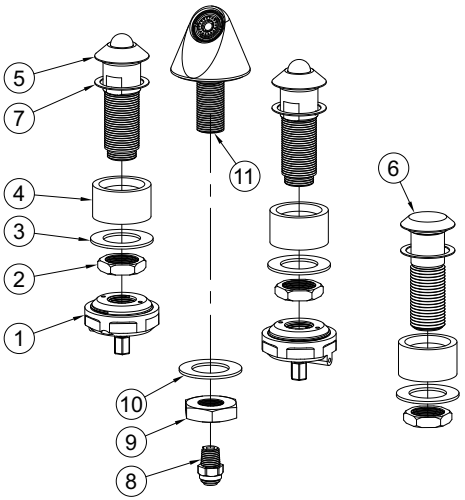
PUSHBUTTON DETAIL

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NOTE:

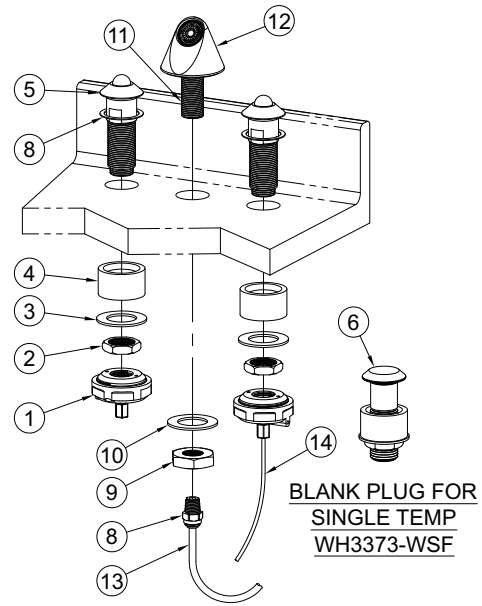
1. Provide 3-hole, 6" Minimum Centerset Deck openings with ø1-5/16" minimum to ø1-3/8" maximum holes for Faucet installation.

WH3376-WSF & WH3378-WFS



A- Prior to installing, remove Diaphragm Retainer (1) Hex Nut (2), Washer (3) and Spacer (4) from the Pushbutton(s) (5) and/or Blank (6) Assemblies. Ensure Gasket (7) does not slide off.

B- Remove the 1/4" OD x 1/4" NPT Push-In Fitting (8), Locknut (9) and Washer (10) from the Conical Faucet Adapter (11) .



BLANK PLUG FOR SINGLE TEMP WH3373-WSF

C- Fix the Pushbutton(s) (5) to the Basin by passing Pushbutton Shank thru the hole ensuring Gasket (8) is in place and secure using the Spacer (4) , Washer (3) and Hex Nut (2) and Diaphragm Retainer (1).

D- Fix the Blank Assembly (6) to the Basin by passing the Shank thru the hole ensuring Gasket (8) is in place and secure the Spacer (4), Washer (3) and Hex Nut (2).

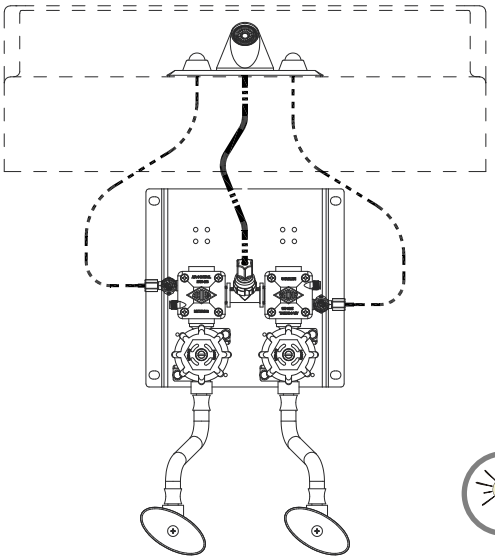
E- Mount the Faucet (12) to the Basin by passing adapter (11) thru hole. Secure using Washer (10) and Nut (9) to Faucet adapter (11) from the under the Deck. Attach 1/4" NPT Push-In Fitting (8) to the Faucet Adapter (11) .

F- Connect 1/4" O.D. Riser Tube (13) to 1/4" NPT Push-In Fitting (8) and 1/8" Tubing (14) to Pushbutton Diaphragm Retainer Assembly (1).

Refer to pages 6 and 7 for connection details.

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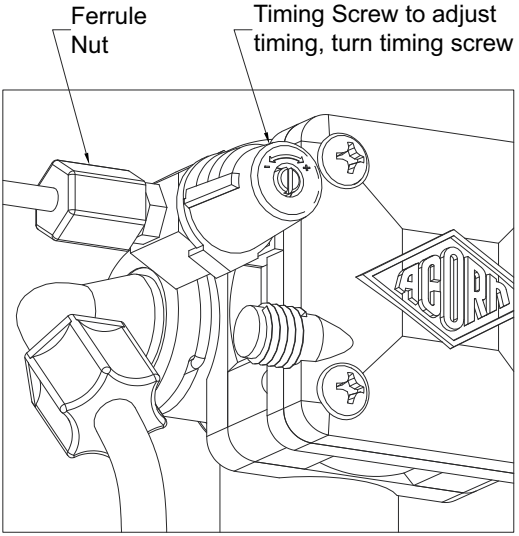
Pneumatic Tubing Connections

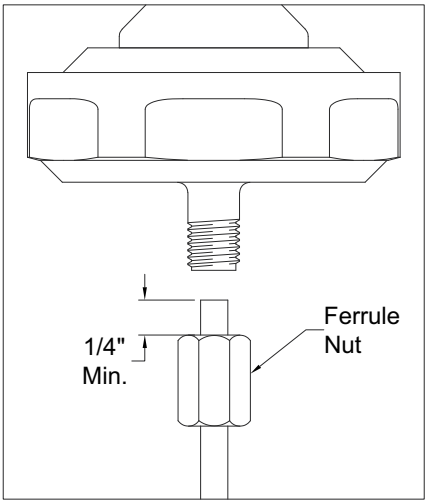


PNEUMATIC TUBING LINE KEY

- - - - - - - -	1/8" O.D. Air Tube
▬ · ▬ · ▬	1/4" O.D. Air Tube

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. Do not over tighten Ferrule Nuts

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PUSH-IN FITTING INSTALLATION

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

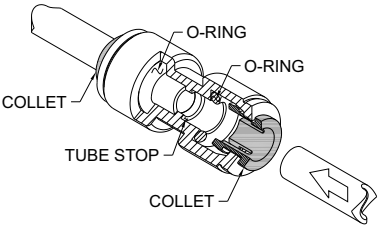
TO CUT TUBE:

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.

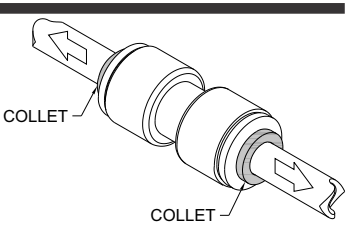


INSERTING THE TUBE:

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

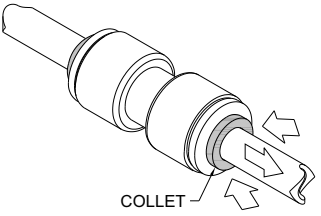


2. Pull on the fitted Tubing to ensure it is secure. Tube should not come free from the Fitting. Water test the connection assembly prior to leaving the site to ensure there are no leaks.



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

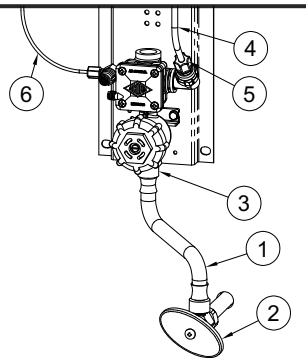
Before making up the supply connections, the supply lines must be flushed of all foreign material such as pipe dope, pipe chips, solder, sand, etc.

NOTE:

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

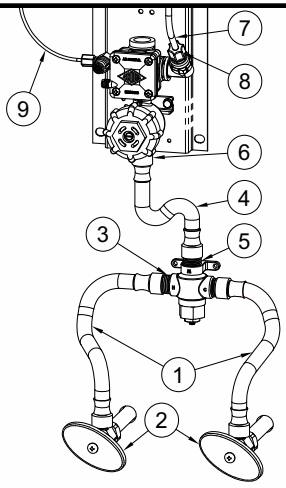
Single Temperature Valve

(WH3376, WH3376-8IN & WH3376-WSF)



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) and 1/8" O.D. Air Tube (6).

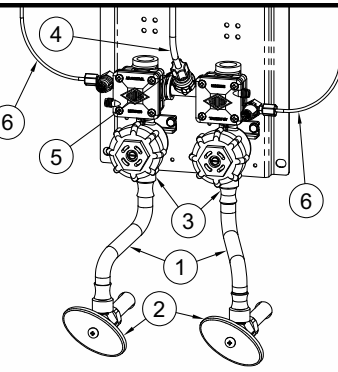
Optional -WHST70-12



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) and 1/8" O.D. Air Tube (9).

Hot & Cold Valve

(WH3377, WH3377-8IN & WH3377-WSF)



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) and 1/8" O.D. Air Tubes (6).

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.

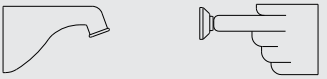
Turn off water supplies and proceed to next step.

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TROUBLE SHOOTING FOR OPTIONAL PUSHBUTTON OPERATED VALVES

Normal Valve Function: Hand pushbutton operated valve has an adjustable flow time from 5 to 60 seconds.

CONDITION: WATER DOES NOT FLOW



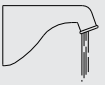
Probable Cause	*Solution*
Water main closed.	Open water main.
Checkstops closed.	Open checkstops.
Debris or scale in checkstop strainer	Remove checkstop strainer and clean.
Air leaks from 1/8” O.D. tubing or fittings.	Replace damaged tubing or fitting.
Pushbutton air diaphragm leaks.	Replace pushbutton 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

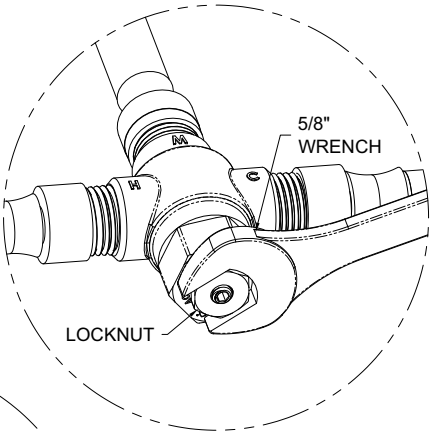


Probable Cause	*Solution*
Air leaks from 1/8" O.D. tubing or fittings.	Replace damaged tubing or fitting.
Pushbutton air diaphragm leaks.	Replace pushbutton air diaphragm.

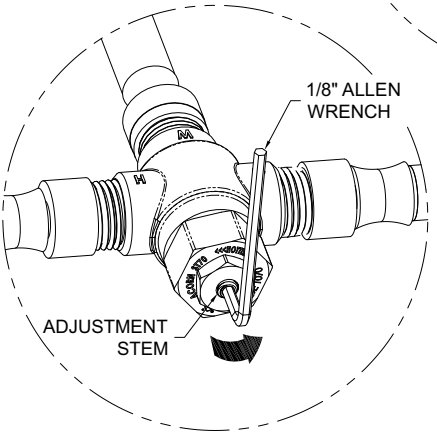
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Optional -WHST70-12 Temperature Adjustment

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

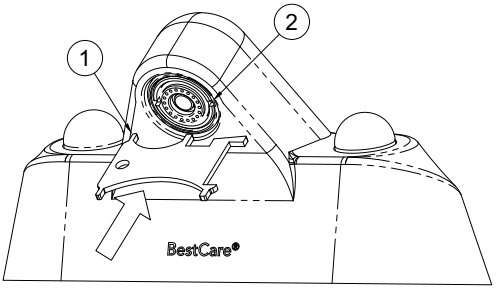
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Nozzle Replacement: WH3378-HC

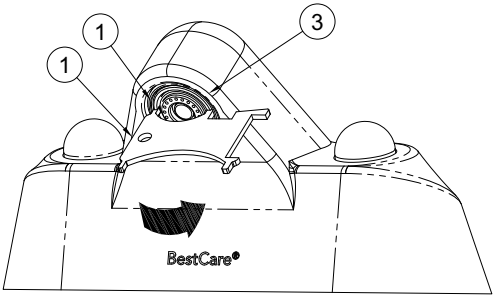
IMPORTANT

Before changing nozzle ensure the water to faucet is turned off.

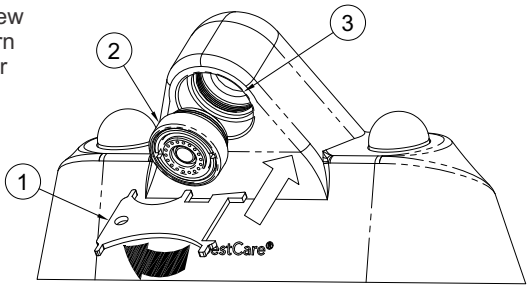
1 Insert the Teeth of Spanner Wrench (*1*) into Notches of Nozzle (*2*).



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*).



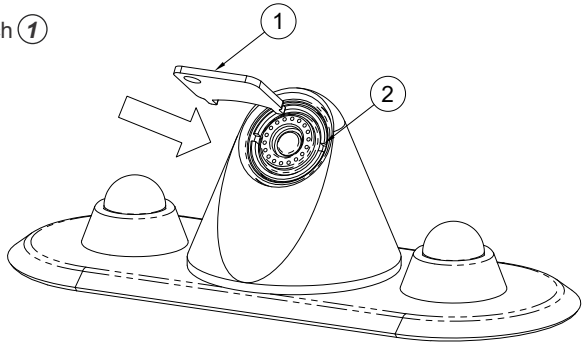
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Nozzle Replacement: WH3377, WH3377-WFS & WH3377-8IN
WH3376, WH3376-WFS & WH3376-8IN

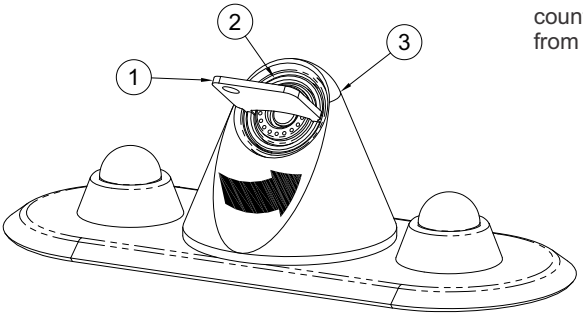
IMPORTANT

Before changing nozzle ensure the water to faucet is turned off.

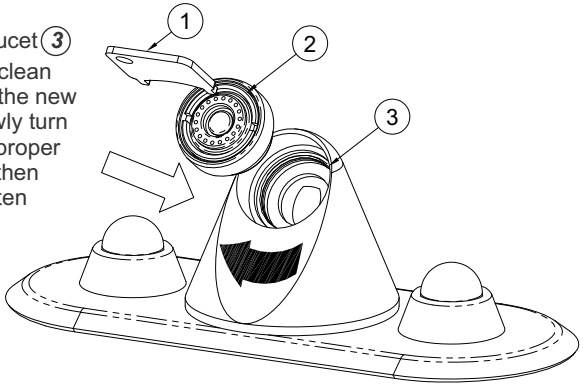
1 Insert the Teeth of Spanner Wrench (*1*) into Notches of Nozzle (*2*).



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*).



WHITEHALL MANUFACTURING • P.O. BOX 3527 • City of Industry, CA 91744-0527 U.S.A
Phone (800) 782-7706 • (626) 968-6681 • Web: www.whitehallmfg.com