Metcraft
Industries, Inc.

301 S.E. Thompson Drive
Lee's Summit, MO 64082

Phone: 816-554-0300
Fax: 816-554-0307

www.metcraftindustries.com
sales@metcraftindustries.com

Stainless Steel Plumbing Fixtures

Claims, Shortages, and Returns
Fixture Installation
Care and Cleaning
Valve Installation
Valve Trouble Shooting

STAINLESS STEEL PLUMBING FIXTURES

Metcraft stainless steel plumbing fixtures set industry standards for safe and reliable operation under the specialized conditions such as prisons, jails and public use environments. The following special features enhance safety and security.

*Integrally welded heavy gauge stainless steel construction.
*Smooth exposed edges
*Special tamper resistant fasteners which resist unauthorized disassembly.
*Toilet fixtures are reinforced to withstand load stress of 3000 lbs without permanent damage.
*For maximum security, Metcraft recommends the use of optional security frame.

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Claims, Shortages, and Returns

Claims and Shortages

The Buyer must file all claims for losses and damages in shipment; however, Metcraft will, if requested in writing, file such claims if Buyer has complied with all of the following within 5 working days after receipt of shipment:

1. Inspects shipment immediately upon receipt.
2. Have shipment inspected by delivering carrier for losses & damages.
3. Files inspection report with carrier and sends copy to factory.

All claims for shortages must be reported in writing to Metcraft within 14 days of shipment.

All claims for failure to receive shipment must be reported in writing to Metcraft within 30 days of invoice date.

Return of Goods

All items are manufactured per specification. The return of any goods is based on Metcraft's discretion. No goods shall be returned without written return materials authorization (R.M.A.) from factory. Requests for R.M.A.'s must be made within 60 days of shipment. To receive an R.M.A., the Buyer must supply the invoice number and date. Terms of the return are listed on Metcraft's R.M.A. when it is issued.

Warranties

Goods manufactured by Metcraft are warranted to be free from defects in workmanship and material for a period of one year from date of shipment. Metcraft must receive written notice from buyer of any defects promptly after discovery and within a one year period. Within a reasonable time after such notification, Metcraft will, at its sole option, repair or replace defective parts. This is the Buyer's exclusive remedy for breach of warranty. Metcraft will under no circumstances be responsible for consequential, incidental or special damages based upon breach of warranty, breach of contract, negligence, strict tort or any other legal theory. The statute of limitation within which any claims can be filed against Metcraft is one year

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, TITLE AND FITNESS FOR A PARTICULAR PURPOSE

The failure of Metcraft to insist upon the strict performance of the terms and conditions of sale shall not constitute or be construed as a waiver or relinquishment of Metcraft's rights thereafter to enforce any such term or condition or any other term or condition. Metcraft's order verification shall be construed under and governed by the Missouri Uniform Commercial Code and such laws of the state of Missouri as may be applicable.

NO AGENT OR REPRESENTATIVE OF METCRAFT IS AUTHORIZED TO MAKE ANY EXCEPTIONS TO THESE TERMS AND CONDITIONS OF SALE. IF LEGAL ACTION IS NECESSARY TO ENFORCE ANY OF THESE TERMS AND CONDITIONS OF SALE, THE CUSTOMER WILL BE RESPONSIBLE FOR ANY COURT COSTS AND REASONABLE ATTORNEY'S FEES.

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Fixture Installation

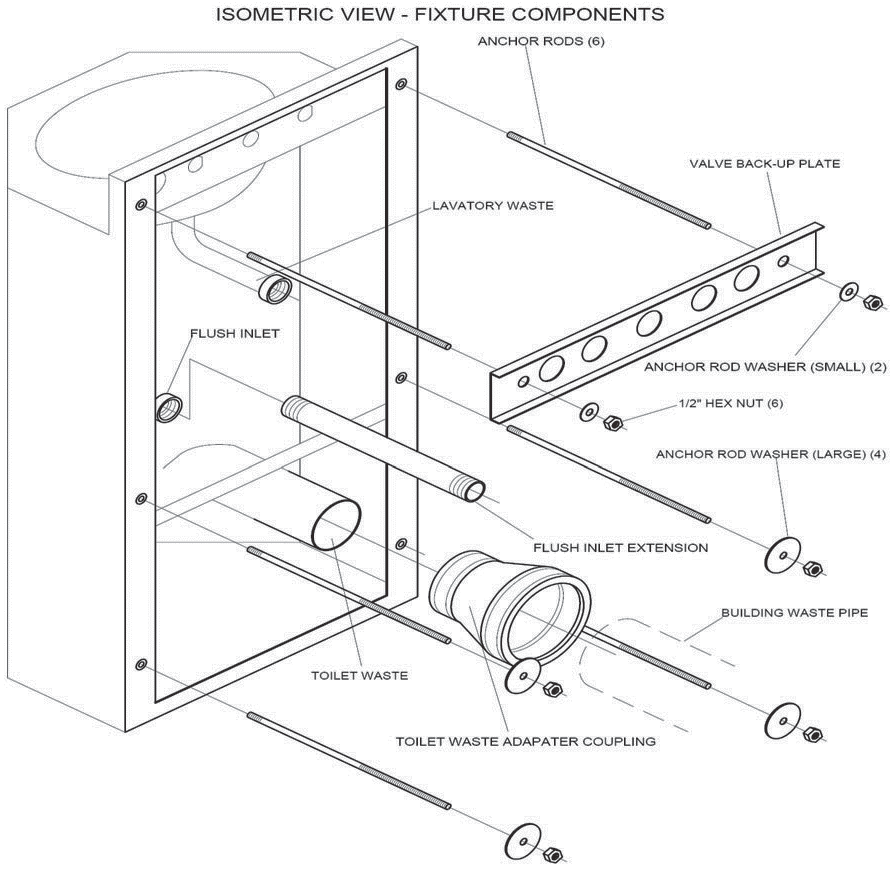
At the time of installation, check to make sure frame is square and has not been damaged in shipment. If the frame is out of square mounting holes will not match fixture anchor locations.

Locate rough-in position on wall. If a Metcraft security frame is to be incorporated, cast the frame in place or block in place by conventional construction methods.

1. Rough-in all plumbing connections required by fixture.

2. Attach backsplash trim, all through wall plumbing connections and seal.

3. Attach anchor rods to fixture. Unit is now ready for final positioning.



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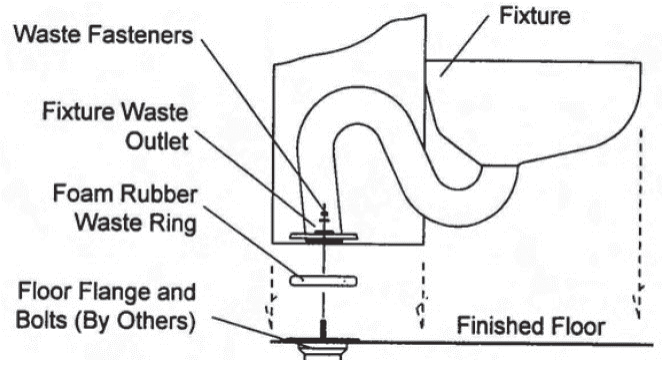
Plumbing Connections

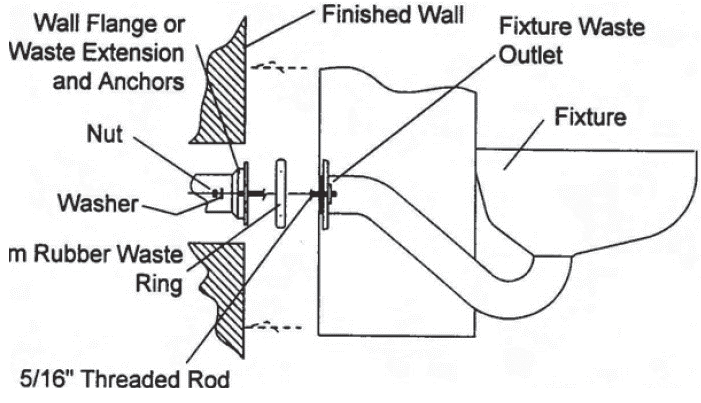
Plumbing connections on Metcraft security fixtures are made per conventional industry standards. The following details illustrate standard plumbing connections. Please refer to supplementary information covering valve applications. **Always follow local plumbing codes.**

Basic Floor Outlet Toilet Waste Connection



Note: All waste connections provided by others

Basic Wall Outlet Toilet Waste Connection



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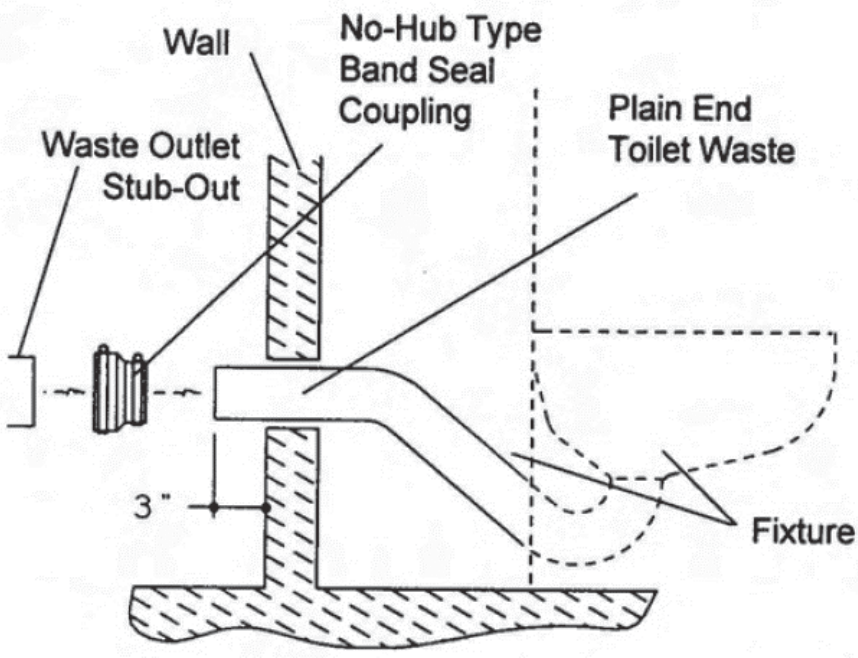
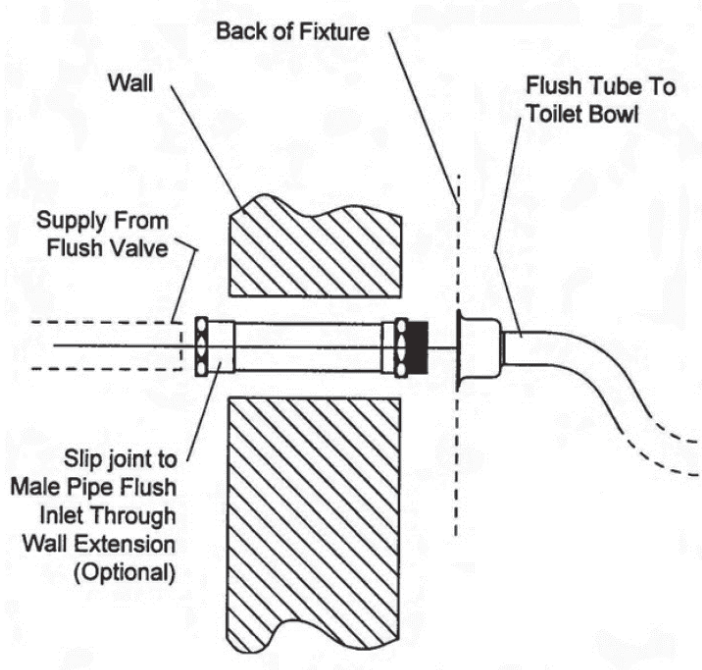
Extended Waste Tube & Adapter Coupling



Basic Flush Inlet Plumbing Connection



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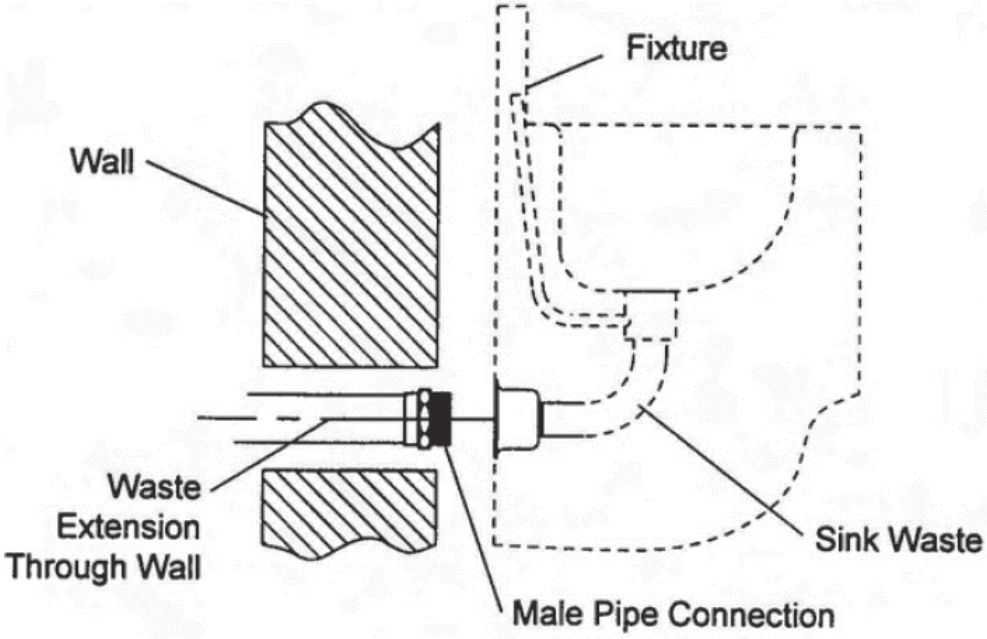
Basic Sink Waste Connection



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General Care and Cleaning

During Construction

The installing contractor must take care, during the construction phase, to care for the stainless steel plumbing fixtures. **Lack of care during the construction can cause the fixtures to rust.** The following is care that should be taken during the construction process.

- Routine cleaning, to remove residue from your stainless steel fixtures, should be performed every month.
    - Clean with ordinary soap and water.
        - Apply with a cloth or sponge
        - Rinse thoroughly and wipe dry
        - Apply a thin film of stainless steel cleaner and wipe dry.
    - For tougher stains, residues and deposits.
        - Use a Scotch-Brite™ scouring pad along with a stainless steel cleaner to remove tough stains, residues, and deposits. Never use common steel wool or wire brush as they will cause surface stains and rusting.
        - Rinse thoroughly and wipe dry
        - Apply a thin film of stainless steel cleaner and wipe dry.
- After installation, clean, dry & cover fixture to protect from soiling by work from other trades. **If contamination of the stainless steel surface occurs, then clean immediately as described above.**

Contamination of Stainless Steel Fixtures

Any of the following are considered a contaminant for stainless steel fixtures and will cause rusting and/or deterioration of these fixtures:

- **Construction Contaminations**
    - Weld Splatter, Metal Shavings, Cleaning Acids & Concrete Dust
- **Chemical Contaminations**
    - Chlorine, Muriatic Acid, Sulphuric Acid, Hydrochloric Acid, Iodine
- **Environmental Contaminations**
    - Sea Salt & Humidity is very caustic to stainless steel and requires more frequent care and cleaning to prevent these fixtures from rusting.
    - Standing Water & Organic Matter
    - Never let standing water or organic matter accumulate in the toilet for over a month.
- **Never allow bleach to stand in the toilet bowl. This is a typical practice we see to disinfect the toilet bowl during long periods where the toilet is inactive. This practice causes the bleach to attack the toilet bowl and destroy the fixture.**

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After Construction

- After construction, the cleaning staff should be trained on the proper care and cleaning of these stainless steel fixtures. Routine cleaning, to remove residue from your stainless steel fixtures should be performed every month.
    - Clean with ordinary soap and water.
        - Apply with a cloth or sponge
        - Rinse thoroughly and wipe dry
        - Apply a thin film of stainless steel cleaner and wipe dry.
    - For tougher stains, residues and deposits.
        - Use a Scotch-Brite™ scouring pad along with a stainless steel cleaner to remove tough stains, residues, and deposits.
        - Rinse thoroughly and wipe dry
        - Apply a thin film of stainless steel cleaner and wipe dry.
- **Never allow bleach to stand in the toilet bowl. This is a typical practice we see to disinfect the toilet bowl during long periods where the toilet is inactive. This practice causes the bleach to attack the toilet bowl and destroy the fixture.**

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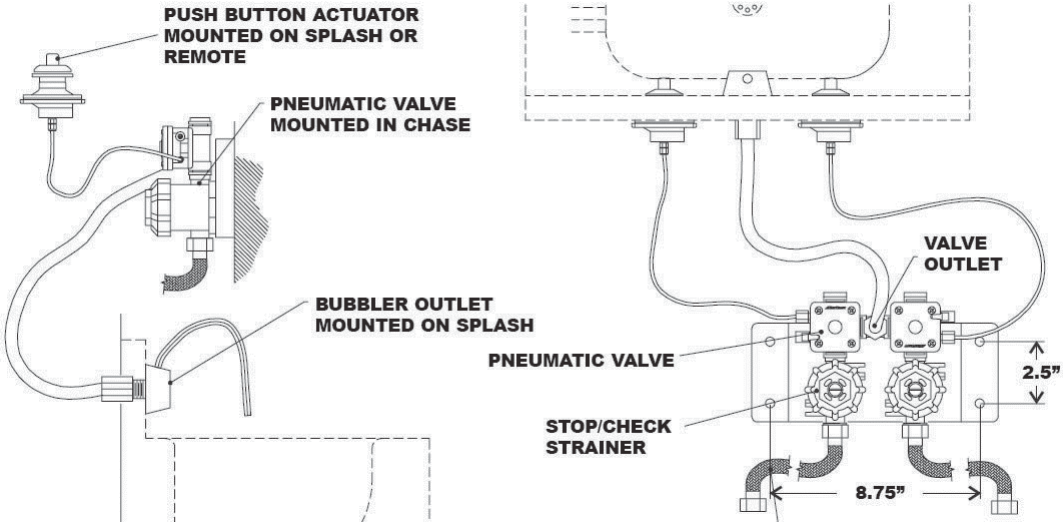
A300 Series Pneumatic Valve Installation Instructions

For specific valve applications, Metcraft provides supplemental information which is provided with each shipment. Please refer to these sheets for answers to specific questions on individual valves. In general, Metcraft fixtures are designed to operate under these general guidelines.

1. All fixtures require water pressure of at least 35 PSI flowing. Recommended maximum pressure 75 PSI.
2. Flow controls of showers are preset to 2.5 gallons per minute or less. Flow controls of lavatories are preset to .5 gallons per minute.
3. Flush all standing water from lines prior to attachment of valve to water supply. Do not leave super chlorinated water in valves or severe damage will occur. Long periods of dormancy can adversely affect valves. The water should be removed from valves during such dormant periods.

For best results from Metcraft A300 Series Pneumatic Valves, reasonable water quality standards must be maintained. High levels of minerals and sediments in water supply will have detrimental effects on function of these valves.



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A300 Series Pneumatic Valve Installation Instructions

1. Flush all supply lines thoroughly.
2. Make sure polyethylene tubing is clear of any debris or water. DO NOT use tubing that has been kinked.
3. Assemble pushbuttons and bubbler spout to fixture backsplash before securing the fixture to the wall. Install the bubbler inlet fitting to the bubbler inlet.
4. Mount the valve and bracket assembly to the wall. Choose a location where future access for service and adjustment of the valve will be convenient, bearing in mind that the valve must be located within Seven feet of the pushbutton operators and bubbler outlet.
5. DO NOT use pipe thread compounds or sealants on Any threads connecting to the valves, valve operators and tubing nuts. Thread sealants are not intended for these connections and may contribute to valve damage or malfunctions and thereby void warranty.
6. A braided flexible connector is used to connect supply tubing to the strainer check/stop.
7. Connect 1/2" OD polyethylene tubing to the bubbler head and the valve outlet. Compression connections should only be tightened 1/4 TO 1/2 turn past hand tight. Over tightening with a wrench may cause damage. Make sure tubing is fully inserted into socket before tightening.
8. Connect 1/8" OD tubing to pushbutton diaphragm assemblies and to tube connection on the side of the valve operator closest to the timing adjustment. Make sure tubing is fully inserted in socket on valve operator end before tightening small plastic nut. Small nut should be finger tight but give the tubing a slight tug to see if connection is good. (A vacuum leak at this connection can cause a short cycle time.)
9. Open supply stop(s) and check the valve and connections for leaks.
10. Actuate pushbuttons several times to clear air from the valves and tubing. Hold hand in front of bubbler to contain squirting caused by air bubbles. Check water tubing at valve and bubbler for possible leaks again.
11. Adjust timed cycle of valves as needed. The timing cycle can be adjusted using the timing adjustment located next to the 1/8" air tube connection on the side the valve operator. Some valves have a small screwdriver slot on the end of the adjuster. Turning clockwise lengthens the cycle; Counterclockwise shortens the cycle. Adjustments should be made in small increment to achieve best result.As the cycle is lengthened, adjustment becomes increasingly sensitive. Timed cycles in excess of 1 minute require infinitely small adjustments.

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VALVE TROUBLE SHOOTING

Symptom: Valve Will Not Shut Off.

1. Remove 1/8" air tube beside timer. If the valve shuts off after a short time, turn the timer adjustment counter-clockwise several turns. Re-connect the tubing making sure the connection is sealed properly (tubing should not slip or come off if tugged gently). Re-adjust timer for desired cycle time. If the valve still refuses to shut off proceed to step 2.
2. Turn off water to valve. Remove the valve top by removing the (4) screws securing it. Note the position of the tube connector and timer so the valve top can be properly re-assembled in the same position. Remove valve operator exposing the water chamber of the valve. Check the rubber diaphragm assembly for possible debris. Check the diaphragm to be sure the rubber is properly seated into the plastic post. Check the hole through the plastic post to be sure it's free of debris. Turn the diaphragm assembly over and find the small circle near the edge of the rubber. There is a small hole in the middle of the circle that should be free of debris. Rinse the assembly with clean water to remove any debris. Also, rinse the orifice plate and the separator cup in the valve top, making sure the small spring in the separator cup (above the orifice plate) is not dropped or lost. If any part of the diaphragm is damaged, replace the entire diaphragm assembly using part #16426 (PVK-2 diaphragm kit). Clean any debris from the valve base and the valve seat before re-assembling. Re-assemble the valve and adjust the timing to desired cycle length.

Symptom: Valve Will Not Open.

1. Make sure the water supply is turned on.
2. Remove the 1/8" plastic tubing from the back of the pushbutton diaphragm and suck on the end. If water flows, the valve is operating properly but there is an air leak in the tubing connections, the tubing or the pushbutton diaphragm. Also, it is possible that the timer has been opened (turned counter-clockwise) so far the vacuum can not be held. Close the timer (turn clockwise) to see if the valve will operate. If yes, adjust timing for desired cycle.
3. Check the flow control orifice located in the valve outlet fitting to be sure it is not blocked by debris. If blocked, clear debris by blowing air through it from the tubing end of the fitting. Do not force any tools through the orifice as this may damage or distort it and cause improper operation.
4. Check the pushbutton actuator diaphragm for leakage by removing the diaphragm from the back of the pushbutton and from the air tubing. While holding your finger over the end of the tubing connection to seat it, push the rubber diaphragm toward

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the back using your finger in place of the pushbutton. If the tubing fitting is sealed properly with your finger, the rubber diaphragm should be held back away from the front of the diaphragm housing. If it returns to the front of the housing, it is not holding a vacuum and must be replaced. This test should be repeated several times before deciding the diaphragm must be replaced as it is difficult to hold your finger over the hole in the tube fitting to properly seal it

Symptom: Valve Will Only Run A Short Time And Does Not Respond To Timer Adjustment.

This is one of the most common complaints. In most cases, this is a result of an air leak in the air tubing connections either at the pushbutton end or the valve end of the tubing. If the tubing is connected using a white plastic nut, gently give the tubing a quick tug. If it comes out of the fitting, re-insert it, making certain it "bottoms out" in the fitting. Using gentle force, tighten the plastic nut one-quarter turn. Repeat as necessary until tubing is held tightly in place.

Some valve operators have a brass barb connection. No tubing nut is used on the operator.

It should be noted that the ends of the 1/8" tubing should be closely checked for splitting or cuts. Also, inspect the tubing to be sure there are no kinks or bends to prohibit air flow within the tubing. If the tubing is damaged or kinked, it must be replaced. The ends of the tubing should be cut square for best results.

Symptom: Bubbler Stream Overshoots The Lavatory Basin (Steady Stream).

1. Check the flow control fitting to be sure the flow restrictor is in place. The flow restrictor is normally located inside the fitting where the outlet supply tubing is connected to the valve. Penal spouts are designed for a rate of .5 gpm flow rate provided by this flow restrictor. Flow rate can not be adjusted adequately using the inlet stops on the valve.
2. Check the hole in the spout or bubbler for debris or blockage. The outlet hole of the bubbler must be clear of any obstruction or partial obstruction to form proper height arc. Clear any debris inside the bubbler head by disconnecting the supply tube from the fitting and blowing air back trough the bubbler. Do not use tools or probes through the hole on the bubbler as they may damage the finish or distort the hole, causing an erratic stream. Re-assemble the valve and adjust timing to desired cycle length.

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Symptom: Bubbler Stream Does Not Form A High Enough Arc.

1. Check the flow control fitting for blockage. Clear any debris with air pressure or flushing with clean water. Do not use probes to clear blockage as this may cause damage to the flow restrictor.
2. Check plastic supply tubing for possible kinks that would restrict water flow.
3. Make sure inlet stops are open.
4. Turn off inlet stops and inspect strainer screens for blockage or mineral build-up. Use clean water to rinse away debris. If mineral build-up is severe on the screen, Use a commercial mineral solvent, (like calcisolve or limerase) to clean it. Thoroughly rinse the screen before re-installing it.

Important Valve Re-Assembly Note:
DO NOT tighten the four (4) screws that hold the valve top to the valve base any tighter than 18 inch pounds torque.

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Metcraft's Powder Coat Color Option

Metcraft's Powder Coat Color option has you covered when the durability of stainless steel is desired but the institutional appearance is not! Our electrostatically applied color coat is baked on to provide a highly durable and attractive appearance. While this powder coat is highly durable, it can be scratched or chipped if subjected to abuse. We do not recommend it for areas where vandalism or high abuse may be problematic. Non-Abrasive cleaning methods are required. **DO NOT use fiber pads (such as 3M Scotchbrite) or mild steel (wool) scouring pads on the powder coat finish. DO NOT use highly caustic cleaners on powder coated fixtures.** Highly caustic cleaners will degloss the paint causing a duller appearance and damage the powder coat.

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Thanks for purchasing this Metcraft Fixture!

For genuine Metcraft repair parts, call or email us for a copy of our Repair Catalog. Alternatively you can browse our Online Repair Catalog on our website:

www.metcraftindustries.com/parts.html

To keep updated with new products from us as well as helpful videos for Maintenance and Repair of Metcraft Products, follow us on Social Media!

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Facebook: https://goo.gl/BtjK7q

YouTube: https://goo.gl/SJKyzH

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