Aquaflush® Z6000 Series

Aquaflush Exposed Flushometer

Installation, Operation, Maintenance, and Parts Manual

Patented and Patents Pending

Z6000

Z6003

Aquaflush® Exposed Closet/Urinal Systems

- **Z6000**
- ✓ **Z6000PL-HET**
- **Z6001**
- **Z6003**
- **Z6003PL-ULF**
- **Z6010**
- **Z6014**
- **Z6017**
- **Z6096**
- **Z6099**

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship for a period of three years from the date of purchase. Decorative finishes warranted for one year. We will replace at no cost goods that prove defective provided we are notified in writing of such defect and the goods are returned to us prepaid at Sanford, NC, with evidence that they have been properly maintained and used in accordance with instructions. We shall not be responsible for any labor charges or any loss, injury or damages whatsoever, including incidental or consequential damages. The sole and exclusive remedy shall be limited to the replacement of the defective goods. Before installation and use, the purchaser shall determine the suitability of the product for his intended use and the purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, the implied warranty of merchantability is expressly excluded. If the products sold hereunder are “consumer products,” the implied warranty of merchantability is limited to a period of three years and shall be limited solely to the replacement of the defective goods. All weights stated in our catalogs and lists are approximate and are not guaranteed.

Aquaflush® Rough-In, Product Specification, Models and Options

ENGINEERING SPECIFICATION: ZURN Aquaflush Exposed Closet Flush Valve – Exposed, quiet diaphragm-type, chrome-plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature, high back pressure vacuum breaker, one-piece hex coupling nut, adjustable tailpiece, spud coupling, and flange for top spud connection. Control stop has internal siphon-guard protection. Internal seals are made of chloramine resistant materials.

Z6000PL Aquaflush Plus is furnished as specified above and includes sweat solder kit, vandal-resistant stop cap, and cast wall flange with setscrew.

MODELS

Z6000 – 1-1/2" Water Closet Valve with top spud connection.
Z6010 – 1-1/2" Water Closet Valve with back spud connection.
Z6001 – 1-1/4" Urinal Valve with top spud connection.
Z6003 – 3/4" Urinal Valve with top spud connection.

FLOWS

-FF Full Flow
3.0 Gal. for Urinal, 4.5 Gal. for Water Closet

-HET High Efficiency Toilet (PL Only)
1.28 Gal. for Water Closet

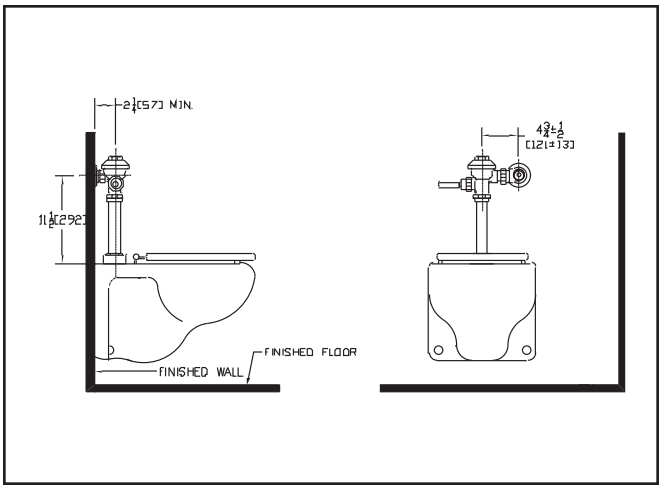
-WS1 Low Consumption
1.0 Gal. for Urinal, 1.6 Gal. for Water Closet

-WS 1.5 Gal. for Urinal, 3.5 Gal. for Water Closet

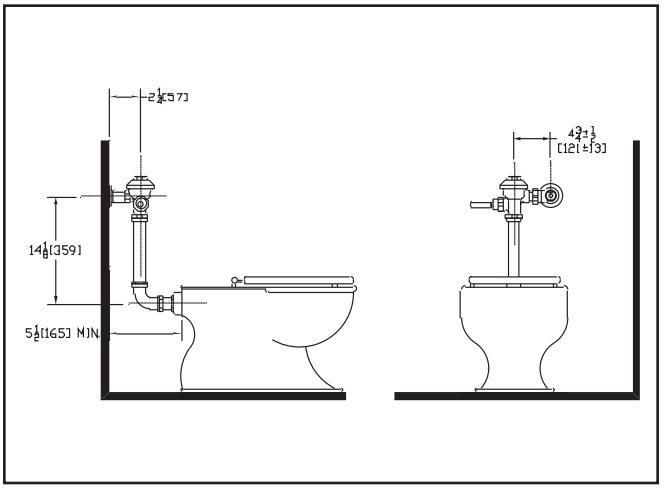
-ULF 0.125 Gal. for Urinal (PL Only)

OPTIONS

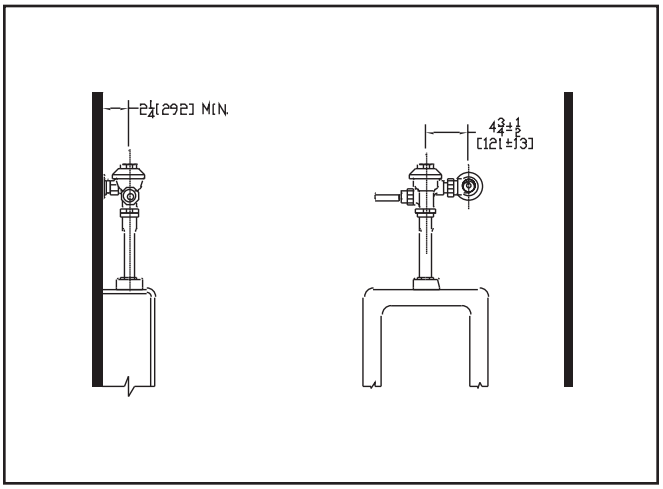
____ **-BG** BioCare Handle
____ **-H** Handle on Front of Flush Valve
____ **-L** 1" [25] Metal Push Button
____ **-L3** 3" [76] Metal Push Button
____ **-VC** Vandal-Resistant Stop Cover
____ **-YB** Sweat Solder Kit
____ **-YC** Cast Wall Flange
____ **-YJ** Split Ring Pipe Support
____ **-YK** Solid Ring Pipe Support
____ **-YO** Bumper on Stop Angle



Models: Z6000, Z6000-1, Z6000-2, Z6000-3,
-HET (High Efficiency) 1.28 Gal.
-WS1 (Water Saver) 1.6 Gal. Low Consumption



Models: Z6010, Z6010-1, Z6010-2,
-HET (High Efficiency) 1.28 Gal.
-WS1 (Water Saver) 1.6 Gal. Low Consumption



Models: Z6001 (1-1/4" urinal flush valve)
Z6003 (3/4" urinal flush valve)
-WS1 (Water Saver) 1.0 Gal. Low Consumption
-ULF (Ultra Low Flow) 0.125 Gal.

Sweat Solder Adaptor Installation Instructions

Important:

- *All plumbing is to be installed according to state and local codes and regulations.*
- *Water supply lines need to allow proper water flow for each fixture.*
- *Flush all lines of any **debris** before making connections.*
- *Do not use pipe sealant or plumbing grease on any fitting other then the control stop inlet.*

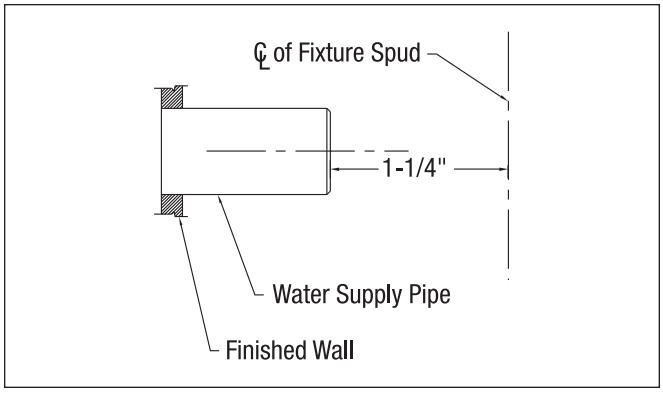
The Aquaflush valve is designed to operate under various water pressures with a recommended range between 10 and 100 psi (69 to 689 kPa). Each Zurn valve is tested for proper performance at the factory before being shipped. Consult the product pages of the catalog for available flow options.

Most low consumption fixtures (1.28 and 1.6 gallon) require a minimum of 25 psi running pressure through the valve to obtain proper evacuation. Please be sure to consult fixture manufacturer on minimum running water supply requirements for proper evacuation.

When installing your quality Zurn valve it is recommended that to protect the polished finish you do not use a toothed wrench. This will cause gouges and scratches on your valve.

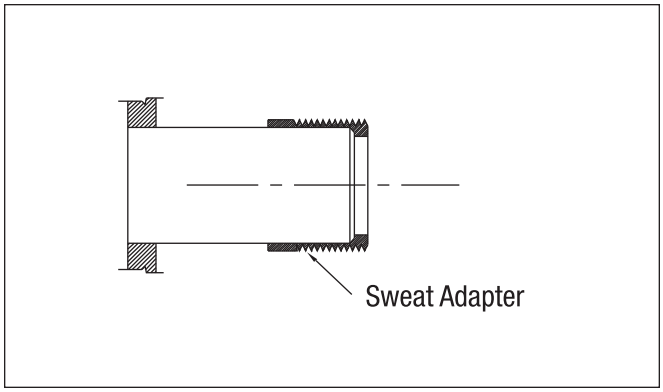
STEP NO. 1

Measure distance from finished wall to center line of fixture spud; cut water supply pipe 1-1/4" shorter than this measurement. Chamfer O.D. and I.D.



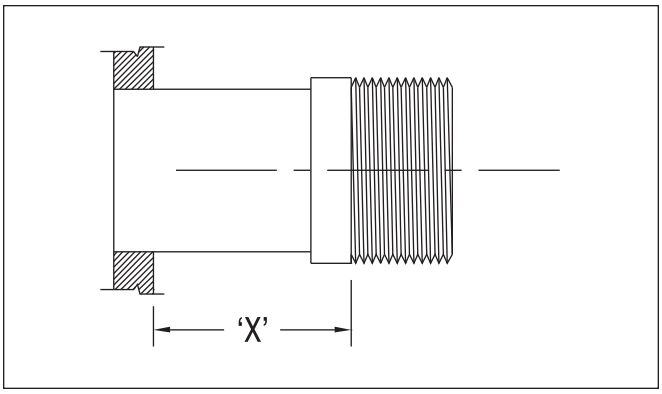
STEP NO. 2

Slide threaded adapter onto supply pipe until shoulder stops on end of pipe. Then sweat-solder the adapter to water supply pipe.



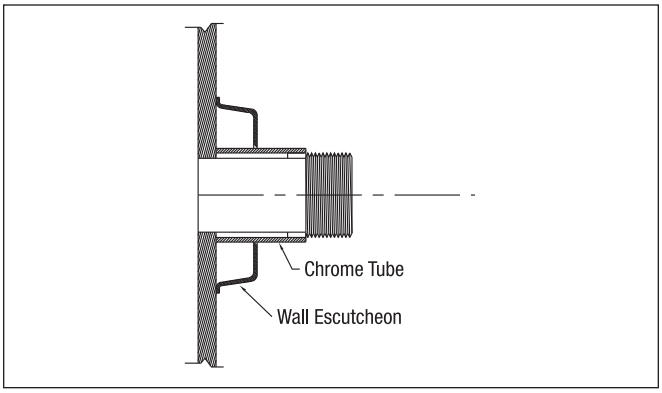
STEP NO. 3

Measure from finished wall to first thread of adapter for length of chrome tube. Cut chrome tube this length 'x'.



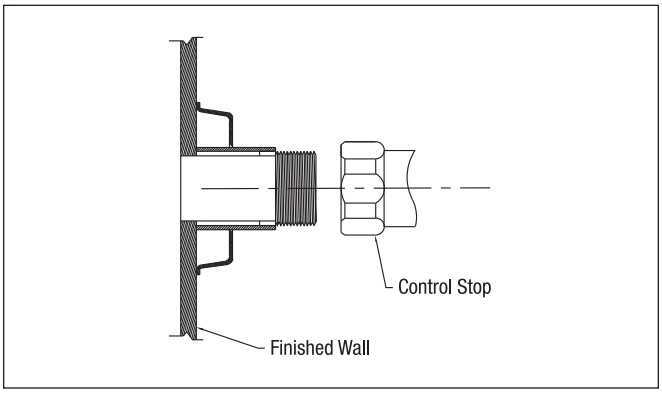
STEP NO. 4

Slide wall escutcheon over chrome tube and slide both chrome tube and wall escutcheon over supply pipe pushing the wall escutcheon all the way to the wall.



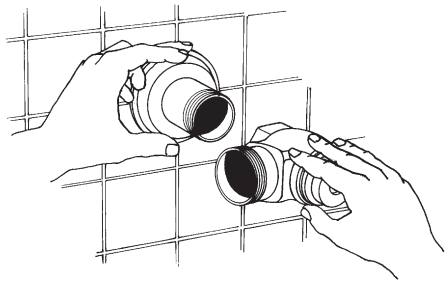
STEP NO. 5

Screw control stop onto water supply water adaptor.



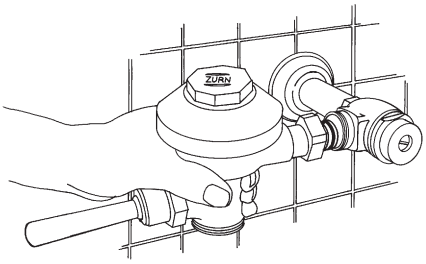
Aquaflush® Installation Instructions

1. Install stop valve assembly using proper size supply escutcheon and sweat solder adapter kit if applicable (see 1). Thread sealing compounds should be used on male NPT threads only.



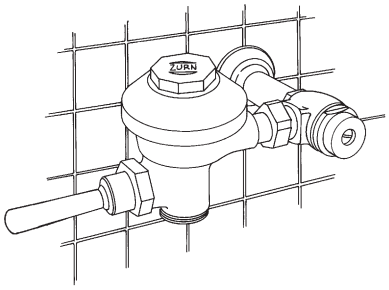
1

2. Prior to inserting the flush valve tailpiece into stop valve, be certain that the O-ring seal is located in O-ring seal groove at the end of the tailpiece and the locking nut and locking snap ring are located as shown below (see 2). Care should be taken not to damage the O-ring when inserting the tailpiece into the stop valve. If lubrication is needed, wetting the O-ring with water will be sufficient.



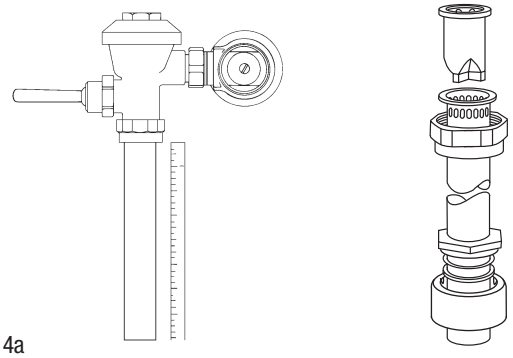
2

3. Insert the flush valve tailpiece into the stop valve and hand tighten the lock nut to the stop valve. Plumb the entire unit (see 3).



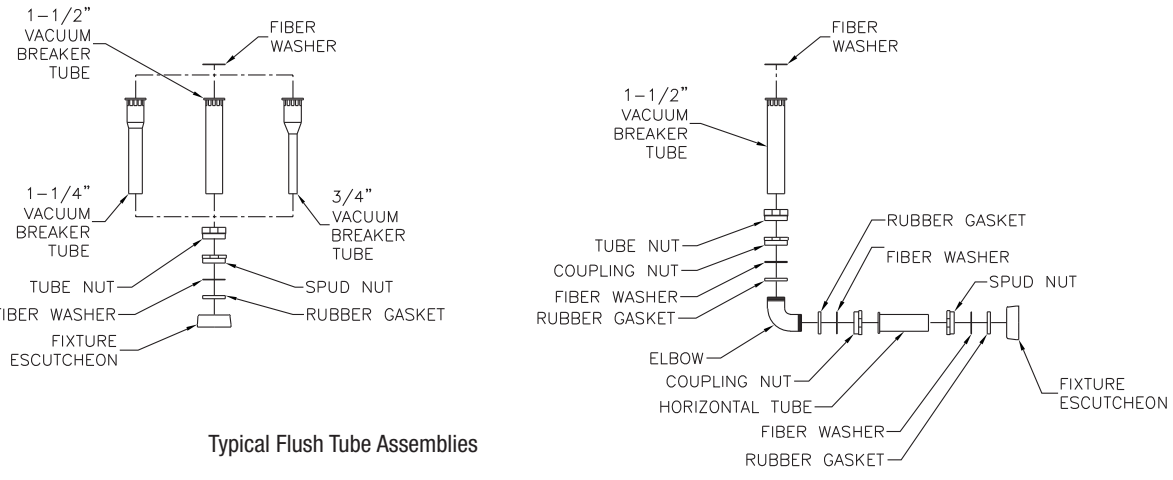
3

4. Determine the length of vacuum breaker tube required to join the flush valve and fixture spud. Cut the vacuum breaker tube, if required, to this length (see 4a). Assemble the vacuum breaker tube assembly and spud nut assembly to the flush valve and fixture spud (see 4b).



4a 4b

5. Hand tighten spud nut and vacuum breaker tube nut to fixture and flush valve. Adjust the valve assembly for plumb. Tighten fixture spud nut, vacuum breaker tube nut and lock nut with a wrench.

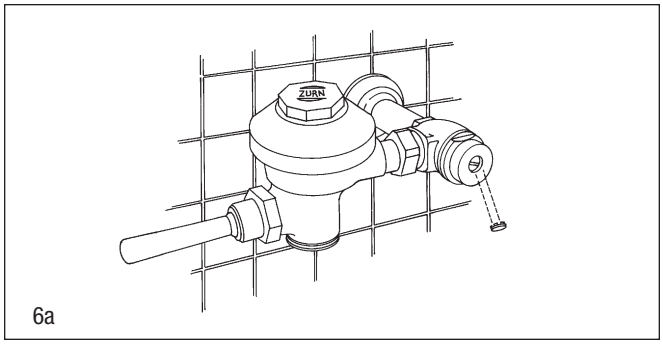


Typical Flush Tube Assemblies

5

Aquaflush® Installation Instructions

6. When all flush valves are connected to the fixtures and water pressure is available, it is recommended that the supply piping be flushed to remove dirt, pipe chips, etc. from system. Before the water is turned on, be sure all stop valves to the flush valves are closed off tight. The stop valves can be opened and closed by using the adjusting screw located at the center of the stop valve cap, behind the stop snap cap screw cover if already installed (see 6a). Stop valve adjustments can only be made by using the adjusting screw. **It is not necessary to remove the stop valve cap when making adjustments. If for any reason it becomes necessary to remove the stop valve cap, be certain the water is shut off at the main supply valve.**



6a

Use the following procedure to flush out the supply piping:

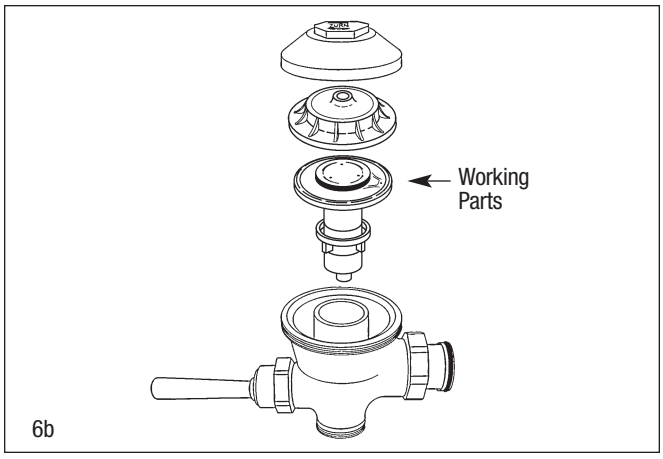
A. Remove the main valve body cover.

B. Remove the working parts from the flush valve (shown in 6b).

C. Replace the main valve body cover and plastic cover without reinstalling the working parts.

D. Open the stop valve by using the stop adjusting screw, and flush out all debris from pipe and connections.

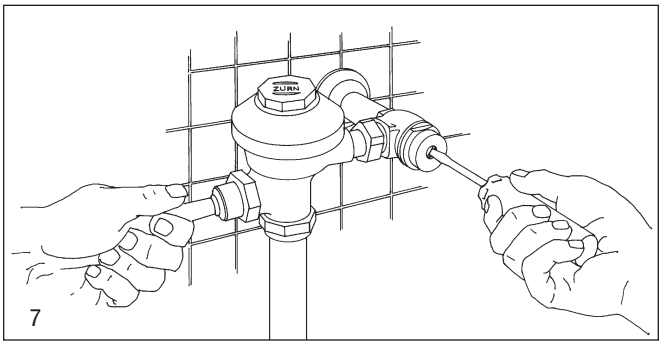
E. Shut stop, open cover, replace the working parts, replace plastic cover and main valve body cover and tighten.



6b

This procedure should also be followed when the system has been drained for some time, as occurs in athletic fields, recreation parks, etc.

7. The Aquaflush flush valves are preset for fixture volume as marked on the valve cartons. The valve does not require regulation for variation in water pressure within its operating range. To set the flush valve for proper operation, gradually adjust the stop valve open, using the adjusting screw, while actuating the valve until the rate of water flow into the fixture is not excessive, yet is sufficient enough to adequately evacuate the waste. The final setting for urinals should be such that the fixture will not overflow when the valve is actuated in succession. The stop snap cap screw cover should be secured after final adjustments have been made.

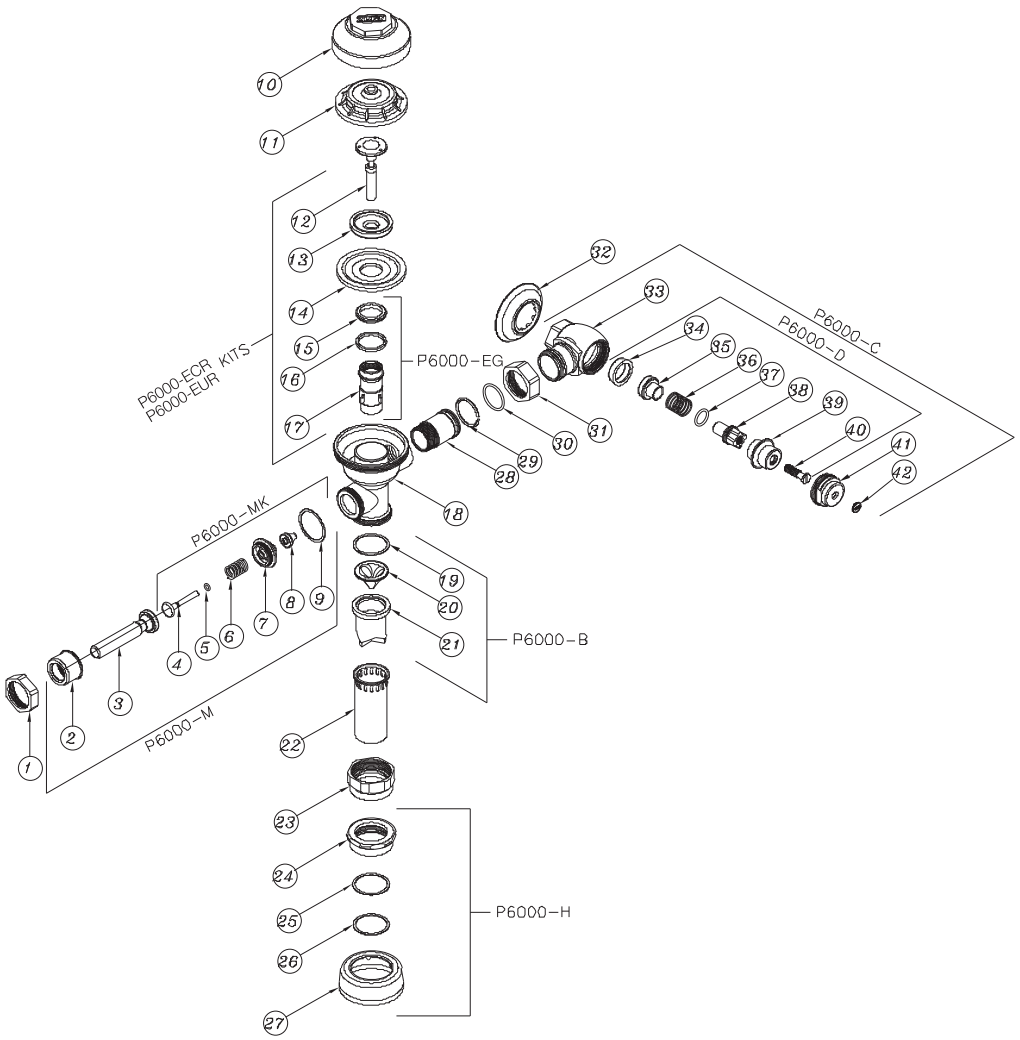


7

Aquaflush® Exposed Repair Kits

Parts Identification

1. Handle Nut
2. Handle Sleeve and Insert
3. Low Force/ADA Compliant Handle
4. Actuator Rod
5. Handle O-Ring
6. Handle Spring
7. Handle Seal Retainer
8. Handle Seal
9. Gasket
10. Valve Body Cover
11. Plastic Cover
12. Trip Mechanism
13. Retainer Disc
14. Diaphragm
15. Flow Ring
16. Guide Ring
17. Cylinder Slide
18. Valve Body
19. Vacuum Breaker Friction Washer
20. Vacuum Breaker Insert
21. Vacuum Breaker Duckbill
22. Vacuum Breaker Tube
23. Vacuum Breaker Tube Nut
24. Spud Nut
25. Spud Friction Washer
26. Spud Sleeve
27. Spud Escutcheon
28. Tailpiece
29. Snap Ring
30. Tailpiece O-Ring
31. Locking Nut
32. Setscrew for Cast Wall Flange
33. Stop Body
34. Piston Seal
35. Piston
36. Stop Spring
37. Guide O-Ring
38. Piston Guide
39. Guide Holder
40. Adjusting Screw
41. Stop Cap
42. Snap Cap Screw Cover



Covers and Repair Kits	Product No.
Outside Cover - CP – Item 10	P6000-LL
Inside Cover – Item 11	P6000-L
HET Water Closet Kit – 1.28 gal. flush (PL Only)	P6000-ECA-HET
ULF Urinal Kit – 0.125 gal. flush (PL Only)	P6000-EUA-ULF
Low Consumption Closet Kit – 1.6 gal. flush	P6000-ECR-WS1
Water Saving Closet Kit – 3.5 gal. flush	P6000-ECR-WS
Full Flow Closet Kit – 4.5 gal. flush	P6000-ECR-FF
Low Consumption Urinal Kit – 1.0 gal. flush	P6000-EUR-WS1
Water Saving Urinal Kit – 1.5 gal. flush	P6000-EUR-WS
Full Flow Urinal Kit – 3.0 gal. flush	P6000-EUR-FF

Repair Parts – Inside Parts	Product No.
Urinal Relief Valve – Item 12	P6000-EU13
Closet Relief Valve – Item 12	P6000-EC13

Aquaflush Rebuild Kits	Product No.
Closet and Urinal Rebuild Kits Include Items 4-9, 12, 13, 15-17, 26	P6000-ECR-WS-RK P6000-ECR-WS1-RK P6000-EUR-WS-RK P6000-EUR-WS1-RK

Handle Assembly and Repair Kits	Product No.
ADA Handle Assembly (Side) Includes Items 2-9	P6000-M-ADA
Handle Repair Kit (Side) Includes Items 4-9	P6000-MK
Handle Seal Includes Item 8	P6000-M9
Handle Gasket Includes Item 9	P6000-M10
Repair Kit for Front Operation - Exposed Includes Items 4-9	P6000-MHK
Handle Assembly (Front) Includes Items 2-9	P6000-MH

Control Stop Repair Kit and Parts	Product No.
Control Stop Repair Kit for 1" and 3⁄4" Includes Items 30-36	P6000-D-SD
Seal Seat for 1" and 3⁄4", Includes Item 30	P6000-D42
VP Control Stop Repair Kit for 1" and 3⁄4"	P6000-D-VP
Sweat Solder Connection with Cast Wall Flange	P6000-YB

Adjustable Tailpieces	Product No.
Adjustable Tailpiece for Standard Flush Valve Includes Items 24-26	P6000-J1
Tailpiece Coupling Assembly Includes Items 25-27	P6000-K
Tailpiece Locking Ring Includes Item 25	P6000-C30
Tailpiece O-Ring Includes Item 26	P6000-C31
Coupling Nut Includes Item 27	P6000-C32

Flush Connections and Spud Coupling Kits	Product No.
Flush Tube Assembly for Flush Valves Includes Items 15-19. Specify diameter and length.	P6000-A
Vacuum Breaker Repair Kit Includes Items 15-17	P6000-B
Spud Coupling Assembly Includes Items 20-23. Specify size.	P6000-H

Aquaflush® Trouble Shooting Guide

Problem	Cause*	Corrective Action*
Valve will not operate.	1.) Stop valve is closed. 2.) Supply valve is closed.	1.) Open stop valve. 2.) Open supply valve.
Insufficient volume of water to adequately siphon fixture.	1.) Stop valve is not open enough. 2.) Urinal trip mechanism installed in wrong kit, urinal for closet. 3.) Insufficient volume or pressure at supply.	1.) Open stop valve for desired volume of water. 2.) Replace urinal part with proper closet valve part. 3.) If gauges are not available to measure supply pressure or volume of water at the valve, completely remove the working parts and open the stop valve to allow water to pass through the empty valve. If the supply is adequate to siphon the fixture, the guide ring (#16) may be removed from the guide assembly to provide additional flow (see page 5). Should this prove unsatisfactory, steps should be taken to increase the pressure and/or supply.
Flush valve shuts off too quickly.	1.) Damaged or punctured diaphragm. 2.) Enlarged by-pass orifice.	1.) Install new P6000-EUR or P6000-ECR replacement kit to remedy the problem. (#12 thru #17) 2.) Install new P6000-EUR or P6000-ECR replacement kit to remedy the problem. (#12 thru #17)
Valve is short flushing.	1.) Diaphragm kit is not matched to the fixture. 2.) Urinal trip mechanism (black #12) is in the closet flush valve.	1.) Install the proper P6000-EUR or P6000-ECR replacement kit to remedy the problem. (#12 thru #17) 2.) Install closet trip mechanism (white #12).
Valve is flushing too long or not shutting off.	1.) Trip mechanism not seating properly due to foreign material between trip mechanism and retainer disc. 2.) By-pass orifice is plugged or partially plugged. 3.) Line pressure is not adequate to force trip mechanism to seal. 4.) Cracked cover. (#11)	1.) Disassemble parts and rinse thoroughly. 2.) Examine by-pass orifice and clean if necessary being certain not to enlarge orifice opening. 3.) Pressure is inadequate or has dropped below minimum operating range. Steps should be taken to increase the line pressure. 4.) Replace cover with new one.
Water splashes out of fixture.	1.) Supply volume is more than is necessary. 2.) Lime accumulation on vortex or spreader holes of fixture.	1.) Adjust downward on control stop. 2.) Remove the lime build up.
Flush is not considered quiet.	1.) Control stop may not be adjusted for quiet operation. 2.) Fixture may be contributing to noise. 3.) Piping system may be source of noise.	1.) Adjust the control stop for quiet operation keeping in mind the fixture evacuation requirements. 2.) Check noise created by fixture by placing a cover over the bowl opening to separate valve noise from bowl noise. If it is determined the fixture is too noisy consult with fixture manufacturer. 3.) High pressure in the system can sometimes be controlled by the stop valve. Other sources of noise may be the absence of air chambers and shock arrestors, loose pipes, improper size pipes, etc. In these cases the building engineer should be consulted.
Handle assembly leaking.	1.) Handle assembly is not tight.	1.) Tighten handle assembly.

Care of Chrome Plated Surfaces

The suggested cleaning of chrome plated surfaces is simply to clean them with mild soap and water, then dry. Commercial cleaning compounds are never recommended.

Seasonal Use

Valves used in installations subject to shut down because of cold and freezing conditions should be maintained in the following manner. After the main supply has been shut off and the water drained from the system, remove the stop valve cap and stop valve internals to allow the water to drain from the flush valve itself.

*See previous page for numerical references.

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