

### Installation and Operations Manual

MODEL 280-Flush - Specifies that this Portable Toilet Wash-Down Station was built as a button activated flushing station and provided with a Hydraulic Flush System and flushing trap for easy installation by a plumber.

#### Standard Components

##### Sink & Stand Assembly

- Gasketed Cover
- 2 Gas Cylinder Hinges
- Non-Skid 4" Sink Rim
- 3" Schedule 40 PVC Slip Connection at Base of the Sink
- Hose Clip & Pre-Drilled Hole for Rinse Hose
- 7" X 13" Access Panel in Back
- Sink Flush Outlet with
  - 1/2" Bronze 90 Degree Elbow
  - 1/2" X 5/8" Male Hose Adapter
- Flush Kit Push Button Actuator

##### Flush Kit

- Hydraulic Flushing Valve
- 3" PVC-DWV Street Elbow (3)
- 3" PVC-DWV Flushing Elbow with
  - 3/4" Nipple & Elbow
  - 3/4" MNPT X 5/8" Male Hose

Adapter 3" Sch. 40 FNPT X Slip

Adapter

(stainless steel sink & stand only)

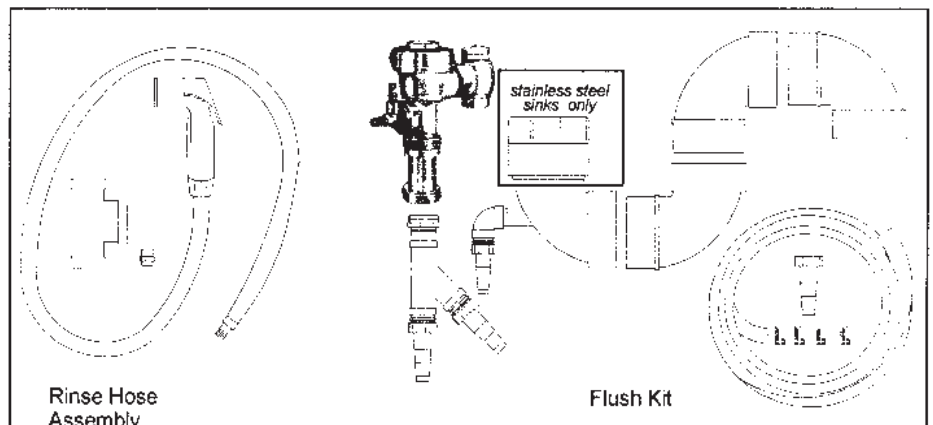
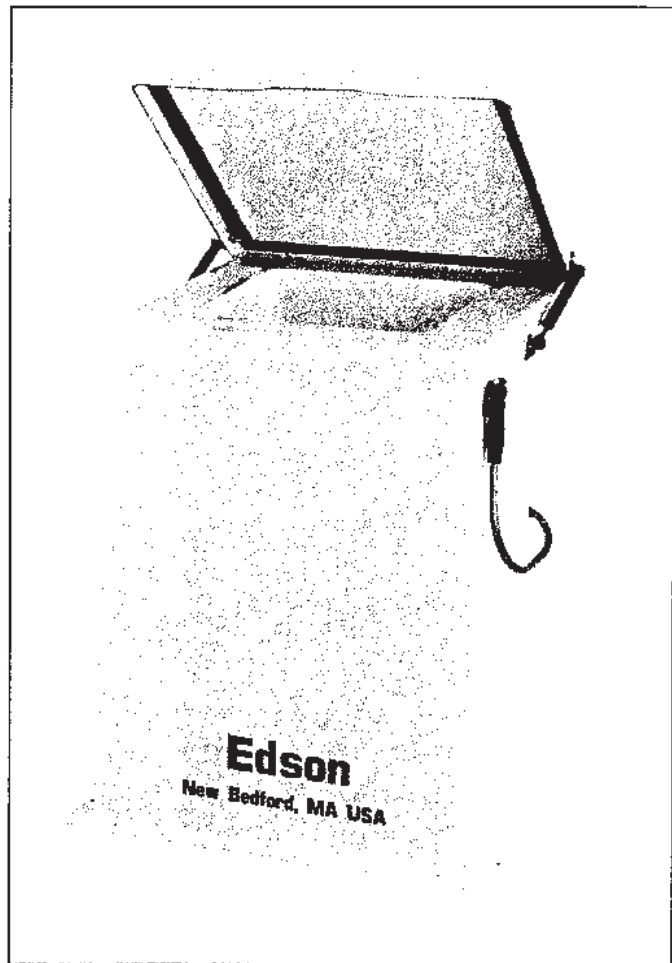
- 1" X 3/4" Bronze Reducer Bushing
- 3/4" Bronze Wye
- 3/4" MNPT X 5/8" Hose Adapter (2)
- 5/8" Female Hose Coupling (4)
- 5/8" Clear Hose (5 ft.)
- 5/8" Stainless Hose Clamps (4)

##### Rinse Hose Assembly

- Thumb Activated Shut Off Nozzle
- Reinforced Hose w/ 1/8" Threaded End
- 1/8" X 1/4" Adapter
- 1" X 1/8" Bronze Tee

#### Options

- Fiberglass Sink & Stand
- 304 Stainless Steel Sink & Stand



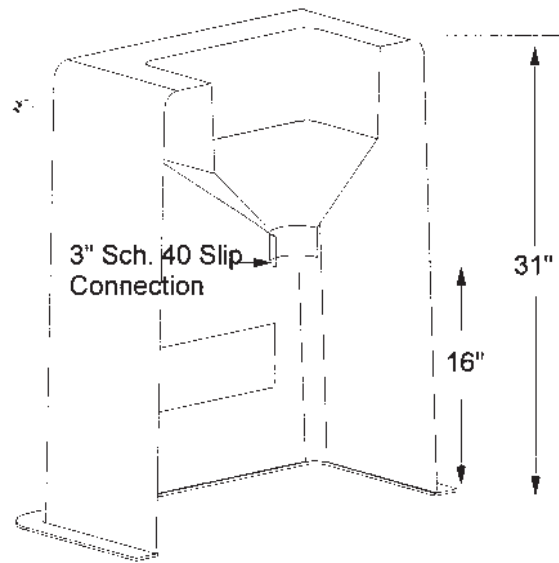
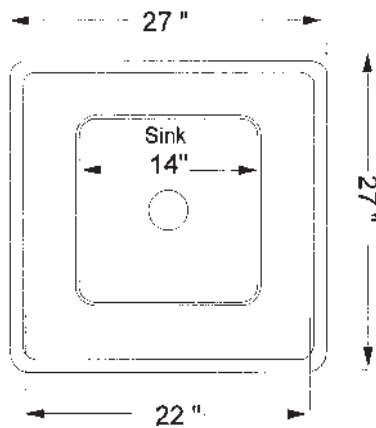
# Installation

## Fiberglass Sink & Stand

Dimensions - 27" X 27" X 31" with a 2" external mounting flange at the base.

Sink Connection - 3" PVC Schedule 40 Slip (Female) Connection at the base of the sink.

Footprint

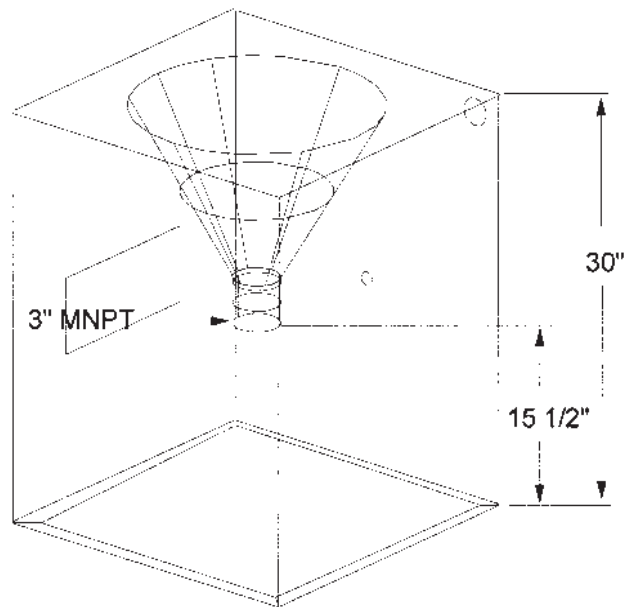
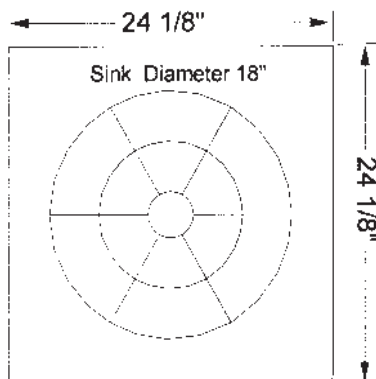


## Stainless Steel Sink & Stand

Dimensions - 24" X 24" X 30" with a 1.5" internal mounting flange at the base.

Sink Connection - 3" Male National Pipe Thread Connection at the base of the sink.

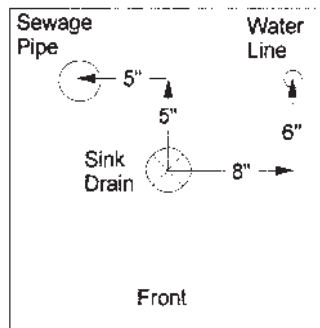
Footprint



## Ruff Plumbing

3" PVC Drain to Sewage Line or Holding Tank

1" Water Line - Rigid pipe strong enough to support a Sloan Valve



# Edson

INTERNATIONAL

## Installation

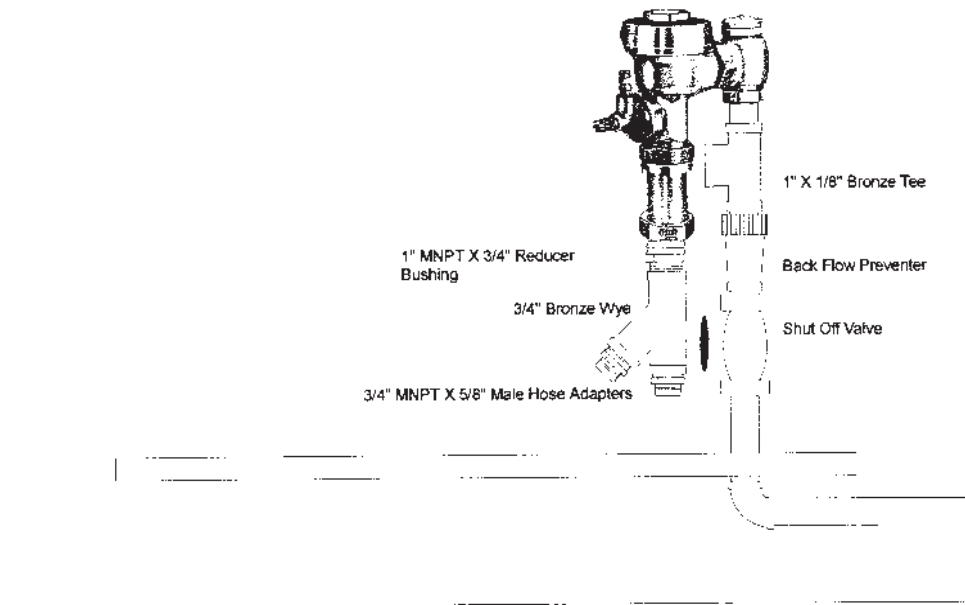
### Plumbing

1" FNPT X 1/8" Bronze Tee - Install 1" tee directly to 1" water line. It is recommended that a primary shut off valve be installed first. A back flow preventer similar to a Watts 1" Regulator Series 009QT may be required. If it is to be installed between the shut off valve and the 1" tee.

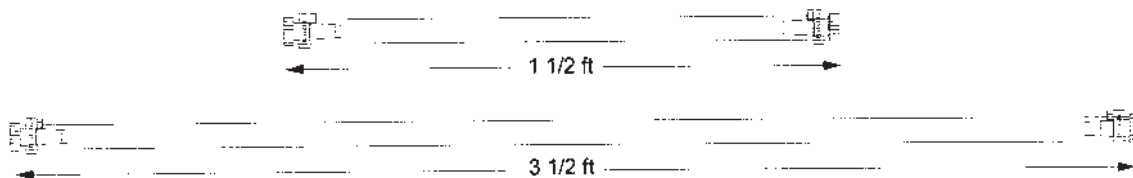
1" MNPT X 3/4" MNPT Bronze Reducer Bushing - Install reducer 3/4" bronze wye

3/4" MNPT X 5/8" Male Hose Adapter - Install one into each leg of the 3/4" wye

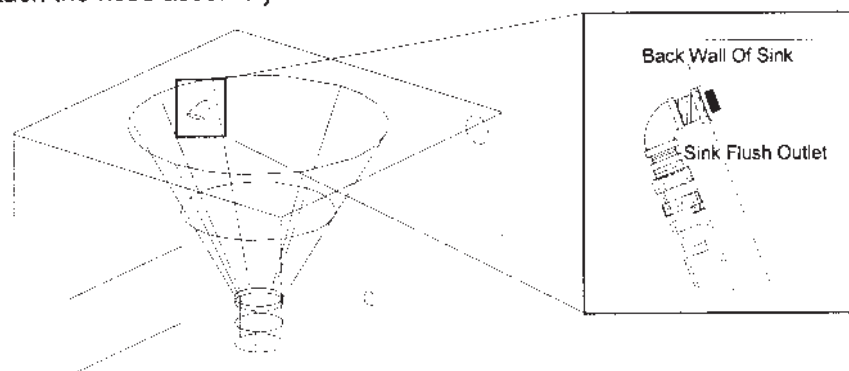
3/4" Bronze Wye - Install wye into flush valve outlet.



5/8" Clear Hose, Hose Couplings & Hose Clamps - Make 2 hose assemblies with a coupling at each end.



5/8" X 3.5 ft Hose Assembly - Attach the hose assembly to the sink flush outlet.



**Edson**

INTERNATIONAL

# Installation

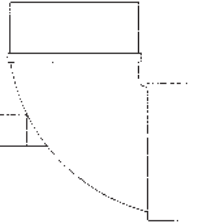
## Plumbing

3/4" PVC Elbow - Install on 3/4" PVC nipple of the 3" PVC - DWV flush elbow

3/4" MNPT X 5/8" Male Hose Adapter - Install one into the 3/4" PVC elbow

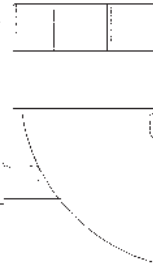
Fiberglass Wash-Down  
3" PVC - DWV Flushing Elbow

3/4" PVC Elbow  
3/4" Male NPT X 5/8"  
Hose Adapter



Stainless Steel Wash-Down  
3" PVC - DWV Flushing Elbow

3/4" PVC Elbow  
3/4" Male NPT X 5/8"  
Hose Adapter



Sink & Stand Assembly - Position over flush valve and sewer drain.

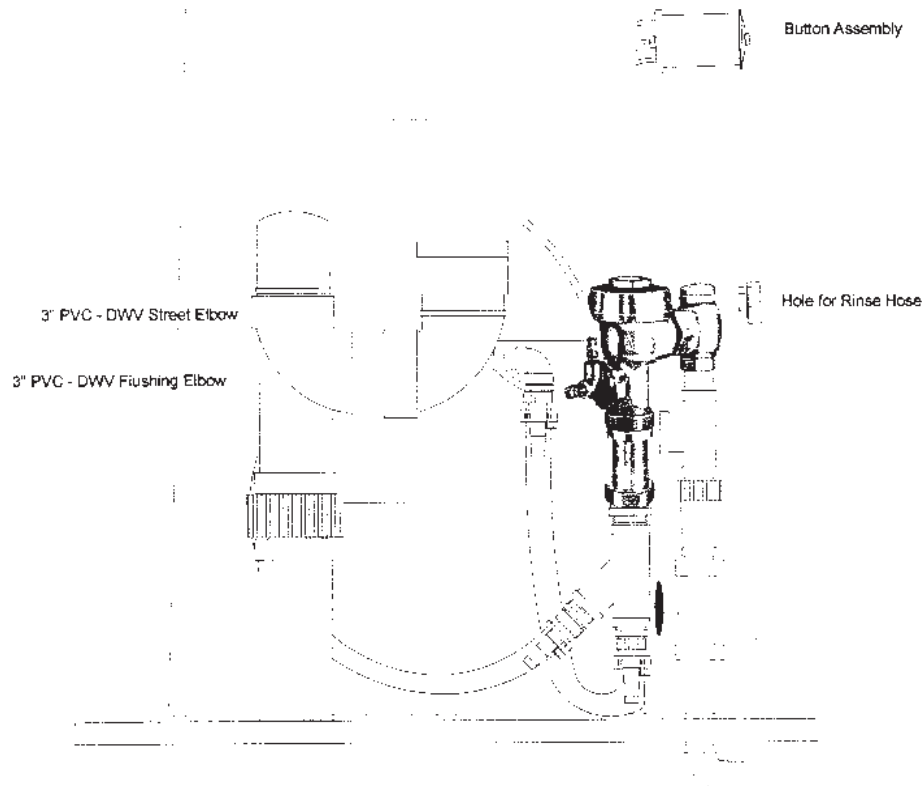
3" PVC - DWV Flush Elbow - Fit to sink drain through access panel on back of stand.

3" PVC - DWV Street Elbows (Qty. 3) - Arrange into trap and connect to sewer line.

Clear Hose Assemblies - Connect 1 1/2 ft. hose from flush elbow to one of the hose adapters on the 3/4" wye. Connect the 3 1/2 ft. hose to the remaining adapter on the 3/4" wye

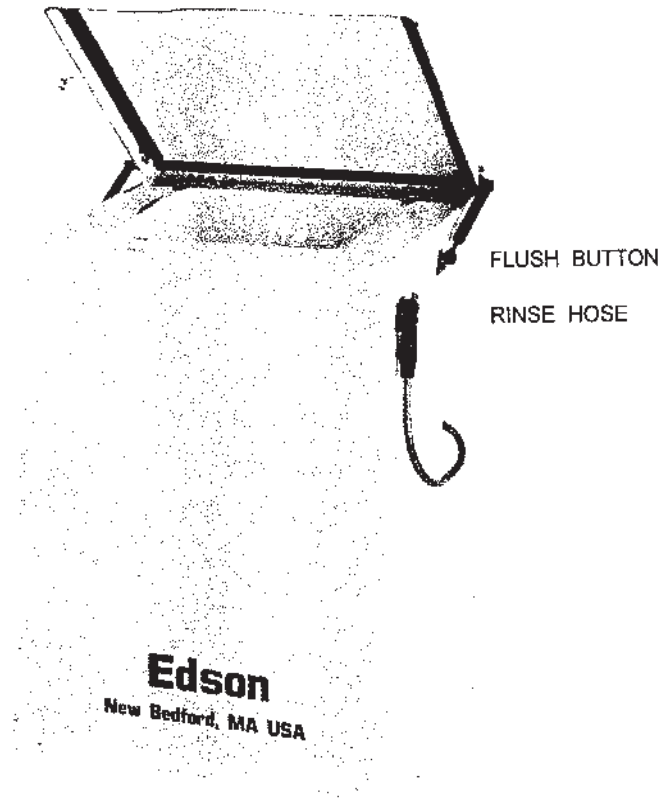
Actuator 1/4" Tubes - One attach to flush valve. Opposite ends should be already connected to the button assembly.

Rinse Hose Assembly - Install rinse hose through 1" hole in right side of stand and connect end to 1/8" NPT connection on the bronze tee



INTERNATIONAL

1. LIFT COVER TO FULL UPRIGHT POSITION
2. EMPTY PORTABLE TOILET INTO SINK.
3. USE RINSE HOSE TO CLEAN POTTY
4. POUR RINSE WATER INTO SINK
5. RINSE SINK - CLOSE COVER - FLUSH



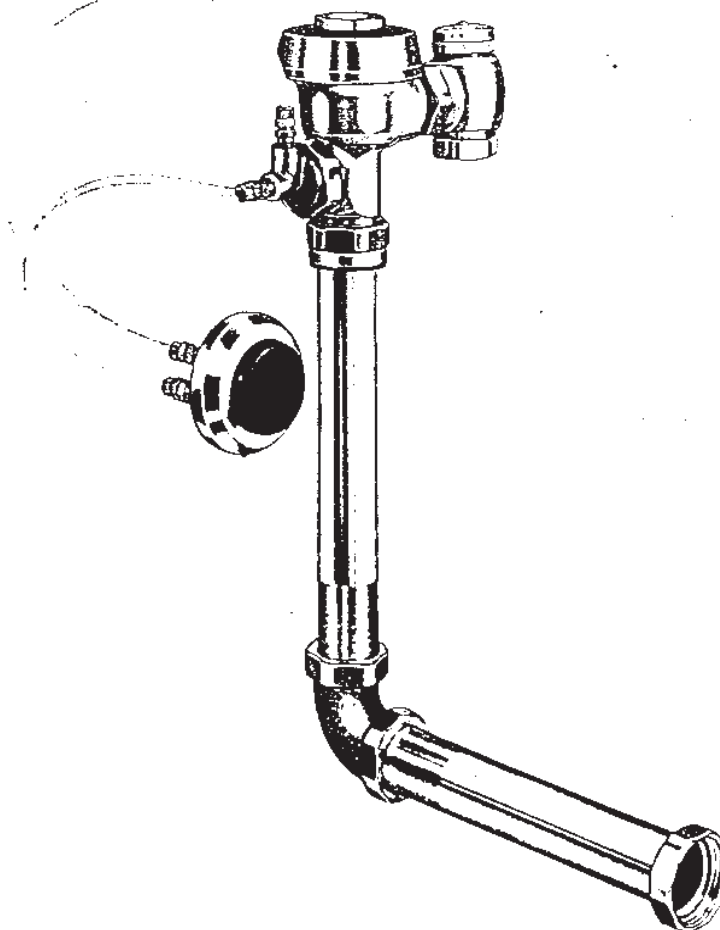
Trouble Shooting - See the Flush Valve Maintenance and Service Guide

Part	Order #
Flush Valve Assembly	160 - A - 1643 (See Manufacturer's Manual for Component Part #)
Cover Hinges	160 - A - 1417
Gas Spring Hinge	160 - A - 1418
Gas Spring Mounting Bracket	160 - A - 1418a
Rinse Hose	160 - A - 1419
Access Panel	160 - B - 551
Fiberglass Sink and Stand with Cover	160 - C - 540

# SLOAN

## SLOAN SERIES 900 HYDRAULIC FLUSHING SYSTEM/REPAIR & MAINTENANCE GUIDE

### CLOSET or URINAL INSTALLATION



Mfg. in U.S.A. by Sloan Valve Co. under one or more of the following U.S. Patents: 4,309,781 3,778,812 3,038,347 3,273,819 3,327,992 3,334,948 3,399,800 3,558,137 D-164,772 D-164,773 D-218,325

This maintenance guide is intended to help aid you in maintaining and servicing the Sloan Hydraulic Series 900 Flushing System. If further assistance is required, contact your nearest Sloan Representative.

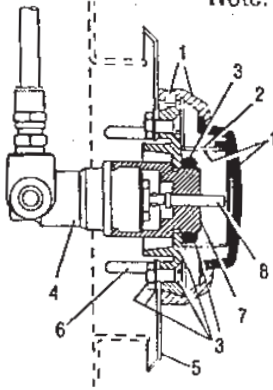
#### LIMITED WARRANTY

Sloan Valve Company warrants its products to be made of first class materials, free from defects of material or workmanship under normal use and to perform the service for which they are intended in a thoroughly reliable and efficient manner when properly installed and serviced, for a period of one year (Hand Dryers: 5 years) from date of purchase. During this period, Sloan Valve Company will, at its option, repair or replace any part or parts which prove to be thus defective if returned to Sloan Valve Company, at customer's cost, and this shall be the sole remedy available under this warranty. No claims will be allowed for labor, transportation or other incidental costs. This warranty extends only to persons or organizations who purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

**THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.**

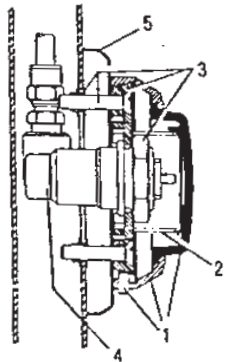
## Actuator Variations\*

\*Note: See opposite page for HY-33-A and HY-100-A Actuators



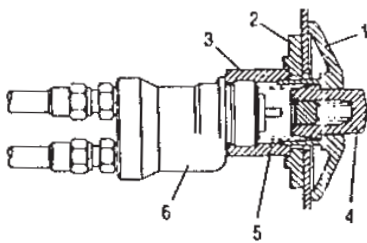
### HY-72-A Side Wall

1. HY-1000-A Push Button Kit includes Push Button, Flange, Spring & Set Screw
2. HY-3 Spring
3. HY-1001-A Mounting Flange Kit includes Mtg. Flange, Mtg. Nut, Screw (2), Nut (2), Washer (2)
4. HY-71-A Actuator Assembly
5. HY-40 Plate
6. EL-173 Screw (4)
7. HY-73 Extension Adaptor
8. HY-74 Extension Stem
9. HY-32-A Actuator Cartridge (see item #38 opposite page)



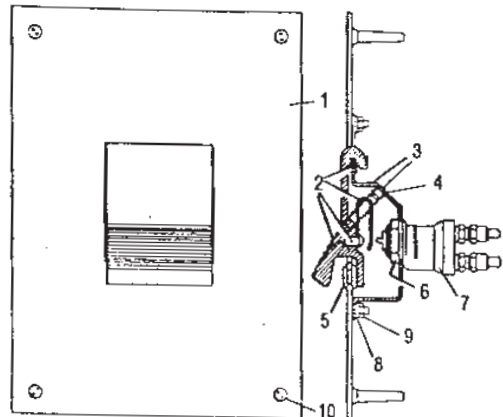
### HY-49-A Metal Partition

1. HY-1000-A Push Button Kit includes Push Button, Flange, Spring & Set Screw
2. HY-3 Spring
3. HY-1003-A Mounting Flange Kit includes Mtg. Flange, Mtg. Nut, Screw (2) & Tinnerman Nut (2)
4. HY-71-A Actuator Assembly
5. HY-46 Mounting Flange
6. HY-32-A Actuator Cartridge (see item #38 opposite page)



### HY-108-A Penal Ware Metal Button

1. HY-91 Flange
2. HY-94 Mounting Washer
3. HY-93 Mounting Nut
4. HY-86-A Push Button Assembly
5. EL-109 Spring
6. HY-50-A Actuator Assembly
7. HY-32-A Actuator Cartridge (see item # 38 opposite page)



### HY-51-A Foot Pedal

1. HY-82-A Wall Plate Assm.
2. HY-70-A Foot Pedal Assm.
3. HY-69-A Mounting Block Assm.
4. HY-59 Return Spring (2) req.
5. HY-57 Grommet
6. HY-2 Mounting Nut
7. HY-50-A Actuator Assm.
8. EL-157 Washer (4) req.
9. HY-61 Nut (4) req.
10. HY-99 Mounting Screw (4) req.
11. HY-32-A Actuator Cartridge (see item #38 opposite page)

## Parts & Kits List

1. A-72 RB Cover
2. A-71 Inside Cover
3. A-19-AC Relief Valve (Closet)
3. A-19-AU Relief Valve (Urinal)
4. A-15-A Disc
5. A-156-A Diaphragm
6. A-163-A Guide
7. A-36-A Inside Parts Kit for Closets, Servic Blowout & Siphon Jet Urinals
- A-37-A Inside Parts Kit for Washdown Uri
- A-38-A Retro Water Saver Kit - delivers 3'
8. V-551-A Vacuum Breaker Repair Kit
9. H-550 RB Stop Coupling
10. H-551-A RB Adj. Tailpiece 2 1/16" long
11. H-600-A 1" WH Bak-Chek RB Control Stop
- H-600-A 3/4" WH Bak-Chek RB Control Sto
12. H-541-AA 1" WH Repair Kit (not shown)
- H-543-AA 3/4" WH Repair Kit (not shown)
13. V-500-AA 3/4" x 10 1/2" Flush Connection
14. V-500-AA 1 1/2" x 13 1/2" Flush Connection
- V-500-AA 1 1/2" x 17 1/2" Flush Connection
- V-500-AA 1 1/2" x 22" Flush Connection
- V-500-AA 1 1/2" x 6" Flush Connection
- V-500-AA 1 1/2" x 7 1/2" Flush Connection
15. F-2-AA RB Coupling / 2 per pkg.
16. F-21 RB Elbow
17. F-2-A 1 1/2" Coupling Assembly
18. F-100 Outlet Tube - 4 3/4" 'L' Dim.
- F-100 Outlet Tube - 6 3/4" 'L' Dim.
- F-100 Outlet Tube - 8 3/4" 'L' Dim.
- F-100 Outlet Tube - 10 3/4" 'L' Dim.
- F-100 Outlet Tube - 12 3/4" 'L' Dim.
19. F-15-A Elbow & Tail - 3 3/4" 'L' Dim.
- F-15-A Elbow & Tail - 5 3/4" 'L' Dim.
- F-15-A Elbow & Tail - 7 3/4" 'L' Dim.
- F-15-A Elbow & Tail - 8 3/4" 'L' Dim.
- F-15-A Elbow & Tail - 9 3/4" 'L' Dim.
- F-15-A Elbow & Tail - 10 3/4" 'L' Dim.
20. F-2-A RB Spud Nut
21. HY-25 Valve Actuator Housing
22. A-6 RB Coupling Nut
23. HY-24 Tube Fitting / 2 req.
24. HY-35 Tube Fitting Nut / 2 req.
25. HY-30 Tubes 1/4" x 48" / 2 req.
26. HY-83-A Actuator Cartridge
27. HY-33-A Fixture Wall Push Button Assm.
28. HY-1000-A Push Button Kit
29. HY-3 Spring
30. HY-1001-A Mounting Flange Kit
31. HY-50-A Actuator Assembly
32. HY-29 Threaded Rod
33. HY-105 Spacer
34. HY-1002-A Mounting Strap Kit
35. HY-100-A Fixture Wall Metal Button
36. HY-111-A Metal Button Kit
37. EL-109 Spring
38. HY-32-A Actuator Cartridge

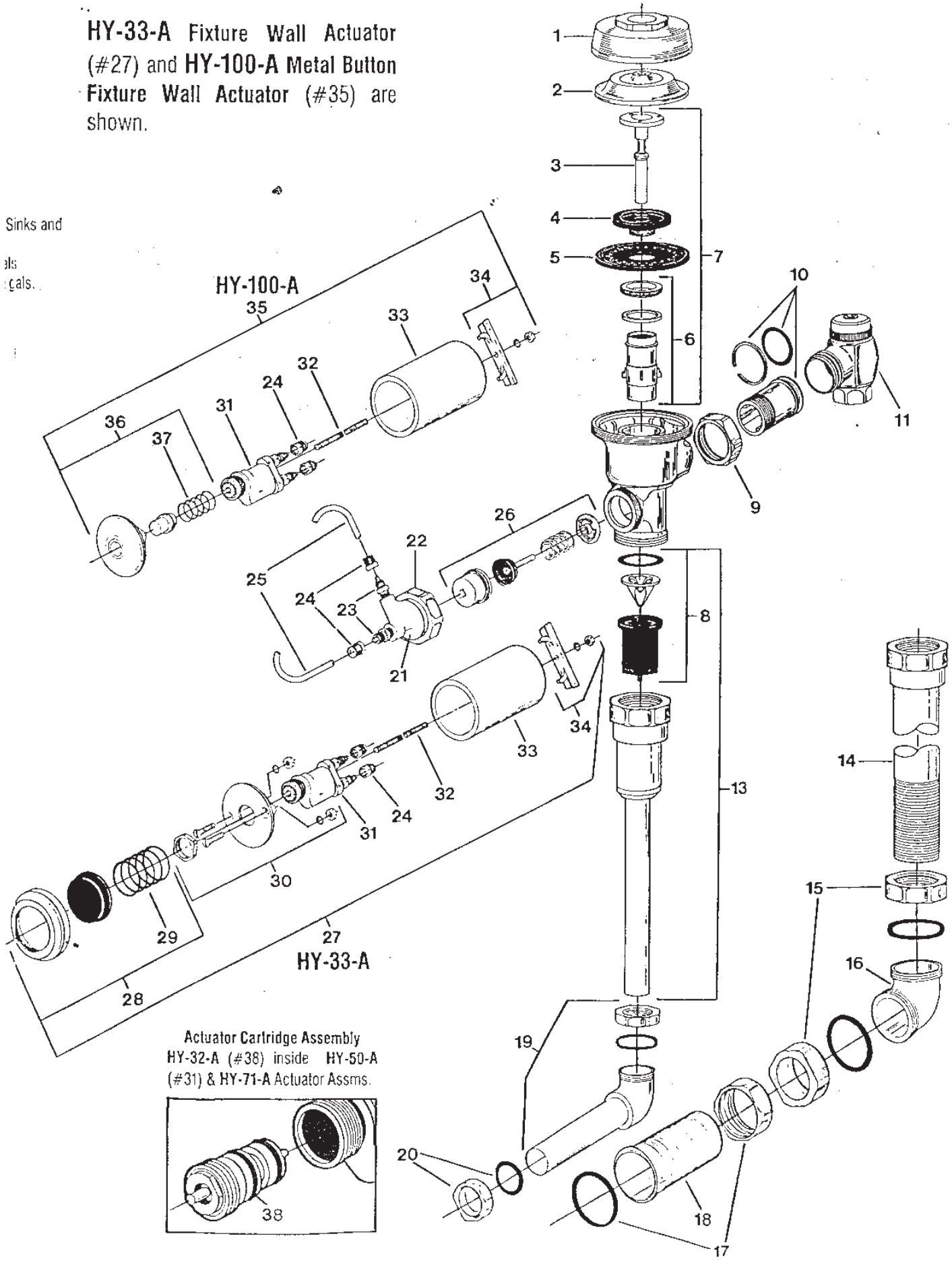
CP = Chrome Plate  
RS = Rough Brass

SD = Screwdriver  
WH = Wheel handle



**HY-33-A Fixture Wall Actuator (#27) and HY-100-A Metal Button Fixture Wall Actuator (#35) are shown.**

Sinks and  
 basins  
 faucets.





# Trouble-Shooting and Maintaining the Series 900 Hydraulic Flushing System

## The Push Button Actuator Assembly

**Problem:** Leakage occurring at the Push Button.

**Cause:** Damaged or worn seals or lime build up in the actuator cartridge.

**Solution:** Replace with new HY-32-A cartridge (item #38).

**Problem:** The Flushometer does not flush and a small amount of leakage is visible on the fixture.

- Cause:** a) Foreign material lodged in the cartridge.  
b) Damaged or worn seals or lime build up in the actuator cartridge.

**Solution:** a) Remove the cartridge and inspect for foreign material. Clean under running water.  
b) Replace with new HY-32-A cartridge (item #38).

**To remove the Actuator Cartridge:**

**A) If the actuator is a plastic Push Button:**

- 1) Loosen the set screw in the button flange and remove the button, flange and spring from the actuator body.
- 2) Unscrew the cartridge from the actuator body. NOTE: An automatic check valve in the actuator body allows removal of the cartridge without turning off the water.

**B) If the actuator is a metal Push Button:**

- 1) Remove the button or actuator assembly from the wall or fixture.
- 2) Disassemble the flange or button assembly from the actuator body.
- 3) Unscrew the cartridge from the actuator body. NOTE: The metal Push Button was designed to be vandal-proof and thus requires removal from the wall for servicing.

## The Flushometer Actuator Assembly

**Problem:** The Flushometer does not flush or flushes only once and will not flush a second time when the button is pushed.

**Cause:** The plunger is lodged in the actuator cartridge or the plunger by-pass hole is clogged.

**Solution:** Remove the actuator housing and cartridge from the Flushometer. Clean under running water. If cartridge parts are worn, deteriorated or limed up and the problem persists after cleaning, replace with new HY-83-A cartridge (item #26).

**To remove the Actuator from the Flushometer**

- 1) Turn off water at the stop.
- 2) Unscrew the housing coupling nut from the Flushometer.
- 3) Remove the actuator housing from the Flushometer. The tubing connections can be left intact.
- 4) Remove the actuator cartridge from the Flushometer body. Care should be taken so that upon removal the actuator does not abruptly separate due to spring compression within. If the actuator cartridge is lodged in the body cavity, grip the exposed portion gently with a pair of channel-lock pliers and rotate back and forth to loosen the "O" ring seal.
- 5) Separate the actuator housing to reveal the spring and plunger.

## Servicing the Flushometer

**Problem:** The Flushometer does not function.

**Cause:** The control stop or main valve is closed.

**Solution:** Open the control stop or the main valve.

**Problem:** Insufficient volume of water to adequately siphon the fixture.

- Cause:** a) The control stop is not open enough.  
b) Urinal Flushometer parts installed in a Closet Flushometer.  
c) Inadequate volume of pressure at the supply.

**Solution:** a) Adjust the control stop for desired delivery of water.  
b) Replace inside Urinal Flushometer parts with proper Closet Flushometer parts.  
c) If no gauges are available to properly measure the supply pressure or the volume of water at the Flushometer, then completely remove the entire Diaphragm Assembly (item #7) and open the control stop to allow water to pass through the empty Flushometer. Make sure that the supply is adequate enough to siphon the fixture. If this does not prove satisfactory, then steps should be taken to increase the pressure and/or supply.

**Problem:** The Flushometer closes off immediately.

- Cause:** a) A ruptured or damaged diaphragm.  
b) An enlarged by-pass orifice from corrosion or damage.

**Solution:** Install inside Parts Kit (item #7) to correct the problems.

**Problem:** The length of the flush is too short.

- Cause:** a) The Diaphragm Assembly and the Guide Assembly are not hand tight.  
b) An enlarged by-pass orifice from corrosion or damage.  
c) A Urinal relief valve (A-19-AU item #3) in a Closet Flushometer.

**Solution:** a) Screw the two assemblies hand tight.  
b) Install inside Parts Kit (item #7).  
c) Install Closet Relief Valve (A-19-AC item #3).

**Problem:** The length of the flush is too long or fails to close off.

- Cause:** a) The relief valve (A-19-A) is not sealing properly or the by-pass orifice is clogged because of foreign material or is closed by a gelatinous film from "overtreated" water.  
b) The line pressure has dropped and it is not sufficient enough to force the relief valve to sit properly.

**Solution:** a) Disassemble the working parts and wash them thoroughly. NOTE: The size of the by-pass orifice is of the utmost importance for the proper metering of water into the upper chamber of the Flushometer. DO NOT enlarge or damage this orifice by sticking a pin or other small objects into it in order to clean it.  
b) Shut off all control stops until pressure has been restored, then open them again.

**Problem:** Water splashes out of the fixture.

- Cause:** a) The supply volume is more than necessary.  
b) Lime accumulation on the vortex or spreader holes of the fixture.

**Solution:** a) Throttle down the control stop.  
b) Remove the lime build up.

**Problem:** The flush is not considered "Quiet".

- Cause:** a) The control stop may not be adjusted for quiet operation.  
b) The fixture may be contributing to the noise.  
c) Conditions in the piping system may be contributing to the noise.

**Solution:** a) Adjust the control stop for quiet operation while the Flushometer is flushing, bearing in mind the fixture requirements for proper siphonage.  
b) Determine that the noise is in the fixture by covering the fixture with a "quilt" or by placing cardboard under the toilet seat, to separate the bowl noise from the Flushometer noise. If the fixture proves to be noisy, it should be replaced by a quiet-action fixture.  
c) A degree of high pressure in the piping might be dealt with by adjustments of the control stop. Other noises which may be created by loose pipes, lack of air chambers, inadequate pipe sizes for pressure, etc., must be taken up with the building engineer.

# SLOAN

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