



Water Closet Flushometer for 1-1/2" Top Spud

Models:
AEF-802-CT-11 (HET)
AEF-802-CT-12 (HET)
AEF-802DF-CT-16 (HET)
AEF-802-CT-16 (LC)
AEF-802-CT-35



Urinal Flushometer for 3/4" Top Spud

Models:
AEF-802-CU-18 (HEU)
AEF-802-CU-05 (HEU)
AEF-802-CU-10 (LC)
AEF-802-CU-15

PRIOR TO INSTALLATION

!!! IMPORTANT !!!

PLEASE READ THIS MANUAL ENTIRELY TO INSURE PROPER PRODUCT INSTALLATION AND OPERATION. IF YOU HAVE ANY QUESTIONS OR REQUIRE FURTHER ASSISTANCE PLEASE CONTACT YOUR LOCAL AMTC REPRESENTATIVE OR CALL AMTC TECHNICAL SUPPORT AT 1-800-874-7822.

Before you install the flushometer, make sure that the items listed below are installed.

- Fixture
- Drain Line
- Water Supply Line

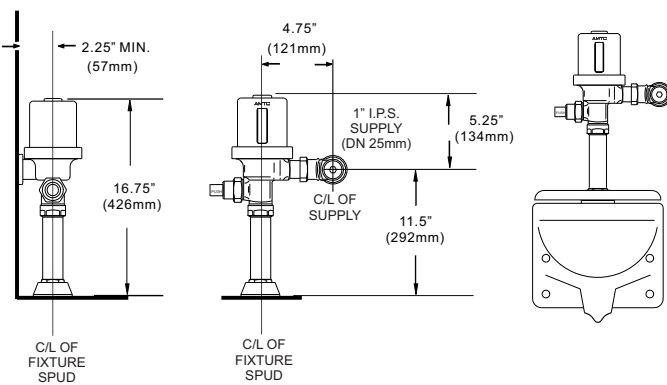
IMPORTANT:

- **ALL PLUMBING SHOULD BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS. ONCE YOU INSTALL A SPECIFIC MODEL, IT CANNOT BE ADJUSTED UP OR DOWN**
- **WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE**
- **FLUSH ALL WATER LINES PRIOR TO MAKING CONNECTIONS**

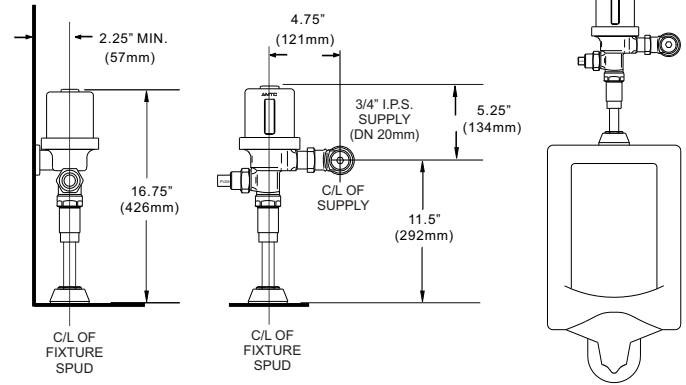
AMTC's flushometers are designed to operate with 10 to 100 psi (69 to 689 kPa) of water pressure. THE MINIMUM PRESSURE REQUIRED TO THE VALVE IS DETERMINED BY THE TYPE OF FIXTURE SELECTED. Consult fixture manufacturer for minimum pressure requirements. Most High Efficiency (HET) and Low Consumption (LC) water closets (toilets) require a minimum flowing pressure of 25 psi (172 kPa).

ROUGH-INS

Rough-In for Water Closet (Toilet) Models



Rough-In for Urinal Models



!!! IMPORTANT !!!

WHEN MOUNTED ON AN ADA ACCESSIBLE BOWL, THE ROUGH-IN TO THE SUPPLY INLET SHOULD BE NO HIGHER THAN 37-1/2" OR THE SIDE PUSH BUTTON WILL EXCEED MAX. HEIGHT ALLOWANCES UNDER ADA GUIDELINES. CHECK YOUR LOCAL ADA REQUIREMENTS AS THEY MAY VARY.

TOOLS REQUIRED FOR INSTALLATION

- Flat Head Screwdriver
- Pliers
- Smooth Jawed Spud Wrench

!!! IMPORTANT !!!

DO NOT USE TOOTHED TOOLS TO INSTALL OR SERVICE THE PRODUCT AS IT MAY DAMAGE THE CHROME.

!!! IMPORTANT !!!

NEVER OPEN CONTROL STOP WHERE THE WATER FLOW EXCEEDS THE FLOW CAPABILITY OF THE FIXTURE. IN THE EVENT OF A FAILURE, THE FIXTURE MUST BE ABLE TO ACCOMMODATE A CONTINUOUS FLOW FROM THE VALVE.

!!! IMPORTANT !!!

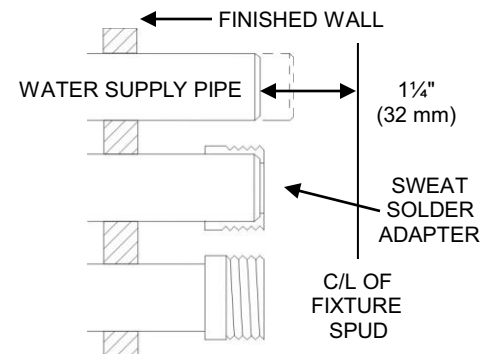
DO NOT USE PIPE SEALANT OR PLUMBING GREASE ON ANY COMPONENT OF THE PRODUCT EXCEPT FOR THE CONTROL STOP INLET.

!!! IMPORTANT !!!

THIS PRODUCT CONTAINS COMPONENTS THAT ARE SUBJECT TO NORMAL WEAR. MAKE SURE TO CHECK THESE COMPONENTS OCCASIONALLY AND REPLACE AS NEEDED TO MAINTAIN THE PRODUCT'S PERFORMANCE.

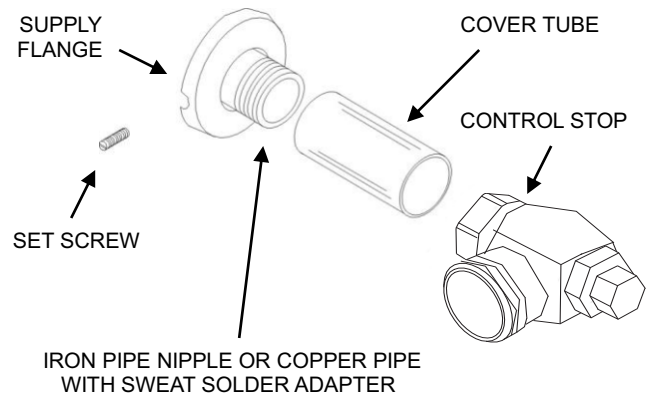
INSTALL OPTIONAL SWEAT SOLDER ADAPTER

1. Measure from finished wall to C/L of fixture spud. Cut pipe 1/4" (32 mm) shorter than this measurement. Chamfer O.D. and I.D. of water supply pipe.
2. Slide thread adapter fully onto pipe.
3. Sweat solder the adapter to pipe.



INSTALL COVER TUBE, WALL FLANGE AND CONTROL STOP TO SUPPLY PIPE

1. Measure from finished wall to first thread of adapter or threaded supply pipe. Cut Cover Tube to this length.
2. Slide Cover Tube over pipe. Slide Supply Flange over Cover Tube until against wall.
3. Thread Control Stop onto pipe. Tighten with wrench
4. Tighten Set Screw with a 1/16" hex wrench.

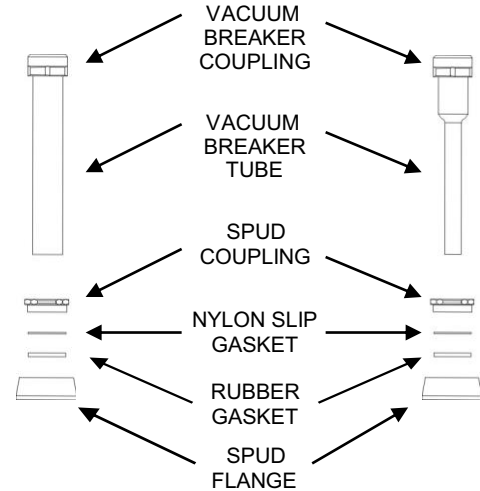


INSTALL VACUUM BREAKER FLUSH CONNECTION

1. Slide Spud Coupling, Nylon Slip Gasket, Rubber Gasket, and Spud Flange over Vacuum Breaker Tube.
2. Insert Tube into Fixture Spud.
3. Hand tighten Spud Coupling onto Fixture Spud.

Water Closet Models:
 AEF-802-CT-11 (HET)
 AEF-802-CT-12 (HET)
 AEF-802DF-CT-16 (HET)
 AEF-802-CT-16 (LC)
 AEF-802-CT-35

Urinal Models:
 AEF-802-CU-18 (HEU)
 AEF-802-CU-05 (HEU)
 AEF-802-CU-10 (LC)
 AEF-802-CU-15



INSTALL FLUSHOMETER AND PUSH BUTTON ASSEMBLY

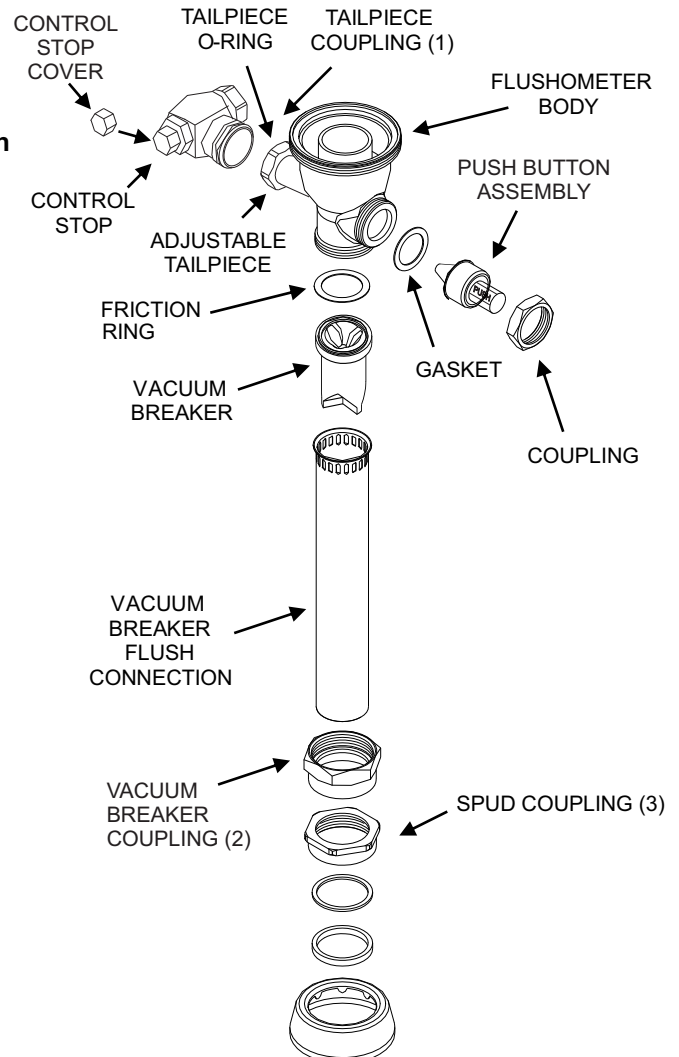
1. Lubricate Tailpiece O-ring with water. Insert Adjustable Tailpiece into Control Stop. Tighten Tailpiece Coupling by hand.
2. Align Flushometer directly above the Vacuum Breaker Flush Connection.
3. Tighten Vacuum Breaker Coupling by hand.

!!! IMPORTANT !!!
 DO NOT USE PIPE THREAD SEALANT

NOTE:

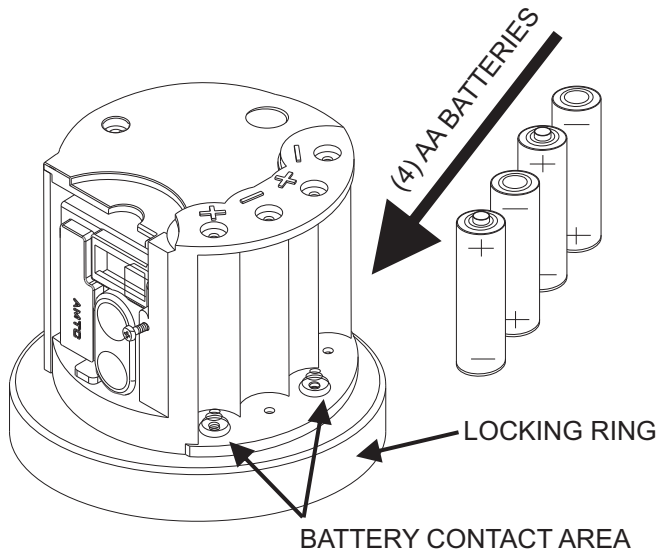
Maximum adjustment of the AMTC Adjustable Tailpiece is 1/2" (13 mm) In or Out from the standard 4-3/4" (121 mm) (center line of Flushometer to center line of Control Stop). If rough-in measurement exceeds 5-1/4" (133 mm), contact factory for longer tailpiece.

4. Align Flushometer Body and securely tighten first the Tailpiece Coupling (1), then the Vacuum Breaker Coupling (2), and finally the Spud Coupling (3). Use a wrench to tighten these couplings in the order shown.
5. Install the Gasket and the Push Button Assembly. Insert the Push Button Assembly into the opening in the Flushometer Body. Securely tighten the Coupling with a wrench.
6. Remove Control Stop Cover and proceed to Installing the Electronic Operator.



WARNING: PLEASE READ BEFORE INSTALLING THE ELECTRONIC OPERATOR

PLEASE READ THE IMPORTANT NOTES BELOW BEFORE INSTALLING THE BATTERIES INTO THE UNIT!



PLEASE DO THE FOLLOWING BEFORE INSTALLING THE BATTERIES:

1. DRY YOUR HANDS BEFORE HANDLING THE BATTERIES.
2. MAKE SURE BATTERY CONTACT AREA IS COMPLETELY DRY AFTER INSTALLING THE LOCKING RING AND BEFORE INSTALLING THE BATTERIES!
3. MAKE SURE THAT BATTERIES ARE INSERTED IN PROPER POSITION (+, -, +, -).

IMPORTANT NOTE:

It is highly recommended that you install the unit and tighten the locking ring before installing the batteries. Then check that there is no left over water in the battery contact area as shown by the arrows in the diagram to the left. If there is water present use a towel and wipe off all the water before installing the batteries to avoid any possible damage to the batteries and/or the unit.

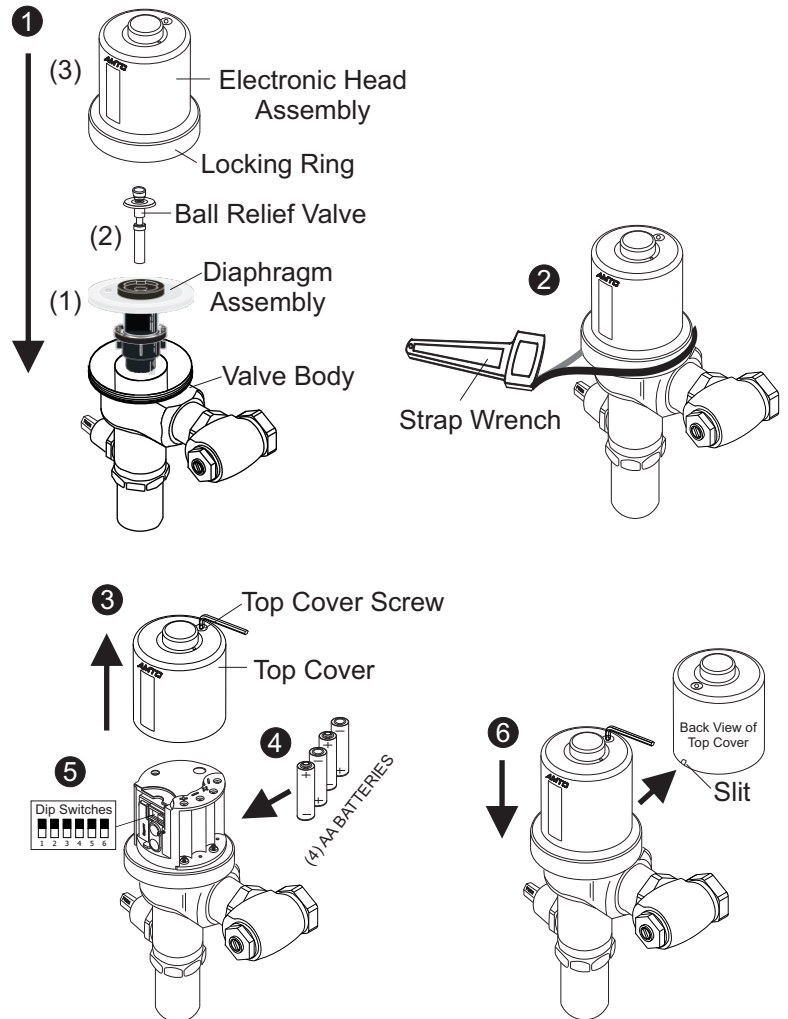
INSTALL THE ELECTRONIC OPERATOR

1. Insert Diaphragm Assembly, Ball Relief Valve, and Electronic Head Assembly into Valve Body.
Note: Sensor Window must face directly forward.

2. Thread Locking Ring onto Valve Body.
Use Strap Wrench provided to tightly secure Locking Ring.

Important: The Locking Ring must be installed down past the valve body threads by at least one thread to allow Locking Ring to securely tighten.

3. Using Allen Wrench provided loosen the Top Cover Screw and remove Top Cover.
4. Insert (4) AA batteries into battery compartment.
(Make sure to have dry hands when installing batteries and that battery contact area is dry).
Note: Unit will activate once, and a red LED will blink (5) times indicating unit is powered on.
5. Make any dip switch adjustments if necessary.
(see page 6 for switch adjustment guide).
6. Re-Install Top Cover and tighten Top Cover Screw
(Make sure Slit on back of top cover inserts into place).
7. Open Control Stop (counterclockwise) to turn water ON.

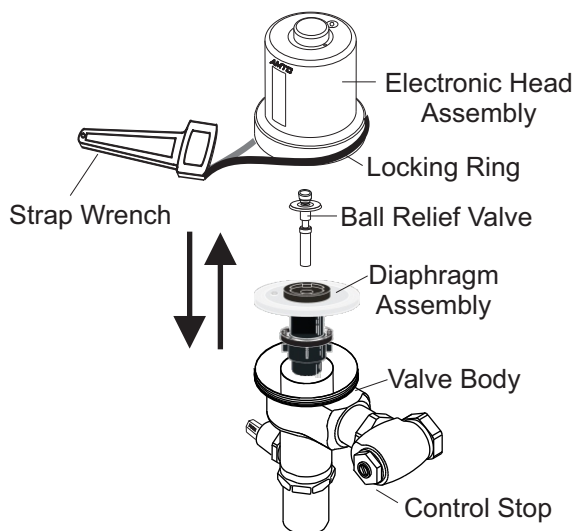


HYBRIDFLUSH® INTRODUCTION

Thank you for purchasing the HYBRIDFLUSH® automatic/manual flush valve system by Advanced Modern Technologies Corporation (AMTC). The patented “hybrid” design gives the user the ability to flush the fixture by touch-free infrared sensor activation or by a push button located on the top of the unit. A “true mechanical” back-up flush option by way of the side push button allows the fixture to flush manually even when the battery power is drained or absent.

FLUSH OUT SUPPLY LINE AND CLEAN DEBRIS ON INSIDE PARTS

1. Make sure Control Stop is CLOSED and use Strap Wrench to remove Electronic Head Assembly, Ball Relief Valve, and Diaphragm Assembly.
2. Check for any debris in the diaphragm bleed hole and O-ring on Ball Relief Valve and clean accordingly.
3. Re-install Diaphragm Assembly, Ball Relief Valve, and Electronic Head Assembly and tighten Locking Ring with Strap Wrench.
4. Open Control Stop (counterclockwise) to turn water ON.



ADJUST CONTROL STOP

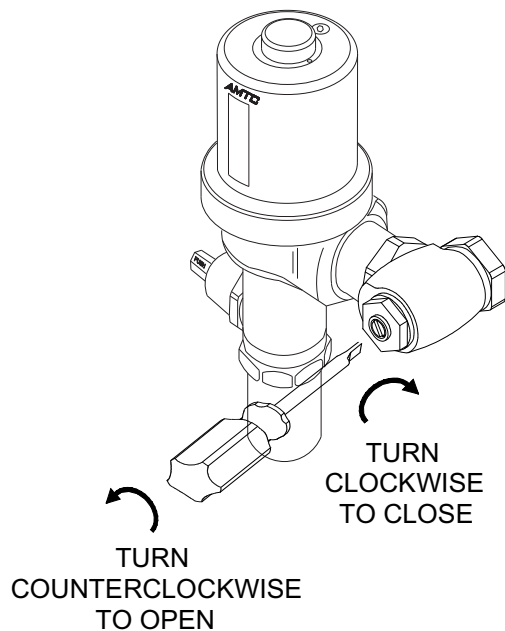
1. Open Control Stop COUNTERCLOCKWISE one FULL turn from closed position.
2. Activate Flushometer.
3. Adjust Control Stop after each flush until the rate of flow delivered properly cleanses the fixture.

!!!IMPORTANT!!!

AMTC's flushometers are engineered for quiet operation. Excessive water flow creates noise, while too little water flow may not allow the fixture to flush properly. Proper adjustment is made when plumbing fixture is cleansed after each flush without splashing out from the lip and a quiet flushing cycle is achieved.

!!!IMPORTANT!!!

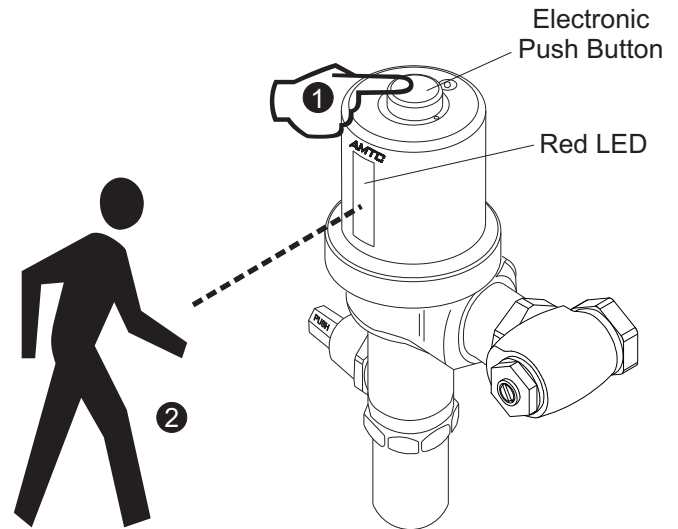
Never open Control Stop to where the water flow from the valve exceeds the flow capability of the fixture. In the event of a valve failure, the fixture must be able to accommodate a continuous flow from the valve.



SENSOR DISTANCE ADJUSTMENT USING TOP PUSH BUTTON

Directions:

- Press (unit will flush once) and hold down Electronic Push Button until you see a blinking red LED in sensor window. Release Electronic Push Button, wait one second, then press and immediately release Electronic Push Button to put unit into sensor distance setup mode.
 - While in setup mode, stand at desired distance (red LED will continuously blink as long as you are within the allowed sensor reading range). Remain still at desired distance until red LED becomes solid (unit will flush once).
- Sensor is now set at the new distance.

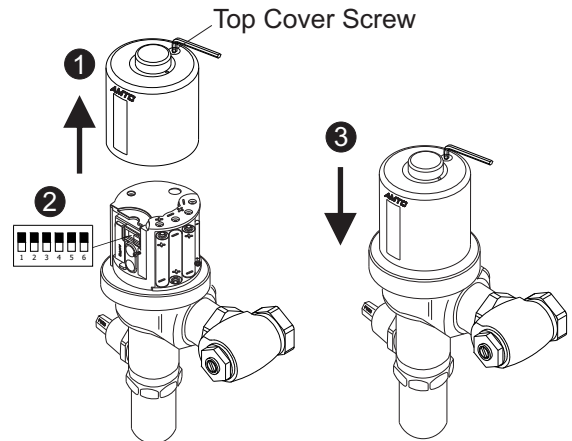


DIP SWITCH ADJUSTMENTS

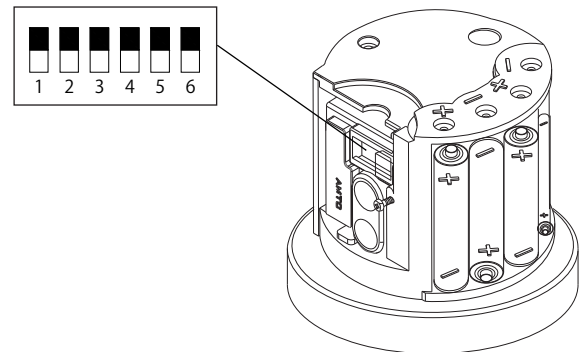
To make dip switch adjustments please refer to the following dip switch adjustment guide.

Directions:

- Using Allen Wrench provided loosen the Top Cover Screw and remove Top Cover.
- Make adjustments (refer to DIP SWITCH ADJUSTMENT GUIDE below).
- Re-install Top Cover and tighten Top Cover Screw.



DIP SWITCH ADJUSTMENT GUIDE		
SENSOR DISTANCE 1 2 18" (45 CM) 1 2 22" (55 CM) 1 2 26" (65 CM) 1 2 30" (75 CM)	WATER SAVER MODE (URINAL ONLY) 3 WATER SAVER OFF 3 WATER SAVER ON (FLUSH EVERY OTHER USER) GHOST FLUSH MODE 4 GHOST FLUSH OFF 4 GHOST FLUSH ON (FLUSH EVERY 24 HOURS)	FLUSH VOLUME MODE 5 NORMAL FLUSH 5 HI-VOLUME FLUSH FLUSH DELAY MODE 6 FLUSH DELAY OFF 6 FLUSH DELAY ON (3-SECOND DELAY)



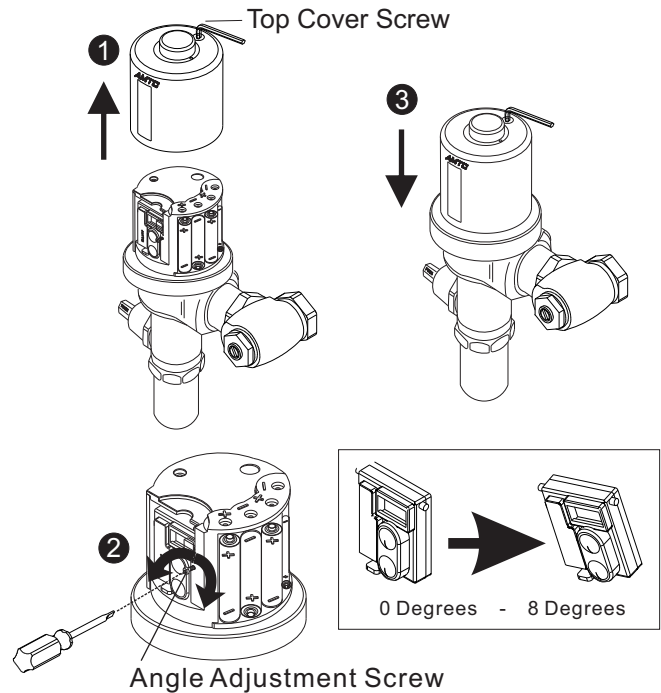
SENSOR ANGLE ADJUSTMENT

Directions:

1. Using Allen Wrench provided loosen the Top Cover Screw and remove Top Cover.
2. Using a small screwdriver slowly turn the Angle Adjustment Screw clockwise to increase the sensor angle downward or counterclockwise to decrease the angle. (Sensor angle can be adjusted downward a maximum of 8 degrees).

Note: When the sensor is angled downward, the sensor beam becomes longer. Therefore, the sensor range must be offset by setting a shorter sensor range (see sensor distance adjustment on page 6).

3. Re-install Top Cover and tighten Top Cover Screw.



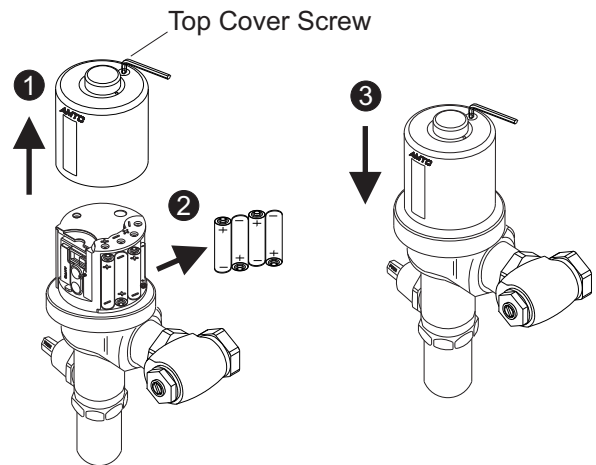
BATTERY REPLACEMENT

Directions:

1. Using Allen Wrench provided loosen the Top Cover Screw and remove Top Cover.
2. Remove old batteries and Install (4) new AA Batteries. Make sure that all (4) batteries are inserted correctly in the proper position (+, -, +, -).

Note: Unit will activate (flush) once, and a red LED will blink (5) times indicating unit has power. If red LED does not come on, then batteries might not be making proper contact.

3. Re-install Top Cover and tighten Top Cover Screw.



CARE AND MAINTENANCE

1. Do not use any abrasive or chemical cleaners to clean the unit as they may discolor or damage the finish of the product.
2. Do not directly hose down unit with water to avoid possible damage to electronics or batteries.
3. Maintain unit's appearance by wiping unit down using a soft, damp cloth or microfiber towel to remove any residue.

TROUBLESHOOTING

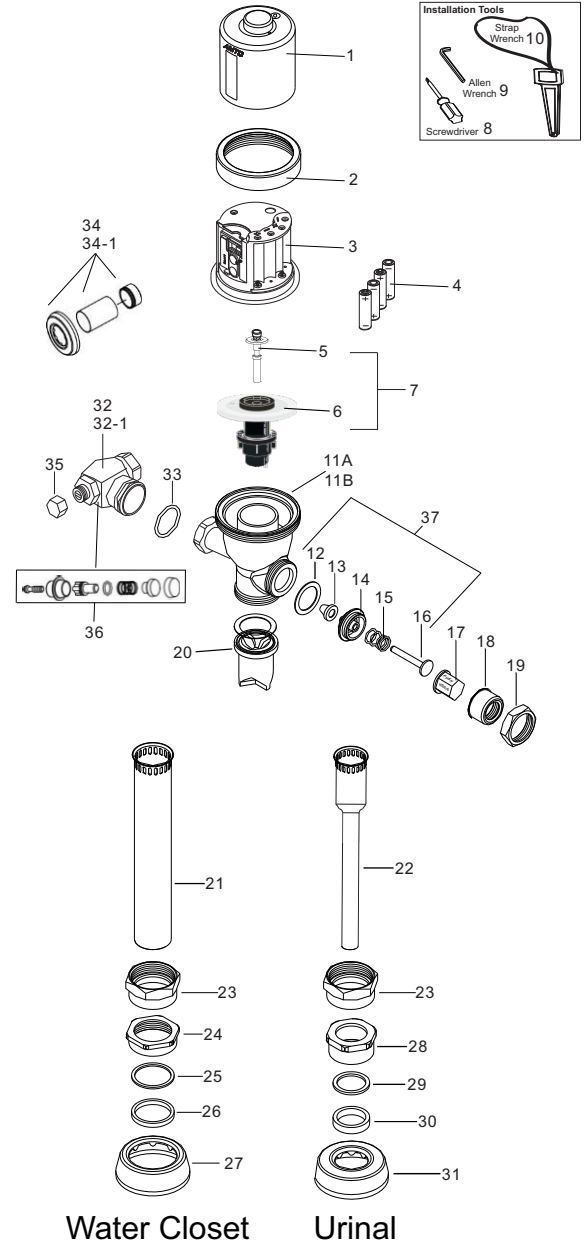
PROBLEM	SOLUTION
Red LED does not come on in sensor window after installation of batteries	Check that all (4) AA batteries are installed correctly and are making proper contact. Remove all (4) AA batteries and re-install them. Make sure that at least (1) battery is not drained. Replace with new batteries if necessary.
Solid red LED stays on in sensor window	Drained battery indicator (batteries are dead). Replace with new batteries. Water got inside the battery compartment causing damage to battery contacts and batteries. Clean battery contacts with metal brush and replace all batteries with new batteries.
Unit does not flush electronically	Make sure that water is turned on. Make sure to stand/sit within the sensor range for at least (10) seconds or until red LED blinks once before you move away. Make sure that all (4) AA batteries are installed correctly and are making proper contact. Make sure that sensor range is properly adjusted (refer to page 6 of this manual). Remove and re-install the unit. Replace the diaphragm (refer to diaphragm repair kit chart on page 10 of this manual).
Unit flushes sometimes electronically	Make sure you are within sensor range to activate the unit. Watch red LED blink once, then move away from the sensor range. Make sure that sensor range is properly adjusted (refer to page 6 of this manual). Adjust sensor angle downward to read lower (refer to page 7 of this manual). Check for dirt or debris in the diaphragm. Remove and re-install the unit.
Unit does not shut off	Check for dirt or debris in the bleed hole of diaphragm. Remove all (4) AA batteries and re-install. Remove and re-install the unit. Replace the diaphragm (refer to diaphragm repair kit chart on page 10 of this manual).
Unit is not picking up/reading user	Sensor range is set too short. Make sure that sensor range is properly adjusted (refer to page 6 of this manual).
Unit does not pick up/read user on high toilet application, or small children on urinal	Adjust sensor angle downward to read lower (refer to page 7 of this manual). Make sure that sensor range is properly adjusted (refer to page 6 of this manual).
Unit does not activate if sensor angled downward	Make sure that sensor range is properly adjusted (refer to page 6 of this manual).
Sensor is reading opposite wall or mirror and activating a ghost flush	Sensor range is set too long and needs to be shortened. Adjust sensor range to read shorter (refer to page 6 of this manual).
Electronic flush is too short	Make sure that correct diaphragm is being used (refer to page 10 of this manual). Move dip switch #5 up to activate high volume flush mode (refer to page 6 of this manual). Turn angle stop screw counterclockwise to increase the water volume.
Electronic flush is too long	Make sure that correct diaphragm is being used (refer to page 10 of this manual). Replace diaphragm. Turn angle stop screw clockwise to decrease the water volume.
Locking ring does not fit valve body correctly	Check that you have the correct locking ring. Check that threading on valve body is not damaged. Replace valve body if necessary. Locking ring may be damaged. Replace the locking ring if necessary.

Please call AMTC Technical Support at 1-800-874-7822 if further assistance is needed.

PARTS LIST (REFER TO FIGURE A)

Ref. No.	Part No.	Description
1	TC802	Top Cover
2	LR802-S	Locking Ring for AMTC Flush Body
3	EMA802	Electronic Module Assembly
4	AABAT	AA Batteries (Set of 4)
5	DI-BRV	Ball Relief Valve with Plunger (See chart below for flush volumes)
6	DI-SH	Diaphragm Assembly (See chart below for flush volumes)
7	DI-SRKH	Diaphragm Repair Kit (See chart below for flush volumes)
8	SCDR802	Flat-Head Screwdriver
9	AW802	Allen Wrench
10	STRW802	Strap Wrench
11A	MF07	Valve Body
11B	MF07-18	Valve Body for 0.125gpf Urinal
12	MF08-A-1	Button Washer
13	MF08-A-2	Button Hycar Seal
14	MF08-A-3	Button Bushing
15	MF08-A-4	Button Spring
16	MF08-A-5	Button Pin
17	PB	Button
18	MF08-B-23	Button Socket
19	MF08-B-4	Button Coupling Nut
20	MF09-123	Vacuum Breaker Assembly
21	MF10-A-2T	Tail Piece 1-1/2" (38mm) x 9" (228mm)
22	MF10-A-2U	Tail Piece 3/4" (19mm) x 9" (228mm)
23	MF10-A-1	Tail Piece Coupling Nut
24	MF11-A-1T	Inside Nut for Water Closet 1-1/2" (38mm)
25	MF11-A-2T	Teflon Washer for Water Closet 1-1/2" (38mm)
26	MF11-A-3T	Rubber Washer for Water Closet 1-1/2" (38mm)
27	MF11-A-4T	Escutcheon for Water Closet 1-1/2" (38mm)
28	MF11-D-1U	Inside Nut for Urinal 3/4" (19mm)
29	MF11-D-2U	Teflon Washer for Urinal 3/4" (19mm)
30	MF11-D-3U	Rubber Washer for Urinal 3/4" (19mm)
31	MF11-D-4U	Escutcheon for Urinal 3/4" (19mm)
32	MF1314-3/4	Control Stop Assembly for Urinal (3/4")
32-1	MF1314-1	Control Stop Assembly for Water Closet (1")
33	MF15-2	Control Stop O-Ring
34	MF11-567	Flange Kit for Urinal (3/4")
34-1	MF16-123	Flange Kit for Water Closet (1")
35	MF13-C	Control Stop Screw Cap

FIGURE A



REPAIR KITS

Ref. No.	Part No.	Description
20	MF09-123	Vacuum Breaker Assembly
33	MF15-2	Control Stop O-Ring
36	MF13-1-7	Control Stop Repair Kit
37	MF08-A-123	Push Button Repair Kit
20,33,36,37	MF-RK	Flushometer Rebuild Kit (Includes Vacuum Breaker Assembly, Control Stop O-Ring, Control Stop Repair Kit, Push Button Repair Kit)

CONTINUED →

PARTS LIST CONTINUED (REFER TO FIGURE A)

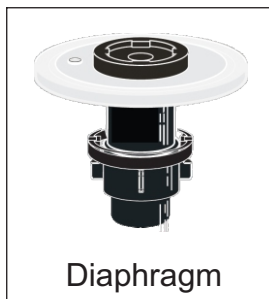
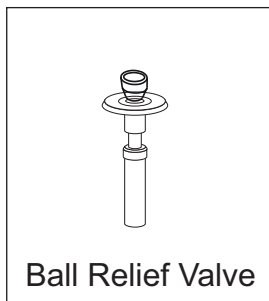
DIAPHRAGM REPAIR KITS

Ref. No.	Part No.	Description
7	DI-SRKH-U18	Diaphragm Repair Kit for Urinal - 0.125gpf
7	DI-SRKH-U05	Diaphragm Repair Kit for Urinal - 0.5gpf
7	DI-SRKH-U10	Diaphragm Repair Kit for Urinal - 1.0gpf
7	DI-SRKH-U15	Diaphragm Repair Kit for Urinal - 1.5gpf
7	DI-SRKH-T11	Diaphragm Repair Kit for Toilet- 1.1gpf
7	DI-SRKH-T12	Diaphragm Repair Kit for Toilet- 1.28gpf
7	DI-SRKH-T16	Diaphragm Repair Kit for Toilet- 1.6gpf
7	DI-SRKH-T35	Diaphragm Repair Kit for Toilet- 3.5gpf



BALL RELIEF VALVES & DIAPHRAGMS

Ref. No.	Part No.	Description
5	DI-BRV-U18	Ball Relief Valve for Urinal - 0.125gpf
5	DI-BRV-U05	Ball Relief Valve for Urinal - 0.5gpf
5	DI-BRV-U10	Ball Relief Valve for Urinal - 1.0gpf
5	DI-BRV-U15	Ball Relief Valve for Urinal - 1.5gpf
5	DI-BRV-T11	Ball Relief Valve for Toilet- 1.1gpf
5	DI-BRV-T12	Ball Relief Valve for Toilet- 1.28gpf
5	DI-BRV-T16	Ball Relief Valve for Toilet- 1.6gpf
5	DI-BRV-T35	Ball Relief Valve for Toilet- 3.5gpf
6	DI-SH-U18	Diaphragm for Urinal - 0.125gpf
6	DI-SH-U05	Diaphragm for Urinal - 0.5gpf
6	DI-SH-U10	Diaphragm for Urinal - 1.0gpf
6	DI-SH-U15	Diaphragm for Urinal - 1.5gpf
6	DI-SH-T11	Diaphragm for Toilet- 1.1gpf
6	DI-SH-T12	Diaphragm for Toilet- 1.28gpf
6	DI-SH-T16	Diaphragm for Toilet- 1.6gpf
6	DI-SH-T35	Diaphragm for Toilet- 3.5gpf



Parts Price Lists are available online at www.amtcorporation.com or call factory for more information.

NOTE: The information contained in this document is subject to change without notice.

LIMITED WARRANTY

AMTC WARRANTS ITS PRODUCTS TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF FIVE (5) YEARS FROM DATE OF PURCHASE, WHEN PROPERLY INSTALLED AND UNDER NORMAL USE AND SERVICE. THESE PROVISIONS DO NOT INCLUDE THE BATTERIES SHIPPED WITH THE PRODUCTS. A DEFECTIVE PRODUCT MAY BE RETURNED TO AMTC OR ITS AUTHORIZED REPRESENTATIVES WITHIN FIVE (5) YEARS FROM DATE OF PURCHASE WITH THE PROPER INVOICE OF PURCHASE. AMTC AT ITS DISCRETION WILL REPLACE OR REPAIR DEFECTIVE PRODUCT AT NO CHARGE. CLAIMS FOR LABOR, TRANSPORTATION, AND ANY OTHER INCIDENTAL COSTS WILL NOT BE ALLOWED. AMTC WILL NOT BE RESPONSIBLE FOR ANY CONSIDERABLE DAMAGES OF ANY KIND WHATSOEVER.

FOR TECHNICAL SUPPORT PLEASE CALL TOLL FREE 1-800-874-7822 OR VISIT OUR WEBSITE AT WWW.AMTCORPORATION.COM.

MAKE SURE TO VISIT OUR WEBSITE PERIODICALLY FOR INFORMATION ON NEW PRODUCTS AND TO DOWNLOAD ANY IMPORTANT PRODUCT DOCUMENTS THAT YOU MAY NEED IN THE FUTURE.

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