

HYDROTEK INTERNATIONAL, INC.

957 N. Pennsylvania Avenue, Winter Park, FL 32789 800-922-9883 Fax: 407-647-0471

OPERATION & MAINTENANCE MANUAL

HYDROTEK MODEL #HB8000C-CB-WB & HB8000C-D1B-WB

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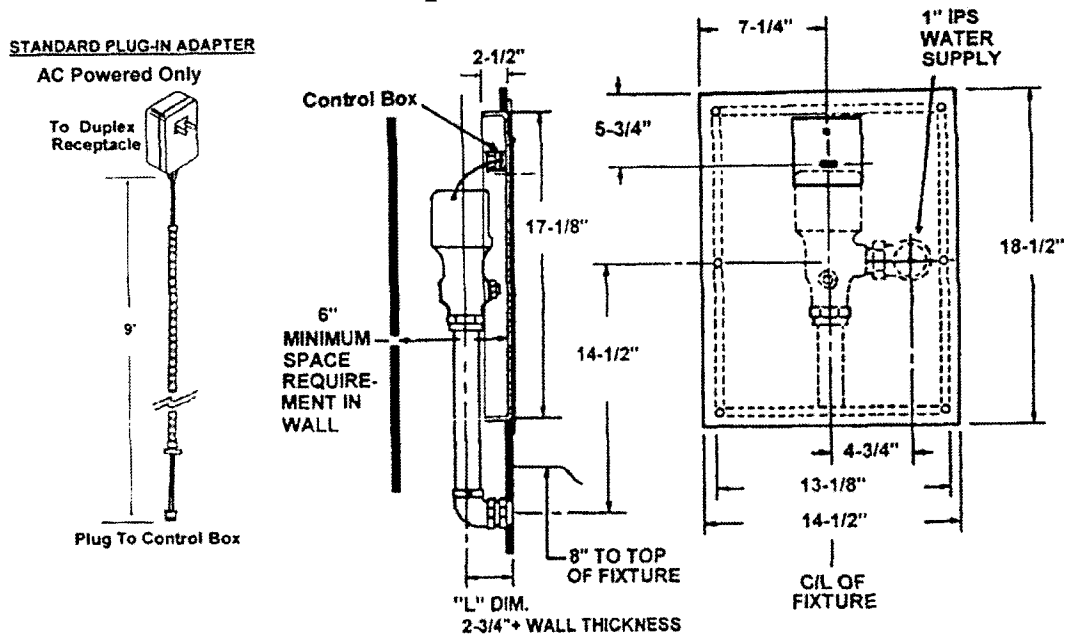
PHONE: 800-922-9883

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HYDROTEK INTERNATIONAL, INC.

Model H-8000C-CB-WB Flush Valve (AC Powered), Concealed Closet, Back Spud with Wall Box
 Model HB-8000C-CB-WB Flush Valve (Battery Powered), Concealed Closet, Back Spud with Wall Box

Specifications



This smooth and quiet concealed flush valve for closet is equipped with adjustable sensor with electronic override button, rough brass finish, solenoid operator, adjustable tailpiece, vacuum breaker, 1" IPS Angle Stop, elbow flush connections, spud connection for 1-1/2" Back Spud. Exposed flush valve parts are chrome plated. Includes Stainless Steel Wall Box and Cover Plate with manual over-ride button.

STANDARD PACKAGE INCLUDES:

- (1) Flush Valve (Rough Brass Finish)
- (1) 1" Angle Stop Valve (Rough Brass Finish)
- (1) Sweat Solder Kit
- (1) Vacuum Breaker / Flush Tube
- (1) 1-1/2" Back Spud ELL Connection
- (1) Back Spud Coupling
- (1) Electronic Control Box with Sensor
- (1) Plug-in Power Adapter (AC Powered)
- (4) AA Alkaline Batteries with Battery Holder (Battery Powered)
- (1) 13" X 17" Stainless Steel Wall Box with Cover Plate and Vandal Resistant Screws.

OPTIONAL ACCESSORIES (AC Powered):

- HC-010 Multi-Unit Power Adapter. Powers up to 8 Flush Valve units up to 100 feet.

PLUMBING SPECIFICATIONS:

| Model | Fixture | Supply | Spud | Flow Rate |
|-------------|---------|--------|-------------|-----------|
| H-8000C-CB | Closet | 1" | 1-1/2" Back | 1.6 GPF |
| HB-8000C-CB | Closet | 1" | 1-1/2" Back | 1.6 GPF |

ELECTRICAL SPECIFICATIONS:

Control Circuit:

- Solid State
- Input: 12V DC (AC Powered)
- Input: 6V DC (Battery Powered)
- 4 Sec. Arming Delay
- 1 Sec. Flush Delay
- 24 Hour Sentinel Flush

Power Source (AC Powered):

- Standard Plug-in Adapter with 9' output cord
Input: 120V AC, Output: 12V DC 800 mA
Class II, UL Listed
- Optional Multi-Unit Adapter
Input: 120V AC, Output: 12V DC 3A
Class II, UL Listed

Power Source (Battery Powered):

- (4) AA Alkaline Batteries

WALL BOX SPECIFICATIONS:

- Frame: 13" X 17" X 2" #15 Gauge 304 SS
- Cover Plate: 14-1/2" X 18-1/2" #14 Gauge 304 SS with #4 finish

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INSTALLATION AND OPERATION INSTRUCTIONS FOR HYDROTEK MODELS HB-8000C-C, HB-8000C-D1 AND HB-8000C-D2

OPERATION:

1. The Hydrotek sensor flush valve operates by detecting the presence of the user
2. A red LED on the sensor will indicate when the user enters the sensor beam's effective range. If the user stays in the effective range for more than four (4) seconds, the system goes into a "HOLD" mode for as long as the user remains within the effective range of the sensor. When the user steps out of the sensor beam range, the sensor sends a signal to the solenoid valve for a single flushing cycle. The sensor then automatically resets and is ready for the next user.

PARTS PROVIDED BY HYDROTEK:

1. Standard parts include:
 - A. (1) HB-8000C-C, HB-8000C-D1 or HB-8000C-D2 Concealed Flush Valve.
 - B. (1) Stainless Steel wall plate with sensor and push button.
 - C. (4) 6/32 X 1-1/2" Vandal Resistant Stainless Steel Screws with Allen Key.
 - D. (1) Battery Holder.(inside Control Box)
 - E. (4) AA Batteries
 - F. (1) Angle-Stop Valve.
 - G. (1) Flush Tube with Vacuum Breaker.
 - H. (1) Sweat Adapter.

PARTS TO BE PROVIDED BY OTHERS:

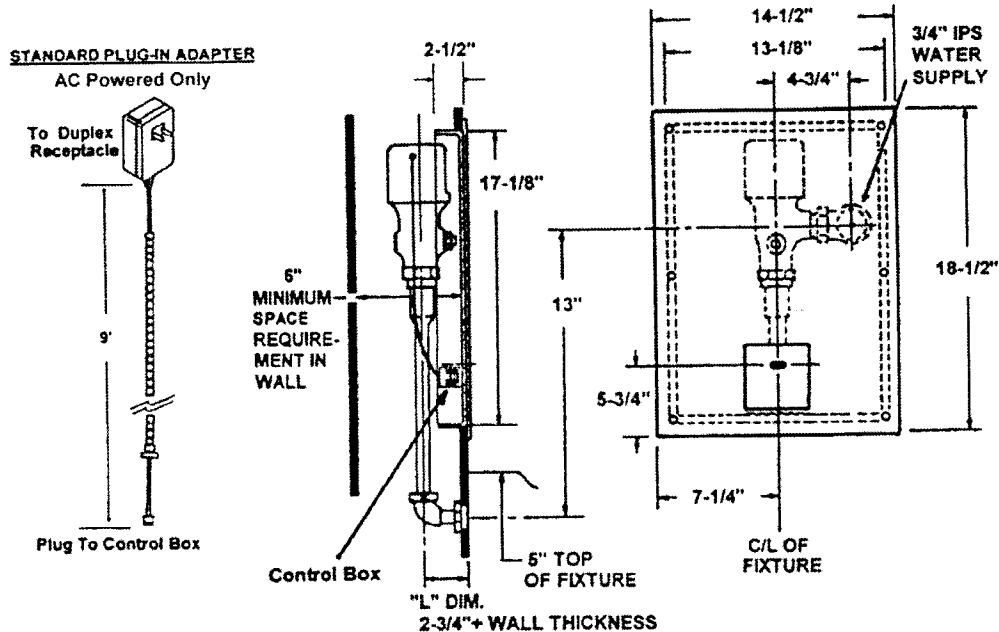
1. One (1) 4-11/16" Sq. Electrical Box

INSTALLATION:

1. Install the Angle Stop Valve to the supply line using the Sweat Adapter.
2. Connect the Flush Valve Body to the Angle Stop Valve using slip joint nut.
3. Attach the Flush Tube with Vacuum Breaker to the Flush Valve using the provided lock nut.
4. Secure the Flush Tube to the plumbing fixture using the provided Spud Couplings.
5. ELECTRICAL:
 - A. Mount 4-11/16" Sq. Junction box as per rough-in diagram.
 - B. Connect Solenoid Wiring (Blue and Orange) from Flush Valve to Solenoid Wiring (Blue and Orange) from Control Box using Bullet Connectors.
 - C. Install batteries.
 - D. Attach Wall Plate to Junction Box with (4) vandal resistant screws.
6. Turn on water and check for leaks.
7. TEST: Stand in front of Flush Valve Sensor Plate and a solid red LED on the sensor will indicate that you are in the effective sensor range. After 4 seconds, step away and the flush valve should activate automatically with one (1) flush cycle. Adjust Angle Stop valve as may be required for a smooth flush.
8. Problems: Refer to the Trouble Shooting Guide.
9. Flush Valves are pre-adjusted at the Factory. If minor adjustments are required, call Hydrotek at 800-922-9883 for further assistance.

HYDROTEK INTERNATIONAL, INC.

Model H-8000C-D1B-WB Flush Valve (AC Powered), Concealed Urinal, Back Spud with Wall Box Model HB-8000C-D1B-WB Flush Valve (Battery Powered), Concealed Urinal, Back Spud with Wall Box Specifications



This smooth and quiet concealed flush valve for urinal is equipped with adjustable sensor, rough brass finish, solenoid operator, adjustable tailpiece, vacuum breaker, 3/4" IPS Angle Stop, elbow flush connection, spud connection for 3/4" Back Spud. Exposed flush valve parts are chrome plated. Includes Stainless Steel Wall Box and Cover Plate.

STANDARD PACKAGE INCLUDES:

- (1) Flush Valve (Rough Brass Finish)
- (1) 3/4" Angle Stop Valve (Rough Brass Finish)
- (1) Sweat Solder Kit
- (1) Vacuum Breaker / Flush Tube
- (1) 3/4" Back Spud ELL Connection
- (1) Back Spud coupling
- (1) Electronic Control Box with Sensor
- (1) Plug-In Power Adapter (AC Powered)
- (4) AA Alkaline Batteries with Battery Holder (Battery Powered)
- (1) 13" X 17" Stainless Steel Wall Box with Cover Plate and Vandal Resistant Screws.

OPTIONAL ACCESSORIES:

- HC-010 Multi-Unit Power Adapter. Powers up to 8 Flush Valve units up to 100 feet.
- Manual over-ride button

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PLUMBING SPECIFICATIONS:

| Model | Fixture | Supply | Spud | Flow Rate |
|--------------|---------|--------|-----------|-----------|
| H-8000C-D1B | Urinal | 3/4" | 3/4" Back | 1.0 GPF |
| HB-8000C-D1B | Urinal | 3/4" | 3/4" Back | 1.0 GPF |

ELECTRICAL SPECIFICATIONS:

Control Circuit:

- Solid State
- Input: 12V DC (AC Powered)
- Input: 6V DC (Battery Powered)
- 3 Sec. Arming Delay
- 1 Sec. Flush Delay
- 24 Hour Sentinel Flush

Power Source (AC Powered):

- Standard Plug-In Adapter with 9' output cord
Input: 120V AC, Output: 12V DC 800 mA
Class II, UL Listed
- Optional Multi-Unit Power Adapter
Input: 120V AC, Output: 12V DC 3A
Class II, UL Listed

Power Source (Battery Powered):

- (4) AA Alkaline Batteries

WALL BOX SPECIFICATIONS:

- Frame: 13" X 17" X 2" #15 Gauge 304 SS
- Cover Plate: 14-1/2" X 18-1/2" #14 Gauge 304 SS with #4 finish

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BATTERY POWERED WALL BOX INSTALLATION INSTRUCTIONS

PRIOR TO INSTALLATION

Prior to installing the Hydrotek concealed Flush Valve with Wall Box, install the items listed below:

- Drain line
- Water supply line

Important:

- ALL PLUMBING IS TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
- WATER SUPPLY LINES MUST BE SIZED TO PROVIDE AN ADEQUATE VOLUME OF WATER FOR EACH FIXTURE.
- FLUSH ALL WATER SUPPLY LINES PRIOR TO MAKING FLUSH VALVE CONNECTIONS.
- WITH THE EXCEPTION OF CONTROL STOP INLET, DO NOT USE PIPE SEALANT OR PLUMBING GREASE ON ANY FLUSH VALVE CONNECTION OR COMPONENT.

INSTALLATION

1. **Install Wall Box** in the exact location as illustrated in (Figure 1). Secure Wall Box using the appropriate fasteners.
2. **Install Angle Stop Valve** to the water supply line with the outlet positioned as required.

For sweat solder applications, slide Threaded Adapter onto water supply pipe until end of pipe rests against shoulder of Adapter. Sweat solder Adapter to water supply pipe.

After confirming that the Angle Stop Valve is shut off. Turn on the water supply and open each Angle Stop Valve to clear any supply line debris or sediment. Close the Angle Stop Valve.

3. **Install Vacuum Breaker Flush Connection**, assembling pipe, Elbows, Couplings, Nylon Slip Gaskets and Rubber Gaskets as is required. NOTE: When cutting pipe to fit, leave a minimum of 1-1/4" to ensure engagement with compression coupling. Hand tighten all couplings.
4. **Install Flush Valve.** NOTE: The adjustable tailpiece compensates for "off-center" rough-ins on the job. Maximum adjustment is 1/2" IN or 1/2" OUT from the standard 4-3/4" (centerline of flush valve to centerline of Angle Stop Valve).

Insert adjustable tailpiece into Angle Stop Valve. Wet O-ring seal with water to lubricate. Secure by hand tightening tailpiece coupling nut.

Align Flush Valve body on top of vacuum breaker flush connection and secure by hand tightening vacuum breaker coupling nut.

Re-align Flush Valve body and securely tighten tailpiece coupling nut, vacuum breaker coupling nut, slip joint couplings and spud coupling, respectively.

DO NOT USE PIPE DOPE OR THREAD SEALANT ON ANY FLUSH VALVE CONNECTION

5. **Electrical Hook-Up:** Remove top of black Control Box located on rear of Sensor Plate. Install (4) AA batteries in battery holder and replace Control Box top.

Make all required electrical connections (Blue and Orange Wires) between Control Box and Flush valve. Blue to Blue – Orange to Orange.

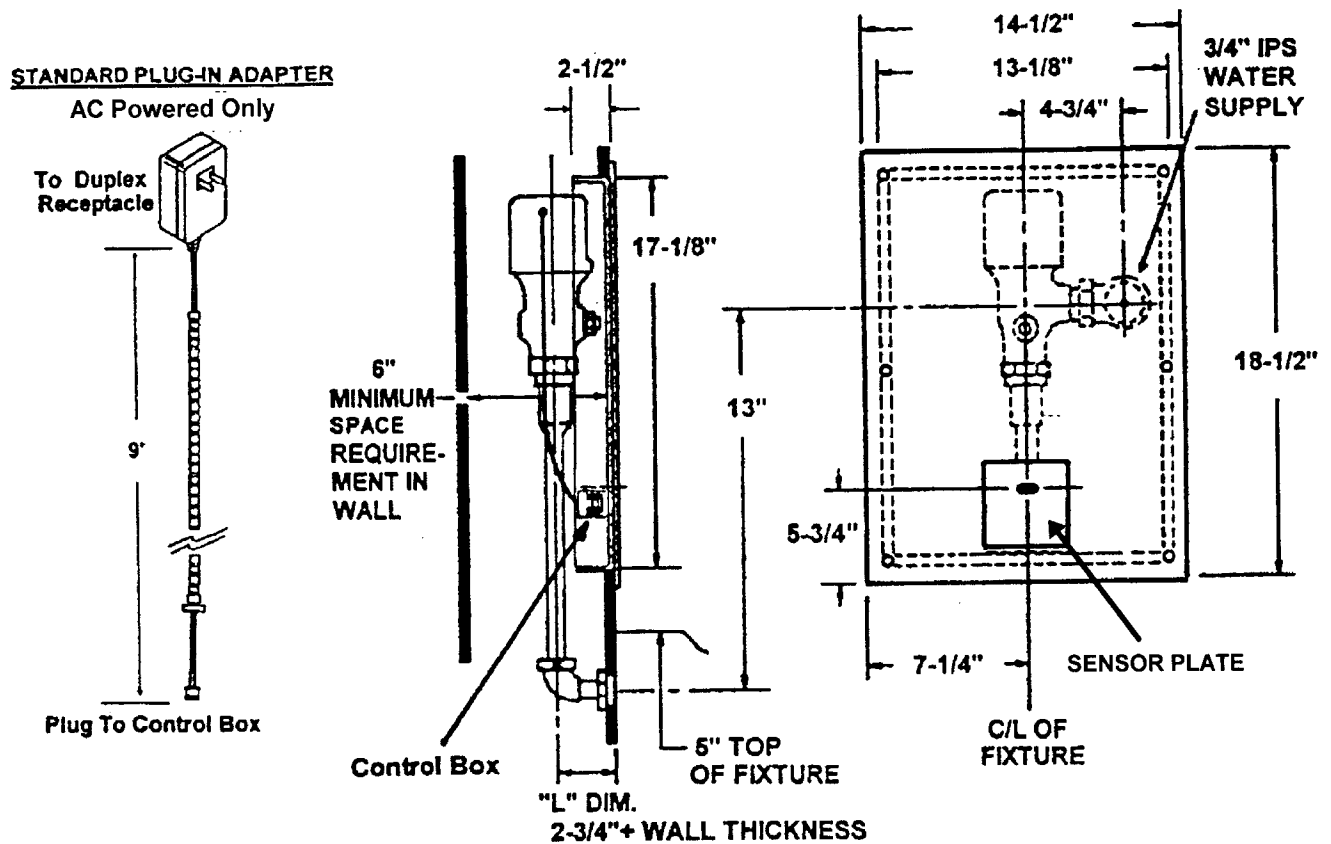
6. **Attach Access Panel to Wall Box Frame** with (4) Vandal Resistant Screws (provided) making sure that wiring is not pinched or cut.

7. **For closet installations:** Push override button on Wall Plate to cycle through (1) flush cycle. If unit flushes, it is now ready for normal operation. If flush valve unit does not cycle, check that batteries are correctly installed. If okay, check all wiring connections. Continued problems: Call Hydrotek.

For urinal installations: Stand in front of Urinal Wall Plate for at least 3 seconds. Step away. If unit flushes, it is now ready for normal operation. If flush valve unit does not flush, check that batteries are correctly installed. If okay, check all wiring connections. Continued problems: Call Hydrotek..

HYDROTEK MODEL H/HB8000C-D1B-WB

INSTALLATION TEMPLATE (FIGURE 1)



HYDROTEK AUTOMATIC FLUSH VALVE TROUBLE SHOOTING GUIDE

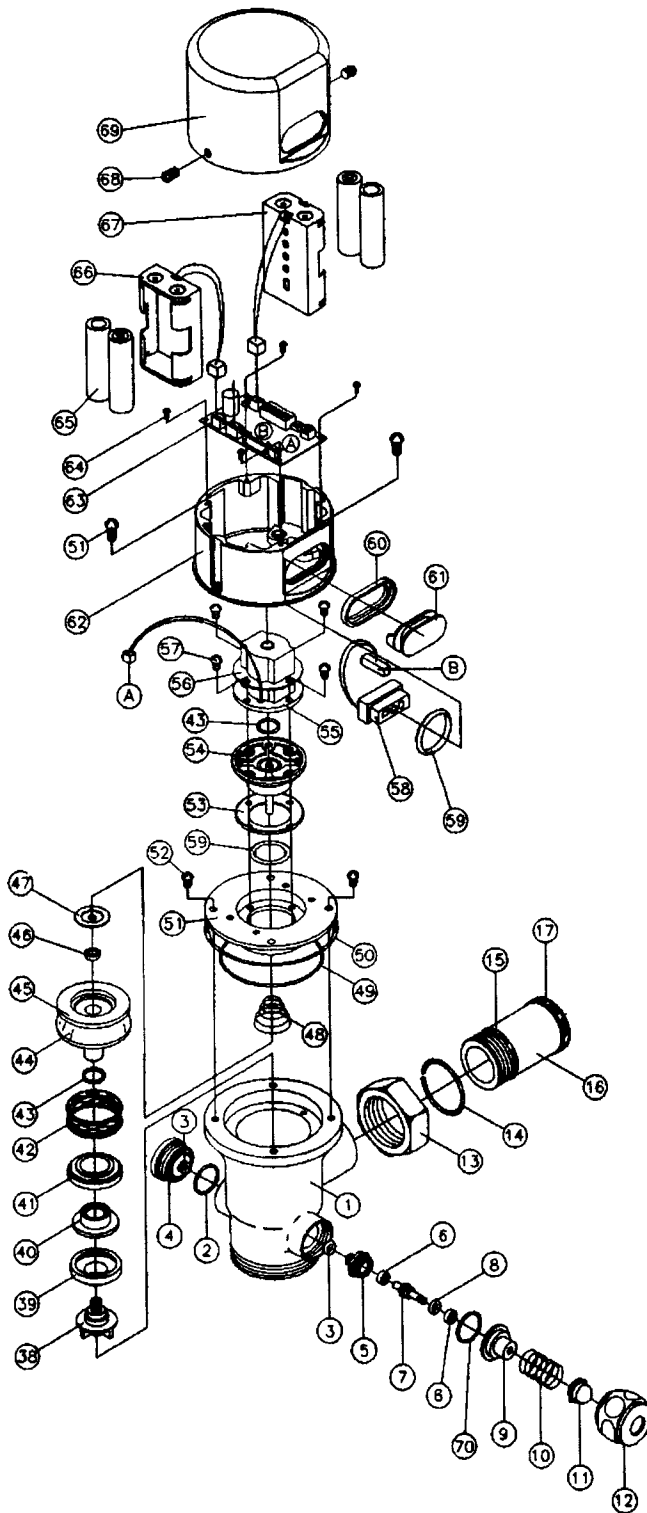
AC Powered

Normal operation: When electricity is connected, or RESET button is pushed, the lights on Printed Circuit Board (PCB) will blink in a sequence as follows: Red, Red (with clicking sound), Green, Red and Red. Then green light stays on. When a user enters the beam's effective range, the red light comes on and stays on. If the user stays in the range for more than 4 seconds and steps away, the valve will activate (l) flush cycle. The unit automatically resets and is ready for the next user. When the manual OVERRIDE button is pushed, the flushing mechanism will be activated without impacting the mode of automatic operation. Please note: Always push the RESET button BEFORE diagnosing any problem and AFTER taking a corrective step.

| PROBLEM | POSSIBLE CAUSE | TO DIAGNOSE | REMEDY |
|------------------------------------|--|---|--|
| VALVE WILL NOT TURN ON | Water not on | Check water supply | Turn on water supply. |
| | Power supply failure. | Check power output, wires and polarity. | Provide power supply and proper Connections. Push RESET. |
| | Sensor distance is too short. | Stand in front of valve To find focal point. | Adjust sensor distance (Turn SDA clockwise), push RESET. |
| | Electronic PCB is Defective. | Replace Adapter or Reset the unit, no light or action. | Replace PCB. RESET. |
| | Sensor Eyes are Defective. | Push RESET, stand In front of valve, no red Light comes on. | Replace sensor eyes and cable. Push RESET. |
| | Solenoid Valve is Clogged. | Solenoid is clicking but No water. | Clean solenoid valve, blow free all bleed Holes. Replace control disc. Push RESET. |
| | Time in sensor Range is too short. | Stand in front of valve, red light stays on. | Stay in range for more than 4 seconds, then move away. |
| VALVE WILL NOT SHUTOFF | Solenoid coil is Defective. | Reset the unit, or replace Power Adapter, lights blink Normally, but no clicking. | Replace solenoid coil. Push RESET. |
| | Solenoid valve is normally closed. Turn off water and activate the valve, if there is a clicking sound then the solenoid is dirty. If there is no clicking sound, then replace solenoid valve. Other factors could be Sensor distance is too long (adjust SDA counterclockwise); Electronic PCB is defective. Manual push button is sticking. If water is leaking through, then the solenoid valve is dirty. Follow same procedures as above for remedies. | | |

IMPORTANT: (1) Periodical maintenance is required for a smooth and trouble-free operation of the flush valve.

For more detailed procedures for above remedies, call Hydrotek at 1-800-922-9883



| NO. | DESCRIPTION | PART NO. |
|-----|---------------------|--------------|
| 1 | Body | H8-01D-0301E |
| 2 | O-Ring(H017) | HC-014-02 |
| 3 | O-Ring(H007) *2 | HC-014-31 |
| 4 | Back Cover | H8-01D-0404 |
| 5 | Seat | H8-01B-0407 |
| 6 | Seat Rubber *2 | H8-01-0408 |
| 7 | Button Axle | H8-01B-0401D |
| 8 | O-Ring(H007) | HC-014-31A |
| 9 | Axle Cap | H8-01B-0403A |
| 10 | Spring | HC-003-08 |
| 11 | Push Button | H8-01D-0406A |
| 12 | Push Button Nut | H8-01D-0402C |
| 13 | Lock Nut | H8-03D-04C |
| 14 | Retainer Ring | H8-03-11 |
| 15 | O-Ring(H122) | HC-014-12A |
| 16 | Nipple | H8-03D-01C |
| 17 | O-Ring(H123) | HC-014-21 |
| 38 | Guide Pin | H8-01B-0106F |
| 39 | Rubber Seal | H8-01-0104C |
| 40 | Metal Bushing | H8-01B-0110 |
| 41 | Filter Seat | H8-01B-0103D |
| 42 | Filter Screen | H8-01-0102A |
| 43 | O-Ring(H013) *2 | HC-014-03 |
| 44 | Rubber | H8-01-0108A |
| 45 | Control Disc Body | H8-01K-0101E |
| 46 | Axis Rubber | H8-01-0408 |
| 47 | Washer | H8-01-0111 |
| 48 | Control Disc Spring | HC-003-03 |
| 49 | O-Ring(H035) | HC-014-19 |
| 50 | O-Ring(H040) | HC-014-67 |
| 51 | Valve Seat | B8-02B-01E |
| 52 | Screw *6 | HC-013-04 |
| 53 | Rubber Gasket | HB-05-05 |
| 54 | Plastic Seat INSERT | B8-02-04 |
| 55 | Coil | HB-04B-E |
| 56 | Gasket | B86-01-04 |
| 57 | Screw and Washer *4 | HC-013-35A |
| 58 | Sensor Eye & Cable | PC-006-29 |
| 59 | O-Ring(H118) *2 | HC-014-16 |
| 60 | Seal | B8-10-02 |
| 61 | Sensor Mask | PC-004-31A |
| 62 | Plastic Ring | B8-10-01B |
| 63 | P.C.B | PC-001B-45E |
| 64 | Screw *4 | HC-013-63 |
| 65 | Alkaline Battery *4 | HB-09-04A |
| 66 | Battery Holder | HB-09-03H |
| 67 | Battery Holder | HB-09-03G |
| 68 | Screw *2 | HC-013-62 |
| 69 | Cover | B8-03D-01C |
| 70 | O-Ring(H018) | HC-014-09 |

HYDROTEK MODEL HB8RFKC