

# **HYDROTEK INTERNATIONAL, INC.**

5055 Forsyth Commerce Rd., Ste. 124, Orlando, FL 32807

Phone (800)922-9883 / Fax (866)670-5580

[www.hydrotekintl.com](http://www.hydrotekintl.com)

## **OPERATION & MAINTENANCE MANUAL**

**HYDROTEK MODEL #HB-3000C FAUCET**

TECHNICAL SUPPORT TEAM:

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**Solid Brass AC or Battery Powered**

# Automatic Faucet

3000C Series

ISO 9002 Certified

## High Technology For No Touch Operation

- ADA Compliant. Meets all barrier free codes
- Conserves water and energy
- Easily installed in new or retrofit applications
- Competitively priced for today's commercial market
- Promotes cleanliness & hygiene
- Proven Hydrotek craftsmanship and reliability



**3000C Series**

U.S. Patent:  
4741363  
6192530B1

## Features:

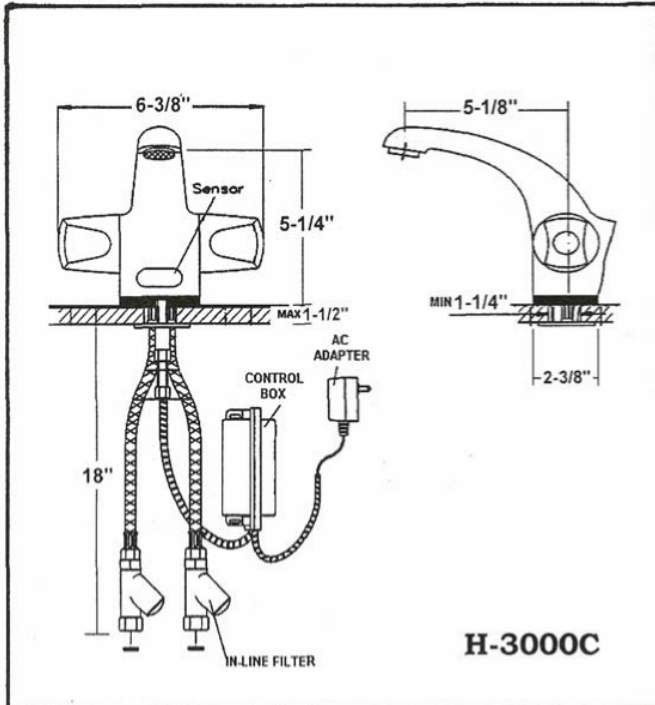
- **ACCU-SENSE** adjustable sensor eyes.
- Chrome plated, solid brass construction.
- Wall mountable, waterproof control box with armored, vandal resistant controls and power cables.
- Preset/adjustable sensor range 6" - 30" for various installation requirements.
- Standard automatic time-out feature. Preset at 0 but adjustable to 15, 30 or 60 seconds. Prevents accidental sink overflow.
- Shut-off delay is adjustable from 1 second (preset) to 8 seconds.
- Standard single-hole deck mount, adaptable to optional 4" or 8" cover plate.
- Includes in-line filters/checks with clean-out trap to reduce maintenance costs.
- Standard 2.0 GPM Laminar flow control.
- Same faucet, field switchable to/from AC Powered or Battery Powered.
- Manual override provides continuous water flow for special applications or in case of power failure.
- Manually controlled temperature adjustment.
- Patented electronics and slow-closing solenoid valve provide reliable and smooth operation without water hammer.
- Control module automatically performs a unique self-check of all electrical components.
- Superior VSI silicone elastomer solenoid piston seals are unaffected by chlorine, chloramines or ammonia.

# Hydrotek Mixing Automatic Faucet

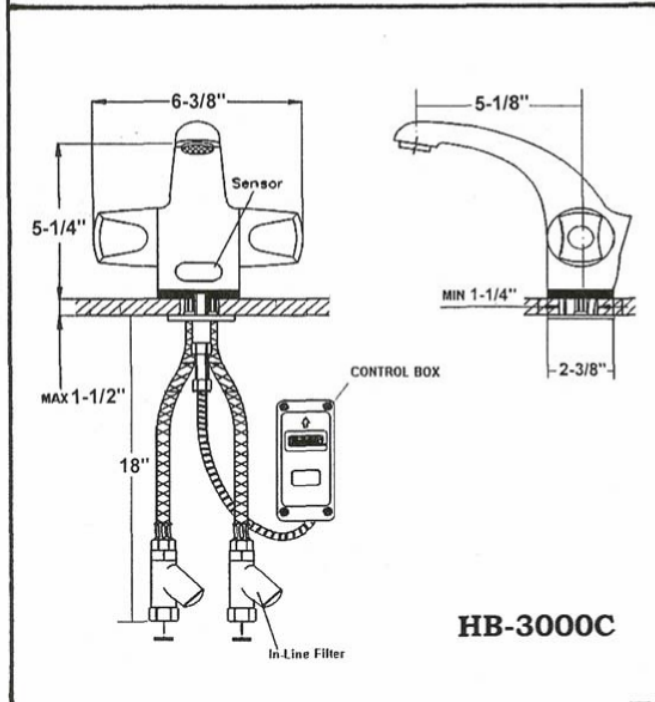
Model H-3000C (AC) or HB-3000C (Battery)

with manual off / on and temperature adjust

Meets ANSI/ASME A112.18.1M-1989



H-3000C



HB-3000C

## Operation:

1. A continuous, invisible beam is emitted from the sensor.
2. The faucet is activated by placing hands under the spout within the effective range of the beam. Water starts to flow immediately for as long as user's hands remain in the sensor range.
3. When hands are removed, the water flow stops. The sensor will automatically reset and be ready for the next user.
4. In the battery powered mode, a flashing red light will indicate low battery condition.
5. Use the faucet handle for temperature adjustment and manual On/Off.

## Specifications:

Faucet Construction:	- Solid Brass, Chrome Plated
Control Circuit	- Solid state, AC or Battery, Switchable
Auto. Time-out:	- Preset and Adjustable for 0, 15, 30, or 60 seconds
Sensor Range:	- Preset and Adjustable
Shut-Off Delay:	- Preset and Adjustable from 1-8 seconds
Control Cable:	- Armored, Vandal Resistant
Solenoid Valve:	- 6V DC, Normally closed - Wattage: 0.4W (idle), 5W (in use) - Operating Pressure: 5psi - 125psi
Flow Control:	- 2.0 GPM, Laminar Flow Control

## AC Mode

Power Adapter	- Input AC 120V 60 Hz or 220 V
Standard plug-in: (UL/CSA)	- Output DC 12V, 0.8A/Class 2
Power Cable:	- Armored, Vandal Resistant
Optional Multi-Unit Adapter (UL/CSA)	- Serves up to 8 Faucets - Input AC 120V, Output DC 12V, 3A

## Battery Mode

Battery Powered Models:	- (4) AA Alkaline Batteries
Battery Service Life:	- 400,000 on/off cycles, up to 4 years

## Standard Package Includes:

H-3000C (AC)	HB-3000C (Bat)
X (1) Faucet with Electronic Sensor	X
X (1) Control Box	X
X (1) 12V DC Plug-in Power Adapter	
X (1) In-Line Filter with Clean-Out Trap	X
X (1) Flex, S.S. Supply Tubes, 3/8"	X
X (1) Mounting Hardware	X
X (1) 2.0 GPM V.R. Laminar Flow Control	X
X (4) AA Alkaline Batteries	X
X (1) Battery Holder	X

## Dimensions:

Base Width (Outside Measurement)	2-1/2"
Base Depth	2"
Faucet Height (Aerator to Base)	5-1/4"
Faucet Height Overall	6-3/8"
Depth (Center of Aerator to Center of Faucet Base)	5-1/8"
Mounting Bolt Length	2-1/2"
Mounting Bolt Pattern	Single-Hole Mount

## Optional Variations and Accessories:

- 1.6 GPM Soft-Flow Aerator 1.5 & 2.5 GPM Laminar Flow
- 4" or 8" Centerset Cover Plate
- HC-010 Multi-Unit Voltage Adapter (AC Powered Only)
- HBL-04 Thermostatic Mixing Valve with Checks
- Wrist Blade Handle

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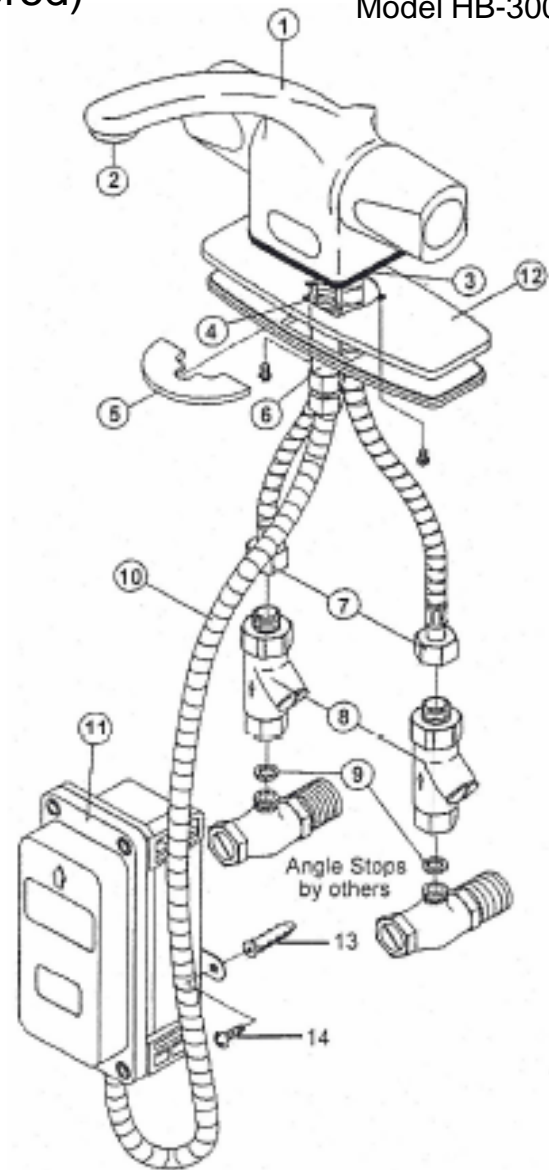


# INSTALLATION INSTRUCTIONS

## Hydrotek Mixing Automatic Faucet w/ Manual Control (Battery Powered)

Model HB-3000C

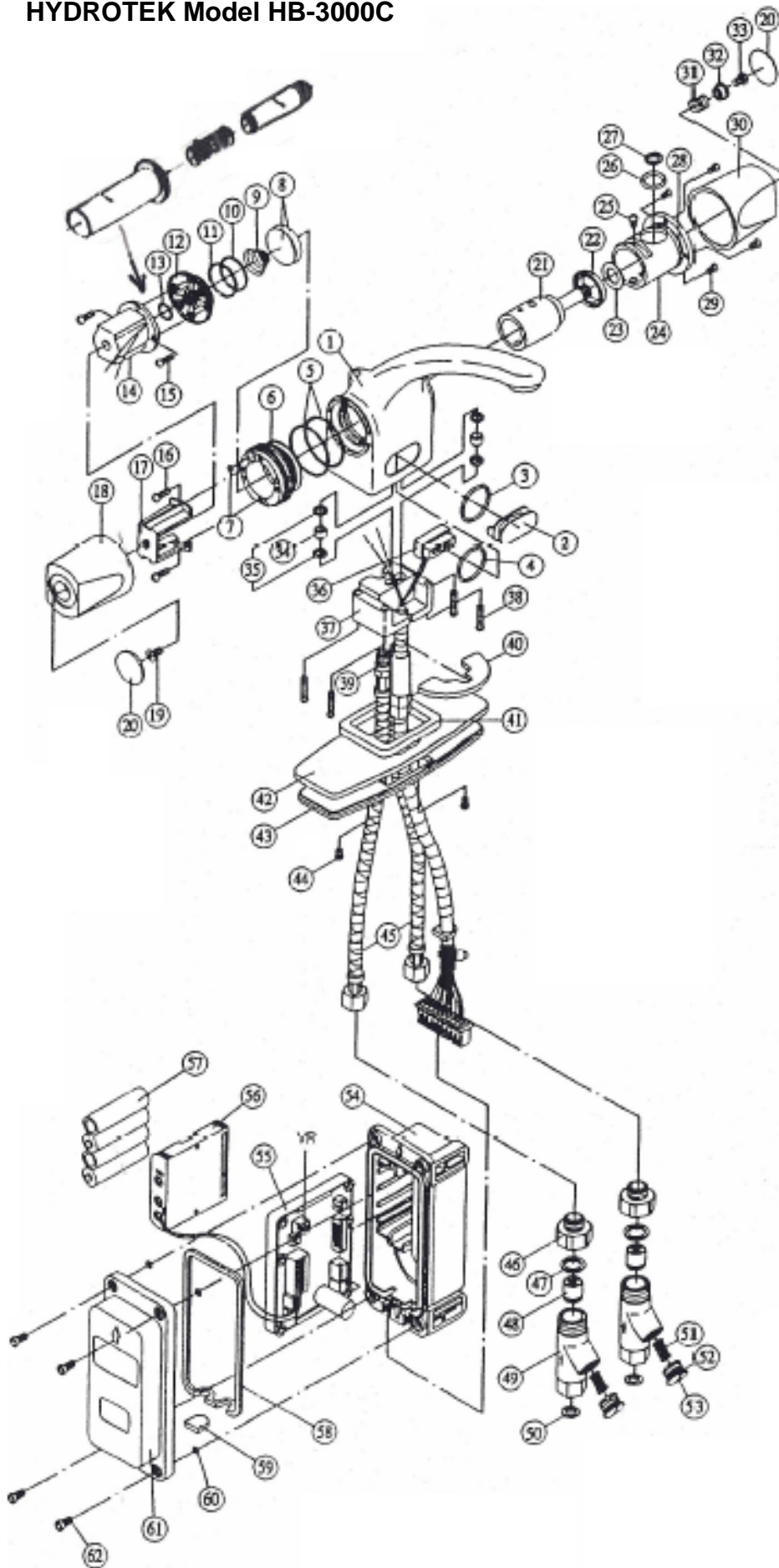
1. Prior to installing this faucet, thoroughly flush all water lines and replace stop washers, if necessary.
2. To ensure proper operation, " DRY TEST " the faucet by plugging the Sensor Eye Cable connector (10) into the matching connector on the PC board inside the Control Box (11). Pull out the PC board for easier access. Properly install batteries into Battery holder and plug the battery holder output connector into the corresponding connector on the PC board. Place your hand in front of the faucet's Sensor Eyes. If there is a clicking sound, the faucet is activating properly. If not, call the factory.
3. After successful "DRY TEST," unplug the Sensor Eye cable and Battery holder connectors from the PC board.
4. Attach the hot and cold water Supply Tubes (7) by screwing threaded ends into the bottom of the faucet body. (Note: Teflon tape is not required for supply tube connections to faucet body.) **CAUTION: DO NOT USE PIPE DOPE.**
5. Optional: Affix Cover Plate (12) to the bottom of the faucet and apply plumbers putty to the bottom of the faucet and cover plate.
6. Position faucet by lowering flexible Supply Tubes (7) and Control Cable (10) through deck hole. Secure faucet to sink deck using Mounting Washer (5) and Mounting Nut (6).
7. Considering the length of the Control Cable (10), drill two holes into the wall and insert Mounting Anchors (13). Position Control Box (11) so that the Control Cable (10) enters control box from the bottom. Attach control box to wall by aligning box mounting holes with mounting anchors using Anchor Screws (14).
8. Attach In-line Filter/Check Valves (8) to stop valves using Nylon Washers (9) inserted into filter inlet. Attach Supply Tubes (7) to Filter/Check Valve compression fittings. Left is the supply tube "HOT." Right is the supply tube "COLD." The filters may be cleaned by using a screwdriver to open the cleanout trap and removing the screen. **DO NOT USE PIPE DOPE. USE TEFLON TAPE ONLY.**
9. Open stop valves. Test faucet using manual control and check for leaks. Set water temperature using the control handle on the right side of the faucet.
10. Connect electrical cables as described in STEP #2. Control cable must be seated in the control box properly to maintain waterproof seal. Reinstall Control Box cover.
11. Test faucet by placing hands under spout. Water should begin to flow. Water flow should stop when hands are removed. If the faucet does not function properly, refer to the troubleshooting guide.
12. Sensor Distance (SDA) is factory preset. If you need to alter this setting, please call Hydrotek.



Part Number Descriptions	
1. Faucet body	8. Filter/Check Valve (2)
2. Laminar flow outlet device, 2.0 GPM	9. Nylon washer (2)
3. Gasket	10. Control cable
4. Mounting bolt	11. Control box
5. Mounting washer	12. Cover plate (optional)
6. Mounting nut	13. Mounting anchor (2)
7. Supply tube (2)	14. Anchor screw (2)

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# HYDROTEK Model HB-3000C



NO.	DESCRIPTION	PART NO.
1	Body	B3-01D-01D
2	Sensor Eye Lens	PC-004-31A
3	O-Ring	HC-014-33
4	O-Ring	HC-014-16
5	O-Ring X2	HC-014-04
6	Valve Seat	HB-05B-01B
7	Rubber Plug	HB-02-06
8	Control Disc w/Rubber	HC-005-03H
9	Control Disc Spring	HC-003-03
10	O-Ring	HC-014-11
11	O-Ring	HC-014-30
12	Control Valve	HB-05-06
13	O-Ring	HC-014-03
14	Coil	HB-04B-E
15	Screw X2	HC-013-12
16	Screw X2	HC-013-35
17	Solenoid Cover Bracket	HB-05-03
18	Solenoid Cover	H3-01D-05C
19	Screw	HC-013-31
20	Side Mark	H3-01-09A
21	Temp. Adj. Rod.	H3-01B-801G
22	Rubber Skirt	HC-005-0311
23	Washer	H3-01-0804A
24	Temp. Adj. Cap.	H3-01B-0802C
25	Screw	HC-013-04
26	O-Ring	HC-014-07
27	Retainer Ring	H3-01-0803
28	O-Ring	HC-014-06
29	Screw X4	HC-013-11
30	Control Handle	H3-01D-06A
31	Spring	H3-01-0702
32	Seat, Screw	H3-01-0701
33	Screw	HC-013-06
34	Brass Connector X2	H3-01-03A
35	Connector O-Ring X4	H3-01-04
36	Sensor Eye & Cable	PC-006-32
37	Bottom Plate	H3-01B-02B
38	Screw X4	HC-013-09
39	O-Ring X2	HC-014-01
40	Mounting Washer	B3-01-06
41	Bottom Plate Gasket	B4-01-02
42	Cover Plate	HC-006D-01A
43	Cover Plate Gasket	HC-006-02C
44	Screw X2	HC-013-12
45	Flexible Supply Tube	HC-004-13
46	Compression Adapt. X2	HC-023D-03D
47	Washer X2	HC-009-06
48	Check Valve X2	HC-023-07A
49	Filter Body X2	HC-023D-01D
50	Nylon Washer X2	HC-023-10
51	Filter Screen X2	HC-009-03
52	O-Ring X2	HC-014-36
53	Filter Cap X2	HC-023D-02
54	Control Box	HB-012-0101C
55	PCB	PC-009-32
56	Battery Holder	HB-00-03
57	AA Battery X4	HB-09-04A
58	Control Box Seal	HB-012-0102
59	Control Box Rubber Plug	HB-01-1-0104
60	O-Ring X4	HC-014-62
61	Control Box Cover	HB-012-0201
62	Screw, Hex Locking X4	HC-013-61

# HYDROTEK AUTOMATIC FAUCET TROUBLESHOOTING GUIDE

(Battery Powered)

Normal Operation: When new batteries are inserted, or RESET button is pushed, the lights on the Printed Circuit Board (PCB) will blink in the following sequence: red – red (with solenoid clicking) – green – red – red. When the user’s hands are placed under the spout, the red indicator light on the faucet will flash one time and water will begin to flow. Water flow will stop when hands are removed. Red indicator light flashes when batteries are low. Always push the RESET button BEFORE attempting to diagnose any problem and AFTER taking corrective action.

<u>PROBLEM</u>	<u>POSSIBLE CAUSE</u>	<u>TO DIAGNOSE</u>	<u>REMEDY</u>
<b>Faucet will not turn on:</b>	Water not turned on.	Check water supply.	Turn water on.
	Power supply failure.	Check batteries, polarity of battery, and connections.	Replace batteries and reconnect. Push RESET button.
	Sensor distance is too short.	Use hand/palm to find focal point of sensor beam.	To adjust sensor distance out, turn adjustment clockwise. Push RESET button.
	Electronic PCB is defective.	No light or action. Change batteries and reset the unit.	Replace PCB.
	Sensor eyes are defective.	Insert new batteries and place hands in front of Sensor eyes. Red light doesn't blink.	Replace sensor eyes and cable. Push RESET button.
	Solenoid valve is clogged.	Solenoid is clicking but no water is coming out.	Clean solenoid and blow free all by-pass holes. Replace control disc. Push RESET button.
	In-line filter is clogged.	Open clean-out trap and check filter screen.	Clean or replace filter screen.
	Solenoid coil is defective.	Insert new batteries and reset the unit. Light blinks normally, but there is no clicking	Replace solenoid coil. Push RESET button.

**Faucet will not shut off OR there is low flow:**

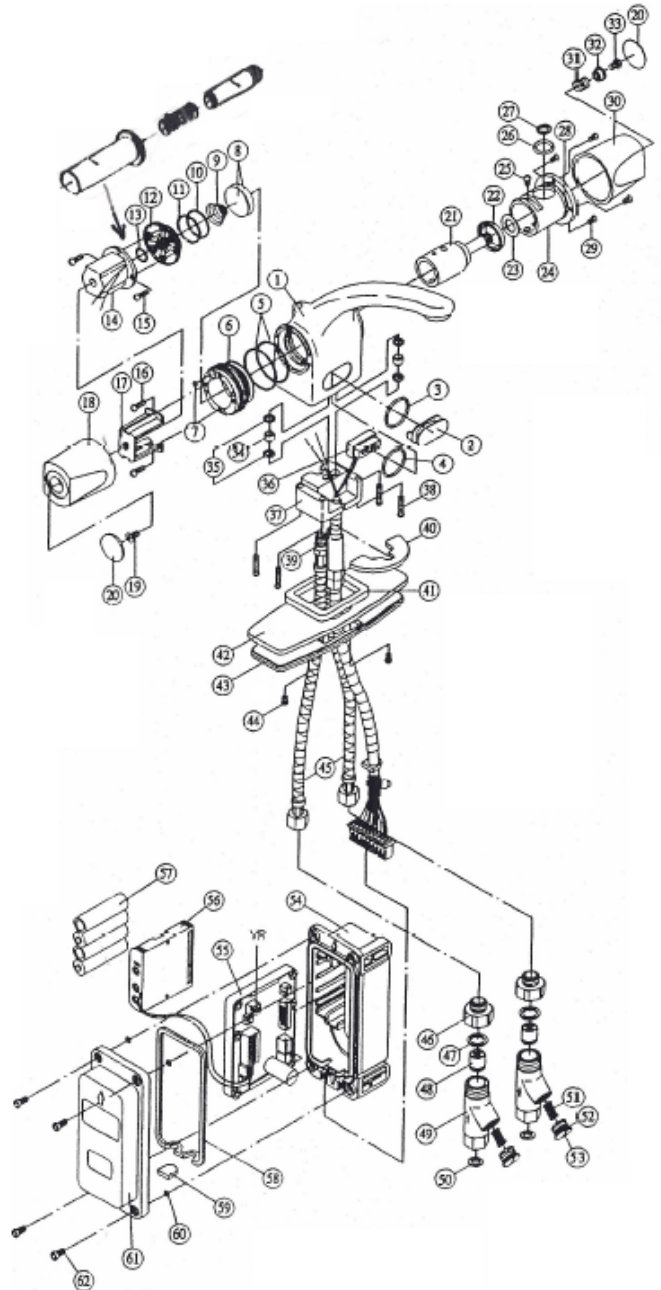
If this is a 3000C or 4000C series model, be sure that the right faucet handle is in the “AUTO” mode position. Otherwise, solenoid valve is normally closed. Turn off water and activate faucet. If there is a clicking sound, the solenoid valve is dirty. If there is no clicking sound, then replace solenoid valve. Other factors could be problematic (Sensor distance adjustment could be too long or electronic PCB could be defective). If the faucet is dripping, the solenoid valve needs a Solenoid repair kit. Follow the same procedures as above for remedies.

**IMPORTANT:** Periodic maintenance is required for smooth and trouble-free operation of this faucet.

*For more detailed remedy procedures, please call Hydrotek Tech Support at (800)922-9883 ext. 105*

## SOLENOID VALVE CLEANING FOR HYDROTEK 3000C SERIES FAUCET (AC & BATTERY POWERED)

1. For AC Powered units, unplug the Power Adapter (#60). For Battery Powered units, remove the Battery Pack (#56) from the PC Board (#55) in the Control Box (#54).
2. Turn off water supply at the angle stop valve or main supply.
3. Position the Manual Control (#30) in the middle of the manual control range to drain water from the faucet.
4. Remove the Blue Plastic Cover (#20) from the left Solenoid Cover (#18).
5. Remove the solenoid cover by removing the Phillips Head Screw (#19) from the center of the Solenoid Cover (#18).
6. Remove the four Phillips head screws (#15, 16) from the Solenoid Coil Body (#14) and carefully separate the coil from the faucet body.
7. Pry the Control Valve (#12) from the Seat (#6) and remove Spring (#9) and Control Disc (#8). Control disc can be easily removed by opening the water supply slowly until the disc pushes out of the seat. Inspect for debris under the control disc and inside the valve seat. If using a repair kit, replace Disc (#8), Cone Shaped Spring (#9), O-ring (#13), Piston, Piston Tip, and Piston Spring.
8. Re-assemble the control valve, spring, and disc. Reattach coil to the body, making sure all components are assembled in the correct order and direction as the diagram on this page.
9. Turn on water supply, check for leaks and test operation of the faucet manually.
10. For AC Powered units, plug in the Power Adapter and push the RESET button located on PC Board (#60). For Battery Powered units, reinstall the Battery Pack (#56) and push the RESET button on the PC Board (#55).
11. Turn the Manual Handle (#30) to "AUTO" mode to return faucet to electronic operation.

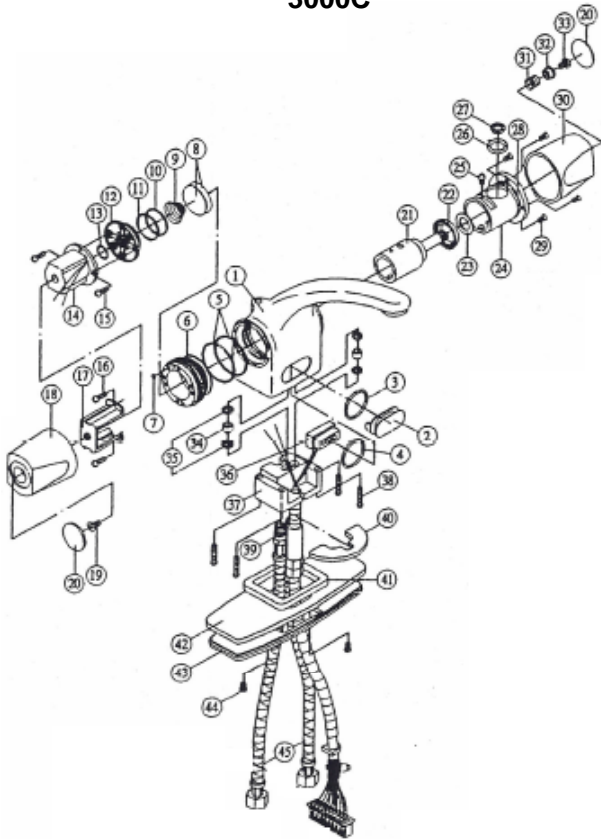


*(For further questions, please call Hydrotek Tech Support at 1-800-922-9883 ext. 105)*

## SENSOR EYE AND CABLE REPLACEMENT FOR 3000C SERIES FAUCETS (AC & BATTERY POWERED)

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### HYDROTEK MODEL 3000C



1. Turn off water supply from angle stops. Disconnect faucet's Sensor Eye Cable from the Control Box. Loosen compression nuts on inline filters and drain water from the faucet body by turning the handle (#30) from the auto to manual position. Loosen Mounting Plate (#40) and remove the faucet from the sink.
  2. Remove both water supply tubes (#45) and four screws (#38) holding the Bottom Plate (#37) to the Faucet Body (#1).
  3. Carefully pull the Bottom Plate (#37) from the Faucet Body and cut wires from sensor eyes to solenoid valve. Retain the TWO Brass Connectors (#34) for reinstallation.
  4. Remove Sensor Eyes (#36) from the Sensor Lens Cover (#2).
  5. Unscrew Sensor Eye retaining bolt from Bottom Plate (#37) and remove the sensor eyes and cable.
  6. Install new Sensor Eye retaining bolt onto the Bottom plate and tighten until snug. Install new eyes into faucet body.
  7. Connect solenoid wires to existing solenoid coil, matching the wire colors. Connections must be insulated.
  8. Holding the faucet body upside down, carefully align Connectors (#34) with the Bottom Plate (#37) and reattach the plate to the faucet body. Note: Check O-Rings (#35) for damage before reassembly of the Bottom Plate. If connectors are not in the proper position, water leakage will occur.
- CAUTION: DO NOT PINCH OR SCRAPE WIRES when attaching the Bottom Plate to the faucet body as this will cause the faucet to fail.**
9. Carefully reconnect faucet sensor eye cable to the Control Module (PCB) located inside the Control Box. Install fresh batteries. Push RESET button located on PCB. If the faucet is operating properly, you will hear a "click" and the indicator light will flash once you have activated the faucet.
  10. Reconnect the Supply Tubes and install faucet and check for leaks and normal operation.

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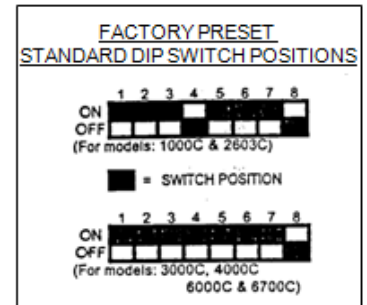


# HYDROTEK AUTOMATIC FAUCET: DIP SWITCHES

**\*NOTE: ALWAYS PUSH THE RESET BUTTON AFTER ANY ADJUSTMENTS\***

A. Shut Off Time Delay (After hands are removed):

Sw 1	Sw 2	Sw 3	Time Delay
ON	ON	ON	1-Sec
ON	ON	OFF	2-Sec
ON	OFF	ON	3-Sec
ON	OFF	OFF	4-Sec
OFF	ON	ON	5-Sec
OFF	ON	OFF	6-Sec
OFF	OFF	ON	7-Sec
OFF	OFF	OFF	8-Sec



B. Automatic Time Off (Maximum run time after activation):

Sw 4	Sw 5	Time Off
ON	ON	0 Sec
ON	OFF	15 Sec
OFF	ON	30 Sec
OFF	OFF	60 Sec

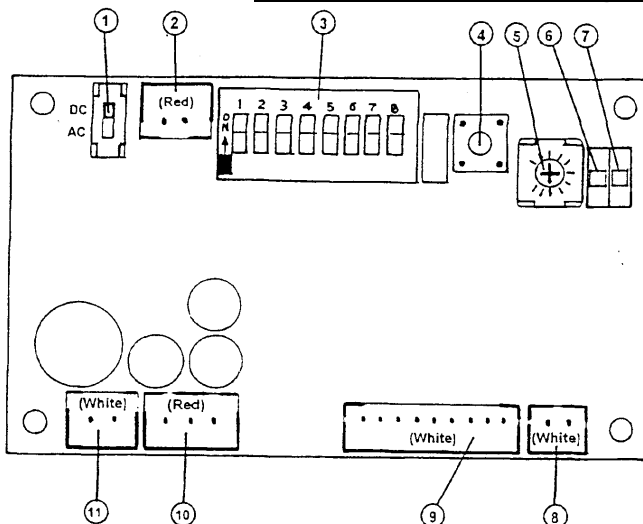
C. Sensor Distance: To increase distance, turn SDA screw clockwise.  
To decrease distance, turn screw counter-clockwise.

Sw 6	Mode	Distance
ON	Std	4" – 12"
OFF	Enhanced	10" – 24"

D. Faucet Switch:

Sw 7	Sw 8	Product
ON	OFF	Auto Faucet

## **Control Module Diagram for C-Series Faucets**



1. AC/DC Switch
2. Battery Holder Pin Connector (Red)
3. Dip Switches
4. Reset Button
5. Sensor Distance Adjustment (SDA)
6. Indicator LED (Green)
7. Indicator LED (Red)
8. Solenoid Pin Connector (White)
9. Sensor Eye Control Cable (White)
10. AC Power Adapter Pin Connector (Red)
11. Battery Holder Pin Connector (White)

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**Suggested Backup Parts for 3000C Series Faucets**  
AC or Battery Powered Lavatory Faucets

<b>Part Number From Drawing</b>	<b>Hydrotek Item Code</b>	<b>Description</b>
8,9,13,20, & Piston Spring	HCB-017B	Solenoid Repair Kit
20,22,26,27,28	HC-078	O-Ring Kit for Temperature Adjustment Assembly
36	HCC-032	Sensor Eyes & Cable
55 55	HCC-011A HCC-011B	PCB Module for AC Model PCB Module for Battery Model
39,45	HC-025C	Supply Tube (2 required)
38	HB-003CM	2.0 GPM Laminar Flow Control Device
14	HCC-019	Solenoid Coil
51	HC-020	Filter Screen

*(Please visit [www.hydrotekintl.com](http://www.hydrotekintl.com) to view our most current Products Pricing Sheet)*