



Sensor Faucets and Flush Valves



OPERATION & MAINTENANCE MANUAL
5000EM Series Faucet

www.hydrotekintl.com

5055 Forsyth Commerce Rd, Ste 124, Orlando, FL 32807
Phone (800) 922-9883 | Fax (866) 670-5580



Sensor Faucets and Flush Valves

The 5000EM Series faucet is an elegant piston operated sensor faucet that provides a vandal resistant, no touch lavatory solution with hot/cold mixing and manual on/off adjustments that promotes better hygiene and energy savings.

Designed to be easy to install and maintain, all major faucet components are encased above deck, making for easier access. The sensor included in this faucet is self adapting, meaning manual adjustments are not necessary and the innovative sensor placement eliminates ambient reflectivity issues.

- 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

Features

- Proprietary **Enduratek** energy saving design allows up to 1.5 million on/off cycles (for battery powered HE models)
- Vandal resistant faucet body with chrome plated, solid metal construction
- Faucet design allows for quick and simple installation
- Clam shell design allows for easy "above the deck" access to all major faucet component parts
- Integral faucet mixing valve and manual on/off
- "Above the deck" temperature adjustment
- "Above the deck" manual on/off with external temperature adjustment
- Slow closing solenoid valve provides reliable and smooth operation without water hammer
- Available in AC powered and battery powered versions
- Unique, energy-saving design of electronics and solenoid valve contributes to longer battery life
- Sensor eye positioning eliminates ambient reflectivity issues
- "Self-adapting" sensor distance adjustment eliminates the need for manual sensor adjustments
- 20 second time-out feature prevents accidental sink overflow
- Replaceable filter screen reduces maintenance costs
- Low battery indicator light
- Unique electronic control module allows for faucet electronic component diagnostics
- Standard 0.5 GPM vandal resistant aerator
- Single-hole deck mount with optional 4" and 8" cover plate for vandal resistant three point anchoring

5000EM Series

AC or Battery Powered Sensor Operated Faucet



Compliances & Certifications



- ADA Compliant
- ASME A112.18.1
- NSF/ANSI Standard 372 - Lead Free Compliant
- USGBC Member
- WaterSense Listed*—select flow rates; certified for residential and private restroom use.

Available Models

- H-5000EM-LR:** Lead Free, AC Powered
- H-5000EM-LR-1.0:** Lead Free, AC Powered, WaterSense Listed*
- HE-5000EM-LR:** Lead Free, Battery Powered with Enduratek
- HE-5000EM-LR-1.0:** Lead Free, Battery Powered, WaterSense Listed*
- H-5000EMMB-LR:** Matte Black Finish, Lead Free, AC Powered
- HE-5000EMMB-LR:** Matte Black Finish, Lead Free, Battery Powered with Enduratek

Special Finishes

- Matte Black
- Additional Finishes Upon Request



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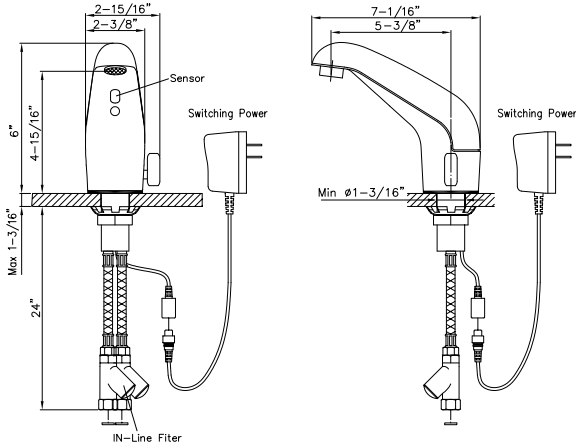
Sensor Faucets and Flush Valves

5000EM Series

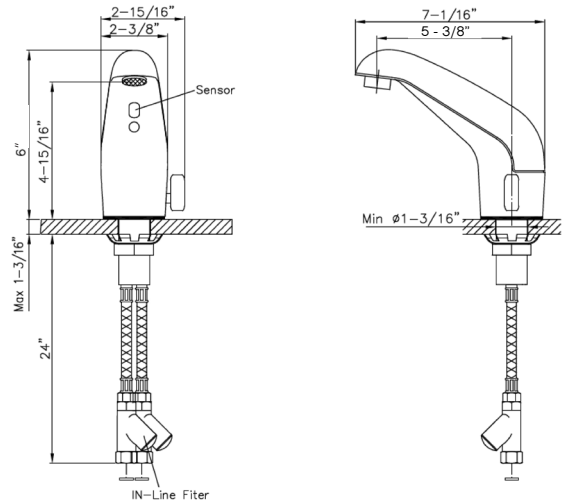
AC or Battery Powered Sensor Operated Faucet

Deck Mounted / Mixing

H-5000EM (AC Powered)



HE-5000EM (Battery Powered)



Specifications:

- Faucet Construction: Metal & chrome plated
- Mixing Valve (Built-in): with Manual on/off override.
- Control Circuit:
 - Auto. Time-out: 20 seconds
 - Sensor Range: Self adapting
 - Shut-off Delay: 1 second
- Solenoid Valve: 6V DC, normally closed
- Wattage: 0.2W (idle), 3W (in use)
- Operating Pressure: 5 psi to 125 psi
- Flow Control: 0.5 GPM Laminar, vandal resistant

AC Mode

- Power Adapter
 - Standard Plug-in: Input AC 120V 60 Hz (UL/CSA) Output DC 7.5V, 0.8A/Class 2
 - Power Cable: Armored, vandal resistant
- Optional Multi-Unit Adapter: Serves up to 8 faucets (UL/CSA) Input AC 120V, Output DC 7.5V, 3A

Battery Mode

Enduratek Battery Service Life: **1.5 million on/off cycles, up to 10 years**

Package Includes:

- (1) Faucet with sensor/solenoid
- (1) 7.5V DC plug-in power adaptor (H-5000EM Only)
- (2) Armored steel supply tube with filter
- (1) Mounting lock nut and washer
- (1) 0.5 GPM vandal resistant Rosette flow control
- (4) AA Alkaline batteries (HE-5000EM & HE-5000EM-LR Only)

Dimensions:

- Base Width (Outside Measurement) 2-3/8"
- Base Depth 2-3/8"
- Faucet Height (Aerator to Base) 4-15/16"
- Faucet Height Overall 6"
- Depth (Center of Aerator to Center of Faucet Base) 5-3/8"
- Mounting Bolt Length. 2-1/4"
- Mounting Bolt Size 1-1/8"

Optional Variations and Accessories

- 1.5 GPM VR Soft Flow or 0.35, 2.2 GPM Laminar Flow Control
- 4" or 8" Centerset Cover Plate
- HC-010E Multi-Unit Voltage Adapter (AC Powered Only)
- HBL-04 Thermostatic Mixing Valve with Checks

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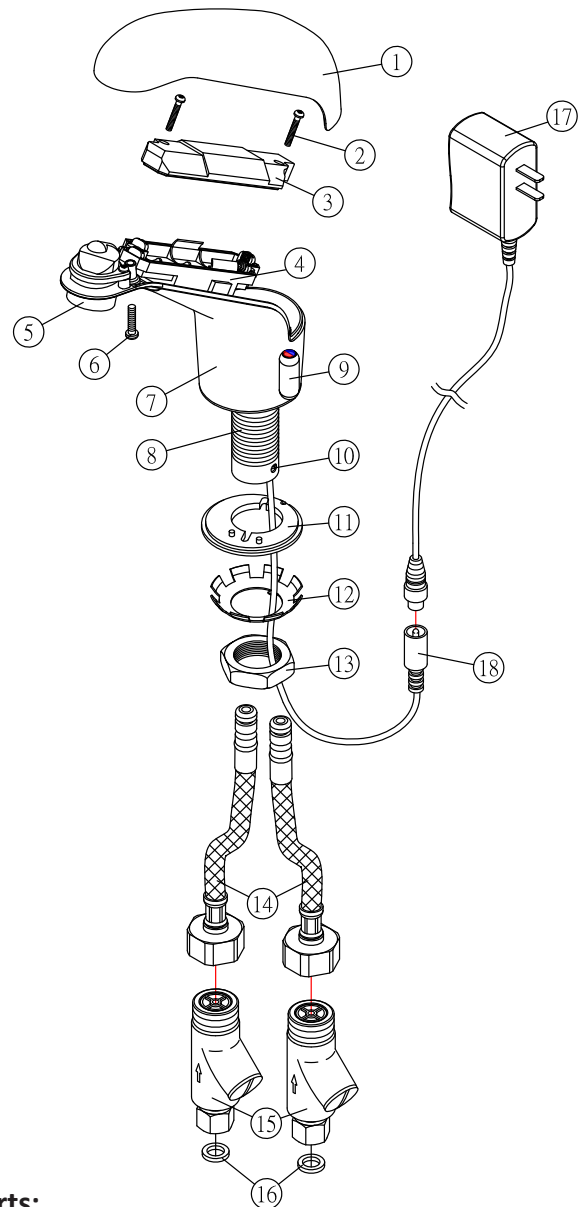
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AC or Battery Powered Sensor Operated Faucet Installation Instructions

- Prior to installing this faucet, thoroughly flush all water lines and replace stop washers as may be required.
- Unscrew the **Mounting Nut (13)** from the **Mounting Rod (8)** and completely remove both the **Mounting Nut (13)** and **Star Locking Washer (12)**. Ensure the **Rubber Gasket (11)** remains on the faucet body.
- From above the deck, carefully feed the **Mounting Rod (8)** into the deck mounting hole and adjust the faucet in the correct position.
- From below the deck, slide both the **Star Locking Washer (12)** and the **Mounting Nut (13)** onto the **Mounting Rod (8)** and tighten **Mounting Nut (13)** to secure faucet to the deck.
- Rotate the **Locking Screw (10)** fully clockwise, then insert the O-ring end of the **Supply Tubes (14)** into the bottom of the **Mounting Rod (8)** until properly seated. Turn the **Locking Screw (10)** counterclockwise until the markings on the **Mounting Rod (8)** and the **Locking Screw (10)** are properly lined up. Gently pull down on the supply tubes to confirm they are properly seated in the **Mounting Rod (8)**.
- Install both **In-line Filters (15)** onto the stop valves.
USE TEFLON TAPE FOR ALL CONNECTIONS, NO PIPE DOPE
- Connect the **Supply Tubes (14)** to the **In-line Filters (15)** using the swivel quick connect nuts.
- To allow for proper sensor calibration, empty the sink basin prior to installing the power supply.
 - AC Powered:** Plug-in the **AC Power Adapter (17)** into a 120V outlet and connect it to the **AC Cord Pigtail (18)**.
 - Battery Powered:** Using the security screw allen key included in the box, remove the **Top Cover (1)** by loosening up the **Security Screw (6)** next to the **Aerator (5)**. Remove the **Battery Holder Cover (3)** and install the 4 AA batteries provided, into the **Battery Holder (4)**. Reinstall the **Battery Holder Cover (3)** and tighten the screws. Reinstall the **Top Cover (1)** onto the **Faucet Body (7)** and tighten the **Security Screw (6)**.
- Once the power supply is installed, allow 15 seconds for the faucet to complete the auto calibration process before activating the faucet.
- Turn the water supply ON and check for possible leaks.
- Place your hands under the faucet to activate the sensor. Water should flow automatically and should stop once you remove your hands, or after 20 seconds of continuous activation.
- Retain the security screw allen key for future maintenance and battery replacements.
- The faucet's water temperature can be adjusted by rotating the **Temperature Adjustment Knob (9)** to the desired setting.
- The sensor can be bypassed for manual operation by pulling the **Temperature Adjustment Knob (9)** outward from the faucet body; pushing the knob inward returns the faucet to automatic sensor mode.
- IMPORTANT:** This product contains mechanical and/or electrical components that are subject to normal wear. Periodic cleaning and maintenance for the **In-line Filters (15)** as well as the **Aerator (5)** is recommended to maintain the faucet's performance.



Parts:

1. Top Cover	11. Rubber Gasket
2. Battery Holder Screws (2)	12. Star Locking Washer
3. Battery Holder Cover	13. Mounting Nut
4. Battery Holder	14. Supply Tubes
5. Aerator	15. In-line Filters
6. Security Screw	16. Nylon Washers (Installed)
7. Faucet Body	17. AC Power Adapter (AC models only)
8. Mounting Rod	18. AC Cord Pigtail (AC models only)
9. Temp. Adjustment Knob	
10. Locking Screw	

IMPORTANT: (1) For outdoor installations, the faucets must be installed in fully enclosed spaces where they are completely shielded from direct sunlight, as exposure to the sun can affect performance. Hydrotek International, Inc. is not liable for any damages, malfunctions, or performance issues caused by exposure to direct sunlight.

(2) Additionally, the stop valve must not be opened beyond the point where water flow exceeds the sink drain's capacity. The sink's drain and plumbing must accommodate continuous water flow from the faucet to prevent overflow. Hydrotek is not responsible for any damages resulting from sink overflow caused by water flow exceeding the capacity of the drain or pipes. Proper installation and operation are the user's responsibility.

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AC or Battery Powered Sensor Operated Faucet

Troubleshooting Guide

OPERATION: When power is connected, the unit will automatically begin to perform the setup procedure. You will hear a click sound and the sensor light will flash. Once setup is complete, water will flow when the sensor is activated by placing the user's hands under the spout and will continue to flow for the duration of the sensor activation. Water flow will automatically stop once the user's hands are removed. Periodic maintenance is required for smooth and trouble-free operation.

PROBLEM	SYMPTOM	POSSIBLE CAUSE	SOLUTION
No water flow	Solenoid clicking is detectable	No water at supply	Make sure the stop valves are turned on
	Solenoid clicking is undetectable	No power to the PCB	AC Models: Check the outlet to make sure there is power to it
		**Battery Models only: red indicator light flashing	Battery Models: Low battery. Remove batteries. Install new AA batteries
		Power confirmed at the PCB, but no indicator light when sensor is activated	PCB is defective
Continuous water flow or dripping	Solenoid clicking is detectable	Solenoid valve is stuck open	Clogged/Defective solenoid valve. Turn water off at the supply. Contact <i>Hydrotek Technical Support</i> for further assistance
	EM models ONLY Solenoid clicking is detectable	Manual temperature knob in open position	Push the temperature knob inwards against the faucet body
	Solenoid clicking is undetectable	Solenoid is defective	Check power source to the PCB. If there is appropriate power, replace solenoid
Faucet is ghost activating	Water turns on and off intermittently without activation	Sensor calibration is off	Battery Models: Ensure sink basin is empty. Remove all 4 AA batteries. Wait 10 seconds. Reinstall batteries and allow for faucet to calibrate without any interruption (15 seconds) AC Models: Ensure sink basin is empty. Unplug the power supply. Wait 10 seconds. Reconnect the power supply and allow for faucet to calibrate without any interruption (15 seconds)
Limited water flow after each activation	Low line pressure	Stop valves have restricted flow	Make sure stop valves are fully open
	Faucet is trickling or dripping with each activation	Solenoid Valve/Module malfunction due to normal wear and tear	Replace Solenoid Coil and Valve Module (HCE-194)
		Inline filter or aerator clogged with excessive debris	Use appropriate aerator removal key (red plastic Neoperl) and rinse off the debris. Repeat this procedure with the inline filter screen below the deck

For issues beyond the steps of this troubleshooting guide, please call:

Hydrotek Technical Support

(800)922-9883

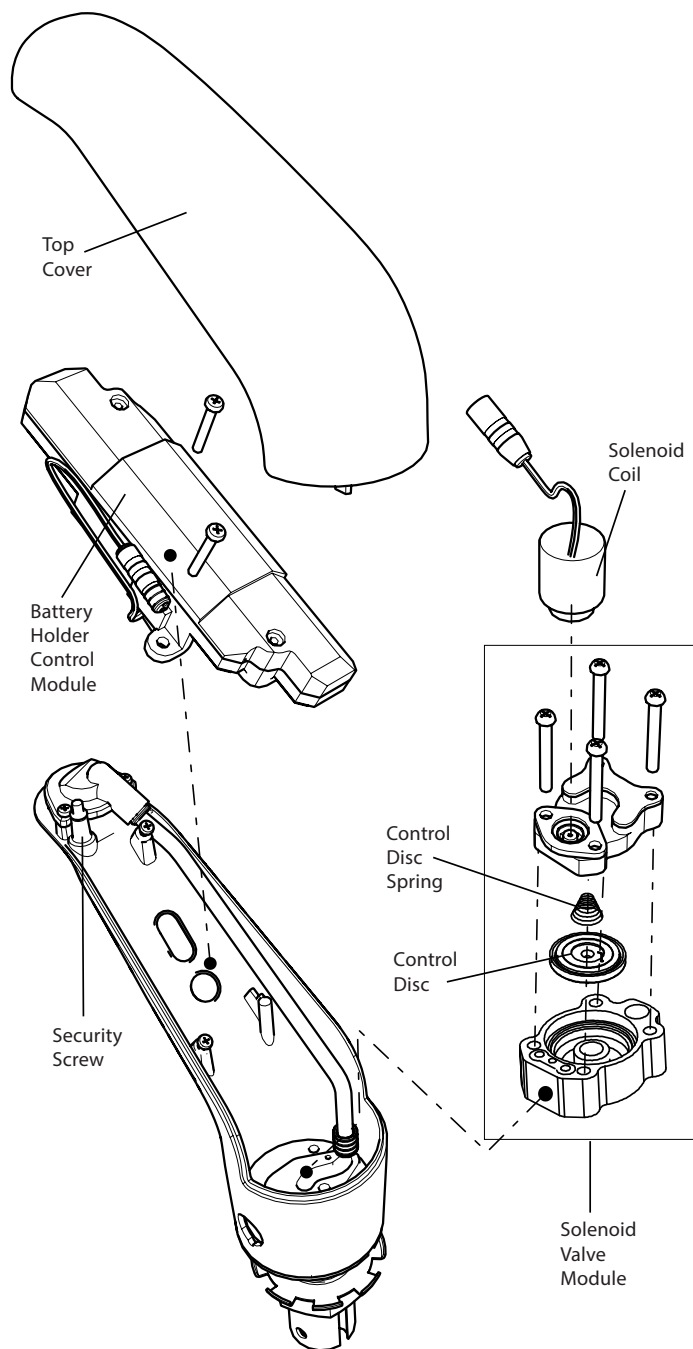
Care and Cleaning Instructions:

- **WARNING!** Using abrasive or chemical cleaners *will* damage the chrome or decorative finishes.
- Use only soap and water to clean the finish, then wipe dry with a clean cloth.
- If chemical cleaners are used for other parts of the lavatory, ensure that the faucet is protected from potential contact from those cleaners.

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AC or Battery Powered Sensor Operated Faucet

Maintenance Tasks



Tools Required

- Philips Screwdriver
- Security Screw Allen Key
- Pliers
- Replacement Solenoid Valve Assembly (HCE-194)

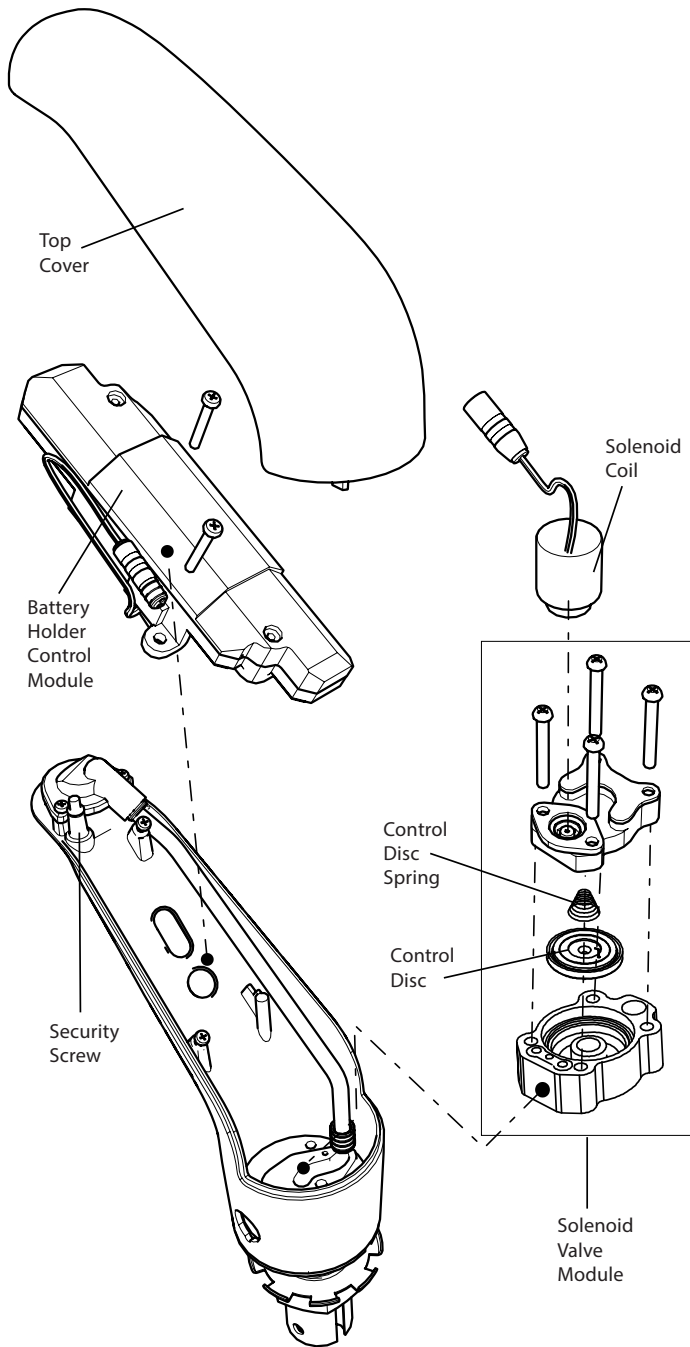
HCE-194 Solenoid Valve Assembly Replacement

- 1. Turn off the water supply and remove the Top Cover:** Shut off the stop valve(s) below the deck. Using the Security Screw Allen Key, loosen the Security Screw next to the aerator and remove the Top Cover.
- 2. Remove the Battery Holder Control Module:** Loosen the screws. Disconnect the orange and blue solenoid plug. Disconnect the black and red power plug (AC models only). Completely remove the Battery Holder Control Module from the faucet body.
- 3. Remove the Solenoid Coil:** Using a set of pliers, unscrew and remove the Solenoid Coil from the Solenoid Valve Module. *Note: Ensure that the piston and spring housed inside the solenoid are securely latched inside the coil.*
- 4. Remove the Solenoid Valve Module:** Remove the 4 screws securing the Solenoid Valve Module. Disconnect the copper tube from the Solenoid Valve Module. *Note: Ensure the rubber grommet on the copper tube has been completely removed before installing the new Solenoid Valve Assembly.*
- 5. Install the new Solenoid Valve Module:** Insert the copper tube into the new Solenoid Valve Module and place inside the faucet body. **IMPORTANT: Ensure that the gasket at the bottom of the new Solenoid Valve Module is properly seated. Failure to do so will result in significant internal leaking.** Secure the Solenoid Valve Module to the faucet body using the 4 screws.
- 6. Install the new Solenoid Coil:** Install the new Solenoid Coil by screwing it into the Solenoid Valve Module. Hand tighten.
- 7. Reinstall the Battery Holder Control Module:** Secure the Battery Holder Control Module to the faucet body using the screws. Reconnect the Solenoid Coil wire to the corresponding wire on the faucet body. Reconnect the power plug (AC models only).
- 8. Test the faucet:** Before turning on the water, place hands under the sensor to confirm sensor activation. Turn on the water supply and check for leaks.
- 9. Reinstall the Top Cover:** Using the Security Screw Allen Key, tighten the Top Cover to the faucet body.

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AC or Battery Powered Sensor Operated Faucet Maintenance Tasks



Tools Required

- Philips Screwdriver
- Flathead Screwdriver
- Security Screw Allen Key
- Pliers
- Replacement Control Disc (HCE-005A)

HCE-005A Control Disc Replacement

- 1. Turn off the water supply and remove the Top Cover:** Shut off the stop valve(s) below the deck. Using the Security Screw Allen Key, loosen the Security Screw next to the aerator and remove the Top Cover.
- 2. Remove the Battery Holder Control Module:** Loosen the screws. Disconnect the orange and blue solenoid plug. Disconnect the black and red power plug (AC models only). Completely remove the Battery Holder Control Module from the faucet body.
- 3. Remove the Solenoid Coil:** Using a set of pliers, unscrew and remove the Solenoid Coil from the Solenoid Valve Module. *Note: Ensure that the piston and spring housed inside the solenoid are securely latched inside the coil.*
- 4. Remove the Solenoid Valve Module lid:** Remove the 4 screws securing the Solenoid Valve Module. Carefully lift off the Solenoid Valve Module lid ONLY, along with the screws.
- 5. Remove the Control Disc:** Remove the Control Disc Spring from the center of the Control Disc. Use a flathead screwdriver to carefully pry out and remove the Control Disc.
- 6. Install the new Control Disc:** Install the new Control Disc with the nipple facing down. Ensure that the Control Disc is properly seated. Place the Control Disc Spring back into the center of the Control Disc.
- 7. Reassemble the Solenoid Valve Module:** Position the lid of the Solenoid Valve Module back onto the bottom valve seat. Secure the lid with the 4 screws.
- 8. Reinstall the Solenoid Coil and Battery Holder Control Module:** Reinstall the Solenoid Coil by screwing it into the Solenoid Valve Module. Hand tighten. Reconnect the Solenoid Coil wire to the corresponding wire on the faucet body. Reconnect the power plug (AC models only).
- 9. Test the faucet:** Before turning on the water, place hands under the sensor to confirm sensor activation. Turn on the water supply and check for leaks.
- 10. Reinstall the Top Cover:** Using the Security Screw Allen Key, tighten the Top Cover to the faucet body.



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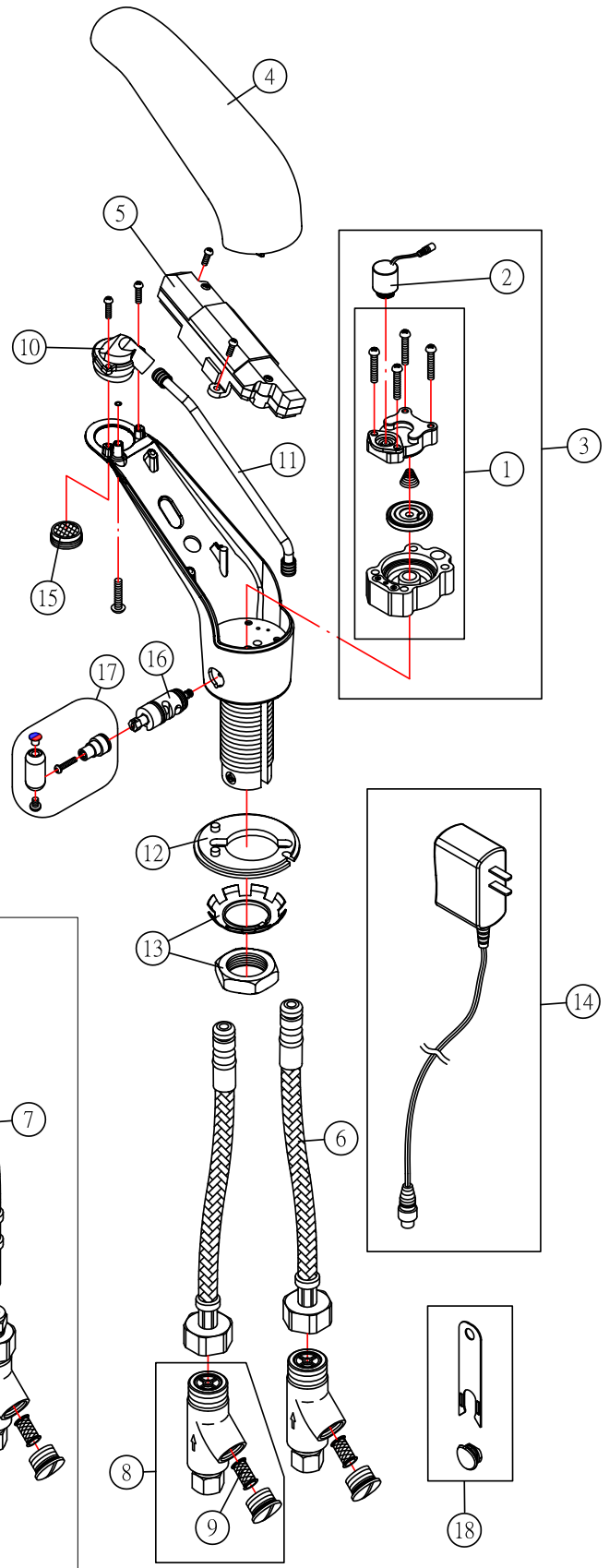
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AC or Battery Powered Sensor Operated Faucet Assembly Parts

No	Description	Part Number
1	Solenoid Module	HCE-004
2	Solenoid Coil	HCE-019
3	Complete Solenoid Assembly	HCE-194
4	Top Cover	HCE-014
5	Control Module Assembly	HCE-018A (AC) HCE-018B (DC)
6	Flexible Supply Tube, Quick Connect	HC-025H
7*	Flexible Supply Tube, Compression	HCE-026 (Single O-ring) HCE-015 (Double O-ring)
8	In-Line Filter	HC-009A
9	Filter Screen	HC-020
10	Aerator Connector	HCE-006
11	Copper Supply Tube	HCE-016
12	Rubber Gasket	HCE-022
13	Mounting Nut & Washer	HCE-021
14	AC Power Adapter	HCE-008-RCA
15	0.5 Slim Rose Spray Aerator	HB-003SLIM0.5
16	Temp Adjustment Assembly	HCE-028
17	Temp Handle Assembly	HCE-029
18	Temp Handle Cap & Lock Assembly	HCE-017

* only (1) Supply Tube included per order



*Alternate style Supply Tubes. Please check your specific product for the correct type and part number

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