



# H401 (AC/DC) -- Service and Installation --

10/27/2023 Rev.1

## DESCRIPTION

H401 Series are 2-way piloted piston-operated solenoid valves with Standard stainless-steel bodies. Positive shutoff is assured by using a spring-loaded plunger and synthetic seating materials such as FKM and PTFE. Valves are designed for use with air, gas, liquids, and other flow media not corrosive to stainless steel or the selected seating material.

## OPERATION

H401 Valves are normally closed (N.C.) and open when electrically energized.

## SPECIFICATIONS

Use H401 Valves within the specified operating ranges as indicated on the nameplate and in the complete Catalog Number. (max. psi, voltage, hz, maximum media temperature at F ambient, Cv factor, etc.).

### OPERATING TEMPERATURES

Ambient	Elastomer	Fluid
32° - 125° F	FKM/PTFE	32° - 230° F
32° - 125° F	PTFE	32° - 366° F

For other applications, consult the factory.

## INSTALLATION

Check valve specifications to make sure of proper application.

1. Clear all lines of foreign matter.
2. Valves are multi-poised and may be mounted in any position. Media flow must be in the direction indicated on the valve body. If small particulates are a problem, install a fine mesh strainer having adequate capacity ahead of the valve.
3. Do not use the solenoid housing as a handle. Apply thread sealant to the male threads only.
4. Provide clearance for solenoid removal.
5. Wire in accordance with applicable local and national electrical codes. Apply rated voltage.

## MAINTENANCE

### COIL REPLACEMENT

**Turn off the electrical power supply to the solenoid before disconnecting the coil lead wires.**

Incorrect coil reassembly can cause coil burnout. At all times, take care not to nick, dent, or damage the plunger tube.

It is not necessary to remove the valve from the pipeline. Follow Steps 1, 2, and 3 under **VALVE DISASSEMBLY**. Disassemble the solenoid, taking care to note the exact order of placement and quantity of parts.

Incorrect reassembly can cause coil burnout. At all times, take care not to nick, dent, or damage the plunger tube.

## PARTS

The charts that follow cover replaceable coil part numbers and Repair/Rebuild kits for most H401 valves.

When ordering parts/kits, specify the Catalog Number, Serial Number, and Part Name. If your valve's Catalog Number is not listed, obtain the complete Serial Number, and consult the factory.

## REBUILD KIT

The Rebuild Kit contains the plunger, spring and spring pin assembly, plunger tube assembly, O-rings, piston assembly, and adapter ring.

## REPAIR KIT

The Repair Kit contains a plunger assembly, piston assembly, and O-rings.

### REBUILD & REPAIR KIT CHART

Valve	Rebuild Kits	Repair Kits
H401GF__T__F5Z5	KH401T-Z5	RH401T-Z5
H401GF__Z__F5	KH401Z	RH401Z

### COIL CHART

Valve	Voltage	DIN Coil	Conduit Coil
H401GF02_____	120V 50/60	HS4YN02	HS4GN02A24
H401GF24_____	24V 50/60	HS4YN24	HS4GN24A24
H401GF15_____	12 VDC	HS4YN15	HS4GN15A24
H401GF16_____	24 VDC	HS4YN16	HS4GN16A24

## Cleaning

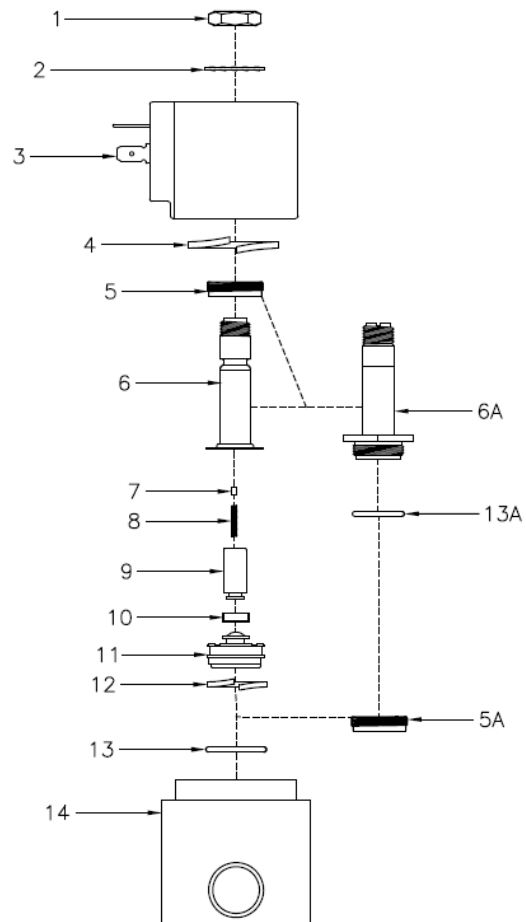
**Cleaning fluid must be compatible with all valve components.** It is recommended that S211 Series Valves be cleaned on a routine basis by qualified personnel. Valves should be cleaned where flow media or service conditions may determine the life of the valve. If excessive leakage occurs or if the operation is sluggish, the unit must be cleaned.

## SERVICE DISASSEMBLY AND KIT INSTALLATION

### WARNING

Disassembly, reassembly, or internal adjustment without factory testing may result in hazardous conditions. If the valve does not operate properly after following the INSTALLATION and MAINTENANCE instructions, the complete valve must be replaced by a trained and experienced service person.

1. Disconnect electrical connections and remove retaining nut (1). Remove with lock washer (2).
2. Lift off coil (3) from the plunger tube.
3. Do not damage the solenoid assembly.
4. Remove split washer (4). **Note – split washer (4) is not required when plunger tube (6A) is used.**
5. Use GC Valves spanner nut (106198E) for items (5&6) or a 1" deep socket to remove item (6A). Do not nick, dent, or damage the plunger tube (6) or valve seating surfaces.
6. Hold plunger tube (6/6A) in position when removing from valve body (14) to prevent loss of internal parts.
7. Carefully remove spring pin (7), spring (8), plunger assembly (9), and retaining clip (10).
8. Carefully remove piston (11) and glide ring (12).
9. Check seating surfaces on plunger (9), piston (11), and valve body (14) for damage or wear.
10. Replace plunger (9), piston assembly (11), O-ring (13/13A), and other parts as necessary. Consult the "REBUILD & REPAIR KIT CHART" for the correct kit part number.
11. Carefully install the piston (11) and glide ring (12). Take care not to pinch the glide ring (12) during installation. Replace retaining clip (10), plunger assembly (9), spring (8), and spring pin (7).
12. Align internal parts and carefully slide the plunger tube (7) over the assembled parts.
10. Tighten solenoid base nut (5) or plunger tube (6A) to 50 In/Lbs.
11. Re-connect electrical and test for proper operation.



### TROUBLESHOOTING

If the valve fails to open, check the voltage against the rating on the nameplate, check the voltage at solenoid lead connections, and check the control circuit and solenoid coil for burnout. If the valve fails to close, check the condition of the synthetic seat insert. Also, check for a damaged spring. The valve must be free of dirt to ensure tight shutoff. If media contaminants are a problem, install a fine mesh strainer to ensure proper closing and trouble-free operation.

Buzzing can be caused by low voltage or contaminants between the top of the plunger and the tube head. Check voltage--clean the plunger/interior of the tube assembly.