Mounting Instructions

ISO 5211 Dimensionally Compliant Bracket, Coupling, and Actuator to 4-Bolt 60 Series Valves

This document covers how to install an ISO 5211 dimensionally compliant mounting bracket to a 4-bolt 60 series ball valve. The valve shown is a 65 series valve.

Bracket Kit Contents

Mounting Bracket

Wall Mounting Bracket

Bracket Lock Washers (2)

Bracket Hex Nuts (2)

Bracket Hex Bolts (2)

Socket Head Cap Screws (4)

Coupling

Lock Tab

Lower Grounding Spring

Upper Grounding Spring

Also: Lubricant, Material Safety Data Sheet and Instructions.

Tool Requirements

Hex Wrench

Wrench

Socket

ISO 5211 Flange Size	Hex Key		Wrench and Socket	
	Metric	Fractional	Metric	Fractional
F03	4 mm	5/32 in.	13 mm	5/16 in.
F04				
F05	5 mm	3/16 in.		
F07	6 mm	5/16 in.		

Valve Series	Socket
All series bracket hex nut	9/16 in.
62 series stem nut	7/16 in.
63 series stem nut	9/16 in.
65 series stem nut	3/4 in.
67, 68 series stem nut	15/16 in.

Torque Wrench

ISO 5211 Flange Size or Valve Series	Torque Required		
	in.·lb	N·m	cm·kg
Cap screw torques			
F03, F04	45	5.1	51.8
F05	75	8.5	86.4
F07	150	16.9	173
Hex and stem nut torques			
All Series bracket hex nut	55	6.2	63.4
62 series stem nut	25	2.8	28.8
63 series stem nut	50	5.6	57.6
65 series stem nut	100	11.3	115
67, 68 series stem nut	150	16.9	173

WARNING

Before removing any installed valve you must:

- **depressurize the system**
- **cycle the valve**
- **purge the valve**

CAUTION

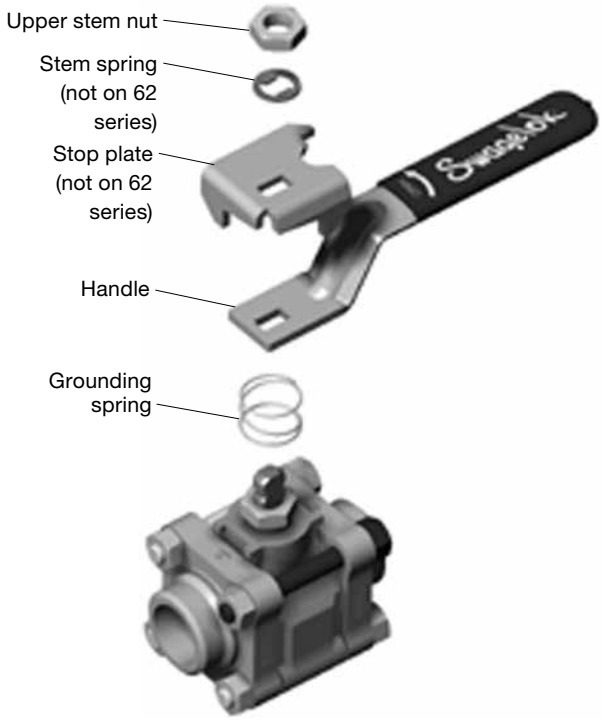
You must verify the desired flow patterns after these assembly steps are completed.

CAUTION

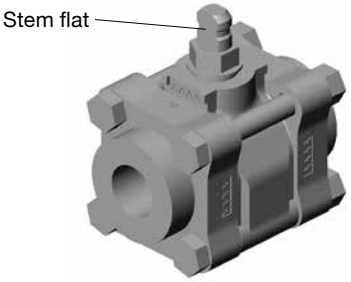
Actuated assemblies must be properly aligned and supported. Improper alignment or inadequate support of the actuated assembly may result in leakage or premature valve failure.

Valve Preparation

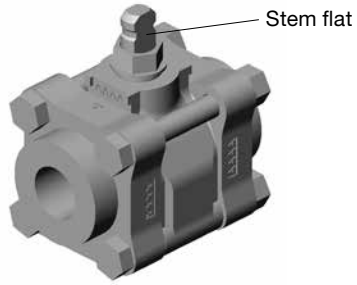
1. Turn the handle to orient the valve in the desired position. This position will determine the initial valve/actuator position.
   Remove the **upper stem nut**, **stem spring**, **stop plate**, **handle**, and **grounding spring** from the valve.



2. Verify the orientation of the valve.

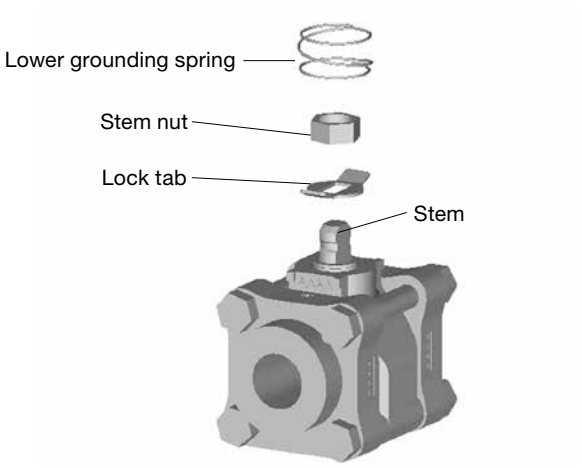


Valve in **closed** position



Valve in **open** position

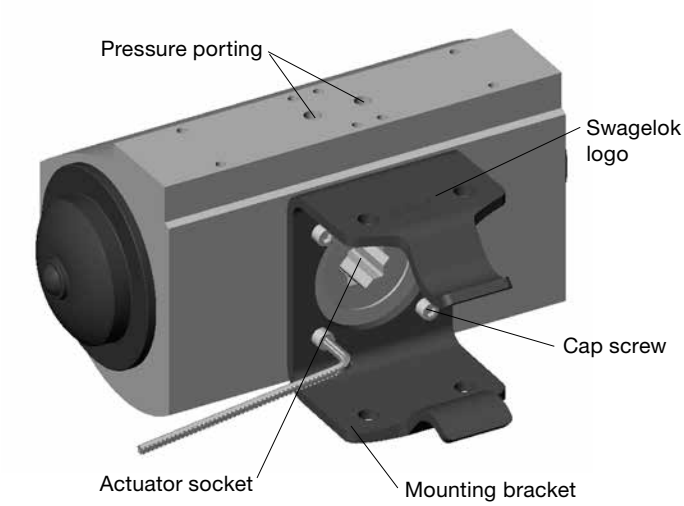
3. Remove the **lower stem nut** and place **lock tab** on stem.
4. Reinstall the **lower stem nut** and tighten according to the Torque Wrench table on page 2. Bend the **lock tabs** “up” against the stem nut flats.
   If the tabs do not align with the stem nut, tighten the stem nut until the tabs are aligned, not more than 1/6 turn.
   Place the **lower grounding spring** onto the valve, ensuring it contacts with the valve body.



Open position shown

Actuator Preparation

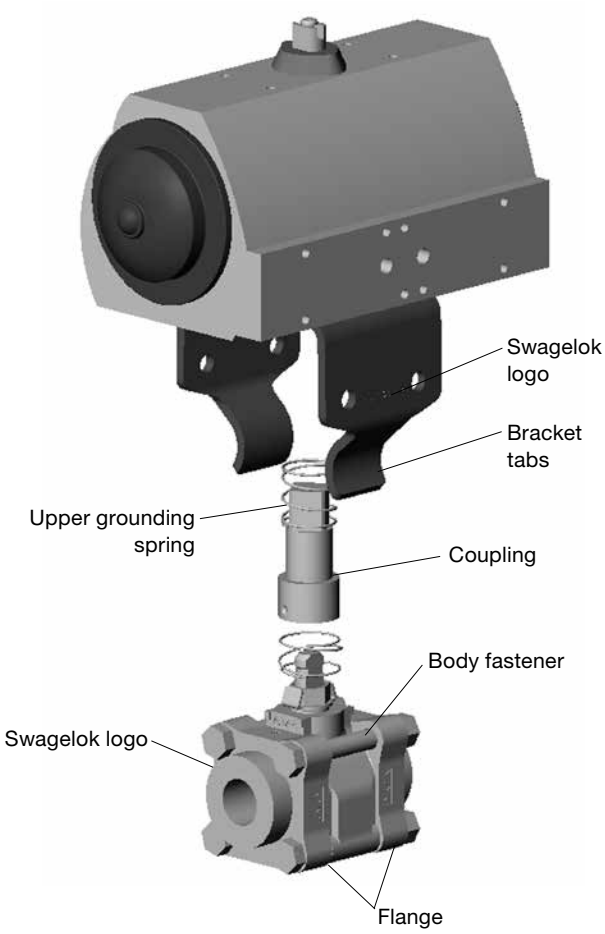
1. Using four **cap screws**, attach the **mounting bracket** to the actuator so the logo on the bracket is on the same side as the **pressure porting** on the actuator. Tighten the cap screws according to the Torque Wrench table on page 2. Verify that the position of actuator (open or closed) corresponds to the valve position.



Mounting Instructions

1. Place the **upper grounding spring** onto the **coupling** and then the coupling/spring onto the valve stem.

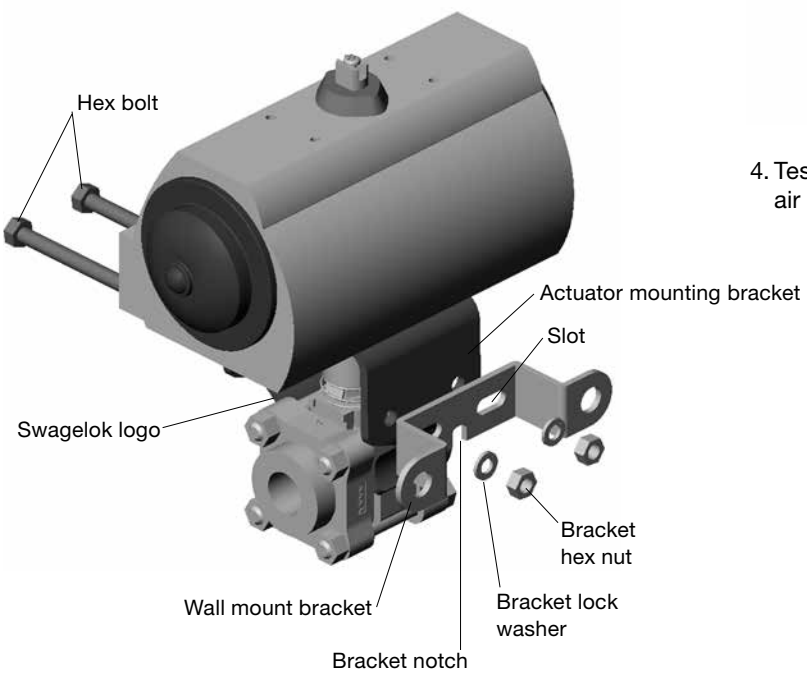
   Align the actuator over the valve so that the **Swagelok logo** on the bracket and the Swagelok logo on the valve body are on opposite sides. Insert the **coupling** into the actuator socket. Press the **bracket tabs** onto the valve body between the **flanges** until the bracket tabs “snap” past the **body fasteners**.



2. Place the **wall mount bracket** against the **actuator mounting bracket** on the side opposite the actuator bracket's **Swagelok logo**. If the wall mount bracket has a notch in the center, orient the notch towards the valve.

   Insert the **hex bolts** through the holes in the actuator mounting bracket on the same side as the logo on the bracket. Pass the bolts through opposite side of mounting bracket and through the **slots** in wall mount bracket.

   Apply system compatible thread lubricant to the first three threads of each hex bolt. Place one **lock washer** over each of the hex bolts and thread a **hex nut** to finger-tight. Align the wall mount bracket in the center of the actuator mounting bracket.



3. Torque the hex nuts to 55 in.·lb (6.2 N·m, 63.4 cm·kg) while holding hex bolt heads with a wrench (all sizes).

4. Test for proper valve operation by applying a minimum air pressure as specified by the actuator manufacturer.

⚠ WARNING
Do not mix/interchange Swagelok products or components not governed by industrial design standards, including Swagelok tube fitting end connections, with those of other manufacturers.

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MS-INS-4B60NM, RevC, March 2022