



Instructions for Installing Actuator Drive-Keys 76, 86 & 96 Series Ball Valves

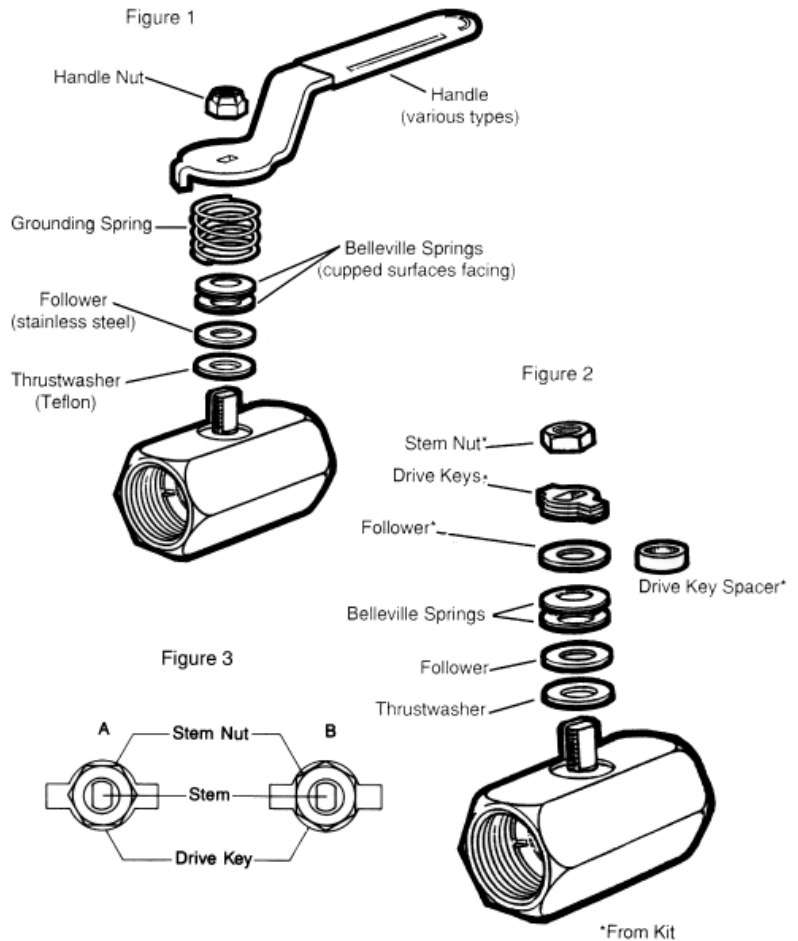
2 Otter Court, Raymond, New Hampshire 03077 • Tel. (603) 895-4761 • FAX (603) 895-6785 • www.geminivalve.com

These instructions cover the conversion of manual (handle-operated) valves for actuated operation. In addition to the valve and actuator, a mounting kit is also necessary to complete the installation.

1. With the valve in the 'open' position remove, and put aside, the handle nut, handle and grounding spring from the valve on which the actuator will be mounted. Leave the thrustwasher, follower and Belleville springs on the valve stem.

2. Note: 1-1/2" - 2" 76, 1-1/4" - 2" 86 and 1" & 1-1/2" 96 Series use a single thick drive key. All other valves use (3) thin drive keys. Assemble the follower or spacer (if required, see the chart below), drive key(s), and stem nut from the kit. Do not reuse the handle nut from the manual valve assembly. Prevent the stem from turning as the nut is tightened by inserting a wooden or plastic dowel through the valve, then tighten the stem nut until the Belleville springs have just become fully compressed (flattened). Although the nut spins freely when first run onto the stem, the torque needed to continue tightening will increase progressively after the stem nut contacts the drive key(s) and the Belleville springs begin to deflect. The torque required to tighten further will increase sharply once the Belleville springs have become fully flattened. Tightening beyond this point should not be attempted as damage to the stem seal may result.

3. The correct orientation of the stem nut to the drive key(s) is shown in Figure 3; this orientation is necessary to permit engagement with the twelve-point socket in the actuator pinion driver. In order to achieve the desired orientation, loosen the stem nut until the nut / drive key(s) relationship corresponds to either 'A' or 'B' in Figure 3. This adjustment should require less than one-twelfth (1/12) turn of the nut.



For Mounting To							
B410 & A420 Series				A500 Series			
Size	76 Series	86 Series	96 Series	76 Series	86 Series	96 Series	
1/4	N/A	Follower	N/A	N/A	Follower	N/A	
3/8	N/A	Follower	N/A	N/A	Follower	N/A	
1/2	Follower	Follower	None	Follower	Follower	None	
3/4	Follower	None	Spacer	Follower	None	None	
1	None	Spacer	Spacer	None	None	Spacer	
1-1/4	Spacer	Spacer	Spacer	None	Spacer	Spacer	
1-1/2	Spacer	Spacer	Spacer	Spacer	Spacer	Spacer	
2	Spacer	Spacer	N/A	Spacer	Spacer	N/A	