



Instructions for Installing Actuator Drive-Keys on 1.0, 1.2 and 1.5 Port 89 Series Ball Valves

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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. Turn valve to 'open' position.

2. Remove handle nut, handle, stem nut and stop. Leave Belleville springs, thrustwasher and pilot spacer undisturbed.

3. Place the drive key spacer on the Belleville springs.

4. Place the drive key in position on the drive key spacer. The drive key has a rounded edge on one side (the 'draw' side) and a square edge on the opposite side (the 'shear' side). Install the drive key 'draw' side down.

5. Assemble the stem nut from the kit. Insert a wooden or plastic dowel through the valve port to prevent turning as the stem nut is tightened. Continue tightening the stem nut until the Belleville springs beneath the drive key spacer become fully compressed (flattened) signalled by an abrupt increase in resistance to further tightening.

6. Check the orientation of the stem nut to the drive key. In order to achieve the desired orientation, loosen the nut until the drive key relationship corresponds to Illustration 'A' or 'B' (see Instruction 6 Illustration). This should not require more than one-twelfth (1/12) turn of the nut.

