



# GEAR OPERATOR KIT & CHAINWHEEL OPERATOR KIT INSTALLATION INSTRUCTIONS



BF-3B-0700

Operator or Chainwheel Operator mounts directly to Spears® Butterfly Valve stem shaft using the following kit components:

### Gear Operator Kit

Gear Operator Assembly  
Handwheel & Nut  
Drive Bushing  
Mounting Bolts (4)  
Lock Washers (4)

### Chainwheel Operator Kit

Gear Operator & Chainwheel Assembly  
Drive Bushing  
Mounting Bolts (4)  
Lock Washers (4)

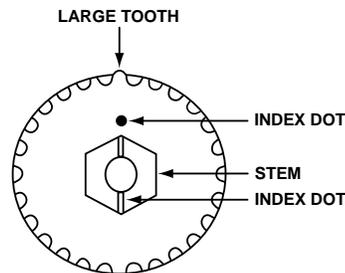
Please read all instructions carefully before proceeding. “Unit Installation” and “Position Adjustment” instructions apply to both Gear Operator Kits and Chainwheel Operator Kits.

## Unit Installation

### IMPORTANT:

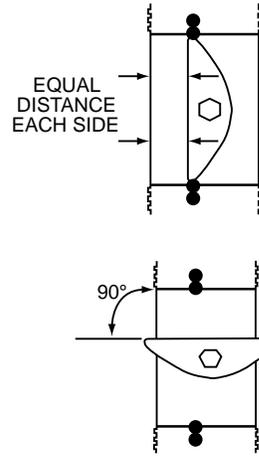
Chainwheel operated valves should be mounted in the inverted (stem down) position to assure proper chain clearance with piping system.

- Step 1** Install Handwheel onto Gear Operator shaft adapter and secure with Nut. Tighten snug (Chainwheel is pre-assembled onto Gear Operator shaft).
- Step 2** Rotate valve Disc to full closed position. Rotate handwheel to position Gear operator at full closed position (as indicated on top indicator).
- Step 3** Drive Bushing is timed to Gear Operator and Valve Stem with a large spline tooth and index marks. Locate the large tooth of the Drive Bushing (marked with a small dot). Locate the disc index line (stamped on top of the stem). With spline side up, install Drive Bushing onto Stem hex while locating the bushing index tooth at either end of the stem index line (note: reversing end location on index line changes operator orientation 180°).
- Step 4** Locate index spline on underside of the Gear Operator housing (indicated by a small arrow when operator is in closed position). Align index spline on housing with index tooth on bushing and install Gear Operator onto Drive Bushing (hint: tap plastic indicator cap out from underside of operator to facilitate visual alignment; reinstall when completed).
- Step 5** Align mounting holes on valve platform with Gear operator and install Mounting Bolts with Lock Washers (note: Handwheel/Chainwheel can be rotated open slightly to aid alignment and mounting). Tighten Mounting Bolts to 10 ft-lbs torque.



## Position Adjustment

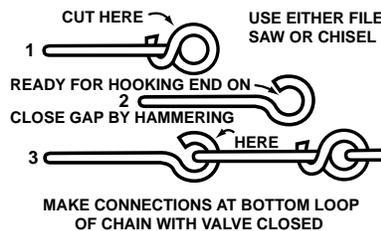
- Step 1** Remove (2) rubber grommets from end of Gear Operator housing adjacent to "OPEN" designation to give access to stop adjustment screws.
- Step 2** Closed Adjustment: Rotate Handwheel/Chainwheel to full closed position. Measure distance from both leading edges of the disc (perpendicular to stem) to the gasket sealing surface on the seat side of valve. These distances should be equal when properly adjusted for the closed position. If not, use an Allen wrench to adjust the stop located on the "O" side of the "OPEN" designation until proper position is reached.
- Step 3** Open Adjustment: Rotate Handwheel/Chainwheel to full open position. Disc should be positioned squarely at 90° to valve body when properly adjusted for the open position. If not, use an Allen wrench to adjust the stop located on the "N" side of the "OPEN" designation until proper position is reached.
- Step 4** Re-install rubber grommets in operator housing. Valve is now ready to be placed into service.



## Chain Installation (Chainwheel Operator only):

- Step 1** Special Lock Link chain (purchased separately) is required and should be ordered to the desired length. Chain length is determined by Chainwheel height from floor. Refer to "HOW TO ORDER CHAIN" on price schedule.
- Step 2** Insert a minimum chain length of 3-feet through lower side of the Chain Guide eyelet. Lay chain links over each tooth on the upper side of the Chainwheel Sprocket being sure that chain is not twisted. Thread chain down through the opposite Chain Guide eyelet.
- Step 3** Attach chain ends according to the following directions:

### Directions For Making Endless Chain



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