



## KEYSTONE K-LOK® HIGH PERFORMANCE BUTTERFLY VALVES

FIGURE 360/362 AND 370/372

Seat replacement instructions:  
K-LOK Series 360/362 - ASME 150  
K-LOK Series 370/372 - ASME 300

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### PTFE, RTFE AND UHMWPE SEATS

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#### CAUTION

*Always use the cardboard or brass shims to protect the valve body, disc, flange and sealing surfaces from damage. Failure to do so may result in serious damage to the valve.*

1. Remove the socket head screws which secure the flange locator plates on the wafer-style valves, the retaining clips on lug-style valves, or the seat retaining ring on bi-directional dead-end service valves.
2. Remove the flange bolt guides or retaining clips.
3. Remove the seat retainer ring. Do not gouge or leave a raised edge on the seat retainer ring.
4. Remove the seat and if applicable the body seat retainer ring gasket.
5. Check and clean the disc edge and seat pocket. If the disc edge is damaged, contact the factory for a disc replacement assembly. Make certain that all gasket and sealing surfaces are clean and undamaged. Remove any gasket material that may have adhered to the mating body surfaces.
6. Close the disc. Make sure the disc is centered in relation to the body waterway bore. If it is not centered, contact the factory. Be sure to position the disc against the disc position stop located in the valve body.
7. With the disc in the closed position, install the new seat and external gasket. Refer to Figure 1 for proper orientation.

#### NOTE

Installing a seat in a valve that has been modified for Bi-directional Dead End Service:

To allow the seat retainer ring dead end service bolts to pass through the gasket, modify the seat retainer ring gasket by following these steps:

- a. Use the dead end service seat retainer ring to layout the bolt hole pattern.
- b. Using a hole punch, make the required holes in the gasket.

#### CAUTION

*The standard seat retainer screws only provide enough force to hold the seat retainer ring for shipment and installation. If cycling or testing of the valve is required prior to installation, the seat retainer must be pressed into the seat to prevent damage to the seat or leakage past the seat.*

8. Install the seat-retaining ring using the flange bolt guide or retaining clips to align the ring with the body.
9. Install and tighten the socket head screws.
10. When pressing the seat retainer into the seat and body, use C-Clamps. The number of C-Clamps used should equal half the number of flange bolts of the valve. For instance, if the valve has 12 flange bolts, 6 C-Clamps should be used. To press the seat retainer ring with the C-Clamps, place the C-Clamps around the valve assembly to allow an even load to be applied all around the seat retainer ring. Tighten until the seat retainer gasket is compressed. After the gasket is compressed by the C-Clamps, complete the tightening of the socket head screws.



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FIGURE 360/362 AND 370/372

## POLYMER SEATS: PTFE, RTFE AND UHMWPE

1. If required, assemble the wire wrapped seat with the seat backing ring. Orient the mid-section of the backing ring with the wire wrap knot. Insure the backing ring is completely inserted into the polymer seat.  
Install the new seat and body seat retainer gasket. The seat large ID taper should be located against the disc edge. Refer to Figure 1.

## NBR, EPDM, AND FLUOROELASTOMER (FKM) SEATS

- Follow Steps 1 - 3 for the PTFE, RTFE and UHMWPE seated valves on page 1.
4. Remove the seat. Seat assembly consists of a rubber ring. Seat retaining ring gaskets are not used with the elastomer seats.
  5. Check and clean the disc edge and seat pocket. If disc edge is damaged, contact the factory for a disc replacement assembly. Make certain that all gasket and sealing surfaces are clean and undamaged.
  6. Close the disc. Make sure the disc is centered in relation to the body waterway bore. If it is not centered, contact the factory. Be sure to position disc against disc position stop located inside the valve body.
  7. With the disc in the closed position, install a new seat. Do not use any gaskets between the valve body and seat-retaining ring when installing an elastomer seat. Refer to Figure 2 for proper orientation.
  8. Install the retaining ring using the retaining clips to align the ring with the body.
  9. Install and tighten the socket head screws.

### CAUTION

*The standard seat retainer screws only provide enough force to hold the seat retainer ring for shipment and installation. If cycling or testing of the valve is required prior to installation, the seat retainer must be pressed into the seat to prevent damage to the seat or leakage past the seat.*

10. When pressing the seat retainer into the seat and body, use C-Clamps. The number of C-Clamps used should equal half the number of flange bolts of the valve. For instance, if the valve has 12 flange bolts, 6 C-Clamps should be used. To press the seat retainer ring with the C-Clamps, place the C-Clamps around the valve assembly to allow an even load to be applied all around the seat retainer ring. Tighten until the seat retainer gasket is compressed. After the gasket is compressed by the C-Clamps, complete the tightening of the socket head screws.

FIGURE 1

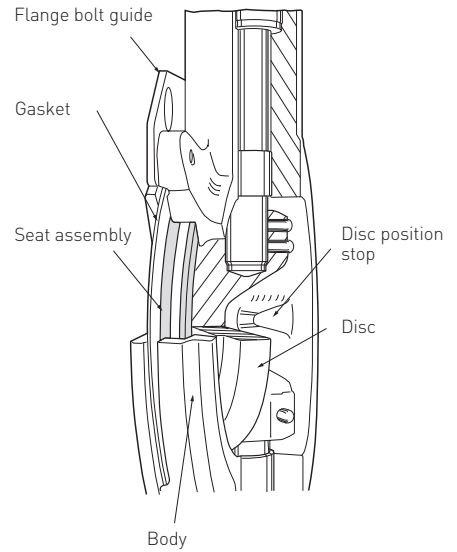
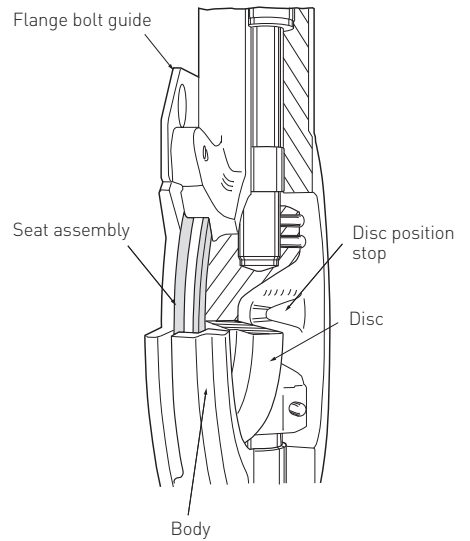


FIGURE 2



# KEYSTONE K-LOK® HIGH PERFORMANCE BUTTERFLY VALVES

## FIGURE 360/362 AND 370/372

### METAL AND FIRE-SAFE SEATS

1. Remove the socket head screws that secure the bolt guides on wafer-style valves, the retaining clips on lug-style valves or seat retaining ring on bi-directional dead-end service valves.
2. Remove the flange bolt guides or retaining clips.
3. Remove the retaining ring.
4. Remove the seat and external gasket. Be sure to remove both the convoluted stainless steel portion of this two-part seat as well as the RTFE.
5. Check and clean the disc edge and seat pocket and make certain that all gasket and sealing surfaces are clean. If disc edge is damaged, contact the factory for a disc replacement assembly. Remove any gasket material that may have adhered to the mating body surfaces.
6. Close the disc. Be sure to position disc against disc position stop located in the valve body. Make sure the disc is centered in relation to the body waterway bore.
7. Install new gasket.
8. Install new two-piece fire-safe or one-piece metal seat in seat pocket. Refer to Figure 3 for proper orientation.
9. Install retaining ring using flange bolt guides or retaining clips to align retaining ring with the body.
10. Install and tighten the socket head screws.

### CAUTION

*The standard seat retainer screws only provide enough force to hold the seat retainer ring for shipment and installation. If cycling or testing of the valve is required prior to installation, the seat retainer must be pressed into the seat to prevent damage to the seat or leakage past the seat.*

### NOTE

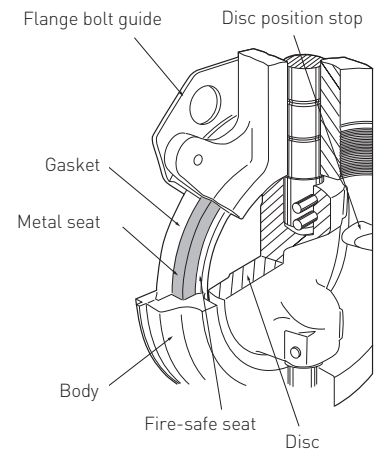
Sizes DN 350 - 600 (NPS 14 - 24) body valves employ both clips (for wafer and for lug) and locating plates to retain the seat retainer ring.

Sizes DN 750 - 900 (NPS 30 - 36) wafer and lug body valves use seat retainer screws instead of the hex socket flat head screws with clips or locating plates.

These seat retainer screws are located directly in the face of the seat. Two of these seat retainer screw holes are tapped. The two tapped holes allow the use of eye bolts so the seat retainer ring can be lifted to and from the body.

11. When pressing the seat retainer into the seat and body, use C-Clamps. The amount of C-Clamps used should equal half the number of flange bolts of the valve. For instance, if the valve has 12 flange bolts, 6 C-Clamps should be used. To press the seat retainer ring with the C-Clamps, place the C-Clamps around the valve assembly to allow an even load to be applied all around the seat retainer ring. Tighten until the seat retainer gasket is compressed. After the gasket is compressed by the C-Clamps, complete the tightening of the socket head screws.

FIGURE 3



# KEYSTONE K-LOK® HIGH PERFORMANCE BUTTERFLY VALVES

## FIGURE 360/362 AND 370/372

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### STEPS 1-4: ALL SEATS

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1. Locate the seat retainer ring with the body and gasket using the flange locator plate/screws and/or the retainer clips/screws or bi-directional end of line seat retainer ring screws.
2. Install and slightly tighten the socket head screws. Insure the seat retainer ring is evenly located with the body gasket surface when initially bolted to the body.

#### CAUTION

*The standard seat retainer ring screws only provide enough force to hold the seat retainer ring for shipment and installation. Prior to installation, the seat retainer ring must be pressed into the seat and body gasket to prevent damage to the seat or leakage past the seat.*

3. Use strong forged steel C-clamps to press the seat retainer ring and stretch the seat around the disc OD and into the valve body. Four C-clamps are recommended but the number of C-clamps may vary depending on the valve size; small valves can be assembled with two C-clamps and large valves should use at least four C-clamps.  
Locate the C-clamps evenly around the valve assembly and begin applying even loads to the C-clamps. Insure the seat retainer ring maintains an even distance from the body gasket surface as it is being pressed into the body. Continue evenly pressing the assembly together until the seat retainer ring is firmly compressed against the body gasket.
4. Locate the C-clamps evenly around the valve assembly and begin applying even loads to the C-clamps. Insure the seat retainer ring maintains an even distance from the body gasket surface as it is being pressed into the body. Tighten the socket head screws using a short handle Allen wrench. Do not over tighten and damage the screw hex socket. While tightening the screws, use a proper size plastic mallet to firmly strike the seat retainer ring near the screw being tightened. Firmly hand tighten.  
Continue evenly pressing the assembly together and tightening the screws until the seat retainer ring is firmly compressed against the body gasket.
5. If the valve assembly is not to be opened or closed while not installed between flanges, remove the C-clamps.

#### CAUTION

*It is recommended to keep the valve assembly firmly C-clamped together should actuation cycling be required before installation with the piping flanges. Insure C-clamps are located properly to allow opening and closing.*

#### NOTE

Sizes DN 350-600 (NPS 14-24) wafer and lug valve bodies employ both retention clips and flange locating plates to retain the seat retainer ring.

Sizes DN 750-900 (NPS 30-36) wafer and lug valves use seat retainer ring screws located directly in the face of the seat retainer ring. Two of the seat retainer ring bolt bores are tapped to allow the use of eye bolts for removal / installation of the seat retainer ring.

All sizes of bi-direction end of line lug valves use seat retainer ring screws located directly in the face of the seat retainer ring.