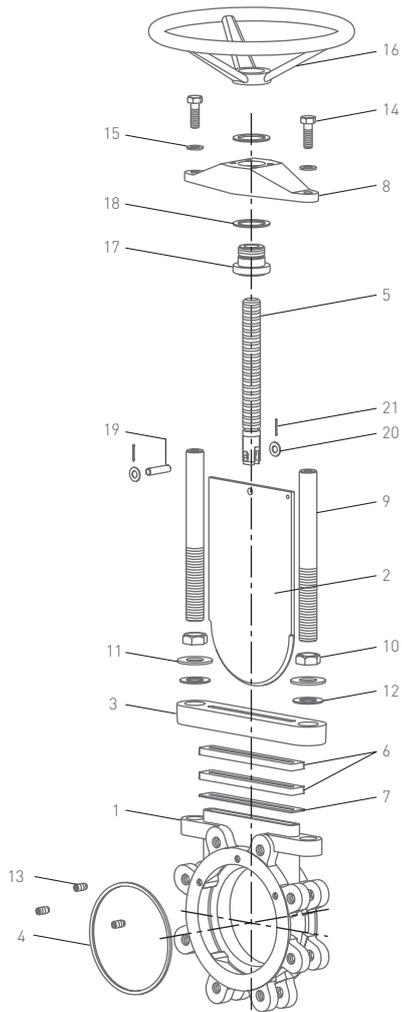


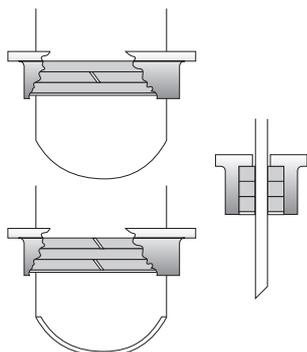
**KEYSTONE** FIGURE 952 KNIFE GATE VALVES

INSTALLATION AND OPERATING MANUAL

Gland packing replacement instructions for DN 50 - 200 (NPS 2 - 8)  
Figure 952 knife gate valves



**Note:** DN 50 - 200 (NPS 2 - 8) valve illustrated.



**PACKING REPLACEMENT**

For optimum performance, the packing material should be replaced whenever the valve has been disassembled for routine maintenance. This is a very simple procedure which can be done leaving the valve in the pipeline.

Correct packing is essential for leak-free operation. Use Emerson's preformed and pre-cut packing replacement kits for best results. Kits are available in the following types:

**K-LON** - Standard packing material.

**D-LON** - Food grade packing.

**G-LON** - High cyclic packing.

**H-LON** - Abrasive service packing.

Ensure packing material selected is suitable for the service.

**DISASSEMBLY PROCEDURE**

1. Ensure the pipeline is not pressurized and any hazardous medium is drained away.
2. Close valve. Loosen gland box nuts (10) to end of pillar (9) threads.
3. Remove clevis fastener (19).
4. Remove both bridge bolts (14).
5. Remove bridge sub-assembly (handwheel, handwheel nut, spindle and bridge or cylinder actuator and bridge).

**NOTE**

Heavy valves will require a chain block or crane to assist.

6. Unscrew both pillars (9).
7. Unscrew gate guides approximately 2 turns (Not applicable on polyurethane trim valves).
8. Withdraw gland box (3) and gate (2) sub-assembly.
9. Remove scraper (7) (Not fitted on polyurethane trim valves) and packing segments (6) from the gland box (3), noting the number of layers.
10. Clean gland box (3) and gate (2). Check gate for irregularities or abrasion on the seating side. If excessive, discard and replace.

**PACKING PROCEDURE**

**NOTE**

Care should be taken to stagger the mitred joints in each layer of packing to the opposite side of the gland box, e.g.;

- 1st packing layer joint to the front of the valve
- 2nd packing layer joint to the rear of the valve
- (on larger valves) 3rd packing layer joint to the front of the valve.

1. Press first layer of gland packing (6) into gland box (3) cavity by hand, then repeat the process with the second layer ensuring the joints of the two layers are on opposing sides of the cavity
2. Push gate (2) (rounded edge first) gently through top of gland box with packing underneath, then turn upside down and push gland box to 25 mm (1") from the end of the gate. Firmly press packing in with fingers around gate then fit the RTFE scraper blade (7) (Not fitted on polyurethane trim valves) in bottom of gland box.

# KEYSTONE FIGURE 952 KNIFE GATE VALVES

## INSTALLATION AND OPERATING MANUAL

### ASSEMBLY PROCEDURE

1. With bevelled edge (Not applicable on polyurethane trim valves) of gate up stream and away from the seating face, place gland box/gate sub-assembly into body and push gate down until firmly wedged at bottom of valve.
2. Screw the gland box nuts (10) onto each pillar (9), add washers (11) and (12). Coat threads with anti-seize compound. Put each pillar sub-assembly through gland box holes and screw them into the valve body lug until pillar is level with the bottom of the body lug. Height of pillars (9) should be equal.

#### NOTE

For Polyurethane trimmed valves ignore steps 3 through 5.

3. Screw in the gate guides (13) until they contact the gate, do not over tighten.
4. With gate firmly wedged into bottom of valve, push top of gate towards downstream side to ensure it's firmly up against seat (4), then tighten pillar nuts.
5. Check gate alignment (gate closed).

If correctly fitted and aligned

- Gate will be fitting firmly and evenly up against seating face in valve body.
- Gate and gland box will be approximately centred with the valve body viewed from front and sides.
- Gate will be true and parallel to valve body axis viewed from the side.
- Gate will not have significant movement when rocked backwards and forwards (upstream and downstream, not sideways).

If not fitted correctly

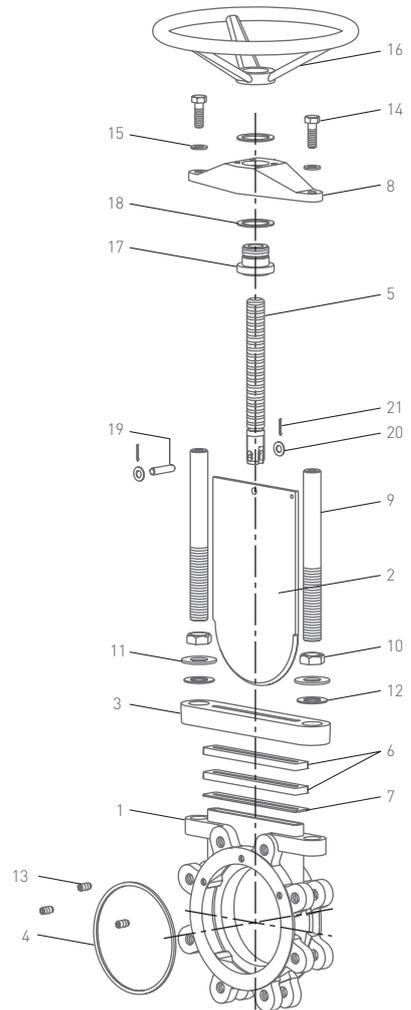
- Gate is not seating properly into the wedges in the base of the valve and/or the gate guides in the upper body of the valve are badly worn, missing or incorrectly adjusted - repair as necessary.
6. Fit bridge sub-assembly (handwheel, handwheel nut, spindle and bridge or cylinder actuator and bridge) to the top of the pillars and secure using bridge bolts (14).
  7. To fit the clevis pin (19) adjust the spindle (5) until the holes in the spindle and the gate are aligned.
  8. Assembly is complete, actuate to check all is functioning as desired and gate reseats itself into the wedges at bottom of the valve body. If re-seating does not occur, loosen gland box nuts (8) and remove gland box, clean and repeat steps.

#### NOTE

1. At commissioning or plant start-up, open and close valve to check it is operating correctly - gland nuts (8) may require adjustment. Please ensure to tighten equally.
2. To minimize risk to personnel, Emerson recommend the use of purpose built guards and shrouds. Refer to the Emerson data sheet or consult factory for details.

#### CAUTION

Do NOT over tighten gland packing as it will cause excessive resistance to gate movement.



**Note:** DN 50 - 200 (NPS 2 - 8) valve illustrated.

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