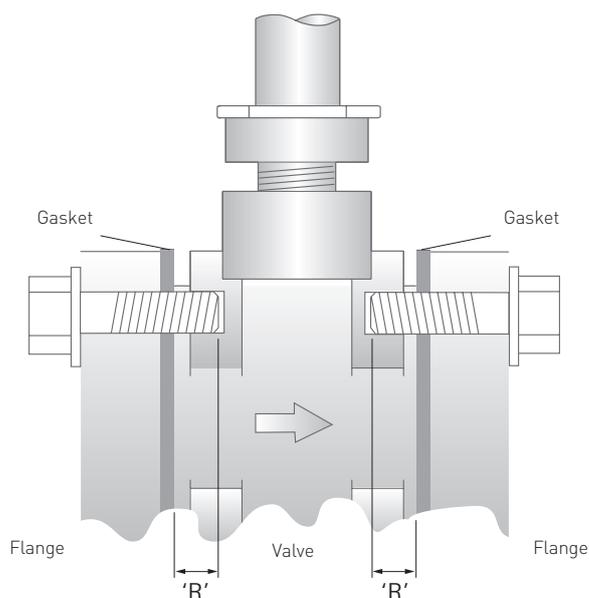




KEYSTONE FIGURE 952 KNIFE GATE VALVES INSTALLATION AND OPERATING MANUAL

Storage and installation instructions for DN 50 - 600 (NPS 2 - 24)
Figure 952 knife gate valves

FIGURE 1



FLANGE BOLTS

CAUTION

It is critical that flange bolts do not bottom out in valve body otherwise valve damage will occur.

To determine bolt length for the blind holes in the upper chest area of the valve, add dimension 'R' + gasket + flange thickness + any washers etc. (plus deflection cone and gasket when used).

1. Stud bolts can be used in the blind holes in the chest area of the valve body to alleviate the risk of flange bolts bottoming out.
2. Coating of flange bolt threads with an anti-seize compound (Loctite 729 etc.) is recommended to prevent bolt seizure, particularly when using S/S bolts with S/S valves, or when using steel bolts in iron valves.

THREAD DEPTHS

Valve size DN (NPS)	Thread depth	
	mm	inches
50 (2)	10	3/8
65 (2½)	10	3/8
80 (3)	11	7/16
100 (4)	11	7/16
125 (5)	14	7/16
150 (6)	14	7/16
200 (8)	16	5/8
250 (10)	16	5/8
300 (12)	16	5/8
350 (14)	16	5/8
400 (16)	19	3/4
450 (18)	24	15/16
500 (20)	19	3/4
600 (24)	19	3/4

bolt holes to prevent rusting. Apply protective coating to seating faces of metal to metal seated valves. Valves should be stored flat with the flow arrow pointing downwards and in the closed position, (but not jammed tight) to protect seating faces and gate from damage. Handwheel spindle threads should NOT be lubricated otherwise dirt will accumulate in threads.

Actuators

All air line and electrical cable entries should be plugged. If cylinders are not fitted to a valve, they should be stored with the piston rod fully retracted. Cylinders are assembled with a light coating of grease on internal components.

Spare parts

Seats and packings should be carefully stored and protected from sharp or heavy objects which will damage sealing faces.

HANDWHEEL OPERATION

On standard valves, turn handwheel anti-clockwise to open valves, and clockwise to close valves.

STORAGE

Important

Do not remove any identification or instruction tags. For optimum protection, store valve undercover.

Valves

Flange faces should be protected at all times with wooden or heavy cardboard shields. On iron bodied valves, lubricate threaded flange

KEYSTONE FIGURE 952 KNIFE GATE VALVES

INSTALLATION AND OPERATING MANUAL

INSTALLATION INSTRUCTIONS

NOTE

Heavy valves will require a chain block or crane to assist. In difficult locations, large cylinder actuators can be removed from valve and re-fitted after installation if necessary, but check cylinder to gate alignment carefully and that valve seats correctly. (Refer cylinder fitting instructions).

1. Close valve.
2. Check valve size is correct and that there is adequate clearance to install valve.
3. Check flange faces are clean and smooth and that bolt hole patterns on pipe flanges are the same as the valve, and are in line.
4. Check bolt sizes and threads are clean and compatible with the valve. (Separate technical data is available).
5. Check gaskets match flanges and are suitable for the service.
6. Check that the pipeline, upstream and downstream, is correctly aligned.
7. If a Deflector cone is being used, fit it to upstream side of valve with the cone nozzle pointing downstream, prior to installation. Metal (Chrome Iron) cones must have gaskets fitted between the cone and valve, and between cone and flange. Resilient urethane cones do not require these gaskets.
8. Spread flanges to clear valve, check flow arrow on side of valve is in the right direction. (Valve seating face and gate are downstream). Lower valve into position. Insert gaskets, 1 each side.
9. Insert flange bolts. On wafer valves, insert bolts into the threaded bolt holes in the chest of the valve first but do not tighten until all bolts are fitted. Tighten bolts in a diagonal sequence (refer Fig. 2).
10. Ensure bolts in the chest area of the valve are not bottoming out in the blind holes.
11. Open and close valve to check it is operating correctly.
12. After pipe line is pressurized, check for flange leaks and for gland leaks, adjust as necessary.

PURGE PORTS (WHERE FITTED)

Optional stainless steel purge nozzles can be fitted in lower part of body. If sedimentation occurs preventing gate from closing fully, purge with compressed air or water. Alternatively, connect permanent installation to purge ports and purge periodically. Purge port hole is 3 mm (1/8") BSPP.

GLAND ADJUSTMENT

The gland on new and repaired valves may require final adjustment after installation and pressurisation of the valve. If packing leaks, tighten gland nuts equally until leaking ceases. A 32 mm (1 1/4") AF spanner fits DN 50 - 600 (NPS 2 - 24) valve size. If gland leakage persists, check that pipeline is not pressurized above rating of valve. Alternatively, packing may be damaged, wrongly installed or have foreign matter caught between gate and packing. Disassemble, inspect and repair or replace as necessary.

CAUTION

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

SAFETY

The gland on new and repaired valves may require final adjustment after installation and pressurisation of the valve. Actuated valves are generally operated from a remote location, caution should be exercised if working in close proximity to any moving parts.

NOTE

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.

FIGURE 2

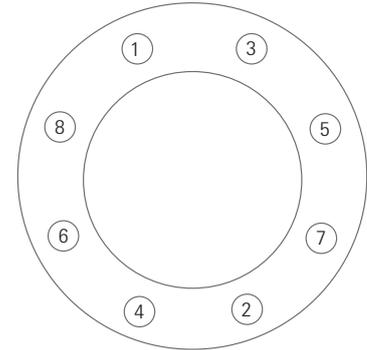
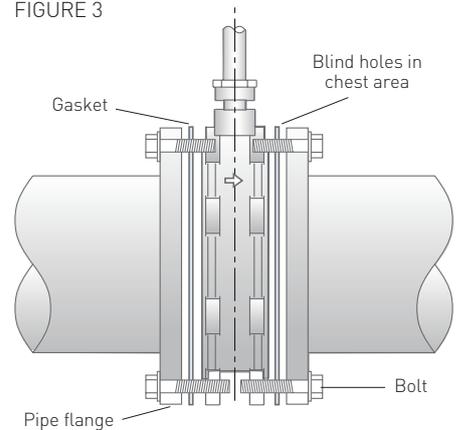


FIGURE 3



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