

FLANGE BOLTING GUIDE FOR 150# KNIFE GATE VALVES

NOTE: While this bolting guide includes information for use of hex head bolts, FNW recommends that studs be used on all mounting holes for knife gate valves. Use of studs ensures that the valve will not be damaged during installation.

CAUTION: Dimensions provided for flange bolting are intended only as a guide. Bolt lengths may vary due to manufacturing tolerances in valves, gaskets, flange bolts and flanges.

WARNING: Damage can occur to the valve if improper bolting is used. It is always recommended that studs be used for tapped blind holes typically found in the chest area of the valve. Hex head bolts can bottom out in the tapped hole when fully tightened to the valve, causing damage to the body, liners, and/or blade. Hex head bolts in the chest area must not be used. Improper bolt and stud lengths could result in leakage at the flange resulting in death or serious injury.

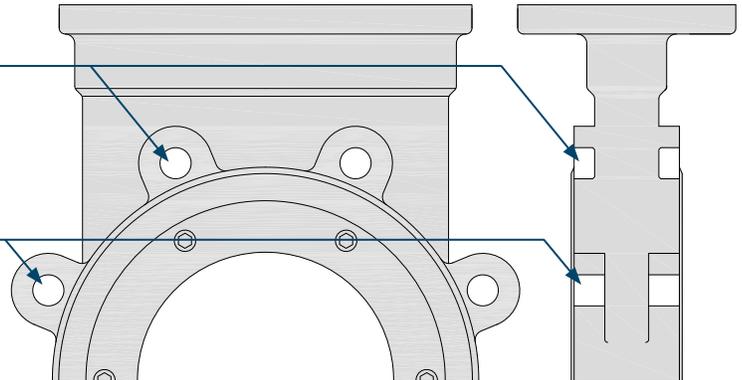
Bolt Hole Types & Locations

Tapped Blind Hole

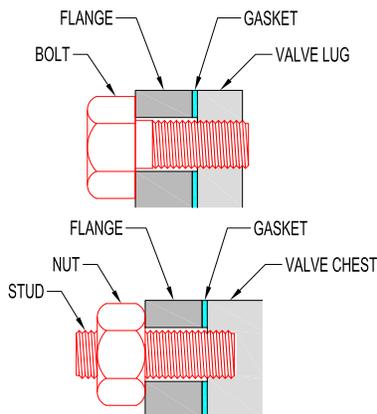
Tapped blind holes are located in the chest area of the valve. Studs must be used in this area to ensure that mechanical force is NOT imparted into the pressure containment area of the valve body, liner of lined valves, or blade.

Tapped Through Hole

Tapped through holes are located in lugs around the perimeter of the valve body. Hex head bolts can be used in this area, but studs are still recommended.



Typical Mounting Configuration



Bolts

Bolts must be threaded completely through to utilize all threads available on lugs or in blind tapped holes.

Gaskets

Use gasket material appropriate to the application.

Washers

If washers are utilized, bolt or stud length should be adjusted accordingly.

NOTE: Due to castings, machining, and flange thickness tolerances, the body tapped hole depth may vary slightly from valve to valve. It is recommended that all knife gate valves be installed with stainless steel ASTM A-304-B8 studs or ASTM A-316-B-8M studs. The use of carbon steel class B-7 studs may also be considered. When using stainless steel bolting on stainless steel valve bodies, thread lubricant is recommended to prevent galling.

Recommended Bolt Lengths

Size	ØD	TPI	L		Qty
			BOLT*	STUD	
2	5/8"	11	1-3/4"	2-3/4"	4
2½	5/8"	11	1-3/4"	2-3/4"	4
3	5/8"	11	1-3/4"	2-3/4"	4
4	5/8"	11	1-3/4"	2-3/4"	8
6	3/4"	10	2"	3"	8
8	3/4"	10	2"	3"	8
10	7/8"	9	2-1/4"	3-1/2"	12
12	7/8"	9	2-1/4"	3-1/2"	12
14	1"	8	2-1/2"	4"	12
16	1"	8	2-5/8"	4-1/4"	16
18	1-1/8"	7	3"	4-3/4"	16
20	1-1/8"	7	3-1/4"	5"	20
24	1-1/4"	7	3-1/2"	5-1/4"	20

* FNW recommends the use of stud bolts only.

