A-C VALVE INC.

FIGURE 176
INSTALLATION & MAINTENANCE

DESCRIPTION:

The A-C Valve Fig 176 is a bonneted knife gate valve. It has a metal to metal seat and is a unidirectional valve, meaning that there is a preferred seating direction. The pressure rating of the Fig 176 valve is 150 PSI CWP (Cold working pressure).

SHIPPING & STORAGE:

For shipment the valve will be in the closed position. Small valves (3", 4" & 6") may be shipped in individual boxes. Larger valves and large quantities will be shipped on pallets, skids or in boxes, all of which will require a forklift for moving. Storage should be in a clean dry environment such as a warehouse.

INSTALLATION:

When lifting the valve, never lift the valve by the handwheel or actuator. Remove any foreign materials from the inside of the connecting piping such as dirt, sand, scale and metal chips to prevent damage to the valve seat.

Find the marking on the valve body near the top flange that says "**SEAT**". This is the down stream side of the valve. Be sure to install the valve so that pressure enters the upstream side of the valve and flows out of the downstream side of the valve. Failure to install the valve properly can result in excessive seat leakage and/or damage to the valve gate.

Install the valve to the mating pipe flange using proper size bolts. See Chart 1 for bolt size. Bolt length is not included on Chart 1 since different flanges will require different length bolts. It is very important to choose the proper length of bolt for the bolt holes in the chest of the valve. These holes are bottom drilled and tapped holes and in some cases contain less than a bolt diameter of threads. Be careful not to bottom out bolts in the chest during installation. If necessary, use washers to shorten the penetration of the bolt into the chest holes. Chart 2 gives recommended bolt torques to be used during installation, however, depending on the type of gaskets being used the required torques may be higher or lower. Use the cross torque pattern method for tightening the bolts. Mating flanges must be parallel and true with each other and the valve. Do not use the valve to pull together or force apart the two mating pipes.

After installation, open and close the valve once to assure smooth operation.

MAINTENANCE:

The only items requiring maintenance on the Fig 176 knife gate valve are the packing and the lubrication of the stem. The packing gland may require adjustment after installation, especially if the valve has been in storage for an long time. All sizes of the Fig 176 valve have two or more packing gland bolts. Normally just a small amount of tightening per bolt is required. Do not tighten the bolts more than is necessary to stop the leaks. Try to adjust the packing gland down evenly. Generally, the more a valve is operated the more maintenance will be required to keep packing leaks under control.

Lubricate the stem nut and stem by using a grease gun on the grease fitting at the top of the yoke.

CHART 1

VALVE SIZE (IN)	BOLT SIZE (IN)	NUMBER OF BOLTS
3"	5/8-11	4
4"	5/8-11	8
6"	3/4-10	8
8"	3/4-10	8
10"	7/8-9	12
12"	7/8-9	12
14"	1-8	12
16"	1-8	16
18"	1-1/8-7	16
20"	1-1/8-7	20
24"	1-1/4-7	20
30"	1-1/4-7	28
36"	1-1/2-6	32
42"	1-1/2-6	36
48"	1-1/2-6	44

CHART 2

VALVE SIZE (IN)	RECOMMENDED TIGHTENING TORQUE (FT-LBS)
2"-3"	55 +/- 5
4"-8"	65 +/- 5
10"-12"	110 +/- 10
14"-16"	135 +/- 10
18"-24"	150 +/- 10
30"	200 +/- 10
36"-48"	250 +/- 10

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