



Installation Instructions

Standard Gate Valves

**Read All Instructions
Prior to Installation**

**Keep Instructions with the Valve
for Future Reference**

Standard Gate Valve Installation Manual

UNPACKING KJLC GATE VALVE

Inspect the shipping container before unpacking to look for damage that could have occurred during transit. Any visible damage should be reported to the transportation company immediately. After visual inspection, remove the valve from the shipping container. Make sure the flange faces are free of any scratches and that there is not any obvious damage to the actuator assembly of valve body.

Make sure to note the valves model number and serial number during the unpacking process. The model number and serial number will need to be provided when purchasing replacement parts.

PRE-INSTALLATION

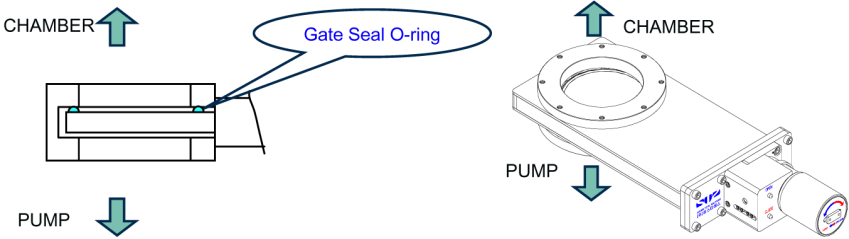
Determine that the gate valve and its plumbing is adequately supported when installed in the vacuum system. If a gate valve is not adequately supported, this could prevent the gate valve from operating and sealing correctly. Be sure that all mating flanges are in line and parallel to minimize straining on joints and valve body.

To prepare the valve for installation, remove the flange covers and wipe the flanges down with a lint free dry cloth or wipe. During installation be careful not to damage the sealing surface in any way. Any damage to the sealing surface will affect its sealing capabilities.

WARNING: Never insert your hands or objects in the port of a gate valve. Serious bodily injuries and damage of the valve will occur.

INSTALLATION

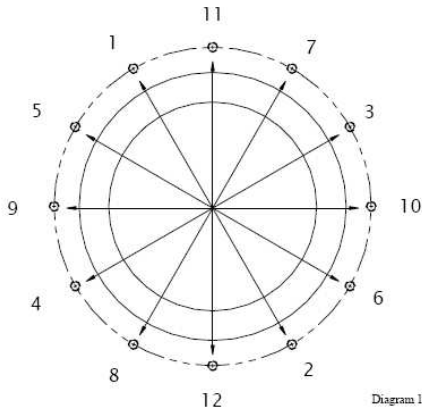
It is recommended that the gate valve is installed with the gate seal (carriage side) facing toward the chamber (vacuum side). Mounting the valve in this configuration will eliminate the pump down of the valve body. The gate valve may be mounted in either a vertical or horizontal position



Bolt Tightening Sequence

To avoid damaging the valve body and flanges, first finger tighten all flange bolts. Next, using the proper tightening sequence, tighten bolts to half the torque required. To properly tighten the bolts, tighten one and then tighten the bolt 180 degrees across from it. Continue this process until all the bolts are tightened. Lastly, tighten to the recommended torque specification using the proper tightening technique.

FLANGE BOLT TIGHTENING SEQUENCE



		ISO FLANGES		CF FLANGES	
VALVE SIZE (INCH)	VALVE SIZE (mm)	TORQUE FT.LBS	TORQUE N·m	TORQUE FT.LBS	TORQUE N·m
4"-6"	100-160	6	8.2	15	20.4

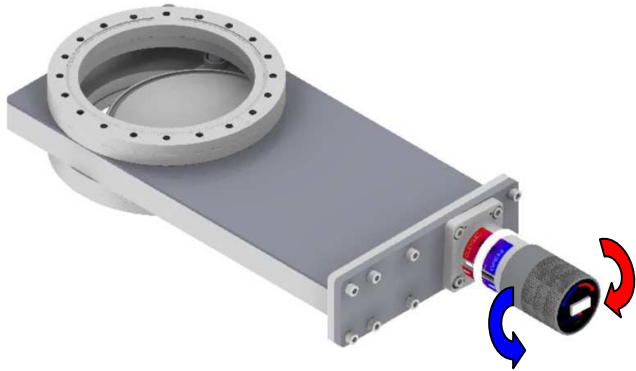
IMPORTANT: It is possible that the valve body can suffer damage by the use of improper length bolts or from the over torquing of the bolts. To be sure the valve body is not damaged please make sure that the correct length bolts are used and the torque specs in the diagram are used.

IMPORTANT: Before installing flange bolts, it is recommend to apply a light coating anti-seize (non-galling, high temperature grease) to the threads of the bolts.

WARNING: Never place hands or any other objects into the gate valve. Serious injury and valve damage will occur.

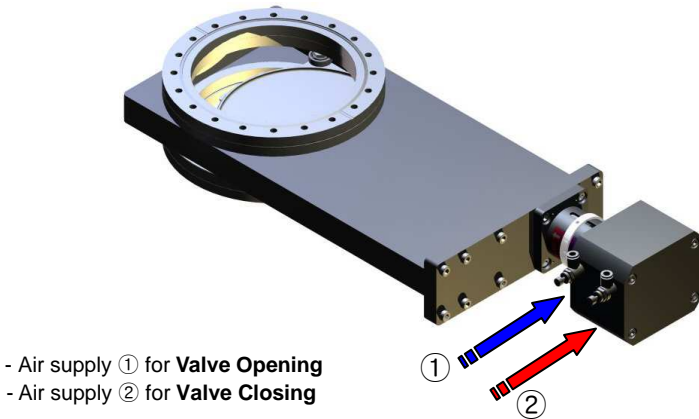
OPERATION

MANUAL VALVE



- Rotate actuator clockwise to close the gate valve.
- Rotate actuator counterclockwise to open the gate valve.
- Set the actuator locking unit on lock position when the gate valve fully closed.
- **Note:** When opening the gate valve, move the locking unit to the unlock position first.
- **Warning:** Do not force actuator when locking unit is in lock position. Damage to the valve will occur.

PNEUMATIC VALVE



PNEUMATIC ACTUATION: Connect regulated compressed air supply to the gate valve. Use Teflon tape on the threads to ensure leak proof connections. KJLC recommends using an air filter in the air line system. Please refer to the information located on the solenoid for the correct voltage needed when connecting the electrical service. Check the valve port for anything that could be obstructing the valves performance.

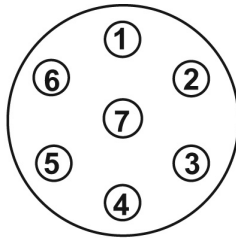
Supply 60-80 psig of air to the valve. For proper performance the valve needs a minimum of 60 psig of air for operation. If more than 80 psig of air is supplied, serious damage of the valve may occur. **DO NOT EXCEED 80 PSIG.**

IMPORTANT: An air regulator must be used to confirm that the valve is actuating properly.

Position Indicators

Position indicator switches are preset and an LED indicator will illuminate when the valve is fully open or fully closed.

7-PIN CONNECTOR PINOUT



Pin Number		Status	Description
Open	1	Valve Open	Limit Switch Normal Open
	2	Valve Open	
Close	3	Valve Close	Limit Switch Normal Open
	4	Valve Close	
SOL V	5	P24	DC2/Volt (Option)
	6	N24	
7		Spare	

GENERAL SOLENOID INFORMATION

CAUTION: Compressed air is powerful and can be dangerous. Before removing a component from an air line or system, always disconnect the air supply and vent (exhaust) the air line completely. Never attempt to construct, operate, or service anything using compressed air unless you have been properly trained to do so. Failure to comply with this warning could result in serious or fatal injuries.

SOLENOID INSTALLATION

Solenoid valves can be mounted in orientation (position) in most environments. 410 solenoid valves feature a Class B insulation system and molded coil for ambient temperatures from 32°F to 125°F (0°C to 50°C).



410 PORT IDENTIFICATION

- 1 – Intake
- 2 – Normally Open
- 3 – Exhaust
- 4 – Normally Closed

If the pneumatic gate valve does not function when electricity is supplied to the solenoid, use the solenoid's manual override to open the valve. If the valve functions when manually actuated, check the line voltage to determine if the solenoid valve is receiving the correct voltage. If the voltages are correct, next check the air pressure going to the valve. Make sure that the valve is receiving 60-80 psig. Be sure that there are no air line blockages or defective or blocked fittings. If the valve continues to fail after following these steps please contact KJLC.

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