Kurt J. Lesker® Company

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 you have this 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

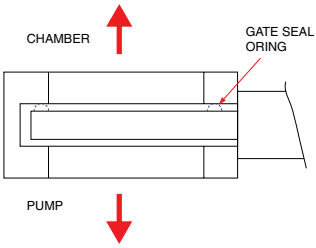
Determine that the gate valve and its plumbing is adequately supported when installed in the vacuum system. If a gate valve is not adequately supported, this could prevent the gate valve from operating and sealing correctly. Be sure that all mating flanges are in line and parallel to minimize straining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

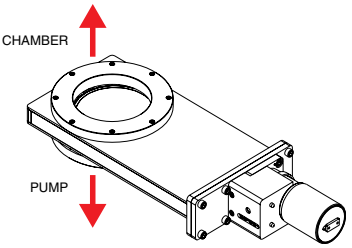
To prepare the valve for installation, remove the flange cover s and wipe the flanges down with a lint free dry cloth or wipe. During installation be careful not to damage the sealing surface in any way. Any damage to the sealing surface will affect its sealing capabilities.

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 gat e 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.



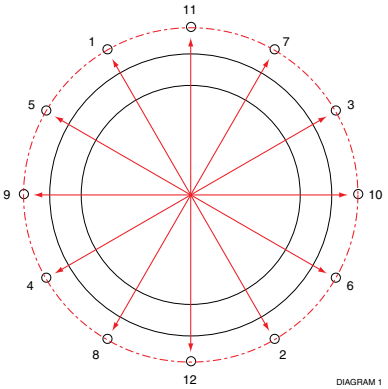


IMPORTANT: Never use bolts that are longer than the combined width of both mating flanges. It is recommended that bolts are at least _" (6.4mm) shorter than the combined thickness of both mating flanges.

Bolt Tightening Sequence

To avoid damaging the valve body and flanges, first finger tightens all flange bolts. Next, using the proper tightening sequence, tighten bolts to ha lf 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 t he proper tightening technique. A flange is sufficiently tightened when the flange faces touch.

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

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 above 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.

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.

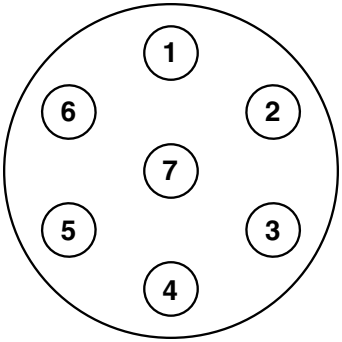
Supply 60-80 psig of air to the valve. For proper performance the valve needs a minimum of 60 psig of air for operation. If more than 80 psig of air is supplied, serious damage of the valve may occur. **DO NOT EXCEED 80PSIG.**

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.

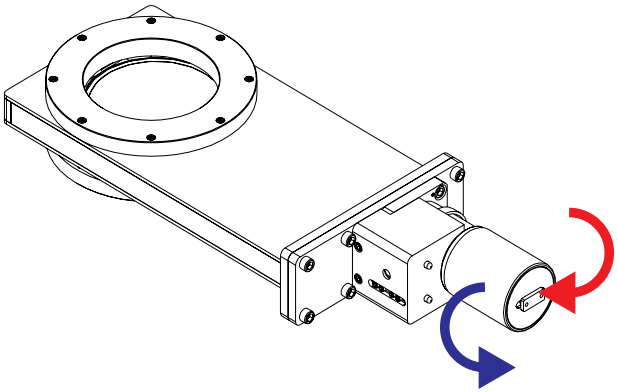
7-PIN CONNECTOR PINOUT



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

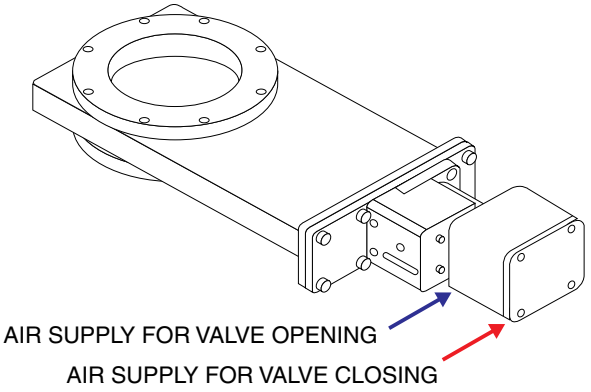
OPERATION

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 in locking position. Damage to the valve will occur.

PNEUMATIC VALVE



GENERAL SOLENOID INFORMATION

A 1/8-inch ported, 4-way, single solenoid, 2 position/spring return general purpose, direct acting solenoids. The solenoid for a gate valve is typically set for a normally closed position.

When 410 solenoids are used with vacuum, use the largest possible tubing size and the minimum tubing length for the solenoids optimum performance. Please note that before connecting fittings and tubing remove all foreign material from the components. If you are using a sealant, take extra caution that no sealant enters the solenoid valve. This could cause malfunction and/or leakage to the solenoids.

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 valve does not function (on pneumatic valve) when electricity is supplied check the valve function using the solenoids manual override. If the valve functions when manually actuated, check the lime 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 fails continues to fail after following these steps please contact KJLC.

Kurt J. Lesker Company®

www.lesker.com

Kurt J. Lesker Company
United States
412.387.9200
800.245.1656
salesus@lesker.com

Kurt J. Lesker Canada Inc.
Canada
416.588.2610
800.465.2476
salescan@lesker.com

Kurt J. Lesker Company Ltd.
Europe
+44 (0) 1424 458100
saleseu@lesker.com

Kurt.Lesker (Shanghai) Trading Company
科特·莱思科(上海)商贸有限公司
Asia
+86 21 50115900
saleschina@lesker.com

Rev. 01
11-145