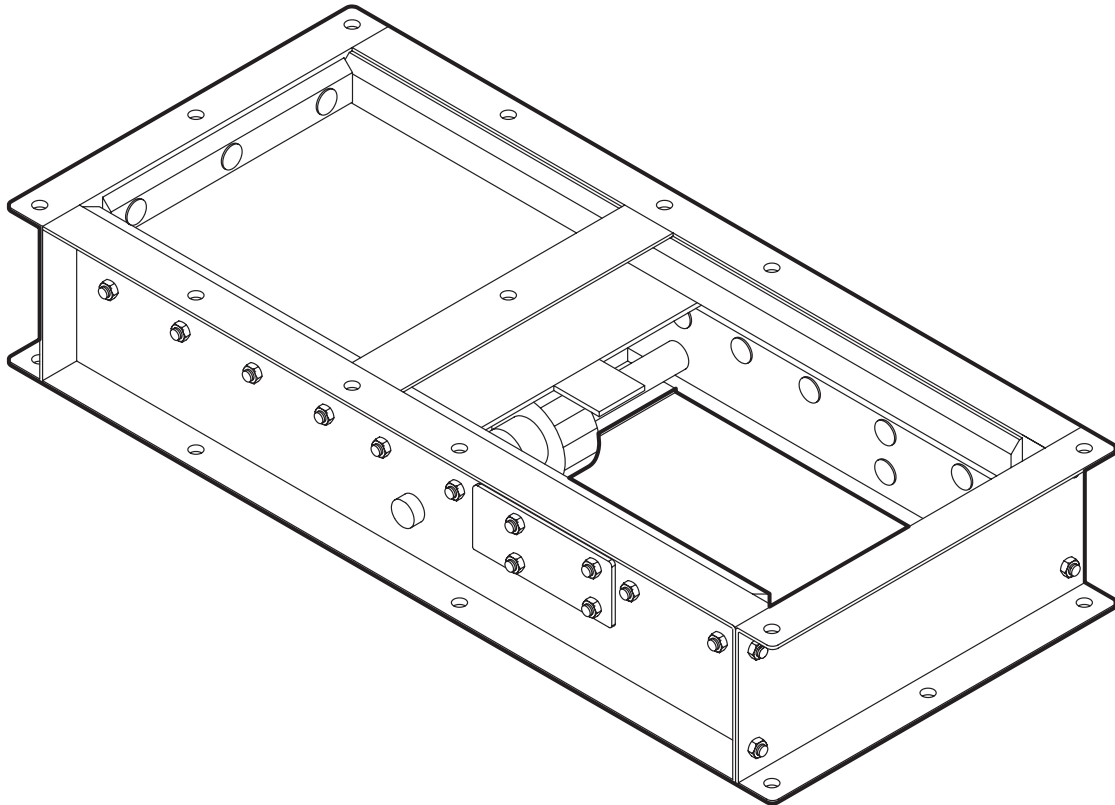


SLIDE GATES

Installation and Operation Manual



Manual-Air-Electric Operators

SCHLAGEL

Manufacturers of Innovative Materials Handling Equipment since 1957.

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SECTION 1 - GENERAL

GENERAL NOTES

- All slide gates should have the flange joints caulked or gasketed during installation.
- Gates used in outside cold weather areas should have a top weather cover used to prevent freezing rain and snow from getting inside the gate and interfering with the slide's travel.
- Slide gates may be installed in any position from horizontal to vertical. A vertical position will cause some material to lay in the bottom of the frame and may prevent a good product seal. Special "VERTICAL" gates are available with the front end of the frame at a 45°.
- No long spouting runs or mis-aligned flange joints should be connected to a slide gate if they would cause a twist in the gate's frame.
- A slide gate is meant to shut off the flow of product while the product is moving through the gate opening. Slides are not meant to shear through the product in a plugged spout condition.
- Do not use UHMW guided gates where the temperature exceeds 200° F (93° C). Consult the factory for steel and/or roller bearing guides.

MANUALLY OPERATED SLIDE GATE NOTES

- When controlling a cable operated gate from a remote location, be certain that any cable runs have as few changes in direction as possible. Each direction change around a pulley will result in poorer operator "feel" of the slide position in the gate. Be especially careful that the cable does not bind against a pulley's mounting bracket or some other object. Use a swivel type pulley when necessary.
- Chain operated gates are supplied with a guide to help prevent the chain from coming off the chain wheel. When you have to operate this type of wheel from a remote location it may be better to only use a short length of chain (8-10') with cable connected to the ends of the chain. The cable would allow you to change cable directions by going around a pulley.
- Plainly mark the operating controls so that any personnel can tell from a glance if the slide gate is in an "OPEN" or "CLOSED" position.

AIR OPERATED SLIDE GATE NOTES

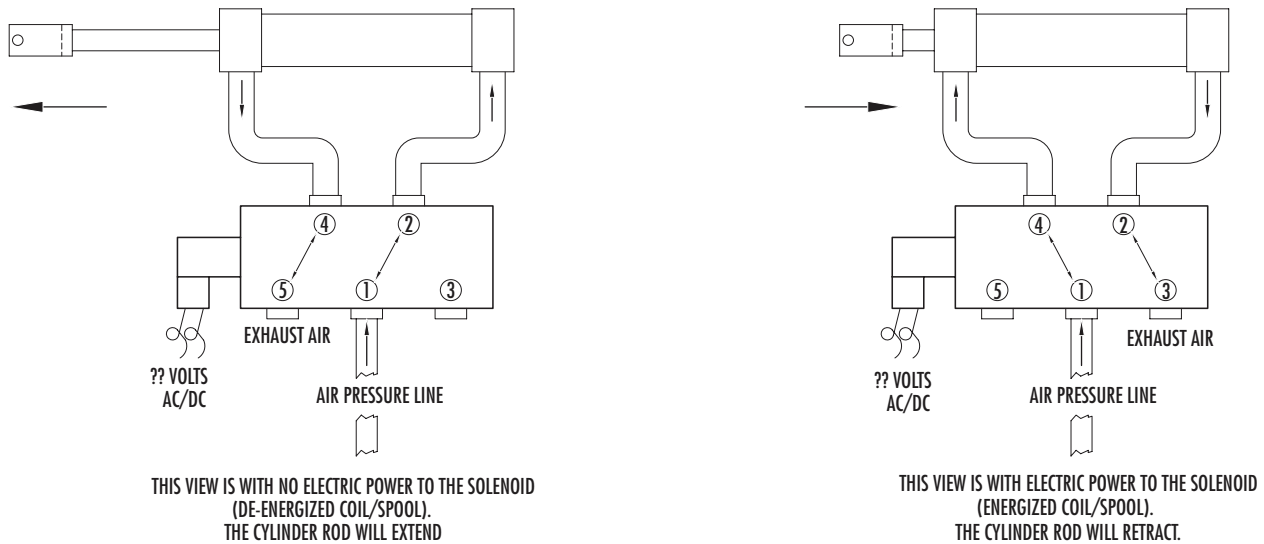
- Use a clean dry air supply of 100 PSI. It is recommended that some type of air dryer be used to remove moisture rather than a simple bowl type filter.
- If a lubricator is installed in the line then use an air system oil that will not harm the seals used in air cylinders or solenoid valves. There are oils available with anti-freeze ingredients for cold weather areas. DO NOT USE EXCESSIVE AMOUNTS OF OIL.
- For cold weather areas, we recommend that electric air solenoid valves be located in a warm control room rather than out by the air cylinder. The freezing that results from moisture in the air line normally happens in the solenoid valve, not the air cylinder. Having the solenoid valve in a control room may also eliminate the need for an explosion proof electrical rating in addition to providing better service access.
- Use adjustable speed controls on large slide gates that will be cycling frequently. This will extend the life of all the mechanical components in the gate.
- Use muffler/filters on the exhausts of any manual or electric solenoid valve to prevent contaminants from getting inside.

ELECTRIC OPERATED SLIDE GATE NOTES

- The standard right angle gear reducer has been factory filled with Mobil #1 75W-90 synthetic oil. Do not use anything but a synthetic oil in cold weather areas.
- The standard gear reducer has an adjustable internal slip clutch that has been factory set. The large nut on the threaded shaft extension (opposite the keyed shaft side) is used to adjust the torque setting. Tightening the nut increases the torque slip point. This nut is factory torqued to 55-65 Lb-ft. Consult the factory before adjusting this unit.

TYPICAL ELECTRICAL AIR SOLENOID VALVE CONNECTIONS

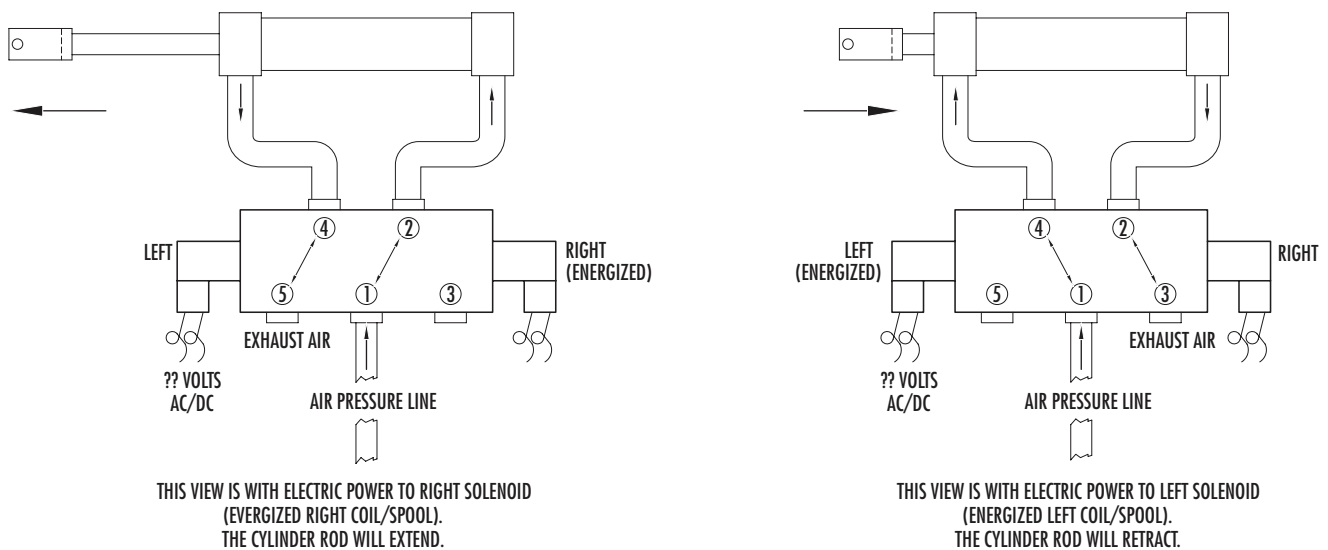
Figure 1



The single solenoid is the style recommended for slide gates.

This style will close the gate upon loss of electric power and thus prevent a bin from emptying.

Figure 2



The double solenoid valve shown here is optional for use on slide gates.

This style will maintain the slide's position upon loss of electric power and keep the gate either open or closed.

The above diagram shows typical hookups for air solenoid control valves on slide gates.

Figure 1. shows a single solenoid (meaning a single electrical coil). This type of solenoid valve, when plumbed as shown, will cause the rod to extend as long as there is no power applied. This means that the slide could change position if there was a loss of power. This is the style supplied by us as standard on gates.

Figure 2. shows a double solenoid (meaning there are two electrical coils). This type of solenoid valve will keep the rod (and thus the slide) in its last chosen position if there was a loss of power. This style is optional.

SECTION 1 - GENERAL

TYPICAL WIRING DIAGRAM FOR GEARMOTOR DRIVE ON A R&P SLIDE GATE

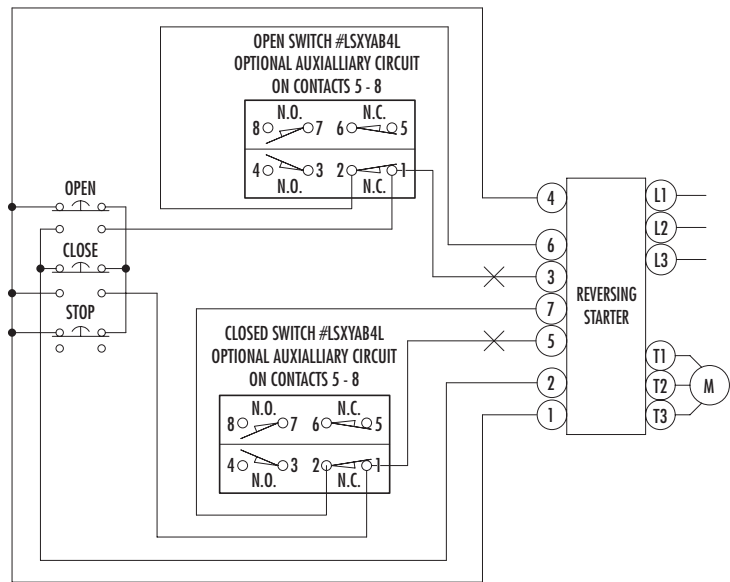
TYPICAL WIRING DIAGRAM

REMOVE INTERNAL JUMPERS 3 TO 6, 5 TO 7.

✕ BREAK FOR MOMENTARY OPERATION

THE LIMIT SWITCHES ARE THE ONLY DEVICES PROVIDED.

ANY STARTER, PUSH BUTTON CONTROL OR INDICATOR LIGHTS ARE TO BE SUPPLIED BY CUSTOMER.



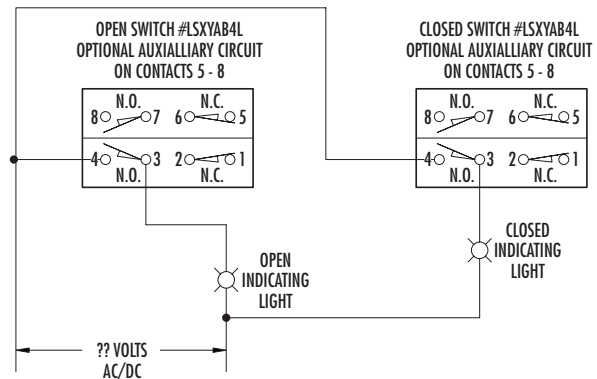
TYPICAL WIRING DIAGRAM FOR POSITION INDICATING SWITCHES ON A R&P SLIDE GATE

TYPICAL WIRING DIAGRAM

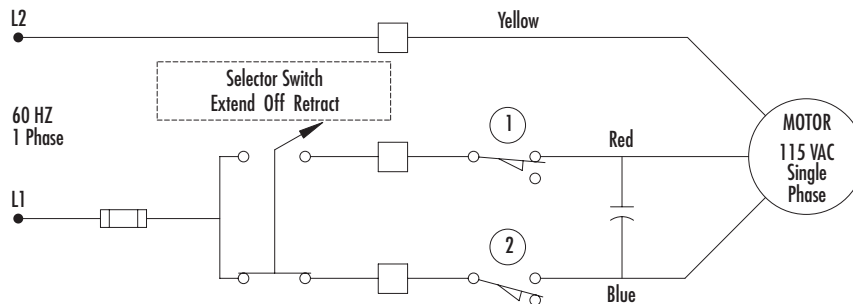
(LSXYAB4L dpdt) LIMIT SWITCHES ARE SHOWN AS BEING USED TO LIGHT AN INDICATING LAMP.

CERTAIN EQUIPMENT MIGHT BE USED WITH ONLY ONE LIMIT SWITCH.

THIS DIAGRAM IS NOT TO BE USED FOR CONTROLLING A MOTOR CIRCUIT.



TYPICAL WIRING DIAGRAM FOR ANDCO "Eagle" LINEAR ACTUATOR ON A R&P SLIDE GATE



- ① Internal Extend position limit switch
 - ② Internal Retract position limit switch
 - Customer connection in actuator
- NOTE: Actuator shown in full retract position.

LIMIT SWITCHES ARE THE ONLY DEVICES PROVIDED. ANY STARTER, PUSH BUTTON CONTROL OR INDICATOR LIGHTS ARE TO BE SUPPLIED BY CUSTOMER.