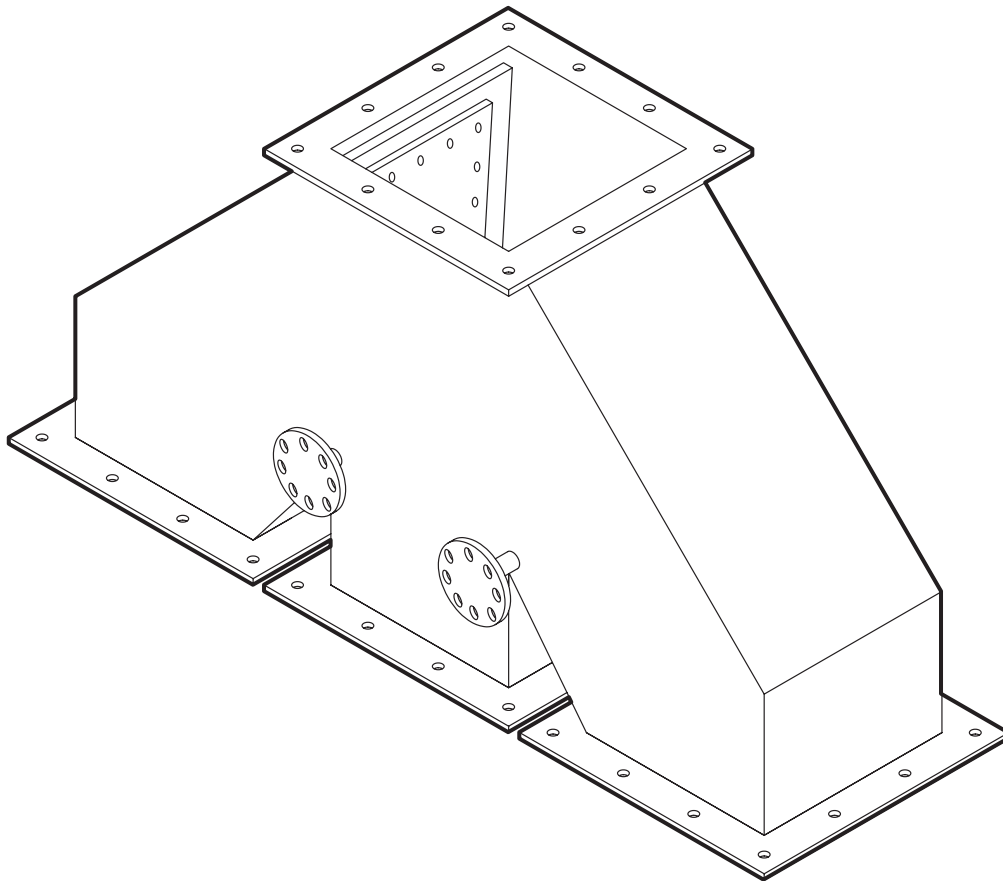


DIVERTER VALVES

Installation and Operation Manual



Manual-Air-Electric Operators

SCHLAGEL

Manufacturers of Innovative Materials Handling Equipment since 1957.

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GENERAL NOTES

- All diverter valves should have the flange joints caulked or gasketed during installation.
- Bucket (basket) type valves should be installed in a vertical position. Flop type valves can be installed at a slight angle but this may cause extra wear on the seal with certain products.
- No long spouting runs or mis-aligned flange joints should be connected to a diverter valve if they would cause a twist in the valve's housing.
- Long vertical drops of product into the diverter valve should be avoided, especially with bucket type valves as this may cause the bucket to slightly open and leak product. If a long run is required then try to install some type of flow retarder above the valve to reduce the product velocity.
- Do not use bucket type valves where the valve is likely to become plugged with product or where you expect an unusual amount of air coming back up the spout that the product is flowing into. Either condition may allow the product to leak around the bucket sides.
- Do not use standard flop valves where the temperature exceeds 170° F (77° C). Consult the factory for special high temperature seals or for food grade products.

MANUALLY OPERATED VALVE NOTES

- When controlling the valve 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 bucket or flop position in the valve. 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.
- Plainly mark the operating controls so that any personnel can tell from a glance what position the diverter is in.
- No bucket type valve should have the product coming into the valve at an angle or high enough velocity to cause the bucket to slightly open and "leak". If this cannot be avoided then you may have to make some type of locking mechanism on the controls to hold the valve in a closed position.

AIR OPERATED VALVE NOTES

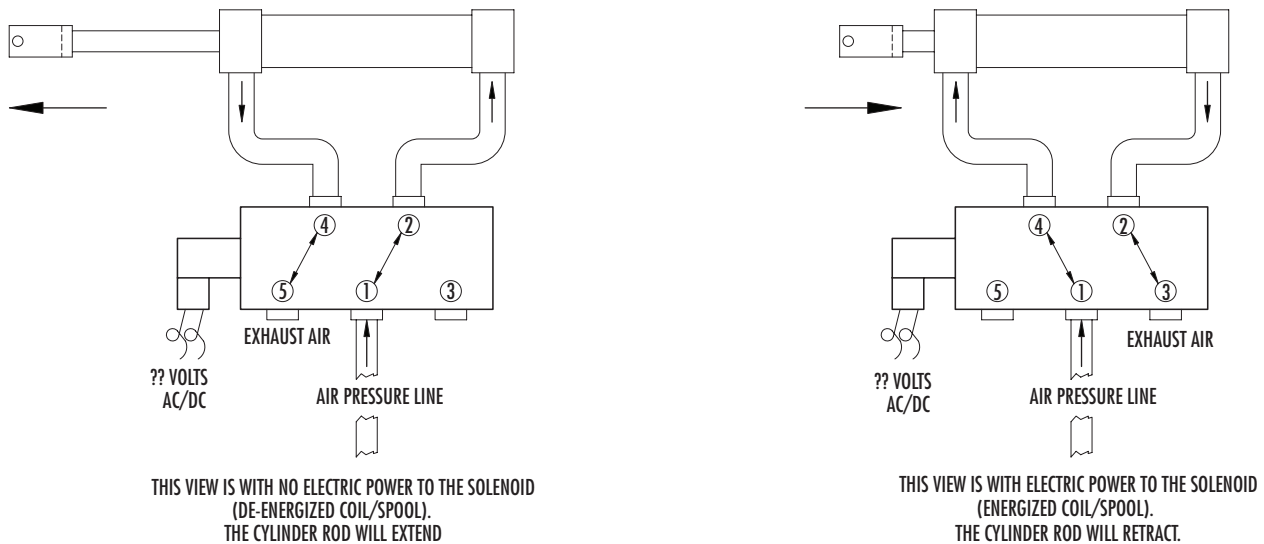
- Use a clean dry air supply of 100 PSI. It is recommended that some type of air dryer be used to remove moisture rather than a simple bowl type filter.
- If a lubricator is installed in the line then use an air system oil that will not harm the seals used in air cylinders or solenoid valves. There are 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 diverter valves or diverter valves that will be cycling frequently. This will extend the life of all the mechanical components in the valve.
- Use muffler/filters on the exhausts of any manual or electric solenoid valve to prevent contaminants from getting inside.

ELECTRIC OPERATED VALVE NOTES

- The standard right angle gear reducer has been factory filled with Mobil #SHC-634 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. Consult the factory before adjusting this unit.

TYPICAL ELECTRICAL AIR SOLENOID VALVE CONNECTIONS

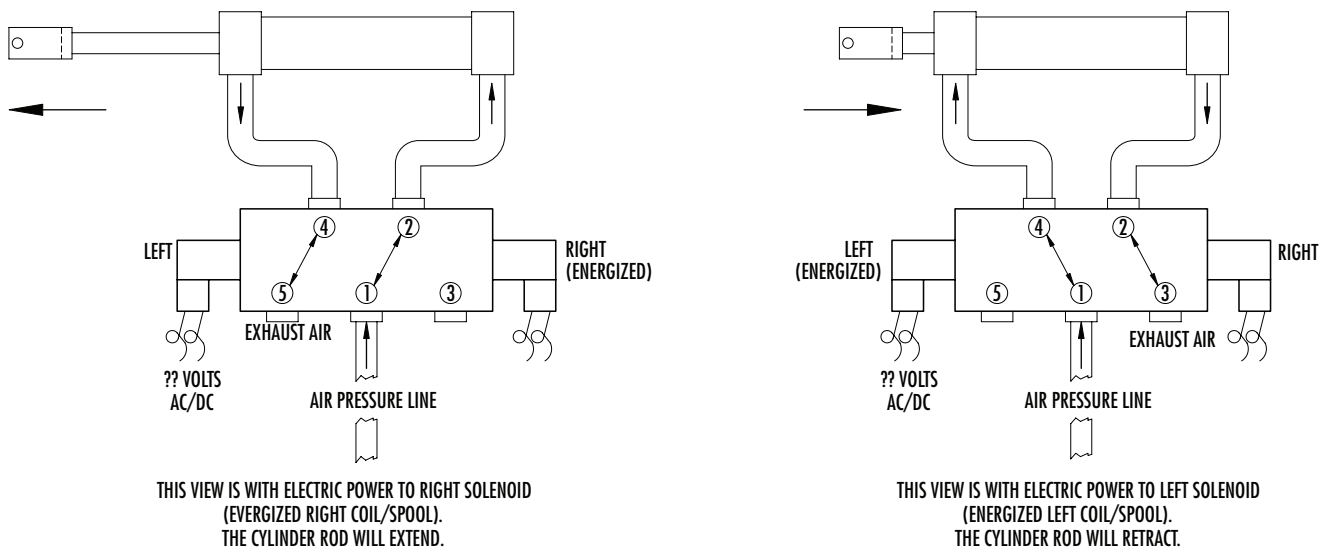
Figure 1



The single solenoid is optional and not normally recommended.

This style can change position upon loss of electric power and thus the product flow direction.

Figure 2



The double solenoid control valve shown here is the style recommended for diverter valves.

This style will maintain the valve's position upon loss of electric power and keep material flowing down the same spout.

The above diagram show typical hookups for air solenoid control valves on diverter valves.

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 diverter valve could change direction if there was a loss of power.

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

SECTION 1 - GENERAL

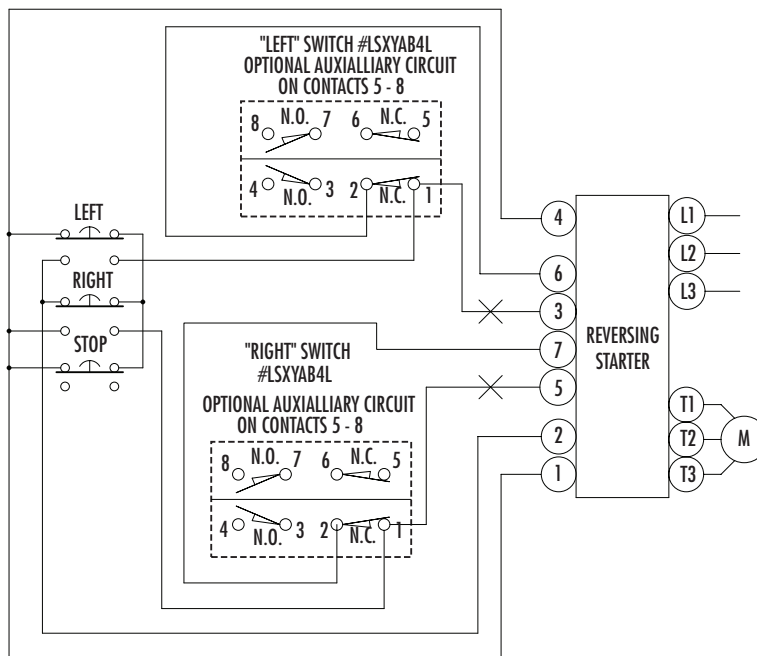
TYPICAL WIRING DIAGRAM FOR GEARMOTOR DRIVE ON A DIVERTER VALVE

TYPICAL WIRING DIAGRAM

REMOVE INTERNAL JUMPERS 3 TO 6, 5 TO 7.

✕ BREAK FOR MOMENTARY OPERATION

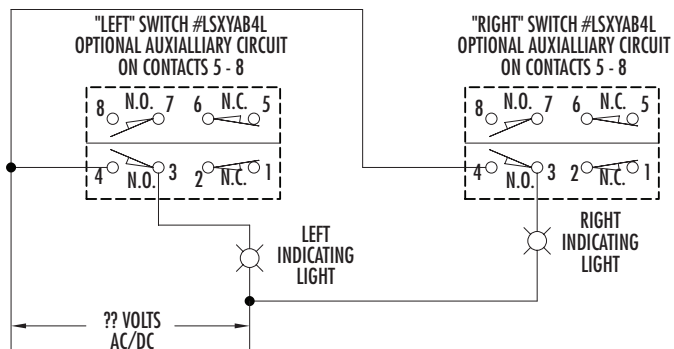
THE LIMIT SWITCHES ARE THE ONLY DEVICES PROVIDED.
ANY STARTER, PUSH BUTTON CONTROL OR
INDICATOR LIGHTS ARE TO BE SUPPLIED BY CUSTOMER.



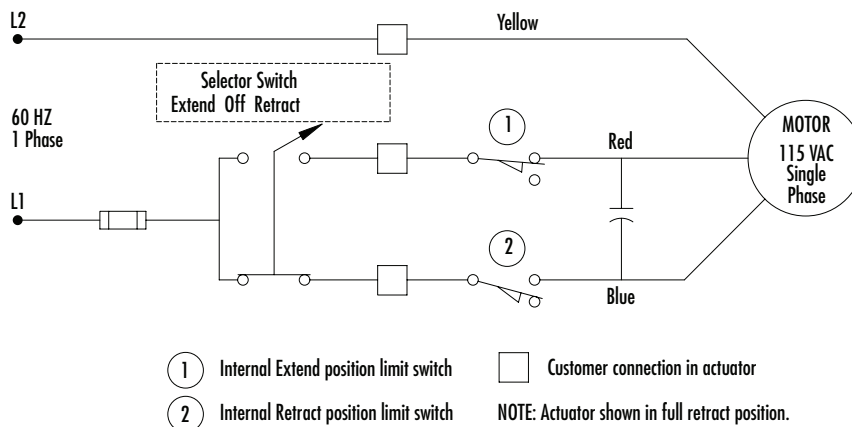
TYPICAL WIRING DIAGRAM FOR POSITION INDICATING SWITCHES ON AN ELECTRIC DIVERTER VALVE

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

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



TYPICAL WIRING DIAGRAM FOR ANDCO "Eagle" LINEAR ACTUATOR ON A DIVERTER VALVE



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INDICATOR LIGHTS ARE TO BE SUPPLIED BY CUSTOMER.**