DISCLAIMER

Knight LLC does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

WARRANTY

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

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KNIGHT ILCS 3-WAY VALVE INSTRUCTION MANUAL

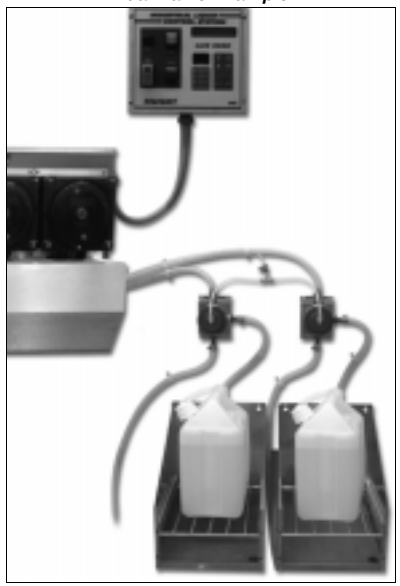
INTRODUCTION

The Air Operated 3-Way Valve for ILCS is designed to divert the flow of the flush water from the chemical flush manifold to a drain. Flushing the chemical injection manifold after chemicals are injected prevents potentially dangerous mixing of non-compatible chemicals in the chemical discharge line, chemical receptacle or the container shelf.

A split discharge system can be setup for separate sanitizer and acid dispensing by using dual 3-Way Valves. This setup maximizes the benefits of the ILCS's separate flush manifolds. The air solenoid can operate both 3-Way Valves through a "tee" connection.

Single Valve Example

Dual Valve Example



CAUTION: Wear protective clothing and eyewear when dispensing chemicals or other materials. Observe safety handling instructions (MSDS) of chemical mfrs.

CAUTION: To avoid severe or fatal shock, always disconnect main power when servicing the unit.

CAUTION: When installing any equipment, ensure that all national and local safety, electrical, and plumbing codes are met.

INSTALLING THE AIR SOLENOID

- An exhaust manifold is provided and is to be mounted on the side of the pump cabinet. Do not modify the exhaust manifold, or block it off in any way!

(1) Turn off power to the ILCS unit.

(2) Mount the air solenoid in the ILCS pump cabinet using provided screws and nuts. A retro-fit mounting bracket is available from Knight for older systems.

(3) Install the air input fitting into the side of the pump case (as shown to the right). Cut a suitable length of 1/4" poly tubing (provided) and connect the air input fitting to port #1 on the air solenoid.

(4) Install the air out fitting into the side of the pump case (as shown to the right). Cut a suitable length of 1/4" poly tubing (provided) and connect the air out fitting to port #2 on the air solenoid.

(5) Install the exhaust manifold into the side of the pump case (as shown to the right). Cut a suitable length of 1/4" poly tubing (provided) and connect the exhaust manifold to port #3 on the air solenoid.

(6) Connect the two black wires from the air solenoid to pump #10 output on the pump board. Connect the green wire from the air solenoid to the existing ground terminal inside the ILCS pump cabinet.

INSTALLING THE 3-WAY VALVE

(1) Position the 3-Way Valve Assembly near a suitable drain on the discharge side of the ILCS manifolds.

(2) Mark 4-hole pattern on the wall surface and drill mounting holes accordingly.

(3) Mount the 3-Way Valve to wall surface using suitable wall anchors or lag bolts.

(4) Secure 1/2" ID discharge tubing to inlet, outlet and drain ports. Use only stainless steel hose clamps to secure tubing.

(5) Connect 1/4" poly tubing from the "air out" fitting on the side of the pump case to the air inlet fitting on the 3-Way Valve. For a 2 valve setup, the air line can be "teed" into the inlet fittings on both 3-Way Valves (see example on front page).

(6) Connect 1/4" poly tubing from the air supply to the "air input" fitting on the side of the pump case. Air supply should be filtered and dried to prevent damage to the 3-Way Valve. Minimum 34 PSI required to operate valve.

SYSTEM TEST

Power up the ILCS unit and turn on the air supply. Test the operation of the 3-Way Valve by pressing prime button #9 and #10 simultaneously to activate the water flush and air solenoid. Water flow should divert to the "drain" port on the 3-Way Valve.

Repeat the prime function and check for proper operation. Also check for any air or water leaks. The air solenoid will exhaust pressure at the end of the cycle. Air exhaust returns the 3-Way Valve to "dispense" orientation.