

INTRODUCTION

The Liquidtrol Air Pump Control is designed to interface an ILCS-6900 Dispensing System to one or two optional Air Operated Double Diaphragm Pumps. Air pumps are generally used as an alternative to peristaltic pumps where feed rates in excess of three gallons per minute are required.

The APC-200 unit is installed in close proximity to the ILCS-6900 and connects to the air pumps using 3/8" air line. Air pumps should be mounted near the chemical source and push chemical to the point of use.

THEORY OF OPERATION

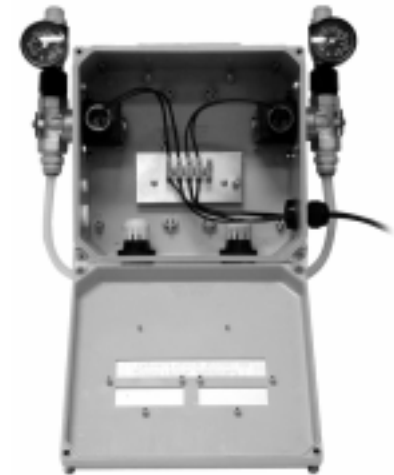
The APC-200 Liquidtrol Air Pump Control includes one or two air solenoid valves for operating one or two Air Operated Double Diaphragm Pumps. Built-in pressure regulators provide control of the air pump feed rate and allow accurate calibration of the chemical volumes. An air filter prevents "dirty" or "wet" air from contaminating the air solenoid valve. Adjustments for the pressure regulator are located in the APC-200 cabinet to discourage tampering by unauthorized users.



INSTALLATION

See diagrams on the following page for illustration of the steps below.

- (1) Mount unit on a wall in a location that is near the ILCS-6900 System.
- (2) Connect incoming air source to the inlet fitting using 3/8" poly tubing. Max recommended pressure is 150 PSI.
- (3) Connect the outlet fitting(s) from the air solenoid valves to the air pump inlet port using 3/8" poly tubing.
- (4) Connect the solenoid(s) to the desired output circuits on the ILCS pump output board using conduit and wiring that complies with all applicable electrical codes. The solenoids are connected to a wiring barrier inside the APC control box for quick and easy connection.
- (5) Use of an air-operated 2-way valve is recommended for installations where siphoning can occur. See part numbers to the lower right.



OPERATION / START-UP

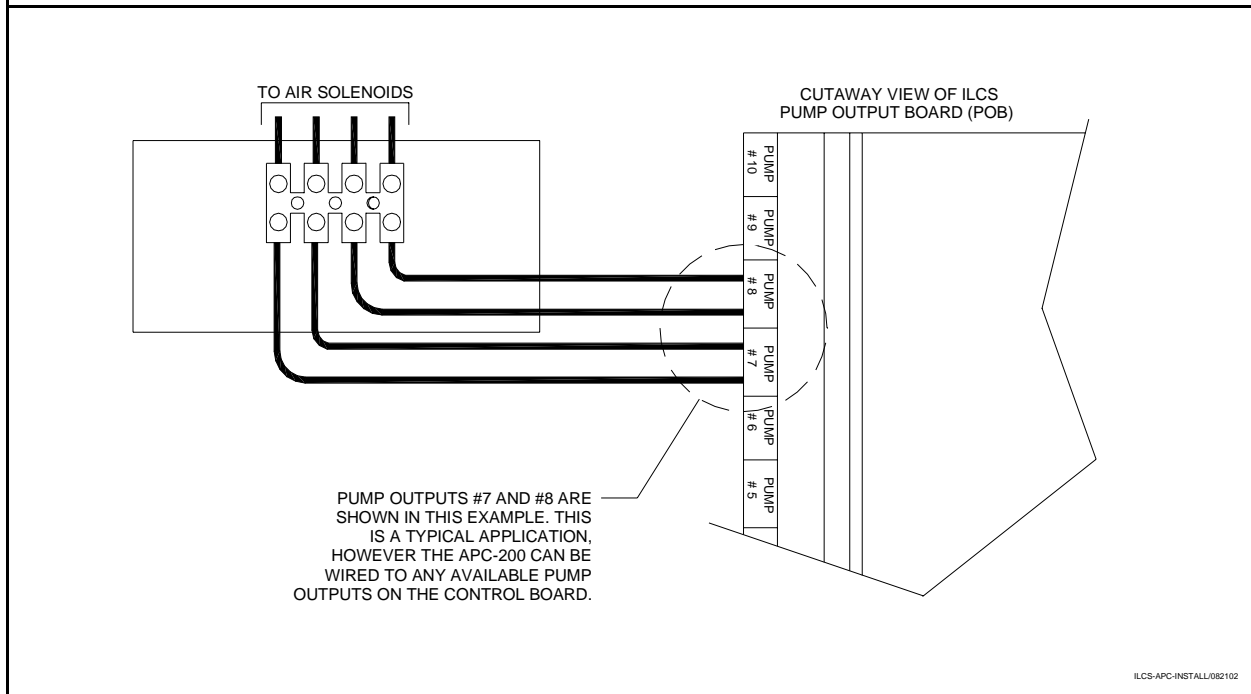
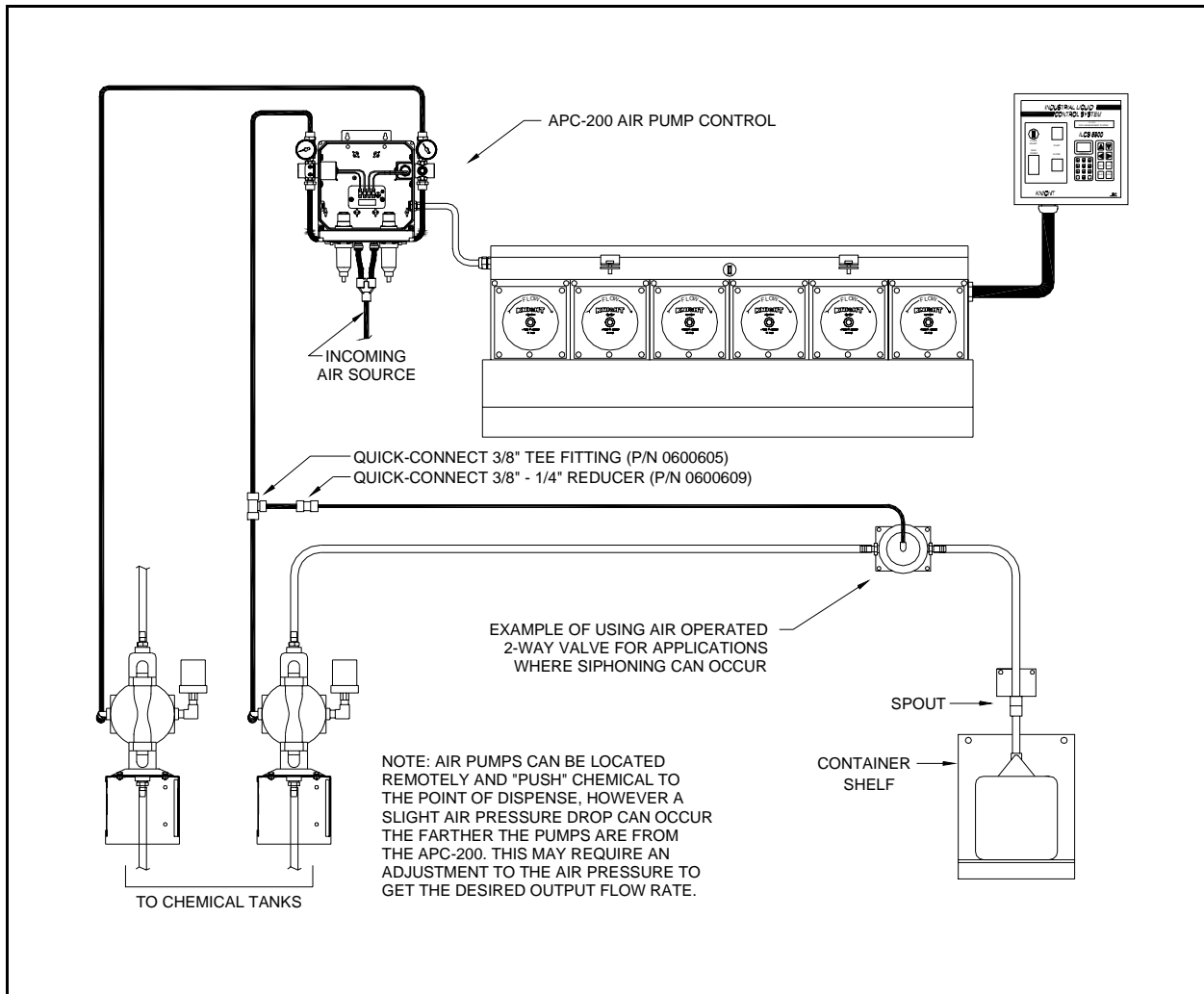
Consult Air Pump operation manual for mfr's operating specifications.

- (1) Manually activate pump(s) using the prime button(s) on the ILCS pump board. Priming a "dry" pump may require you flood the pump suction with water. Suction line should be no longer than 10 feet (3 meters).
- (2) The air pump will typically be easier to prime when running at a slower speed. The speed and volume delivery of the pump can be controlled by turning the regulator clockwise to increase pressure and counter-clockwise to decrease pressure.
- (3) Once the pump is primed, adjust the air pressure as needed and calibrate the ILCS-6900 per the directions in the ILCS programming manual (Dispenser Programming Routines menu).

Knight Air-Operated 2-Way Valves can be ordered using the following part numbers:

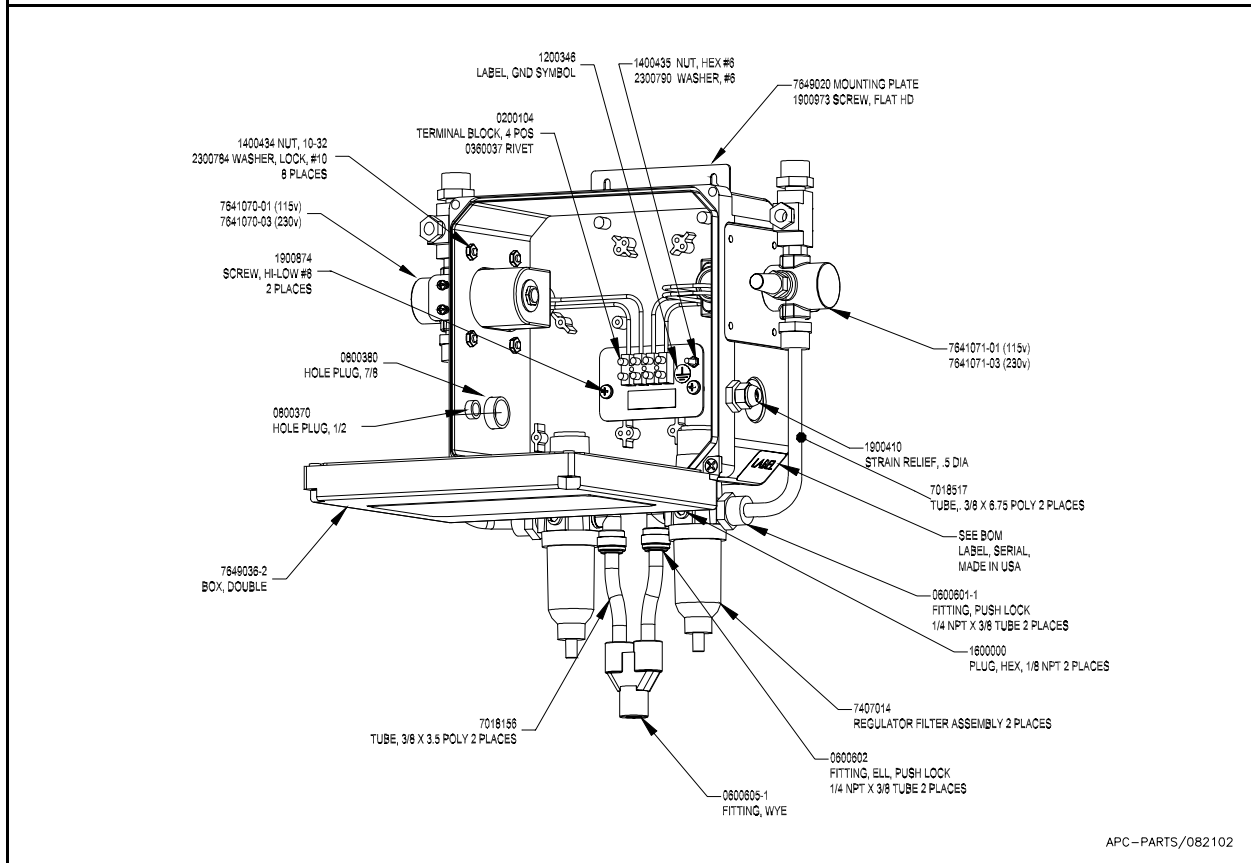
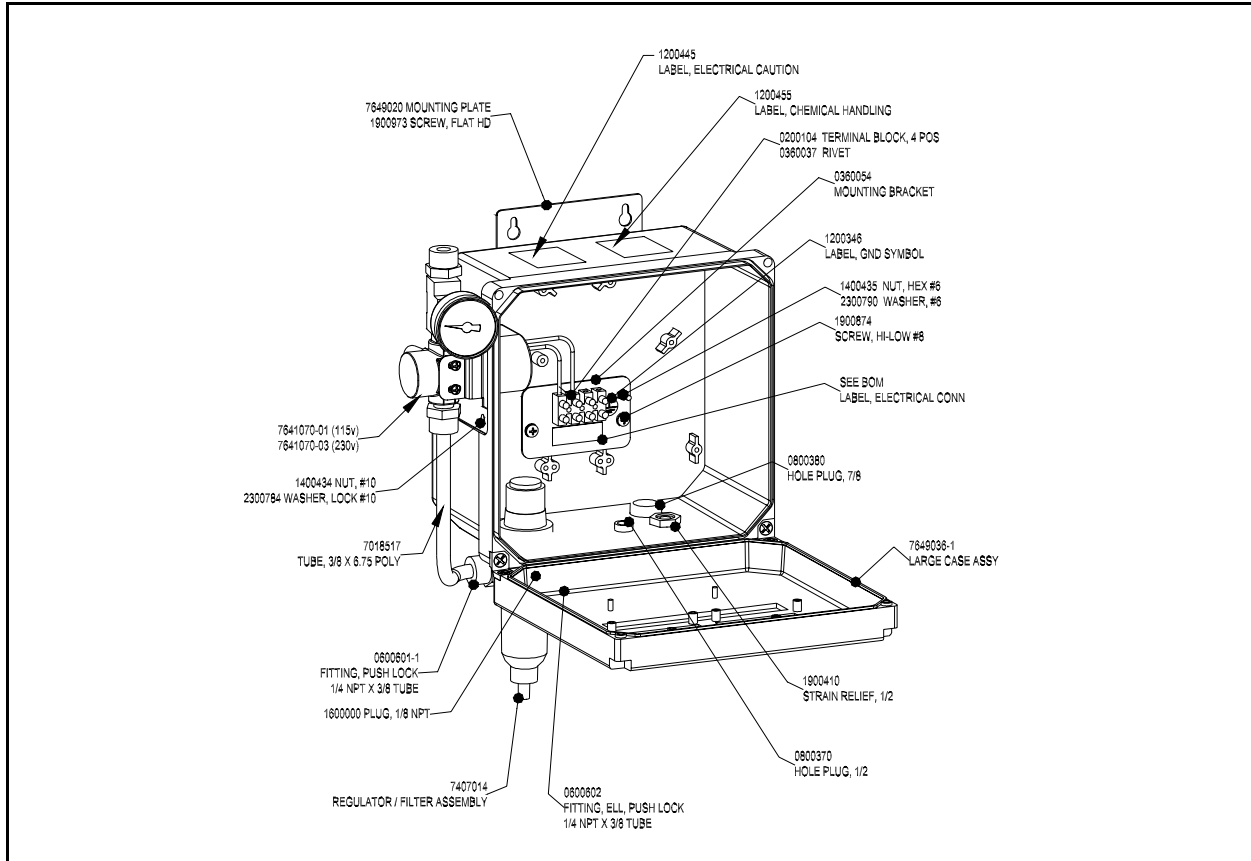
P/N 1600954 — for 1" ID line
P/N 1600955 — for 1/2" ID line

INSTALLATION AND WIRING DIAGRAMS



ILCS-APC-INSTALL/082102

PARTS DIAGRAMS



APC-PARTS/082102

MAINTENANCE

- Periodically drain the float bowls by turning the stem clockwise a few turns till the water runs out the bottom. Then turn back counter-clockwise until hand tight.
- Check the condition of the air lines and fittings — replace any parts that are leaking air.
- Check for variation in air supply pressure and adjust regulators accordingly.

DISCLAIMER

Knight Inc. 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 Inc.

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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