

## **ME710**

### Pneumatic Actuator Instruction Manual

#### WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion and/ or fire causing property damage and personal injury or death.

Install, operate and maintain Marshall Excelsior Co. equipment in accordance with federal, state, and local codes and these instructions. The installation in most states must also comply with NFPA Pamphlet #58, ANSI K61.1 and DOT standards.

Proper installation of remote actuation devices should include thermal protection to close the control valve and internal valve in case of a fire. This pneumatic actuator kit includes thermal protection.

Only personnel trained in the proper procedures, codes, standards, and regulations of the LP-Gas or anhydrous ammonia (NH<sub>3</sub>) industries should install and service this equipment.

#### INTRODUCTION

#### SCOPE OF MANUAL

This manual covers instructions for the type ME710 Pneumatic Actuator kit. This kit allows for remote operation of the RegO® A7853A three-way control valve for 3" and 4" RegO® Flomatic® Internal Valves.

#### **DESCRIPTION**

The ME710 Marshall Excelsior Co. Pneumatic Actuator kit fits the RegO® A7853A 1/4" three-way control valve to allow for remote valve operation utilizing air pressure. Applying air pressure to the actuator moves the cylinder rod and the control valve's operating pin to the open position. Upon loss of air pressure, the valve's operating pin immediately returns to the closed position.

**Type ME710** – For RegO® type A7853A 1/4" three-way control valve

This kit features a spring return design that eliminates the need for an air return.

#### **S**PECIFICATIONS

Pressure Source: Air

Cylinder Pressure Limits: Minimum – 20 psig

Maximum – 125 psig

Recommended – 20-25 psig

Temperature Limits: -60°F to 250°F Return Mechanism: Spring only – no air

#### **MAINTENANCE**

A simple preventive maintenance program for the valve and its controls will eliminate potential problems.

Marshall Excelsior Co. recommends these steps be conducted at least once a month:

- 1. Inspect the operating lever to see that it operates freely.
- 2. Confirm the actuating cylinder fully opens and closes the control valve without sticking. Keep the actuator's cylinder rod free of any buildup of mud, corrosion, or other foreign material. Such a buildup could prevent the cylinder from closing which could jam the control valve in the open position. Do not permit this condition to occur.
- 3. Because the actuator has a diaphragm seal, internal lubrication is not required. For smooth operation, lubricate the linkage/roll pin and linkage/linkage retaining pin pivot points.
- 4. Inspect, clean and oil all operating controls.

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### **INSTALLATION**

#### **CAUTION**

The use of a pressure reducing regulator to supply the minimum actuator operating pressure (20-25 psig) to the unit will maximize actuator life and minimize air consumption.

To install an actuator, first remove any existing operating lever from the RegO<sup>®</sup> A7853A control valve.

#### **WARNING**

(12)

(5)

Release all system pressure before installing the ME710 actuator. Failure to follow these instructions or to properly install and maintain this equipment could result in personal injury or death.

Figure 1

(10)

control valve (2) with rounded corner facing the valve pin. Attach linkage (1) to the control valve (2) using new roll pin (3) included in the installation kit. Assemble 3/8" lock washers (4) onto 3/8"-16 bolts (5) provided and install RegO® A7853A control valve (2) onto actuator bracket (6) as shown in Figure 1. Tighten the two bolts (5) to 25 - 30 inch pounds torque. Position linkage (1) into actuator piston slot (7). Install linkage retaining pin (8) through actuator piston (7) and valve linkage (1). Install the cotter pin (9) through the linkage retaining pin (8) to retain in place. Determine desired mounting position for the actuator assembly. The mounting bracket (10) is provided in installation kit.

Install ME710 linkage (1) onto RegO® A7853A

(10) at desired position on truck frame or other suitable surface. Mark and drill mounting holes 3/8" diameter. Attach mounting bracket/actuator assembly with minimum Grade 5 bolts (not included). After installing the unit, install three-way brass adapter (#15) into connector inlet (#14). Install thermal safety plug (#16) into either open port on three-way brass adapter (#15). Connect the actuating pressure line to the remaining port on three-way brass adapter. Operate the actuator with air pressure to confirm it operates the control valve (2) from open to close without sticking or jamming and that theRegO® Flomatic® internal valve operates as intended.

Install mounting bracket bolts (11) with the

head on the inside of the main actuator

bracket (6) as shown in Figure 1 to

ensure proper clearance for the actuator.

Install 1/4" lock washers (12) on the

outside of the mounting bracket/actuator

assembly prior to installing the 1/4"-20

nuts (13). Tighten the four connecting

points to 25 - 30 inch pounds torque. This

**MOUNTING**. Locate mounting bracket

completes the actuator assembly.

