



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 (NH₃) industries should install and service this equipment.



WARNING: These products contain a chemical known to the state of California to cause cancer and birth defects or reproductive harm

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.

SPECIFICATIONS

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.

Marshall Excelsior Co.

1506 George Brown Drive Marshall, MI 49068

Phone (269) 789-6700 Fax (269) 781-8340

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® A7853A control valve.

WARNING

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.

Install ME710 linkage (1) onto RegO® A7853A 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 universal for right or left hand installation. Attach mounting bracket (10) to actuator body (6) in desired position using 1/4"-20 bolts (11), 1/4" lock washers (12) and 1/4"-20 nuts (13) provided in installation kit.

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 completes the actuator assembly.

MOUNTING. Locate mounting bracket (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 the RegO® Flomatic® internal valve operates as intended.

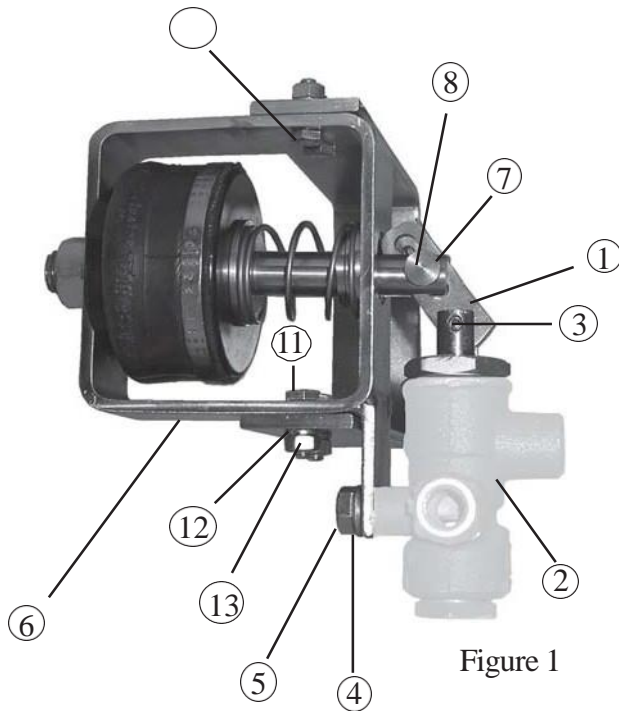


Figure 1

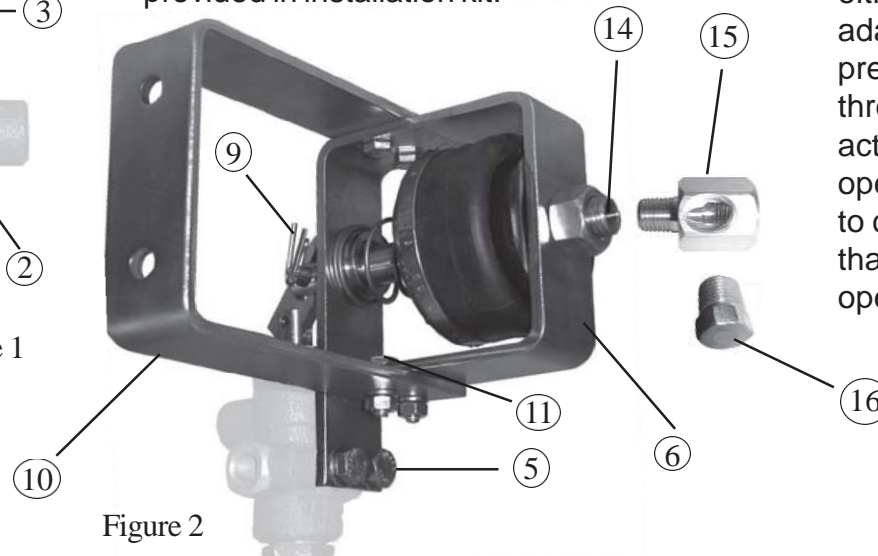


Figure 2