



ME205R

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 must include thermal protection to close the 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.

INTRODUCTION

SCOPE OF MANUAL

This manual covers instructions for the type ME205R Pneumatic Actuator kit. This kit allows for remote operation of the Rego® A3209R internal valve.

DESCRIPTION

The ME205R Marshall Excelsior Co. Pneumatic Actuator kit fits the Rego® A3209R 1-1/4" NPT internal valve to allow for remote valve operation utilizing air pressure. Applying air pressure to the actuator moves the actuator rod and the internal valve shaft to open the valve. Upon loss of air pressure, the valve's operating lever immediately returns to the closed position.

Type ME205R – For Rego® type A3209R internal valve (1-1/4" model)

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 minimize 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 actuator fully opens and closes the internal valve without sticking. Keep the actuator 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 internal 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 operating lever/actuator rod pivot point.
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 cylinder operating pressure (20-25 psig) to the actuator will maximize cylinder life and minimize air consumption.

To install an actuator kit, first remove any existing operating lever from the internal valve shaft.

WARNING

Release all downstream pressure before removing the two screws (#2) holding the cover plate to the internal valve body. 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.

When installing the ME205R, remove any existing screws (#2) and the stop pin (#3) from the internal valve body (#4). Mount the actuator bracket (#1) as shown below. Ensure the actuator bracket (#1) mounting holes line up with the tapped holes in the internal valve body (#4). Install the screw (#2) supplied with the installation kit and the stop pin (#3) through the actuator bracket (#1) into the internal valve body (#4) as shown and tighten to 25-30 inch pound torque.

Locate internal valve shaft (#6) and loosen set screw (#5). Install actuator linkage pin (#7) small end first through internal valve shaft (#6) and linkage hole in the actuator rod (#8) as shown. Hold actuator linkage pin (#7) with large

end flush with the internal valve shaft (#6) and tighten set screw (#5). Ensure the set screw fully engages into the recess in the actuator linkage pin (#7) locking it in place. Confirm the actuator's linkage pin (#7) has about 1/8" movement before it begins to open the internal valve. Install three-way brass adapter (#10) into actuator inlet (#9). Install thermal safety plug (#11) into either open port on three-way brass adapter (#10). Connect the actuating pressure line tubing to the remaining port on three way brass adapter (#10). After installing the unit, operate the actuator with pressure to confirm it smoothly opens and closes the internal valve without sticking or jamming.

