



# ME552

## PowerTorq Series

### Pneumatic Cylinder 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 emergency shutoff valve in case of a fire. The pneumatic actuator does not include 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 installation instructions for the type ME552 Pneumatic Actuator kit. This kit allows for remote operation of the Fisher® N550 emergency shutoff valves.

##### DESCRIPTION

The ME552 Marshall Excelsior Co. Pneumatic Actuator Kit fits all three sizes of the Fisher® emergency shutoff valves (1¼", 2" & 3") to allow for remote valve operation utilizing air pressure. Applying air pressure to the actuator moves the drive coupling and the emergency shutoff valve's operating lever to open the valve. Upon loss of air pressure, the valve's operating lever immediately returns to the closed position.

**Type ME552** – For Fisher® type N550-10, N550-16 & N550-24 emergency shutoff valves.

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 – 50-70 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 coupling to verify that it operates freely.
2. Confirm the actuator fully opens and closes the emergency shutoff valve without sticking. Keep the actuator's drive coupling free of any buildup of dirt, corrosion, or other foreign material. Such a buildup could prevent the actuator from closing which could jam the emergency shutoff valve in the open position. Do not permit this condition to occur.
3. Because the actuator has a sealed housing, internal lubrication is not required. For smooth operation, lubricate the operating coupling joint.
4. Inspect, clean and oil all operating controls.

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## INSTALLATION

### **WARNING**

Release all downstream pressure before starting installation of this product. 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.

### **CAUTION**

**Do not manually stroke the cylinder.**

The use of a pressure reducing regulator to supply the minimum cylinder operating pressure (50-70 psig) to the actuator will maximize product life and minimize air consumption.

When installing the ME552 Actuator Kit, first remove the existing operating lever and remote cable release box from the emergency shut-off valve. Remove fusible element and spacer from ESV operating shaft.

Remove the screws holding the cover plate to the ESV body. Discard the screws and retain the cover plate. Ensure that the ESV packing rings remain in position during disassembly and reassembly. With cover put in position, install stand-offs through cover plate and hand tighten to ESV. Position actuator mounting plate over stand-offs with counter-sink holes facing out. Install mounting screws through mounting plate and hand tighten to stand-offs. Wrench tighten stand-offs to ESV then wrench tighten mounting plate to the stand-offs. Ensure even gap between cover plate and ESV packing. Install drive coupling over ESV operating shaft and ensure ESV is in the closed position actuator with air inlet connection facing down and install over drive coupling. Install mounting bolts with lock washers through mounting bracket and wrench tighten to actuator.

**NOTE:** The inlet tee connection is factory installed and includes a thermal safety plug which is required by code. This must remain installed to the actuator.

Connect the actuating pressure line tubing to the inlet port. After installing the unit, operate the actuator with pressure to confirm it smoothly opens and closes the ESV without sticking or jamming.

**NOTE:** The arrow located on the actuator shaft is an indicator only and is not a manual operating handle.

**CAUTION:** This ME552 Actuator model is specifically timed for the proper operation of ESV (Emergency Safety Valves) only. They are not interchangeable with internal valve actuator kits.

