



## ME205 PNEUMATIC ACTUATOR INSTRUCTION MANUAL

**NOTE:** Numbers in brackets [ ] refer to the number in the valve component list. Numbers in parenthesis ( ) refer to quantities of the valve component.

### **!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 standards 58 and 59, ANSI/CGA G-2.1, and DOT standards.

For installation in the European Union, the equipment must also comply with PED/TPED and EN ISO standards. Periodic inspections, intermediate inspections and exceptional checks of transportable pressure equipment should be carried out in accordance with the Annexes of Directive 2008/68/EC and with 2010/35/EU Directive (TPED) to ensure continued compliance with their safety requirements.

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



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

## Introduction

### Scope of the Manual

This manual covers instructions for the ME205 Pneumatic Actuator kit. This kit allows for remote operation of the ME990-10 (Fisher® C407) internal valve.

### Description

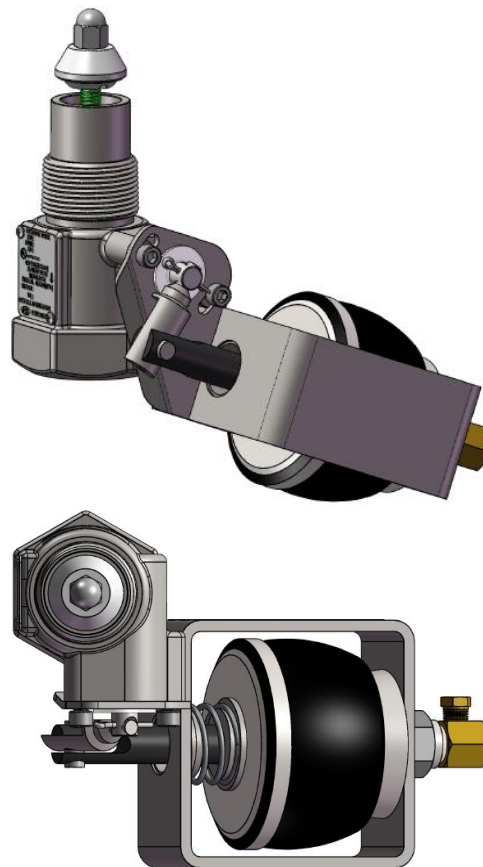
The ME205 Marshall Excelsior Co. Pneumatic Actuator kit fits the ME990-10 (Fisher® C407) 1-1/4" NPT internal valve to allow for remote valve operation utilizing air pressure. Applying air pressure to the actuator moves the cylinder rod and the internal valve shaft to open the valve. Upon loss of air pressure, the valve's operating lever immediately returns to the closed position.

**Type ME205** – For ME990-10 (Fisher® type C407) internal valve (1-1/4" model)

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

### **Marshall Excelsior Company**

1506 George Brown Drive Marshall, MI 49068  
Phone (269) 789-6700 Fax (269) 781-8340  
[www.marshallexcelsior.com](http://www.marshallexcelsior.com)



ME990A-10

## Specifications

<b>Pressure Source:</b>	Air
<b>Pressure Limits:</b>	Minimum – 20 psig / 137 kPa Maximum – 125 psig / 861 kPa Recommended – 20-25 psig / 137-172 kPa
<b>Temperature Limits:</b>	-60°F to 250°F / -51°C to 121°C
<b>Return Mechanism:</b>	Spring only – no air

## Installation

### **!CAUTION!**

**Do not manually stroke the cylinder.**

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

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

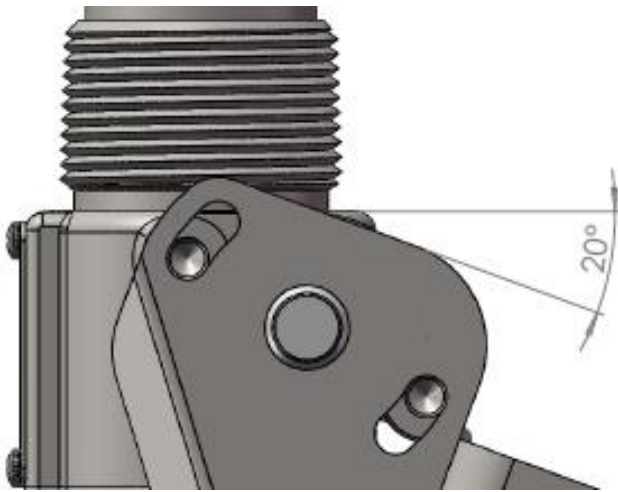
### **MEC Europe AsP**

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**!WARNING!**

Release all downstream pressure before removing the two screws 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.

2. Remove (2) Mounting Screws [1], (2) Cover Washers [3] and Cover Plate [2]. Discard Cover Plate and retain Mounting Screws and Cover Washers.
3. Mount Cylinder Bracket [4] as shown, clocked to 20° or as close to this position as the final installation allows. Loosely install (2) Mounting Screws [1] and (2) Cover Washers [3] to retain.  
**NOTE: Ensure the internal packing components remain in position during disassembly and reassembly.**



4. Place Bushing [7] over the internal valve shaft, between the Cylinder Bracket [4] and the Operating Lever [5]. Position Operating Lever [5] into the internal valve shaft lever hole.
5. Tighten (2) Mounting Screws [1] to 25-30 in.-lbs torque to retain Bracket [4].
6. Install Cotter Pin [8] through Operating Lever [5] and internal valve shaft.  
**NOTE: Ensure Cotter Pin does not interfere with Mounting Screws.**  
**NOTE: Confirm the Operating Lever [5] has approximately 1/8" movement before it begins to open the internal valve.**
7. Install three-way Adapter [9] into Connector Inlet [11], then install Thermal Safety Plug [10] into either open port on Adapter [9].
8. Operate actuator with pressure to confirm the valve opens and closes without sticking or jamming.

**Maintenance**

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

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

1. Confirm the actuator fully opens and closes the internal valve without sticking. Keep Cylinder Rod [6] free of any build-up of mud, corrosion, or other foreign material. Such a build-up could prevent the actuator from closing which could jam the internal valve in the open position. Do not permit this condition to occur.

2. Because the actuator has a diaphragm seal, internal lubrication is not required. Periodically lubricate the pivot between Cylinder Rod [6] and Operating Lever [5].
3. Regularly inspect, clean and oil all operating controls.

**Component List**

1. Mounting Screw; Qty: 2
2. Cover Plate
3. Cover Washers; Qty: 2
4. Cylinder Bracket
5. Operating Lever
6. Cylinder Rod
7. Bushing
8. Cotter Pin
9. Three-way Adapter
10. Thermal Safety Plug
11. Connector Inlet

