



ME206/ME207/ME207SF

Pneumatic Actuators 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.

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 types ME206, ME207 & ME207SF Pneumatic Actuator kits. These kits allow for remote operation of Fisher® internal valves.

DESCRIPTION

Marshall Excelsior Co. Pneumatic Actuator kits fit Fisher® 2 & 3-inch NPT and 3-inch single and double flange internal valves to allow for remote valve operation utilizing air pressure. Applying air pressure to the actuator moves the cylinder rod and the internal 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 ME206 – For Fisher® type C402, C421 and C427 valves (2 and 3 inch series)

Type ME207 – For Fisher® type C403-24 double flanged valves

Type ME207SF – For Fisher® type C404-24 single flanged valves

These kits feature 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 a lot of 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 internal valve without sticking. Keep the actuator's cylinder rod free of any build-up of mud, corrosion, or other foreign material. Such a build-up 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. Periodically lubricate the operating lever/clevis pivot.
4. Regularly inspect, clean and oil all operating controls.

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INSTALLATION

CAUTION

Do not manually stroke the actuator.

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 three bolts (#2) holding the bonnet 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.

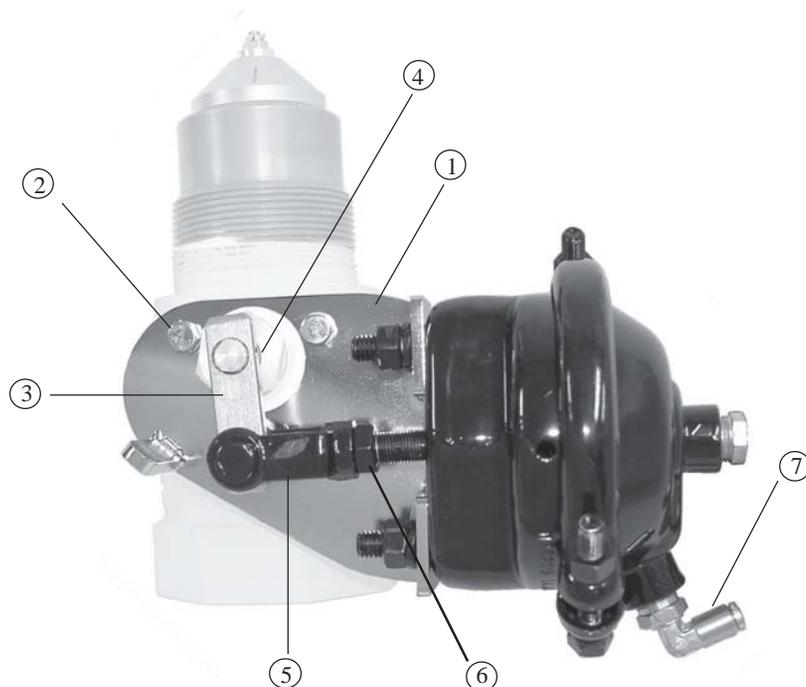


Figure 1. Type ME206 for Fisher® C402, C421 and C427 2" & 3" Internal Valves

When installing the ME206, remove the three bolts (#2) holding the bonnet to the internal valve's body and discard them. Mount the actuator bracket (#1) as shown in Figure 1 using the three longer bolts –supplied with the kit. Fit the operating lever (#3) on the internal valve shaft when moving the bracket into position.

When installing the ME207 or ME207SF, mount the bracket (#1) to the flange/flanges with 2 bolts (#2) – supplied in the kit – as shown in Figure 2, fitting the operating lever (#3) on the internal valve shaft when moving bracket into position.

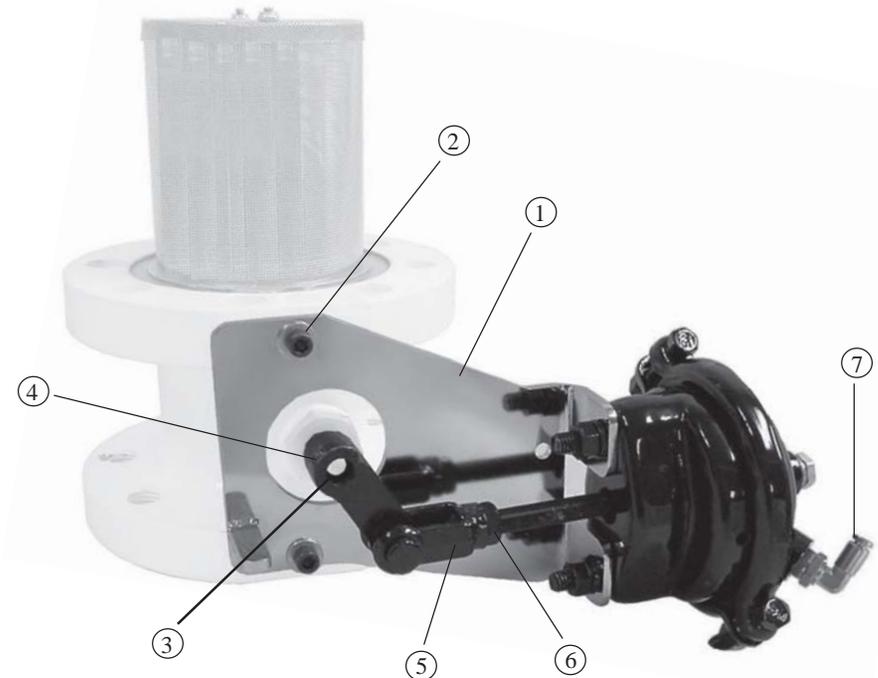


Figure 2.
Type ME207 for Fisher® C403-24 Series - Double Flange Internal Valve
Type ME207SF for Fisher® C404-24 Series - Single Flange Internal Valve

For either kit, install the cotter pin (#4) through the operating lever (#3) and the internal valve shaft. Loosen the clevis (#5) on the cylinder rod and adjust it so that there is about 1/8" movement of the operating lever before it begins to open the internal valve. Tighten the nut (#6) to hold the clevis at this position. Connect the actuating pressure line tubing to the swivel connector (#7). Push the tubing into this connector then pull back firmly to securely lock it into place creating a pressure-tight seal. After installing the unit, operate the actuator with pressure to see that it smoothly opens and closes the internal valve without sticking or jamming.

If stroke adjustment is necessary on the ME206, the brass spacers supplied with the installation kit can be installed between the actuator bolts and actuator bracket.