

!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 #58, ANSI K61.1 and DOT standards.

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 (NH3) industries should install and service this equipment.

Introduction

Scope of the Manual

This manual covers instructions for the ME551 Pneumatic Actuator kit. This kit allows for remote operation of the ME980-10, ME980-16, ME980-16-2F, ME980-24, ME980-24-3F and ME980-24-4F (Fisher® N550-10, N550-16 and N550-24) internal valves.

Description

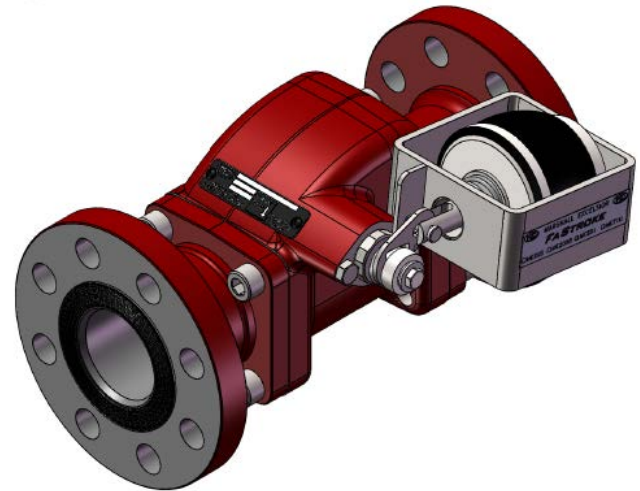
The ME551 Marshall Excelsior Co. Pneumatic Actuator kit fits the three sizes of MEC and Fisher® emergency shutoff valves (1-1/4", 2", 3") to allow for remote valve operation utilizing air pressure. Applying air pressure to the actuator moves the cylinder rod and the emergency shutoff valve's operating lever to open the valve. Upon loss of air pressure, the valve's operating lever immediately returns to the closed position.

Type ME551 – For ME980-10, ME980-16, ME980-16-2F, ME980-24, ME980-24-3F and ME980-24-4F (Fisher® N550-10, N550-16 and N550-24)

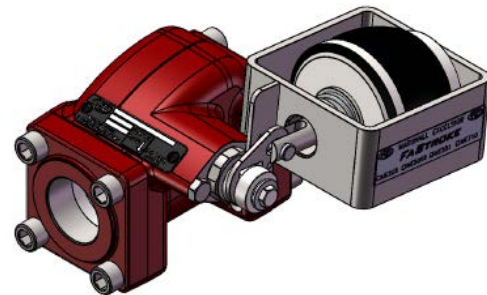
This kit features a spring return design that eliminates the need for an air return.

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



ME980A-16-2F



ME980A-10

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 the existing operating lever and remote cable release box from the emergency shutoff valve. Retain one Cap Screw [6a] from the release box, and the Shaft Screw [11], Spacer [7], and Fusible Element [9] from the shaft assembly.

!WARNING!

Release all downstream pressure before beginning 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.

2. Remove one Flange Bolt [3] from Body and retain.
3. Locate the brace hole of Actuator [2] over flange bolt hole.

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Maintenance

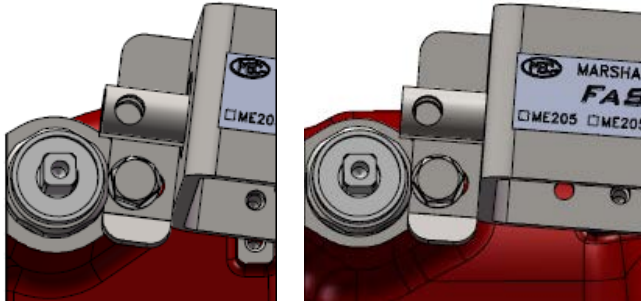
A simple preventive maintenance program for the valve and its controls will eliminate many potential problems. Marshall Excelsior Co. recommends these steps be conducted at least once a month:

1. Confirm the actuator fully opens and closes the shutoff valve without sticking. Keep Cylinder Rod [14] 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 [14] and Operating Lever [8].
3. Regularly inspect, clean and oil all operating controls.

Component List

1. Body
2. Actuator
3. Flange Bolt
4. Star Washer
5. Lock Washer
6. Cap Screw
 - 6a. Retained Cap Screw
 - 6b. Packaged Cap Screw
7. Link Bearing
8. Operating Lever
9. Fusible Element
10. Washer
11. Shaft Screw
12. Clevis Pin
13. E-Clip
14. Cylinder

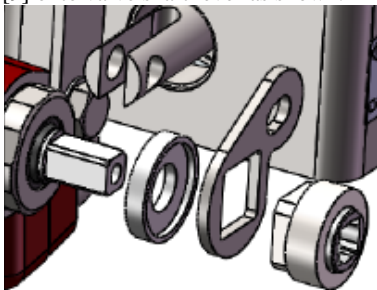
4. Install Star Washer [4] and Flange Bolt [3] and loosely secure so Actuator [2] is able to rotate.
5. Align screw hole A or B with body according to valve size:
 - **1¼" and 2" models:** Align screw hole A with top-most mounting hole. Install Retained Cap Screw [6a] through Lock Washer [5] and loosely secure; discard Packaged Cap Screw [6b].
 - **3" model only:** Align screw hole B with lower-most mounting hole. Install Packaged Cap Screw [6b] through Lock Washer [5] and loosely secure; discard Retained Cap Screw [6a].



1¼" and 2"

3"

6. Tighten Flange Bolt [3] until Actuator [2] is locked against Body [1]. For valves with a packing flange, instead tighten Flange Bolt [3] until gap between Body [1] and flange is even.
7. Tighten Cap Screw [6] until snug against bracket (do not overtighten).
8. Install Link Bearing [7], Operating Lever [8], and Fusible Element [9] onto valve shaft lever as shown.



9. Install Clevis Pin [12] through Operating Lever [8] and Cylinder [14], install E-clip [13] to retain.



10. Install Shaft Screw [11] through Washer [10] and Fusible Element [9] into valve shaft lever.
11. Operate actuator with pressure to confirm the valve opens and closes without sticking or jamming.

