



# MEH225

## Hydrostatic Relief Valve

### 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.**

Use of the Marshall Excelsior Co. MEH225 hydrostatic relief valve is intended but not limited to liquid propane based applications. For alternate liquefied compressed gas applications contact MEC for material and seal compatibility.

Never stand directly over or in front of, or look directly into the MEH225 when the system is pressurized. The relief valve could suddenly “pop” open blowing gas, dirt and other debris into your face and eyes.

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 industry should install and service this equipment.

#### INTRODUCTION

##### Scope of Manual

This manual covers instructions for the MEH225 hydrostatic relief valve for liquid propane applications. Typical installation of hydrostatic relief valves includes ASME tanks, DOT cylinders and piping applications.

##### Things to Tell the Gas Customer

1. The hydrostatic relief valve prevents the rupture of a hose or line when excessive pressure from trapped liquid propane occurs with closed shutoff valves on both ends of a hose or line. Exposure of the closed system to fire or radiant heat could cause this excess pressure.
2. Do not beat, pound or hit the hydrostatic relief valve with hammers or other tools or attempt to force the valve closed. This will not stop gas discharge and could damage relief valve parts or rupture the hose/line.
3. Do not block or plug the outlet area with any foreign material. Use only the MEC™ approved dust cap on the end of the valve.

#### SPECIFICATIONS

Size: ¼” NPT

Materials of construction: Brass and nitrile; plastic dust cap.

Pressure setting: 440 psi +/-5%



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## INSTALLATION

### WARNING

**Hydrostatic relief valves are required on liquid propane lines to provide relief protection between two shutoff valves. Install all hydrostatic relief valves with direct contact to the liquid space.**

Install the valve so that flow during pressure relief is unobstructed. Be certain that any discharge from the valve will not impinge on the container, adjacent containers or any source of ignition.

Coat the male threads of the valve with an Underwriters Laboratories listed sealing compound. Do not allow excess compound to drip into the liquid line or flow around the bottom edge of the pipe threads.

Install the valve into the coupling hand tight and then wrench tighten 1-2 additional turns. Do not overtighten. Over tightening of the valve may cause distortion of the body preventing the internal components from proper actuation. **This valve requires a dust cap.** Keep the dust cap in place; an out-of-place dust cap may indicate the valve operated due to an overpressure situation.

Protect relief valves on motor fuel applications as specified by DOT, NFPA #58 and other applicable laws, codes and standards.

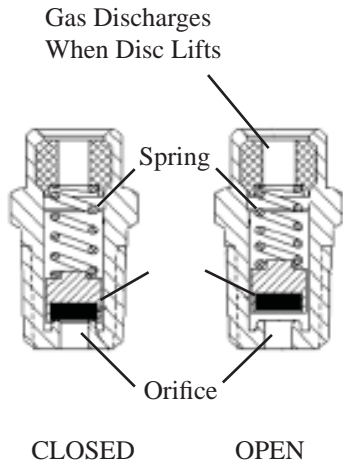


Figure 1

## PRINCIPLE OF OPERATION

The relief valve (refer to Figure 1) is held closed by the spring force seating the nitrile valve disc against the orifice. When the line pressure exceeds the spring force, the valve disc lifts off the orifice allowing gas to discharge through the valve to the air.

Gas discharge initially may be small producing only seepage and a light "hissing" sound. As pressure increases and gas volume discharge continues, a "popping" condition occurs with larger volumes of gas discharging and a loud "hissing or roaring" sound.

When the line pressure decreases enough, the spring force closes the valve disc back against the orifice stopping further discharge.

### MAINTENANCE AND REPLACEMENT

Safety relief valves are not repairable. **Do not attempt to adjust these valves in the field.**

### WARNING

**Any valve that has fully opened (popped), causing full compression of the spring, may be subject to subsequent lower start-to-discharge pressures as the spring may take a set or weaken. In the case of such an event, MEC recommends the relief valve be reevaluated for proper start-to-discharge in accordance with this instructional manual. Typical seepage or weeping does not require reevaluation for continued service in accordance to MEC recommendations.**

Some relief valve installations require periodic testing or replacement, such as those required by DOT, NFPA #58, NFPA Pamphlet 59 (LP-Gas Utility Plants) and ANSI K61.1. Regularly inspect all relief valves for visible damage, dirt, corrosion, missing raincaps, paint inside outlet, tampering, etc. Immediately retest or replace the valve if any of the above noted conditions is evident or questionable.

The discharge side of the relief valve body must be kept free of dirt, water and other foreign matter which can lodge against or otherwise damage the valve disc. Such conditions can prevent the valve from opening. Replace valves when this occurs.

The manufacturer precisely sets relief valves to the correct start-to-discharge setting; **never attempt field repair of a relief valve.** Since the disc in a relief valve is subject to normal deterioration, Marshall Excelsior Co. recommends replacement of relief valves in 15 years or less. Earlier replacement of the valve is appropriate under severe service conditions.

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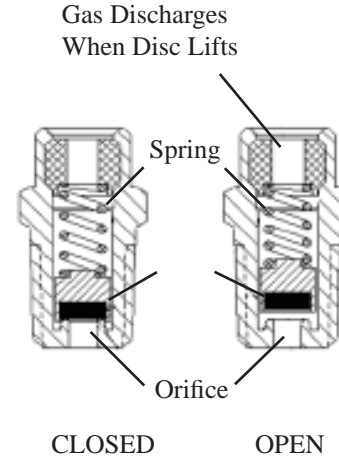


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