

Globe and Angle Valve ME813 through ME828 Series Safety and General Instructions

Marshall Excelsior Company (MEC) would like to provide you with information regarding the hazards associated with Liquefied Petroleum Gas (LPG) and anhydrous ammonia (NH₃) equipment. In the interest of safety, only personnel trained in the proper procedures, codes, standards, and regulations of the LP-Gas or NH₃ industries should install and service equipment that handles these products.

All MEC products must be installed and maintained in accordance with NFPA 58 "Liquefied Petroleum Gas Code", NFPA 59 "Utility LP-Gas Plant Code" for LPG, and ANSI Standard K61.1 for NH₃, as well as all other applicable state, federal and local requirements. 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.

MEC products are mechanical devices that are subject to wear, contaminants, corrosion, and aging of components made of materials such as rubber and metal. Over time these devices will eventually become inoperative. The safe service life of these products is affected by the environment and conditions of use that they are subjected to. MEC products have a long record of quality and service, so managers and service personnel must keep in mind the hazards that can arise from using aging devices that have outlived their safe service life.

!WARNING!

Contact with, or inhalation of liquid propane, anhydrous ammonia, and their vapors can cause serious injury and death! NH₃ and LPG must be released outdoors in air currents that will ensure dispersion to prevent exposure to people and livestock and in accordance with local regulations. LPG must be kept far enough from open flame or other sources of ignition to prevent fire or explosion! LPG vapor is heavier than air and will not disperse or evaporate rapidly if released in still air!

An abundant supply of clean water must be readily available and easily accessible as a means of providing IMMEDIATE First Aid treatment for exposure to anhydrous ammonia.

!CAUTION!

- Always wear suitable eye protection, gloves and protective clothing when operating or servicing LPG and NH₃ equipment.
- Check seals, seats and threads for wear and damage before use. Repair or replace all defective parts immediately.
- Always completely relieve system or line pressure prior to servicing equipment and plumbing.
- Use a suitable sealant on tapered pipe joints and always pressure test for leaks prior to returning to service.
- To prevent the accidental opening of any valve, never carry or grasp a valve by its hand wheel or handle.
- To prevent introducing contaminants and/or premature wear, never intentionally drag or drop a valve when installing into a system.
- Use appropriate size wrenches and/or sockets when installing valves into a system.
- Regular inspection and maintenance is essential for continued safe operation.
- If a leak is detected during valve operation, immediately stop the operation and follow procedures to correct the leaking condition.



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

Globe and Angle Valves

Follow this procedure on every operating application in order to prevent hazardous conditions:

- Before installing a Globe or Angle valve, the piping system must be free of dirt, debris, foreign matter and other particles that could damage sealing surfaces and/or valve seals.

There are developing trends in state legislation and proposed national legislation making the owner of products responsible for replacing products before they outlive their safe service life. LP-Gas dealers should be aware of such legislation as it affects them.

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- When installing a Globe or Angle valve into the system, ensure the arrows on the valve bodies and/or nameplates are oriented with the direction of system flow. While MEC Globe and Angle valves are designed for bi-directional flow, the arrows indicate recommended flow direction.
- A vent valve should be installed on the downstream side of any Globe or Angle valve that is being used for end-of-system shutoff. This allows the operator to vent trapped product before disconnecting.
- Make sure the handles for all Globe and Angle valves easily operate by hand. Never use hammers, pipe wrenches or other artificial means to force a valve open or closed.
- All Globe and Angle valves are rated for maximum operating pressure of 400 psi (27.6 bar) and a temperature range of -40°F to 212°F (-40°C to 100°C). Do not exceed these parameters during valve operation.
- All Globe and Angle valves are marked with their series part number and a date code indicating the time of manufacture.
- All Globe and Angle valves operate on Clockwise to close, Counter-clockwise to open
- Before removing one of the side port plugs, close the valve tightly and relieve upstream or downstream pressure based on which port is being serviced. Loosen the port plug very slowly. If the gas does not stop venting, then there is a leak in the system. Do not remove the side port plug. Make sure you are familiar with your companies' procedure for handling this hazardous situation and follow it carefully.

Globe/Angle Valves with Back Checks

The Integrated Back Check feature (IBC) is designed for use in single-direction flow systems where trapped liquid pressure may exceed 100 psig differential between two valves. The IBC automatically bypasses in the installed direction when this pressure is exceeded. Angle valves bypass trapped downstream pressure back upstream into the product container or piping, and Globe valves bypass trapped upstream pressure downstream after closing, based on recommended flow directions.

!WARNING!

NFPA 58 requires that a hydrostatic relief valve be installed into any section of piping that could allow liquid to be trapped between two shutoff valves.

Globe/Angle Valves with Pilot Features

Standard Globe and Angle valves installed in bi-directional systems can have the potential for upstream pressure buildup when the valve is closed. Pilot features are designed to allow equalization of pressure from upstream to downstream portions of the system during valve opening, greatly reducing the amount of torque required to open the valve and reducing wear on internal components.