



## LP GAS REGULATORS

### LOSS CONTROL BULLETIN

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#### PURPOSE OF THE REGULATOR

The LP gas regulator is a critical part of an LP gas system. The regulator controls the flow of gas in an LP gas line by reducing the pressure from the storage container to the gas line and eventually the appliance the gas line is serving.

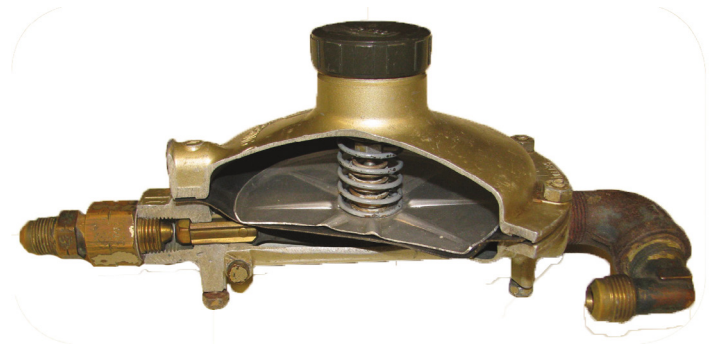
The constant heating and cooling of the LP liquid in the storage container means that the pressure within the container is variable. If excessive gas pressure develops, a properly functioning regulator will prevent the flow of excessive LP gas into the gas line. Because of this function, the regulator must be installed properly.

There are several different types of regulators. The type of regulator required will be determined by the type of LP gas system. They are not interchangeable. Consult with the propane supplier company or a licensed LP gas plumber when buying or installing a regulator.

The regulator must be installed in accordance with the National Fuel Gas Code – NFPA 54 (National Fire Protection Association), the Liquefied Petroleum Gas Code – NFPA 58, and any local codes or guidelines established by the local authority having jurisdiction.

#### REGULATOR INSTALLATION

Regulators used in LP gas systems must be designed for that purpose and installed according to the manufacturer's guidelines.



All regulators used in outdoor installations, except those used in portable industrial applications, shall be protected so their operations will not be affected by the elements. Regulators under the tank dome are protected. For those installed outside the dome, the vent should be pointed down to prevent rain, ice, snow, or other debris from blocking the vent. The vent should also have a screen to prevent insects from getting into the regulator. This screen shall not be painted.

Mounting the regulator with the vent in the upward position with tubing coming out of the vent pointing downward is not acceptable. Water will likely condense in the regulator and will not be able to flow upward which will not allow the regulator to function properly.

The regulator must be installed high enough to prevent water or mud from covering it in the summer or snow and ice in the winter. It must also be protected from physical damage (vehicle traffic, livestock movement) or tampering.

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If a LP gas regulator is installed inside a building, it must be vented to the outside atmosphere using copper tubing (vent extension). The vent extension must terminate at a point at least 3 feet from any opening back into the building.

The safety relief valve (vent openings) on regulators secured to the exterior of the buildings they serve must be at least 3 feet horizontally from any building opening at or below the regulator vent opening. This is to prevent a potential fire and/or explosion resulting from LP gas vapors being released from the regulator in the event of excessive gas pressure within the line entering the building through an exterior building opening and being ignited by a source of ignition within the building.

*From NFPA 58: Liquefied Petroleum Gas Code, 2011 Edition*

The regulator safety relief valve (vent opening) should be located not less than 5 feet from any potential source of ignition, opening into any sealed combustion chamber appliance, and be not less than 5 feet from any mechanical ventilation air intake.

Regulators are mechanical devices and are subject to wear and tear. Consult the manufacturer's guidelines for life expectancy of the regulator. The regulator should be inspected regularly as part of an overall LP gas system inspection by the propane supplier or licensed LP gas plumber.

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