

Magnetic Liquid Level Gauges



PENBERTHY®

PRECAUTIONS:

To ensure optimal performance from your Magnetic Level Indicator, please observe the following precautions.

1. The float chamber and float in your Magnetic Level Gauge are specifically designed and manufactured to match the exact specifications of your process conditions. Do not use this gauge with liquids of different densities or under operating conditions other than those for which it is rated without thoroughly reviewing the new application.
2. The Penberthy Magnetic Level Gauge should be operated in an area free from magnetic forces or materials that could interfere with the magnetic circuit. This includes items such as steel support straps, heater wires, and steel steam trace tubing. As a general guideline, all carbon steel materials should be kept at least 12 inches (305mm) away from the MLG column. If maintaining this clearance is not possible, please contact the factory for further guidance.
3. Do not hydrostatic test the magnetic level gauge with the float inside the chamber. The float is designed for maximum operating pressure only. Exceeding of this pressure may affect the performance of the float.
4. On top mount models (chamber style B0-B3), care must be taken not to bend or deform extension rod, as this may hinder the float movement.
5. Check tag number and serial number engraved on float, and confirm they match the information located on the nameplate of the chamber.

INSTALLATION:

To install your Penberthy Magnetic Level Gauge, perform the steps described below.

1. Unpack and inspect each unit upon receipt. The float is removed from the gauge and packed in a protective tube that is temporarily attached behind the indicator scale for shipment. The float should remain in this protective tube until it will be installed inside the chamber.
2. The Magnetic Level Gauge must be installed vertically and level.
3. Block valves should be installed between the process vessel and the Magnetic Level Gauge.
4. Composition gaskets are supplied for the access flanges. If composition gaskets are not suitable for your process, appropriate gaskets should be used. Check tag and serial number of float to assure correct match. Remove tag prior to operation.
5. Install float, be sure to remove the instruction tag and to clean off any foreign matter, especially metal particles which may have become attracted to the magnet assembly inside the float. The top of the float is marked and must be installed with the arrow pointing upward towards the top of the Magnetic Level Gauge.

For Chamber style FF (End Flanged)

Float stop plates with springs are supplied and should be installed between the Magnicator and mating flange/block valves

For Chamber style B0-B3 (Bottom End Flanged)

Floats are factory installed on top mount level indicators and packed to protect it from damage. Remove all the packing material before installation.

OPERATION:

1. Putting the Magnetic Level Gauge in service:

- Check that the operating conditions are within the rating of the gauge. Each Gauge has a permanent name plate engraved with the rating and process conditions.
- Check to see that all vent and drain valves and plugs (if applicable) are securely closed.
- Flag Indication: Black = Vapor Space, Yellow = Liquid Space (all flags should be in the black position). Alternate color flag indication: White = Vapor Space, Red = Liquid Space (all flags should be in the white position).
- Slowly open the upper isolation valve. Upper isolation valve must be opened first to equalize the pressure between the chamber and tank / vessel.
- Slowly open the lower isolation valve. The float will rise with the liquid level in the chamber. The magnet assembly is positioned in the float so it will ride at the surface of the liquid (or at the interface between two liquids when specified). Flags will turn yellow with the liquid level.

2. Preparing the Magnetic Level Gauge for maintenance:

- Close lower isolation valve.
- Close upper isolation valve.
- Slowly open vent valve to release the pressure from the chamber.
- Slowly open drain valve to drain liquid from the chamber.

MAINTENANCE:

The Magnetic Level Gauge is a low-maintenance device that requires minimal upkeep, primarily involving periodic chamber cleaning. The cleaning frequency depends on the specific process in which the MLG is installed. IF foreign matter accumulates in the chamber and restricts float movement, the chamber must be isolated and drained to remove debris. Flushing can be performed using the vent and drain connections. In severe cases, the float may need to be removed for thorough mechanical cleaning of both the float and chamber. Certain processes may require the use of an appropriate solvent for cleaning. If float removal is necessary, refer to the INSTALLATION section for proper instructions.

Caution: Only clean indicators with a damp cloth to avoid electrostatic charge of non-metallic components.

Available Certifications:

EU
PED Available Contact Factory

PENBERTHY®