



Installation, Operation and Maintenance Instructions **MAGNICATOR® II**

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Specialists In Liquid Level Indication

The Jerguson Magnicator® II is designed to safely determine the level of liquids and liquid interfaces. The operation of the Magnicator® II is both simple and unique. The patented magnetic circuit provides the best combination for floats and indicators available. The magnets in the float actuate the flippers or couple with the bob indicator. As level rises or falls, the indicator tracks the float exactly which in turn gives you an accurate level measurement.

PRECAUTIONS:

To obtain performance from your magnetic gage, the following precautions should be observed.

1. The float chamber and float contained in your gage are designed and manufactured to meet the exact specifications for your particular process conditions. Do not use this gage with liquids of different densities or under different operating process conditions for which it is rated without careful review of the new application.
2. The magnetic gage must be operated in an area free of magnetic forces or matter which will influence the magnetic circuit. This includes items such as steel support straps, heater wires, and steel steam trace tubing.
3. Do not hydrostatic test the magnetic level gage 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 models BEF, 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 double check with chamber.

INSTALLATION:

To install your magnetic gage, perform the steps described below.

1. Unpack and inspect each gage upon receipt. The float is removed from the magnetic gage and packed separately for shipment.
2. The magnetic level gage must be installed vertically and level.
3. Block valves should be installed between the process vessel and the level gage.
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 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 toward the top of the magnetic gage.

For Model EF (End Flanged)

Float stop plates with springs are supplied and should be installed between the gage and block valves

For Model BEF (Bottom End Flanged)

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

Installation, Operation and Maintenance Instructions

OPERATION:

1. Putting the gage in service

- Check that the operating conditions are within the rating of the gage. Each Magnicator II has a permanent nameplate engraved with the rating and process conditions.
- Check to see that all vent and drain valves and plugs (if applicable) are securely closed.
- Flipper Indication: Black = Vapor Space, Yellow = Liquid Space (all flippers should be in the black position).
- Slowly open the upper isolation valve. Upper isolation valve must be opened first to equalize the pressure between the gage 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). Flippers will turn yellow with the liquid level (or the bob follower will track the float).

2. Securing the gage for service

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

MAINTENANCE:

The Magnicator II magnetic liquid level gage is a simple device which requires a minimum amount of maintenance. The maintenance normally consists of cleaning the chamber. The frequency of cleaning will depend on the process in which it is installed in. When enough foreign matter collects in the chamber to restrict the movement of the float, it will be necessary to secure the gage and drain out the accumulation of dirt from the chamber. The gage can be flushed by using the vent and drain connections. In extreme cases, it may be necessary to remove the float, and mechanically clean the float and chamber. Some processes may dictate the use of a suitable solvent for cleaning. In the event the float should be removed, refer to steps given under INSTALLATION.

RS-2

Switch Operation and Mounting

To mount the RS-2 Series Switch, clamp it to the chamber with "TOP" facing the top of the chamber. Alarm points may be changed by simply loosening the clamps and sliding the switch to the desired alarm level. After the switches are mounted they need to be set. To accomplish this, push the Float past the highest switch by filling and draining the chamber, or manually pushing the Float.

| Terminals | Rising Level Alarm | Falling Level Alarm |
|-------------|--------------------|---------------------|
| OPENS (NC) | 2 & 3 5 & 6 | 1 & 3 4 & 6 |
| CLOSES (NO) | 1 & 3 4 & 6 | 2 & 3 5 & 6 |

Model MS-10 Magnicator II Limit Switch

To mount the MS-10 limit switch, place the provided hose clamps around both the mounting bracket ears and Magnicator II chamber and tighten. Alarm points may be changed simply by loosening the clamps and sliding the switch to the desired alarm level.

To wire the switch, remove the cover and pull out the top portion of the two-piece terminal block. Run wires through the conduit connection and connect to designated terminals as follows:

For High Level Switch —

- wire to normally open terminal (NO) for make on alarm
- wire to normally closed terminal (NC) for break on alarm

For Low Level Switch —

- wire to normally closed terminal (NC) for make on alarm
- wire to normally open terminal (NO) for break on alarm

After wiring, plug top portion of terminal block back into bottom half and replace cover.

MAINTENANCE:

The switching mechanism for the Magnicator II MS-10 limit switch is pre-set at the factory and should not have to be reset over the life of the switch. If, however, problems with operation should arise, contact the factory.



JERGUSON® GAGE AND VALVE

A Division of The Clark • Reliance® Corporation
13200 North Promenade • Stafford, TX 77477 USA
Telephone: (281) 240-4243 Fax: (281) 240-7299

JERGUSON® GAGE AND VALVE

A Division of The Clark • Reliance® Corporation
16633 Foltz Industrial Parkway • Strongsville, OH 44136 USA
Telephone: (440) 572-1500 Fax: (440) 238-8828