

# ЭНЕРГОМЕТРИКА

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## Magnetic Float Level Indicator/Gauge



## ➤ First.Product introduction

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EUHZSeries introducing and absorbing domestic and foreign products, and to digest, absorb, improve the original magnetic level gauge standards promulgated by the Ministry of Chemical Industry HG/T21584 -95 developed products. Can be used in a variety of media level measurement towers, tanks, tank, spherical vessels and boilers and other equipment. The magnetic level gauge series can achieve high sealed, leak-proof and adaptation level measurement under high pressure, high temperature, corrosive conditions. The entire process of measuring non-blind, eye-catching display, intuitive readings. In particular site instruction part, because no direct contact with the liquid medium, so the high temperature, high pressure, high viscosity, toxic, harmful, corrosive media, can show its superiority. Therefore, it is more than the traditional glass, plate level gauge with higher reliability, security, advanced, practical.

The gauge of the most notable feature is the liquid medium and the indicator completely isolated, so in any case are very safe, durable, and various types of level gauge coupled with level alarm, control switches, or community level can be achieved the bit, the lower offside alarm control or interlock; coupled with reed chipset level transmitter can be level, sector-bit signal into a standard

two-wire 4-20mA DC signal transmitted to a computer, regulator, liquid digit display device, to achieve long-range indication, detection, recording and control, the series level gauge widely used: the level of the production process in petroleum, chemical, metallurgy, pharmaceutical, food, electricity and other measurement and control.

## ➤ Second.Principle and structure

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### 1. Principle:

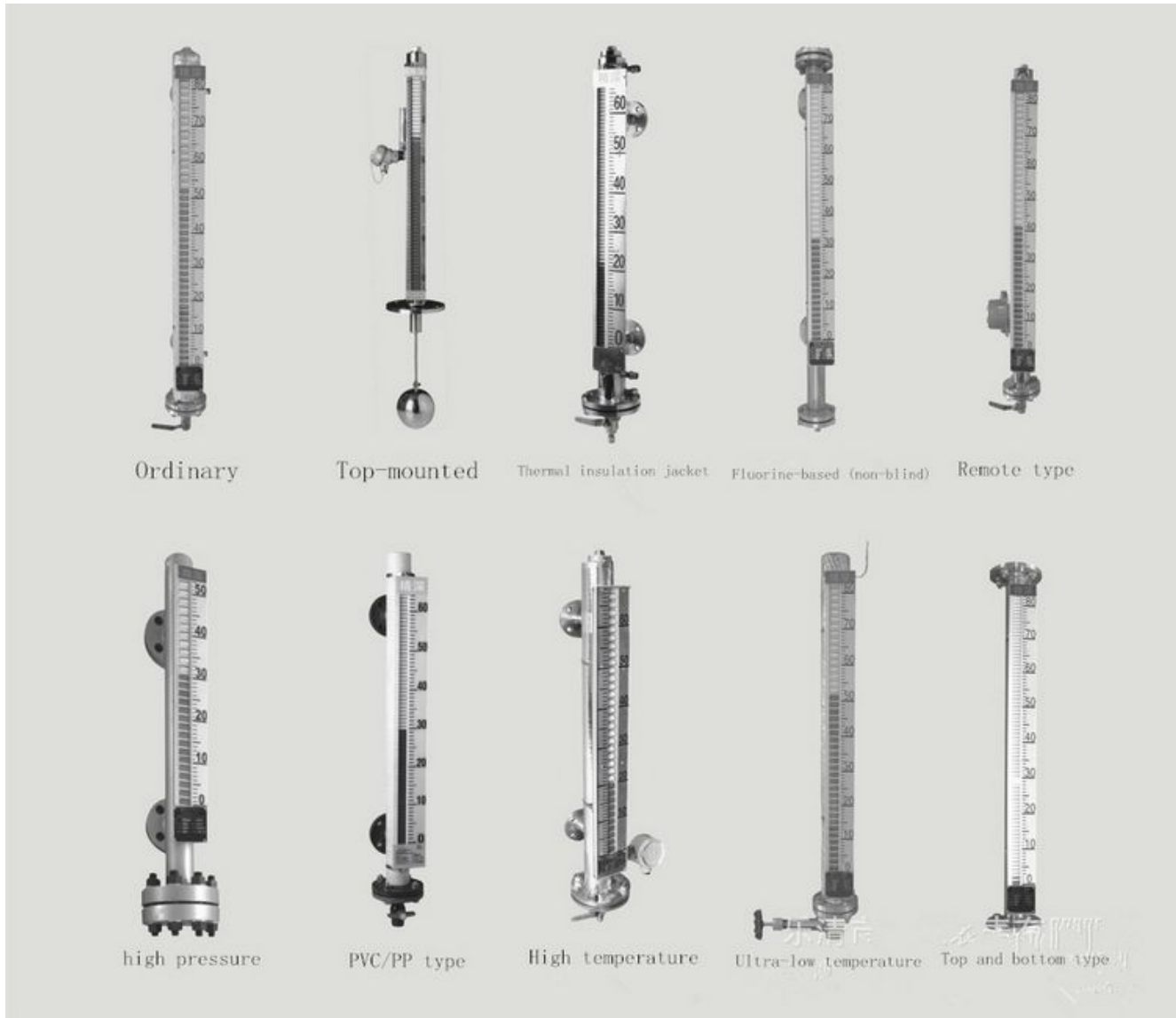
(1) magnetic level gauge its working principle is based on Archimedes' principle, the weight of the float and the float displaces a volume of liquid equal to the weight of the float principle with permanent magnet with liquid level change, float within position the magnetic field lines (i.e., the actual level position) to turn the drive through the magnetic action column flap, when the liquid level rising translated red liquid; the level drops, gas translated white or black. So prominently indicate level changes within the container.

(2) display panel mounted on the ruler, which can be directly read out the liquid level, the valve is installed in the lower body, for sampling and sewerage.

### 2, the main structure:

- (1) (common type), which is made up of body, float, panel boxes and other components. Gauge vertical flange of the container, connecting the middle of the valve, installed at one side. It applies without the need for heat or cooling, and the media on the occasion of austenitic stainless steel does not corrode.
- (2) (insulation type), its structure (1) on the basis of additional insulation type spacer sleeve, heat pipe connecting the upper and lower heat insulation system connecting pipe connected to the device, the size of the valve by opening the required temperature can be achieved .
- (3) (top-side type), which is made of a magnetic float, buoy, side body components, and other components of the panel frame, the display position of the top side, for high temperature, high viscous medium container or the side openings.
- (4) (top mount type), which is the panel frame, top body assembly, a guide tube, float and other components, a display position for the top, or buried in a suitable tank top opening, not traverse the media occasions.
- (5) (vacuum type), its creation in (1) type structure on the basis of the vacuum tube, so that the level gauge body from the outside world for insulation, heating, insulation, cooling and other occasions.

(6) (PTFE lining type), its structure is based on the type (1) Teflon liner for temperature, atmospheric corrosion applications.



Part of the structure diagram

### ➤ Third. Technical parameter

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1, range (mm): 300 ~ 19000

2, medium density (g/cm<sup>3</sup>):  $\geq 0.45$

3, medium viscosity:  $\leq 0.02\text{Pa}\cdot\text{s}$

4, the working temperature  $^{\circ}\text{C}$ :  $-180 \sim 350$

5, the pressure levels (MPa):  $\leq 32$

6, the measurement accuracy (mm):  $\leq \pm 10$

7, Installation: Side-mounted, roof-mounted, bottom-mounted

8, Protection: IP65

9, proof grade: ib II CT4 (intrinsically safe), d II BT3 (flameproof)

10, transmission:  $4 \sim 20\text{mA}$  or switch

11, the interface flange: PN2.5DN25HG20592 (side-mounted)

PN1.0DN80HG20592 (top-mounted, bottom-mounted), can be customized according to the user's specific needs.

Note: When the security level gauge can be installed should be influenced by the environment, spatial location L1 <300 orders significantly raise

## ➤ Fourth.Characteristics

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It total, compared with ordinary glass tube and glass plate surface, with the following characteristics:

(1) level gauge the main components (body) in direct contact with the medium are made of stainless steel material or other special materials, indicating that components are not in contact with the media, and therefore containing flammable, explosive, toxic, corrosive media container use the gauge is safe and reliable.

(2) two-color (white vapor, liquid red) turned columns, flap display, indicating continuous visual eye-catching, no blind spots, in any case will not be a false level.

(3) less sealing surface, reducing static seal leakage points above 95%, and thus, to overcome the petroleum, chemical industry pressure vessel parts run, run, drip, leak and other weak links than the original plate level gauge.

(4) simple structure, easy installation and maintenance, large-scale, design pressure, long life, wide range of applications.

(5) magnetic float level gauge, with a level gauge can replace more than one glass plate liquid level gauge, and the installation extremely easy to use.

Meanwhile, the use of plant development level remote transmitter, alarm and automatic control device, can be realized on the lower level alarm and control automation.

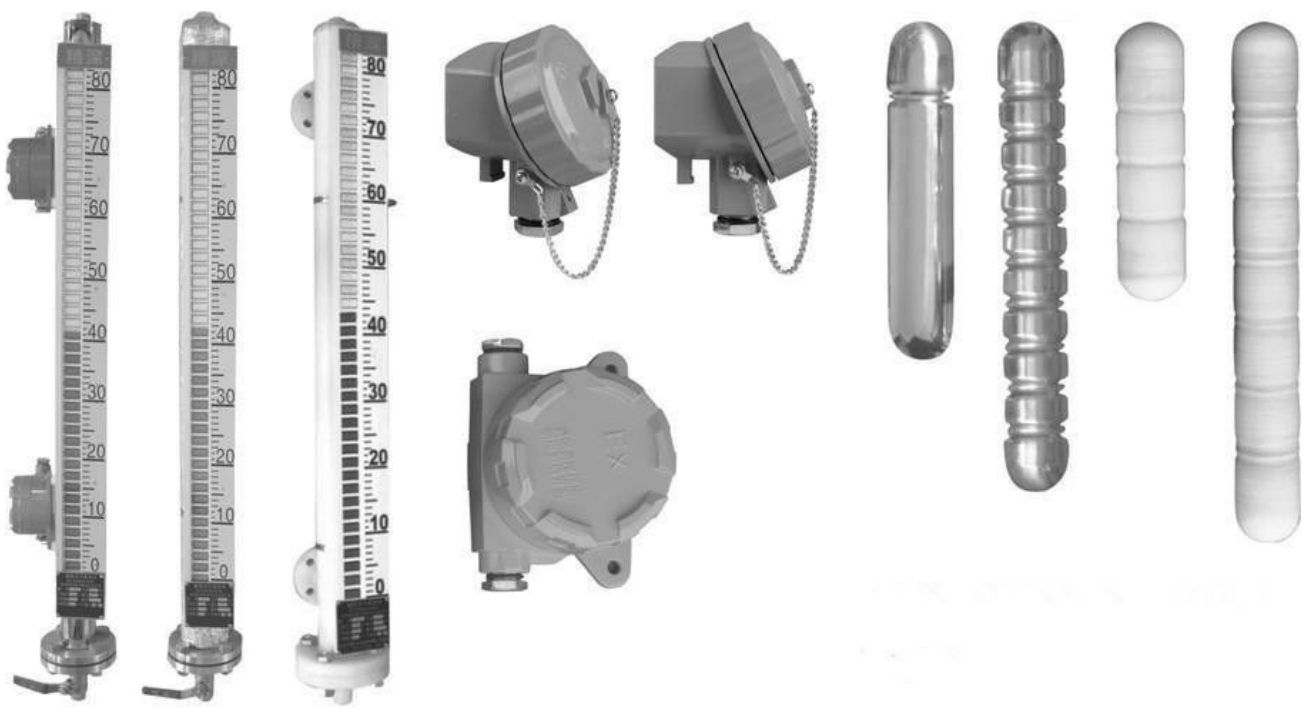
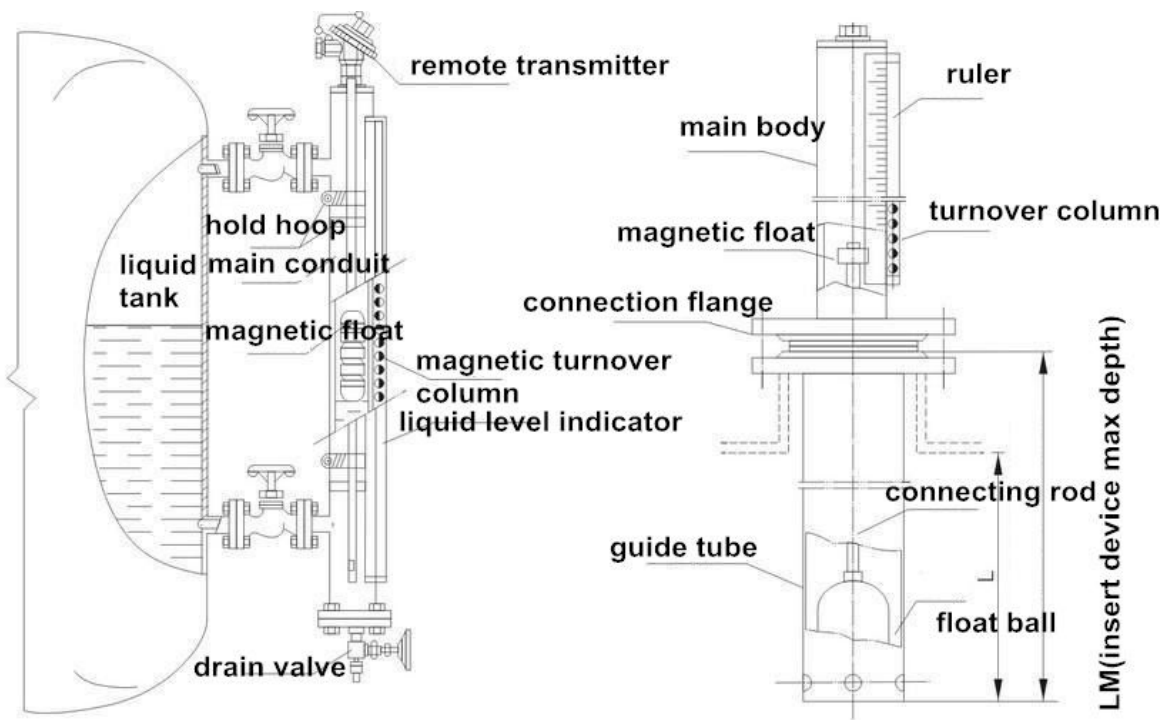
➤ **Fifth. Installation, use and maintain**

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## 1, the installation requirements:

- (1) level gauge must be mounted vertically, the deviation  $\leq 3\text{mm}$ .
- (2) level gauge measuring range over 4.5 meters, the middle should be added at the top and bottom flanges intermediate support.
- (3) not have sucked magnetic cylinder to keep the 100mm distance.
- (4) float when loaded into the barrel, do not float upside down (on the magnetic end).
- (5) carefully check each connection bolts are tightened after the instrument can be put into use.
- (6) insulation type level gauge addition to the above requirements installed, you must also connect the cooling or heating system.
- (7) underground type level gauge installed in underground conduits first container, then the connected buoy, float, rod into the catheter, and then install the upper half.





On the left (side-mounted installation structure diagram) and right (top mounted structure diagram) the lower (partial magnetic flap matching samples)

on

## 2 use:

- (1) gauge when put into operation, the valve should be opened, then slowly open the valve, to avoid rapid pressure medium reservoir flows into the pipe, the rapid rise of the float, causing malfunction or turned column tracking directions under the impact of the float damage.
- (2) level gauge at the factory according to the standard components are, respectively, after the internal pressure and external pressure tests do not have to try again after installing pressure gauge connected when the container and the internal pressure test should be done after the float out, put into operation then into.
- (3) in use, because the level of individual mutations or other causes can not be toggled turned column correction magnet (accessory) or float correction.

## 3, repair and maintenance:

- (1) product after a period of time, such as when the media is a precipitate, the sewage should always turn off the valve and the vertical vent cleaning medium discharge the liquid, remove the lower flange out of the float, and then washed.
- (2) products found in the course of the float and the panel frame damage, direct contact with my factory, and provide the product serial number, I plant with product files to provide timely replacement parts.

