

玻璃板液位计
Glass Level Gauges
安装和操作说明书
Mounting and operating instructions

上海柯普乐自动化仪表有限公司

Shanghai KSR-KUEBLER Automation Instrument Co., Ltd.

V.1017LGG(C/E).1.1/02.2018

工作原理

玻璃板液位计采用连通器的原理，使液体等高引入腔体内，在腔体上装有玻璃视窗，透过视窗可直接观测液位高度。

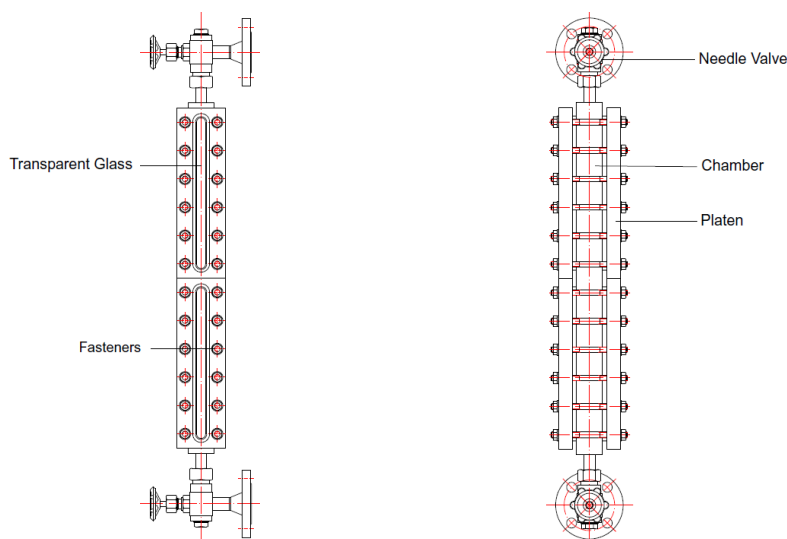


图 1 结构图

功能

玻璃板液位计用于工业过程中很多贮液设备中的液体介质位置的测量和显示，能直观地指示各种液体的工作情况和位置高度，达到操作贮液设备内液体位置的目的。

适用范围

适用于很多工业场所，广泛应用于化工、石油化学、化肥、制药、海上勘探、造船业、发电厂、动力装置、机器制造业等。

结构安装

1. 液位计应垂直安装在便于观测与操作的场所；
2. 液位计上的工艺接口与被测容器上的工艺接口连接，构成连通器，通过玻璃视窗直接观测容器内的液面高度；
3. 液位计由针形阀、腔体、压板、排气排污装置、标准紧固件等组成，其外形结构见图 1；
4. 液位计的针形阀具有切断与自动闭锁功能。当液位计的玻璃视窗因意外造成破裂泄漏时，阀内的钢球在容器内压力（ $\geq 0.3\text{MPa}$ ）的作用下自动封闭，防止液体外喷，保证安全。

注意：用户如有特殊要求可在订货时提出，其要求用文字另行说明。

警告！当设备内的液体是有压、有毒、易燃的危险性液体时，安装前应放空设备内的液体，必要时进行冲洗，待内部干净后再进行安装。

结构安装

5. 焊接式玻璃板的安装，在焊接前需考虑罐体壁开孔造成的强度下降，因此需考虑壁厚加强措施来保证后期的使用。焊接过程中应采取有效的防护措施，防止液位计长期经受高温造成对密封平面的损坏。

6. 紧固件安装顺序见图 2，安装时首先沿此顺序预紧一轮，再次沿此顺序进行紧固，安装旋紧扭矩为 50N.m。注意：禁止以 50N.m 一次旋紧到位。



图 2 紧固件安装顺序

规格长度

1) 有盲区:

工艺接口中心距 M	透光长度 (mm)
500	262
600	262
700	262
800	562
900	562
1000	562
1100	862
1200	862
1300	862
1400	1162
1500	1162
1600	1162
1700	1462

2) 无盲区:

工艺接口中心距 M	透光长度 (mm)
200	262
500	562
800	862
1100	1162
1400	1462

使用

1. 液位计在使用时应缓慢旋转把手，打开阀门，使被测液体慢慢进入腔体，防止阀门钢球自动闭锁而影响液位指示的正确性；
2. 为保证阀门钢球的自动闭锁功能，在打开阀门时，阀杆应退出圈数不小于 4 圈，以防止钢球封闭时碰到阀杆顶端而起不到自动闭锁功能；
3. 当工作温度超过 200°C 时，须降低使用压力。

维护

1. 为防止液位计表面腐蚀，外表应保持清洁、干燥；
2. 应定期检查液位计标准紧固件的松紧。发现松动必须拧紧，紧力必须均匀，紧力矩幅度不宜过大；

质量保证

在用户按文件规定使用的前提下，从发货日起 12 个月的保证期内，产品因质量问题而不能正常工作或不符合文件的技术条件时将给予无偿修理或更换。

产品附件

装箱单；产品说明书；产品合格证；用户附加定购的配件或附件。

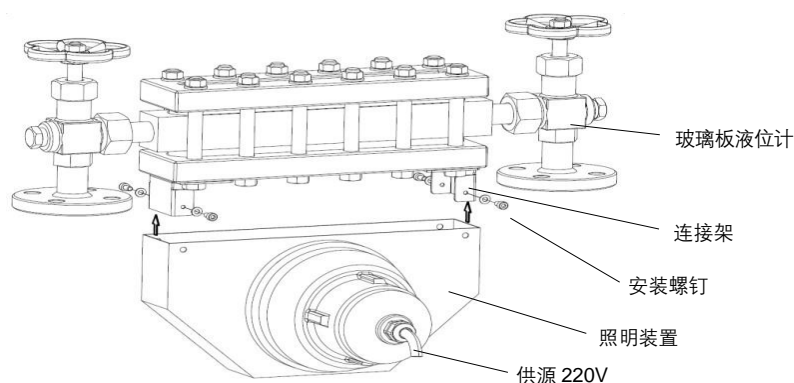
照明装置

1. 照明装置安装见下图安装示例。将照明装置套入液位计上的连接架，然后安装螺钉并锁紧。

2. 供源标配 220V AC 50-60Hz 40W，接线方式如下：

2.1. 型号为 BAD-56 时，松开侧面螺钉，将灯座逆时针旋转约 45°，拔出灯座，连接电源线。

2.2. 型号为 EVA5050 时，松开侧面螺钉，使卡扣脱离灯座，逆时针旋转灯座至完全松开，裸露出灯头，接上电源线。



特别声明：本手册以中文版本为标准，英文版本仅供参考

Operating Principle

Glass level gauge is based on the principle of connecting vessel, which make the liquid flows into the chamber. The chamber is installed with the transparent glass, through which the level of the liquid can be monitored directly.

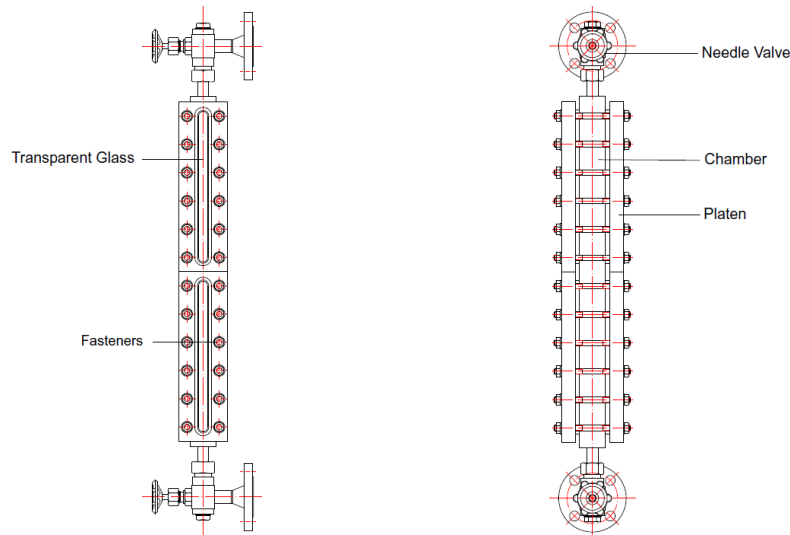


Fig. 1 Structure

Function

Glass level gauges are available for application in many of liquid tank equipments to measure and display the level of the liquid in the industry process, which can also indicate the work situation and height level of all kinds of the liquid.

Application

Available for application in many industrial areas, and widely applied in the fields of chemical industry, petrochemistry, chemical fertilizer, pharmacy, offshore exploration, shipbuilding, generating station, power installation, machine manufacturing and so on.

Structural Installation

1. Glass level gauge should be vertically installed in the area where it is convenient to monitor and operate.
2. The connecting vessel is formed by the process connection on the glass level gauge and the measured container.
3. The glass level gauge is combined with needle valve, chamber, pad, vent and drain devices, Fasteners and so on. Structure sees fig.1.
4. The needle valve of the glass level gauge has the function of cutting and closing automatically. When the glass window burst by accident, to prevent the liquid from spilling and be secure, the steel ball of the valve will close automatically under the pressure of the container. ($\geq 0.3\text{MPa}$)

Attention: Please indicate the requirement literally, shall customers have special requirement when using glass level gauges.

Warning! When the liquid in the container is pressured, toxic, combustible, the container should be empty and be washed completely if necessary. The glass level gauge can be installed after the container is clean.

Structural Installation

5. The strength may decrease caused by the tank nozzle, so customer must consider to increase wall thickness to guarantee the performance. Use effective protection during welding, to prevent the level gauge sealing face damaged by the high temperature.

6. See fig.2 for the installation sequence of fasteners. When installing, firstly, pre-tighten the fastener in this order for one round, and then tighten it in this order again. The torque is 50N.m. It is not allowed to tight the fastener as 50N.m directly.

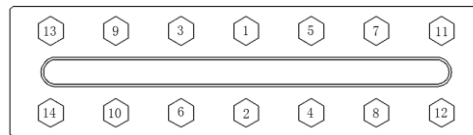


Fig 2 Fastener installation sequence

Length Data

1) blind area :

Centre-to-centre process connection M (mm)	Glass transmission length (mm)
500	262
600	262
700	262
800	562
900	562
1000	562
1100	862
1200	862
1300	862
1400	1162
1500	1162
1600	1162
1700	1462

2) non-blind area:

Centre-to-centre process connection M (mm)	Glass transmission length (mm)
200	262
500	562
800	862
1100	1162
1400	1462

Suggestion: Equip with strengthened racket or consult manufacturer if beyond the range.

Usage

1. To keep the glass level gauge working well, preventing the valve steel ball closing automatically is very important. Whirl the handle slowly, open the valve and make the measured liquid flow into the chamber when using it.
2. To guarantee the function of steel ball closing automatically, the circle of valve handle ≥ 4 .
3. When the operating temperature is beyond 200°C, you must decrease the usage pressure.

Maintaining

1. To prevent the surface of the glass level gauge from corrosion, please keep the surface clean and dry.
2. The standard fastening piece of glass level gauge should be checked regularly. If standard fastening piece is loosening, it should be tightened in balance.
3. The glass level gauge should be cleaned regularly, maintaining the level display clear. When cleaning, close the valve firstly, turn on the drain device, empty the liquid in the chamber and turn on the vent device to clean.

Quality Guarantee

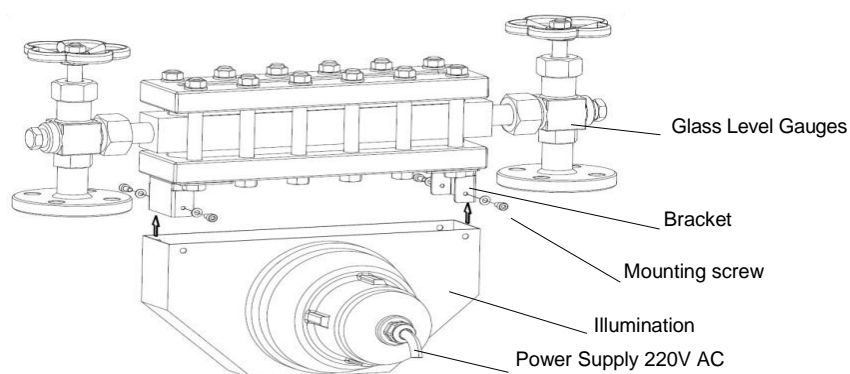
On the premise of regulations according to the documents, during the 12 guarantee months from the day of delivering, we can provide repairing free of charge because of the quality problem if the product is not fitted with the technical index of the documents, or it can not work normally.

Product accessories

Packing list; Product instructions; Product qualification, and Other accessories.

Illuminaton

1. Installation of illumination is referring to following picture, put the illumination to the bracket and tighten screws.
2. Standard power supply: AC 220V 50-60Hz 40W, wiring as below method.
 - 2.1. For type BAD-56, loosen the screw, at side, rotate lamp holder 45°, at anticlockwise direction, remove the lamp holder, and connect wire.
 - 2.2. For type EVA5050, release the screw, at side, remove lamp holder from the hook, rotate the lamp holder at anticlockwise direction till separating, connect wire to the terminals.



Special Statement: This manual is subject to Chinese, English is only for reference



中国

上海柯普乐自动化仪表有限公司

地址：上海市松江区玉阳路 699 弄 2 号

电话：+86 21 33521288

传真：+86 21 67741420

邮政编码：201600

电子邮箱：info@ksr-kuebler.com.cn

公司网址：www.ksr-kuebler.com.cn

China

Shanghai KSR-KUEBLER Automation Instrument Co., Ltd.

Add: No.2, Lane 699 Yuyang Road Songjiang District, Shanghai China

Tel: +86 21 33521288

Fax: +86 21 67741420

Zip: 201600

E-mail: info@ksr-kuebler.com.cn

Website: www.ksr-kuebler.com.cn