

CYW-150B 系列不锈钢差压表**CYW-150B series stainless steel differential pressure meter****用途说明 Application Description**

CYW-152B 及 CYW-153B 不锈钢差压表(以下简称仪表)适用于化工、化纤、冶金、电力、核电等工业部门的工艺流程中测量各种液(气)体介质的差压、流量等参数。仪表结构全部采用不锈钢制成, 其中的测量系统(双波纹管及连接部件)、导压系统(包括接头、导管等)采用特种奥氏体不锈钢制成, 具有较强的耐腐蚀及抗工作环境侵蚀影响。仪表整体结构设计合理、工艺先进、具有体积小、重量轻、稳定性好、使用寿命长、]外观新颖、适应性强等优点。仪表接头的连接形式有平行式(可直接与三阀组连接)和斜式两种, 能够适应不同用户的配套安装。

**CYW-150B**

CYW-152B and CYW-153B stainless steel differential pressure meter (it calls meter for short) as follow pply to measure the various liquid or gas medium parameter i.e. differential pressure and flux, in the technics process of chemical industry, chemical fibre industry, metallurgy, electric power and nuclear power, etc. The whole structure of the meter is adopted the stainless steel among them the-reinto, the measuring system (double corrugation pipes and connecting parts), conducting system (including the joint, meatus, etc.) are made of the special type austenitic stainless steel which have strong resistance to corrosion and environmental etching. The structure of the meter has the advantages of small volume, light weight, good stability, long useful life, original appearance, strong applicability because of the logical deign and advanced technics. The junction forms of joint have parallel type (can directly connect with triple valve group) and tilted type which can meet various demands.

结构原理 Structure

仪表采用双波纹管结构, 即两只波纹管分别安装在“工”字型支架两侧的对称位置上。“工”字型支架的上下两端分别为活动端和固定端, 中间由弹簧片相连接; 两只波纹管呈平行状态, 分别用导管与表壳上的高低压接头相连接; 齿轮传动机构直接安装在支架的固定端, 并通过拉杆与支架的活动端相连接; 度盘则直接固定在齿轮传动机构上。

仪表的工作原理: 基于感压元件采用两只具有相同刚度的波纹管, 因此在同一被测介质下迫使其产生相同的集中力分别作用于活动支架上, 由于弹簧片两侧在等力矩作用下不产生挠度, 故支架还处于原始位置, 这样齿轮传动机构也不动作, 使指针仍指在零位。

当施加不同压力(一般高压端高于低压端)时, 两波纹管作用在活动支架上的力则不相等, 使分别产生相应的位移, 并带动齿轮传动机构传动并予放大, 由指针偏转后指示出两者之间的差压值。

The meter structure is adopted double corrugation pipes, i.e. The two corrugation pipes are respectively installed symmetrical position in I-shaped bracket. The upper part and lower part of the bracket are respectively free end and fixed end. There is spring slice between them. The two corrugation pipes are parallel, which connect with high and low pressure junction on the shell through the meatus. The gear transmission device is installed on the fixed end of the bracket and connects with free end through drag rod. The metric panel is installed on gear transmission device directly.

The working principle of the meter: for the induction component adapted the two same corrugation pipes, the force caused by the I dental medium will act respectively on the free end and the two sides of the spring slice will not bend under isodynamic action. Therefore, the bracket will remain original position, the gear transmission device will not move, and the finger will point to zero.

When pressed on different force (generally the high pressure end will higher than the lower one), the force upon the two corrugation pipes will be different. The pipes will displace and drive the gear transmission device transmit and magnify. Finally, the finger will indicate the differential pressure value of the two.

主要技术指标 Main Technical Data

- ◇ 差压的测量范围、公称工作压力、精确度等级及接头螺纹尺寸:
- ◇ The measuring range of the differential pressure, general working pressure, precision grade and dimension of the junction screw thread.

差压的测量范围 Measuring range of differential pressure		公称工作压力 General working pressure		精确度等级 Accuracy class	接头螺纹尺寸 Connection thread		
0~10 0~16 0~25 0~40 0~60 0~100	KPa	60 100 160 250 400 600	KPa	2.5	M20×1.5 NPT 1/2		
0~0.16 0~0.25 0~0.40 0~0.60 0~1 0~1.6 0~2.5	MPa	1 1.6 2.5 4 6 10 10	MPa				

◇ 导压系统及外壳等材质 Conducting System and Case

零件名称 Parts name	材质牌号(代号) Material code
接头、导管 Connector,pipe	OCr17Ni12Mo2(316)
波纹管 Corrugation	OCr17Ni14Mo2(316L)
表壳、表盖、表环 Case,cover,ring	OCr18Ni9(304)

- ◇ 外型及安装尺寸: 见图1、图2、图3
- ◇ 使用环境温度: -40~70°C
- ◇ 抗工作环境振动: V.H.3级
- ◇ 重量: 约1.5kg
- ◇ 仪表外壳防护等级: IP54
- ◇ 仪表技术性能符合企业标准Q/YXBM831-1997《不锈钢差压表》
- ◇ Appearance and installation dimension: see chart 1, chart 2, and chart 3.
- ◇ Using environmental temperature: -40~70°C
- ◇ Anti- oscillation of the working environment: V.H 3 grade
- ◇ Weight: about 1.5Kg
- ◇ Ingress protection: Ip54
- ◇ The technical data of the meter measure up the enterprise standard Q/YXBM831-1997 stainless steel differential pressure meter

