

# 双波登管式差压表

PCS

Double bourdon tubes differential pressure gauge

PCSH

PCS-100.AO.504

普通型 Standard type

双波登管式差压表 Double bourdon tubes differential pressure gauge



PCSH-100.AO.504

防腐型 Corrosion-proof type

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## 产品简介

双针双管差压表适用于对两个相同或不同压力, 进行测量并可对两个测量压力及二压力差值分别指示。产品分为 PCS 普通型和 PCSH 防腐型。PCS 普通型适用于对无腐蚀性介质的测量。PCSH 防腐型可在具有腐蚀性介质及环境中使用。

仪表由两套各自独立的测量系统和指示装置组成。测量压力通过测压元件的弹性变形, 通过两个测压元件(弹簧管)之末端各自产生相应的位移, 借助于拉杆传动机构的传动予以放大, 由固定于齿轮轴上的红、黑指针将所测值分别指示在度盘上, 同时中间小盘显示出二压力之差值。

## PRODUCT OVERVIEW

Double Bourdon System Differential Pressure Gauges are designed to measure difference between 2 pressures. 2 models available: PCS General available and YCSH Corrosion-Proof. The PCS type is suitable to measuring the un-corrode medium and the PCSH type could be used in corrode environments.

The instrument has 2 independent measuring systems. The measured pressure deflects the elastic elements, displacements then take place to actuate gear mechanisms through linkages to carry 2 pointers traveling over instrument dial, and an auxiliary dial shows the pressure difference.

## PCS 主要技术参数

执行标准 : GB/T1226-2001  
精度 : 1.5 级  
测量范围 : 0.16、0.25.....6MPa、10MPa  
环境温度 : -20 ~ +60  
介质温度 : 小于 60  
安装形式 : 径向直接安装  
(前带边及后带边可选)  
过程连接 : M20 × 1.5 螺纹 (其他螺纹可选)  
防护等级 : IP45  
接头材质 : 铜合金  
波登管材质 : 铜合金  
焊接 : 锡焊  
表壳材质 : 黑钢壳 (喷塑)  
密封圈、防爆塞材质 : 耐油橡胶  
表玻璃 : 3mm 平板玻璃  
(有机玻璃、双层安全玻璃可选)  
机芯 : 铜合金  
指针 : 铝, 黑色和红色  
表盘 : 铝, 白地黑字 (特殊要求表盘可选)

## PCS (YC) FUNCTIONAL FEATURES

Executive standard: GB/T1226-2001  
Accuracy: 1.5%  
Ranges: 0.16、0.25.....6MPa  
Ambient temperature: -20 ~ +60  
Media temperature: less than 60  
Mounting: bottom directly mounting  
(with front or back flange available)  
Process connection: M20 × 1.5 (Other screw as request)  
Protection class: IP45  
Connection material: Copper alloy  
Bourdon tube: Copper alloy  
Welding: Tin-welding  
Case material: Black steel (enameled)  
Sealing circle and blow out vent material: Rubber  
Window: 3mm plain glass  
(Organic or double layers available)  
Movement: Copper alloy  
Pointer: Aluminium, black and red color  
Dial: Aluminium, white with black letters (Special dial available)

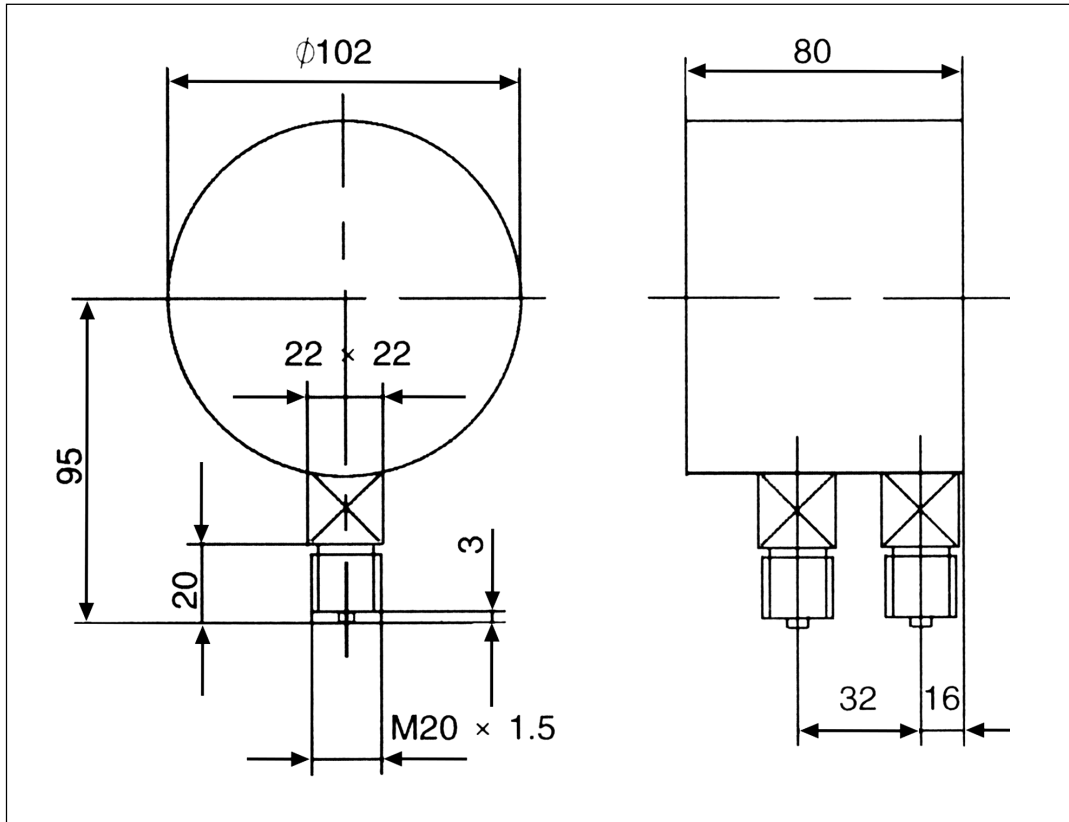
## PCSH 主要技术参数

接头材质 : 316  
波登管材质 : 316  
焊接 : 氩弧焊  
机芯 : 不锈钢  
介质温度 : < 70  
表壳材质 : 304 不锈钢  
其他同 711

## PCSH (YCF) FUNCTIONAL FEATURES

Connection material: 316  
Bourdon tube: 316  
Welding: AISI 316 TIG Argonarc  
Movement: Stainless Steel  
Media temperature: 100  
Others as 711

几何尺寸 DIMENSIONS



量程 RANGES

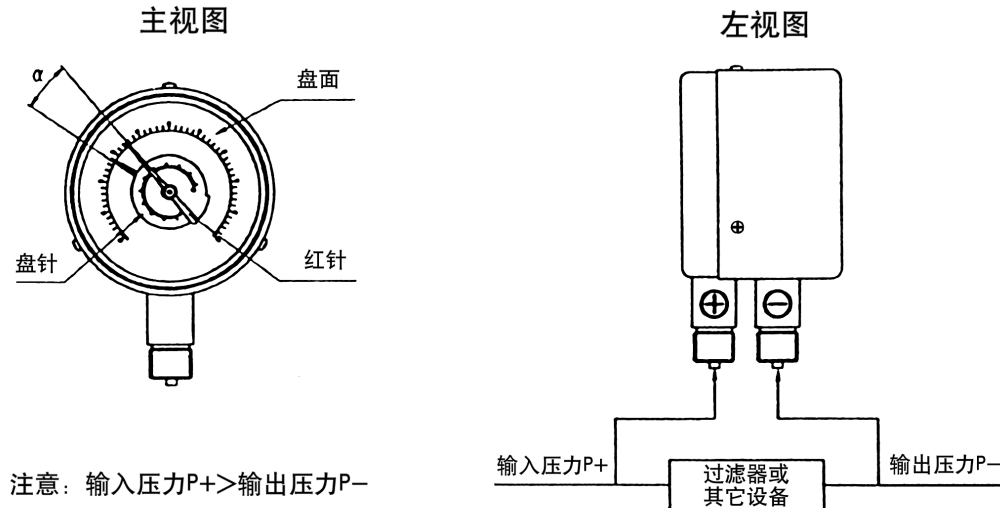
量程范围规格代码表 TABLE OF RANGES

| 选型代码 code | 量程规格 ranges | 选型代码 code | 量程规格 ranges | 选型代码 code | 量程规格 ranges |
|-----------|-------------|-----------|-------------|-----------|-------------|
| M030      | 0.1MPa      | M100      | 0.6MPa      | M160      | 2.5MPa      |
| M040      | 0.16MPa     | M120      | 1MPa        | M180      | 4MPa        |
| M060      | 0.25MPa     | M140      | 1.6MPa      | M200      | 6MPa        |
| M080      | 0.4MPa      |           |             |           |             |

注：0.1MPa 精度 2.5 级

## 产品安装及使用说明 MOUNTING AND OPERATING INSTRUCRION

产品安装示意图： SKETCH MAP OF MOUNTING



## 产品使用说明 OPERATING INSTRUCTION

盘面的最大刻度值即为最大耐压

建议使用的  $P$  (差压值  $=P_+ - P_-$ ) 为盘面的  $1/2 \sim 1/3$  为最佳。再小了就不好读点。

$P$  一般不能小于  $1/10$  的全量程。

红针指示为正压压力 (输入压力为  $P_+$ ) ; 盘针指示为负压压力 (输出压力  $P_-$ ) 。盘针上的刻度可以和红针形成夹角 直接读数(从盘针上直接看刻度),也可以单独用盘针在表盘上的示值与红针在表盘上的示值进行计算得出差压值  $P = P_+ - P_-$

介质为气体或液体,建议用在室内,使用温度为  $-20 \sim 60$

一般最小量程做到  $0.16\text{MPa}$ , 如需  $0.1\text{MPa}$ , 可做到  $2.5$  级

安装时带  $\oplus$  号接头接输入压力  $P_+$ ; 带  $\ominus$  号接输出压力  $P_-$

The highest indicated value is the highest pressure permitted.

We advice using the  $1/2 \sim 1/3$  of the range as  $P$ . it is convenient to see if it is too small.  $P$  is not low than  $1/10$  of full scale value.

The red pointer shows the plus pressure (the pressure input); the dial pointer shows the minus pressure (the pressure output).

The value could be saw by the angle between the red and dial pointers (see directly on the dial pointer). And we can compute the difference using the pointed values of the red pointer and the dial pointer ( $P = P_+ - P_-$ ).

It is suitable to measure gas and liquid medium, suggested in room in  $-20 \sim 60$ .

The general lowest range is  $0.16\text{MPa}$ . it is could be made to  $2.5\%$  if  $0.11\text{MPa}$  requested.

While mounting, the  $\oplus$  end should be deployed with pressure input terminal and the  $\ominus$  end should be deployed

如何选型 HOW TO ORDER

| 型号代码<br>CODE       | 特性说明<br>CHARACTERISTICS  |                          |  |  |  |  |  |
|--------------------|--|--------------------------|--|--|--|--|--|
| Basic type<br>基本型号 | PCS — 普通型双波登管式差压表<br>(Standard type) Double bourdon tubes differential pressure gauge        |                          |  |  |  |  |  |
|                    | PCSF — 防腐型双波登管式差压表<br>(orrosion-proof type) Double bourdon tubes differential pressure gauge |                          |  |  |  |  |  |
| Diameter<br>外径     | 100 — 100mm  |                          |  |  |  |  |  |
| Mounting<br>安装方式   | AO — 径向直接安装 Under mounting   |                          |  |  |  |  |  |
|                    | AT — 径向前边安装 Under mounting with front flange   |                          |  |  |  |  |  |
|                    | AH — 径向后边安装 Under mounting with back flange  |                          |  |  |  |  |  |
| Design<br>设计代码     | 504 — 不锈钢外壳 / 双波登管式<br>Stainless steel case/double bourdon tubes                             |                          |  |  |  |  |  |
| Ranges<br>量程       | M040 — 0.16MPa 请参看量程代码表 See range table  |                          |  |  |  |  |  |
| Connection<br>连接螺纹 | M20 — 20 × 1.5   |                          |  |  |  |  |  |
|                    | T00 — 其它特殊要求的螺纹 Other requests   |                          |  |  |  |  |  |
| Options<br>备选项     | SBD — 安装全双层玻璃 Multilayer glass   | SY1 — 配长尾联接 (螺纹)         |  |  |  |  |  |
|                    | TPB — 特殊要求的表盘 Special dial   | H 系列 + SY1 — 化学密封隔膜配长尾联接 |  |  |  |  |  |
|                    | TYO — 用于氧环境 Used in oxygen environment   | SNR — 蒙乃尔膜片              |  |  |  |  |  |
|                    | FWP — 不锈钢位号牌 Stainless steel label   | SSF — 四氟膜片               |  |  |  |  |  |
|                    |  | STI — Ti 片               |  |  |  |  |  |
|                    |  | SDA — 钽膜片                |  |  |  |  |  |