无菌隔膜阀座阀
Sterile diaphragm seat valve

加工工艺 The processing technology

阀体采用了 CNC 精密加工，保证了阀腔的密封面与膜片弧度的吻合，减少膜片的摩擦，延长其膜片的使用寿面。
阀腔表面抛光可根据客户要求进行机械或电解抛光，抛光度可达到 0.25μm。
The valve body adopts CNC precision machining, which ensures the anastomosis of the sealing surface of the valve cavity and the curve of the diaphragm, reduces the friction of the diaphragm and extends the use of the diaphragm.
The surface polishing of the valve cavity can be machined or electropolished according to the customer's requirements. The polishing degree can be reached 0.25μm.

软性弹性材料隔膜 Soft elastic material diaphragm

软性弹性材料制成的隔膜对于那些被纤维团、固体颗粒、催化物等污染的工作介质不会产生敏感的反应，一般来说也不会因此影响到阀门的工作和密封。根据工作或消毒的温度，以及工作介质的化学特性，可以选择不同的材料。
Soft elastic material of diaphragm for those fibers, solid particles, the working medium of pollution such as catalytic material will not produce the sensitive reaction, in general also won't affect the valve working and sealing. Depending on the temperature of work or disinfection, and the chemical properties of the working medium, different materials can be selected.

FDA 认证 The FDA certification

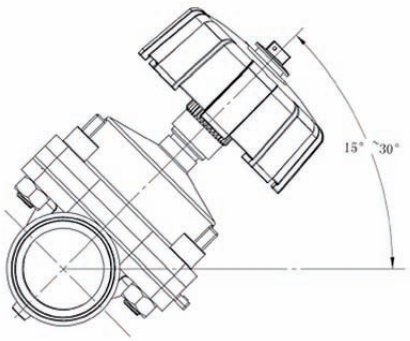
无菌隔膜阀膜片是根据 FDA 标准而生产的。我们也可按照客户的要求提供其它标准认证的证书。
Diaphragm valve diaphragm is produced according to FDA standards. We can also provide other standard certifications according to customers' requirements.

隔膜固定 The diaphragm

典型的隔膜固定方法为螺钉固定，与开孔固定形成对比，这种固定方式将受力面积分散至螺栓整个表面上，这是以防真空条件下破坏隔膜的机械链接。
Typical diaphragm method for screw fixation, and opening a fixed form contrast, this way of fixed spread stressed area to bolt the whole on the surface, this is to prevent damage to the diaphragm vacuum conditions mechanical link.

隔膜阀最优安装角度示意图 The optimal installation Angle of diaphragm valve

无菌隔膜阀根据其结构特点，推荐 15~30 角度安装（根据不同的规格而定），有利于阀门清洗后完全排泄，不易造成液体滞留阀门内部。
The aseptic diaphragm valve is recommended for 15~30 Angle (according to different specifications) according to its structural characteristics. It is helpful for the valve to be completely excreted after cleaning, not to cause the liquid to stay inside the valve.



材质选择 The material selection

由于不同工况下将选用不同类型的阀门和材质，在选择阀体和隔膜以前，必须对每一个产品的运用进行分析，尤其针对化学医药方面的运用，和高温所导致的化学反应。通过有效的化学数据或专家认证，对材质的适宜进行检测，以此确保产品的使用安全性和长期有效性。
Due to the different working conditions to choose different types of valves and material, before choosing body and diaphragm, must analyze the application of each product, especially for the use of chemical medicine, and high temperature caused by the chemical reaction. Through effective chemical data or expert certification, it can be tested to ensure the safety and long-term effectiveness of the product.

无菌隔膜阀
Sterile diaphragm valve

定位器
Locator

智能定位器
Intelligent locator

限位开关
Limit switch

执行器
Actuator

手动执行器（限位装置）
Manual actuator (limit device)

PTFE 膜片
PTFE diaphragm

EPDM 膜片
EPDM diaphragm

普通型阀体
Normal body

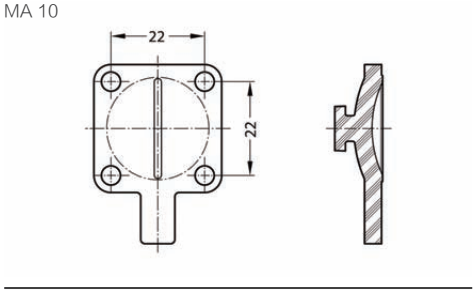
罐底型阀体
Tank bottom
valve body

T 型阀体
T the body

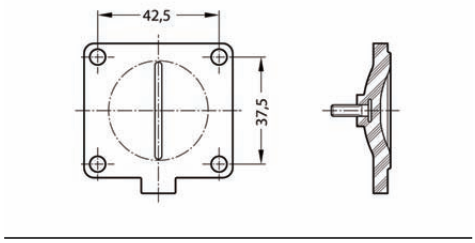
多通道阀体
Multi-channel
valve body

隔膜
The diaphragm

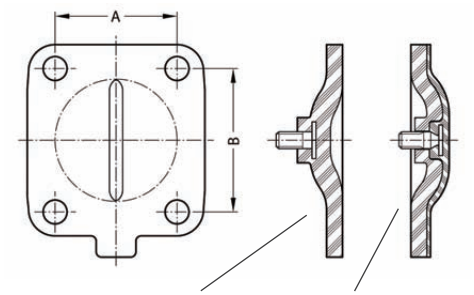
MA 10



MA 20



MA 25–80



膜制开
Membrane system to open

膜制闭
Membrane system closed

隔膜尺寸 MA25–50
Size of the diaphragm MA25–50

MA*	25	40	50	80
A	46	65	78	114
B	54	70	82	127

* 隔膜大小
*The size of the diaphragm

隔膜是隔膜阀最重要的部件
The diaphragm is the most important part of the diaphragm valve

除了阀体之外，隔膜是唯一与工作介质直接接触的部分。
隔膜阀是靠隔膜把工作介质和执行机构以及外部空气隔离开来的。另外，隔膜也是运动部件，隔膜阀是靠隔膜的上下移动实现工作介质流量的控制与切断。
KST 隔膜片根据测试标准以及第三方的严格测试规范下，已经经过多年的研发和试验。这些测试尽可能的模拟接近真实现场的工艺条件，进行不同规范条件下的连续测试。例如，用自动化的饱和蒸汽闭环系统测试隔膜片就是其中一种。测试的结果对膜片形状设计、材质的成分、阀体设计、执行机构设计以及阀门的装配都具有很大的影响。
除了尺寸为 MA10 型隔膜是靠弹性橡胶纽扣与阀门执行机构直接相连接外，其余所有型号的隔膜均是通过嵌入其内部的一个不锈钢柱头螺栓与阀门执行结构相连接。
所有尺寸一样的不同材质隔膜都有相同的执行机构，而且能互相更换，无需改变阀门的压块和阀杆。
不同通径的阀门也有相同尺寸的隔膜，可降低用户的备件库存量。
The diaphragm is the only part of the body that is directly exposed to the working medium except for the valve body.
Diaphragm valves are separated from the working medium by the diaphragm by the actuator and the external air. In addition, diaphragm is also a moving part, and diaphragm valve is controlled by the upper and lower movement of the diaphragm to achieve the control and cutting of the working medium flow.
The KST diaphragm has been developed and tested for many years according to the test standard and the strict test specifications of the third party. These tests are as close as possible to the actual conditions of the site, and to conduct continuous tests under different specifications. For example, testing the diaphragm plate with an automated saturated vapor closed-loop system is one of them. The results of the test have a great influence on the shape design, the composition of the material, the body design, the actuator design, and the assembly of the valve.
In addition to the size of MA10 diaphragm is to rely on elastic rubber button directly connected with the valve actuator, the rest is all types of diaphragm by embedding the inside of a stainless steel studs connected to valve executive structure.
All sizes are of the same type of material diaphragm having the same actuator, and can be replaced with each other without changing the pressure block and stem of the valve.
Different sizes of valves have the same size of diaphragm, which can reduce the stock of spare parts.

EPDM 隔膜片 EPDM diaphragm piece

三元乙丙橡胶 EPDM 是特别研制的一种隔膜材料。中间内嵌一层硫化纤维层增强其机械强度，总是做成膜制开状态。该种隔膜构造在温度升高和压力加大时，具有较高的稳定性。另外，该种加强型纤维层是硬化在嵌入的不锈钢螺栓上，从而保证弹性橡胶与金属能够更好地链接。所以，EPDM 隔膜更适合于真空状态下使用。

EPDM is a kind of diaphragm material specially developed. In the middle, the layer of vulcanized fiber enhances its mechanical strength and is always made into a membrane system. The structure of the diaphragm has high stability when temperature rise and pressure increase. In addition, the reinforced fiber layer is hardened on the embedded stainless steel bolt to ensure that elastic rubber and metal can be linked better. Therefore, EPDM diaphragm is more suitable for use in a vacuum.

PTFE(TFM) 隔膜片 PTFE(TFM)diaphragm

PTFE(聚四氟乙烯) 隔膜片具有高抗化学腐蚀、极高稳定性、弹性好、寿命长、致命性高、无冷变形; 以及不受温度波动影响的极佳性能，无论是热循环、冷循环，还是蒸汽消毒系统。

PTFE (PTFE) diaphragm has high anti-chemical corrosion, high stability, good elasticity, long life, high fatality, no cold deformation; And excellent performance not affected by temperature fluctuation, whether it is heat cycle, cold cycle, or steam sterilization system.

MA10 EPDM PTFE/EPDM(单片式)
PTFE/EPDM (monolithic)

模制开
Molded open

MA20 EPDM PTFE/EPDM(单片式)
PTFE/EPDM (monolithic)

模制开
Molded open

MA25-80 EPDM PTFE/EPDM(单片式)
PTFE/EPDM (monolithic)

模制开 Molded open　　模制闭 Molded closed

MA10-20 规格的隔膜
Ma10-20 specification diaphragm

MA10 规格的隔膜片通常设计成单片式，PTFE 被粘合在 EPDM 的背面。该隔膜片总是制造成膜制开状态。这种单片式隔膜片具有较小的表面积，特比适用与短行程的阀门，具有极佳的操作佳能，非常适合开闭频率高的场合，如灌装等。

MA10 规格的隔膜片通过弹性橡胶纽扣和阀门执行机构连接，MA20 规格的膜片则是通过内嵌的不锈钢柱头螺栓与阀门执行机构连接，达到消除隔膜中心的单点强受力，从而延长隔膜片的使用寿命。

The diaphragm of the MA10 specification is usually designed to be monolithic, and PTFE is glued to the back of EPDM.

The diaphragm is always made into a membrane system. This single-chip diaphragm has a small surface area, which is suitable for the short stroke valve and has excellent operation Canon, which is suitable for the high frequency of opening and closing frequency, such as filling.

MA10 specifications of the diaphragm by elastic rubber buttons and valve actuator connection, MA20 specifications of the diaphragm is through the embedded stainless steel studs is connected to the valve actuator, to eliminate the diaphragm single point in the center of the strong force, so as to prolong the service life of diaphragm piece.

MA	10-80	10-20	25-80
Material	EPDM	PTFE/ EPDM	PTFE/ EPDM
Design form	Single-chip membrane system open	Single-chip membrane system open	Two type membrane system close
Temperature	-40 ~ 150*	-20 ~ 150	-20 ~ 160

MA25 到 MA80 规格的隔膜 MA25 to MA80 specification diaphragm

MA25 到 MA80 规格的隔膜片为两片分开式，由一片 PTFE 和一片 EPDM 构成，EPDM 在背面起支撑作用，该隔膜总是制造成膜制闭状态。此种隔膜的设计有点在于，当阀处于关闭状态时，该隔膜片在正常形状下就和阀体密封，从而大大降低隔膜的受力，延长隔膜的使用寿命。

对两片分开式的 PTFE 隔膜，其不锈钢的柱头螺栓是内嵌在 PTFE 膜片里。为了消除隔膜中心的单点强受力，采用柔性隔膜悬浮结构和阀门执行机构相连接。

The diaphragm of MA25 to MA80 specification is two separate types, consisting of a single PTFE and a piece of EPDM. EPDM is supported on the back and the diaphragm is always made into a film closure. The diaphragm design is a bit is that when the valve is closed, the diaphragm is in the normal shape and body sealing, thereby significantly reducing the stress of the diaphragm, prolong the service life of the diaphragm.

For the two separate PTFE diaphragm, its stainless steel cylinder head bolts are embedded in the PTFE diaphragm. In order to eliminate the single point force of the diaphragm center, the flexible diaphragm suspension structure is used to connect the valve actuator.

阀体
Body

阀体的标准是 1.4435/316L 不锈钢，符合 ASME BPE 标准和 EN10204 检测证书 3.1 的要求 / 材质检测报告。所有的阀体上都打印一个钢印炉号，通过该号码，可以追溯阀体材质的特性以及其物理成分构成。
阀体的内部轮廓与介质的接触面都是经过特别设计的，符合 GMP 规范的要求。最佳的自清洁能力无死区设计。消除了残液的存留空间，提高了隔膜的使用寿命。
The standard of valve body is 1.4435/316l stainless steel, which conforms to ASME BPE standard and EN10204 test certificate 3.1 requirement/material inspection report. All body parts are printed with a steel plate, which can be used to trace the characteristics of the body material and its physical composition.

阀体分类 Classification of the body	接口尺寸 Interface size	制造工艺 Manufacturing process
两通阀体 Two-way valve body	10 ~ 80 mm / 3/8 ~ 3" 10 ~ 80 mm /3/8 ~ 3"	锻造 Forging 铸造 Forging
多通道阀体 Multi-channel valve body	20 ~ 65 mm /3/4 ~ 2"	整块钢机加工 The whole steel machining
罐底阀 Tank bottom valve	20 ~ 50 mm / 3/4 ~ 2"	铸造 Forging

The interior profile of the valve body is specially designed to meet the requirements of GMP specifications. The best self-cleaning capacity has no dead zone design. The remaining space of residual fluid was eliminated and the service life of the diaphragm was improved.

铸造阀体 Casting the body

铸造不锈钢阀体是由模铸而成的，用最终阀体的形状做成的石蜡模具，就可生产出与其一模一样的产品。
通过把阀体蜡膜浸入在陶瓷里，达到让整个阀体蜡膜表面覆盖一层坚固的陶瓷。
溶化掉陶瓷腔内的阀体蜡模后，再注入溶化的不锈钢溶液，冷却后，敲掉外表覆盖的陶瓷，毛坯阀体就行成了。
铸造阀体尺寸非常精确，外表面相当光滑，整洁。
为了获得高质量的铸件，产品模具都是经过特别设计和最佳处理的。
考虑到材料结构和 密度问题，KST 的阀体都是按照详细测试数据要求，经过严格检查的，确保了产品质量的高可靠性。
Casting stainless steel body is made of die casting, and with the shape of the final valve body, the wax mould can produce the same products.

化学成分，主要元素，标准制造
Chemical composition, main elements, standard manufacturing

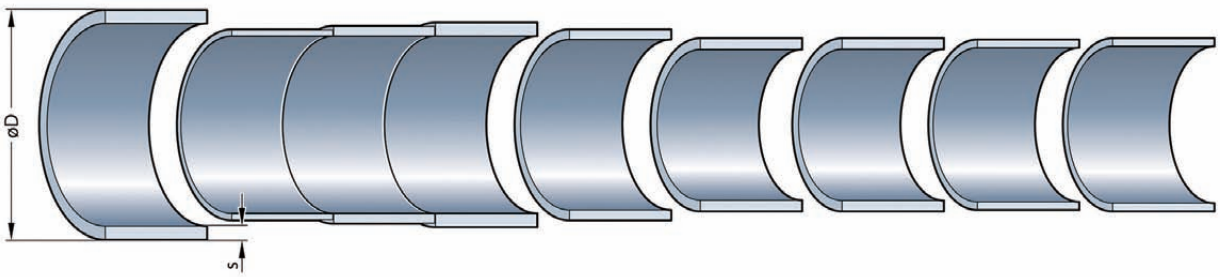
	1.4435	316L ASME BPE
元素 Element	Wt.%	Wt.%
C 碳 (max)	0.030	0.035
Cr 铬	17.00 ~ 19.00	16.00 ~ 18.00
Mn 锰 (max)	2.00	2.00
Mo 钼	2.50 ~ 3.00	2.00 ~ 3.00
Ni 镍	12.50 ~ 15.00	10.00 ~ 15.00
P 磷 (max)	0.045	0.045
Si 硅 (max)	1.00	1.00
S 硫 (max)	0.030	
S 硫		0.005 ~ 0.017

By immersing the body wax film in the ceramic, the entire body wax film surface is covered with a solid ceramic.
Dissolve the body wax in the ceramic cavity, then inject the melted stainless steel solution. After cooling, knock off the coated ceramic, and the blank body will be finished.
The casting body size is very accurate and the outer surface is quite smooth and tidy.
In order to obtain high quality casting, the mold of the product is specially designed and handled optimally.
Considering the material structure and density problem, the valve body of KST is required by the detailed test data, which is strictly inspected to ensure the high reliability of the product quality.

管道接口标准 Pipeline interface standards

下表为：以 DN25 为例的不同国际标准卫生级不锈钢管道的直径区别
The following table is: the diameter difference of the stainless steel pipe of different international standard sanitary grade with the example of DN25

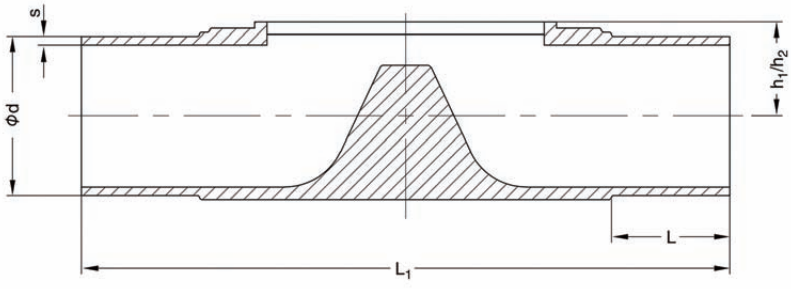
ISO 1127	DIN 11850			DIN	ASTM269	BS O.D.	SMS	JIS G
	系列 1 Series 1	系列 2 Series 2	系列 3 Series 3	选择系列 DIN Choose the series	ASTMBPE (DIN11866 系列 C) ASTM269 ASTMBPE (DIN11866 Series C)	4825	3008	3447
(DIN 11866 系列 B) (DIN 11866 series B)		(DIN11866 系列 A) (DIN11866 Series A)						



焊接接口标准
The welding interface standards

根据国际几个常用的标准，阀门外径和壁厚的尺寸图。这些标准和尺寸如下表所示。
为了正确安装一个卫生管道系统，选择吻合一致的国际管道接口标准是十分重要的，从而达到保证整个工艺管道系统符合卫生级要求。
如果阀门接口标准与系统管道与系统接口标准不一致，就易导致接口出现变形或者台阶，无法保证阀门的自排空功能。
最常用的连接方式是对焊接口，无需任何其他材料。焊接方式通常包括自动焊和氩弧焊，除了这种方式外，我们还可以为客户提供其他的连接方式。

According to the international standards of several commonly used, the size of the valve diameter and wall thickness. These standards and sizes shown in the following table.
Install a plumbing system, in order to correctly choose consistent international pipeline interface standard is very important, so as to ensure the process piping system conform to the requirements of the health level.
If the valve interface standard and system pipeline and system interface standards are inconsistent, is easy to cause deformation within the interface or the steps, there is no guarantee that the emptying function of the valve.
Butt welding is the most common way of connection interface, without any other materials. Usually includes automatic welding and argon arc welding welding way, besides this way, we can also provide other way of connection.



h1= 铸造阀体 Forging body
h2= 锻造阀体 Forging body

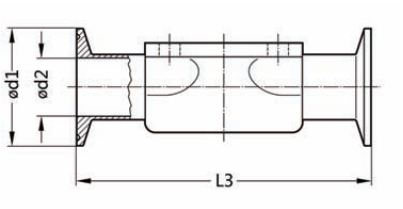
尺寸 size ： mm

对焊接口标准 Butt welding interface standards							ISO 1127	DIN 11850		DIN 系列选择 DIN Series of choices	ASTM 269 ASME BPE		SMS 3008	JIS G 3447
								系列 1 Series 1	系列 2 Series 2					
DN	NPS	MA	L(min)	L_1	h_1	h_2	Φd×s	Φd×s	Φd×s	Φd×s	Φd	s	Φd×s	Φd×s
手动隔膜阀 气动隔膜阀 Manual diaphragm valve Pneumatic diaphragm valve														
10	3/8	10	25	72	9	9	17.2x1.6	12x1.0	13x1.5	–	–	–	–	–
15	1/2	20	25	120	13	16	21.3x1.6	18x1.0	19x1.5	–	**12.7**	**1.65**	–	–
20	3/4	20	25	120	16	16	26.9x1.6	22x1.0	23x1.5	–	**19.05**	**1.65**	–	–
25	1	25	25	120	19	19	33.7x2.0	28x1.0	29x1.5	–	**25.4**	**1.65**	**25.0x1.2**	25.4x1.2
32	1 1/4	40	25	153	24	26	42.4x2.0	34x1.0	35x1.5	–	**31.75**	**1.65**	**33.7x1.2**	31.8x1.2
40	1 1/2	40	25	153	24	26	48.3x2.0	40x1.0	41x1.5	–	**38.1**	**1.65**	**38.0x1.2**	38.1x1.2
50	2	50	30	173	32	32	60.3x2.0	52x1.0	53x1.5	–	**50.8**	**1.65**	**51.0x1.2**	50.8x1.5
65	2 1/2	50	30	173	32	32	–	–	–	–	**63.5**	**1.65**	**63.5x1.6**	63.5x2.0
65	2 1/2	80	25	216	47	47	76.1x2.0	–	70x2.0	–	**63.5**	**1.65**	**63.5x1.6**	63.5x2.0
80	3	80	30	254	47	47	88.9x2.3	–	85x2.0	–	**76.2**	**1.65**	**76.1x1.6**	76.3x2.0

MA 表示膜片大小　MA said the size of the diaphragm
根据要求，也可以提供其他的对接标准　According to the requirements, can also provide other standard docking
上表中黑体所示的尺寸为首选规格　The above table shown in bold in the size of the preferred specification

卡箍接口标准
Clamp interface standards

卡箍 Clamp

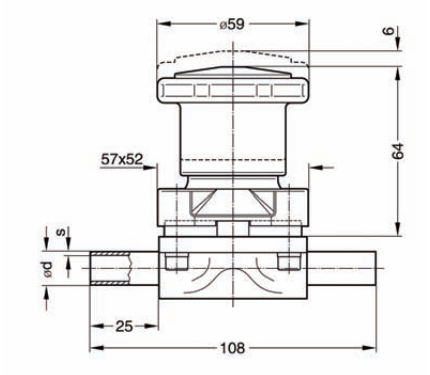


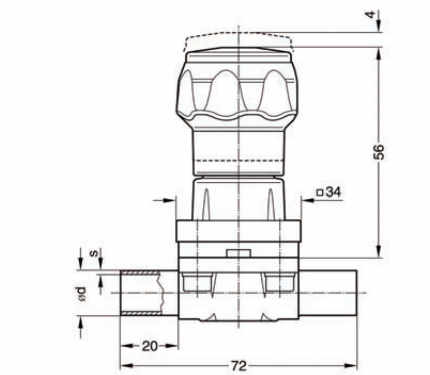
卡箍接口是一种最常用的连接方式，阀门很容易在管道上安装和拆卸。卡箍接口一般设计成面对面连接，这样可以防止泄露，没有裂缝。
卡箍的端面有一个机加工成的环形凹槽，使用时用特殊成型的 EPDM 或 PTFE 材质的垫圈来密封。
垫圈被放置在两个卡箍的中间，用一个卡盘夹紧卡箍，使整个接口完全密封。
一般来说，卡箍式焊在阀门的对焊接口上，然后根据阀体内表面的抛光要求进行抛光。
焊接后的卡箍端 100% 要经过视觉检查和压力测试，对于目前所有国际标准管道，都可以焊接相应的卡箍。
如果相互连接的卡箍不匹配，就可能导致接口出现变形或者台阶，无法保证阀门的自排空功能。
如果能够正确安装带卡箍的阀门，安装后的管道系统就会很光滑，没有裂缝出现，而且自对准连接，这样就减少了管道被污染的危险，最大限度地减小了介质紊乱和系统的 压降。

Clamp interface is one of the most common way of connection, the valve in the pipeline easily installed and remove. Clamp interface is generally designed to connect face to face, to prevent leakage, no cracks.
Clamp face has a machined into the annular groove, when used with a special molding of EPDM or PTFE gasket to seal material.
Washer is placed in the middle of two clamp, use a chuck clamping band, make whole interface is completely sealed.
Generally speaking, the clamp on the butt welded to the valve interface, then according to the requirements of the valve body surface polishing and polishing.
After welding, 100% of the hoop end passes through the visual inspection and pressure test, for all the international standard pipe, can be welding corresponding card hoop.
If the connection card hoop don't match each other, may lead to deformation of interface or the steps, there is no guarantee that the emptying function of the valve.
If it can be properly installed with a clamp valve, after installation of piping systems will be smooth, no cracks, and self aligned connection, thus reducing the pipeline was the risk of contamination, maximum limit reduces the medium disorder and system pressure drop.

卡箍接口标准 管径接口标准 The clamp mouth interface standards Pipe diameter interface standards			类似于 ISO 2852 ISO 1127			DIN 32676 DIN 11850			ASME BPE ASME BPE			ASME BPE ADME BPE			SMS 3017 SMS 3008		
标准 FtF			DIN EN 558-1			DIN EN 558-1			DIN EN 558-1			ASME BPE DT-V-1			DIN EN 558-1		
DN	NPS	MA	L3	d2	d1	L3	d2	d1	L3	d2	d1	L3	d2	d1	L3	d2	d1
8	1/4	10	*63.5	10.3	25.2	–	–	–	–	–	–	63.5	4.57	25.2	–	–	–
10	3/8	10	–	–	–	*63.5	10.0	34.0	–	–	–	63.5	7.75	25.2	–	–	–
15	1/2	20	108	18.1	50.5	108.0	16.0	34.0	108.0	9.40	25.2	101.6	9.40	25.2	–	–	–
20	3/4	20	117	23.7	50.5	117.0	20.0	34.0	117.0	15.75	25.2	101.6	15.75	25.2	–	–	–
25	1	25	127	29.7	50.5	127.0	26.0	50.5	127.0	22.10	50.5	114.3	22.10	50.5	127.0	22.6	50.5
32	1 1/4	40	146	38.4	50.5	146.0	32.0	50.5	–	–	–	–	–	–	146.0	31.3	50.5
40	1 1/2	40	159	44.3	64.0	159.0	38.0	50.5	159.0	34.80	50.5	139.7	34.80	50.5	159.0	35.6	50.5
50	2	50	190	56.3	77.5	190.0	50.0	64.0	190.0	47.50	64.0	158.8	47.50	64.0	190.0	48.6	64.0
65	2 1/2	80	216	72.1	91.0	216.0	66.0	91.0	216.0	60.20	77.5	*222.3	60.20	77.5	216.0	60.3	77.5
80	3	80	254	84.3	106.0	254.0	81.0	106.0	254.0	72.90	91.0	222.3	72.90	91.0	254.0	72.9	91.0

手动隔膜阀 DN10-20mm(3/8''-3/4'')
Manual diaphragm valve DN10-20mm(3/8''-3/4")





产品特点 Product features

- 升降式手轮
- 带就地阀位指示的密封阀盖
- 可调节的闭合限位
- 阀体隔膜和阀体间具有固定的密封圆环
- 柔性隔膜悬浮结构
- Lift handwheel
- Seal valve cover with local valve position indication
- Adjustable closing limit
- The body diaphragm and valve body have a fixed seal ring
- Flexible diaphragm suspension structure

控制方式：Control mode	手动 Manual	
最大工作压力：Maximum operating pressure	10 bar	
最高工作温度：Maximum operating temperature	160℃	
隔膜材质：Diaphragm material	EPDM、PTFE	
阀体材质：Valve body material	锻造不锈钢 Wrought stainless steel	1.4435 / 316L、ASME / BPE
	铸造不锈钢 Wrought stainless steel	1.4435 / 316L
	其它合金 Other alloy	
连接方式：Connection method	对焊接口	Butt welding interface
	卡箍和法兰接口	Clamp and flange interface
	特殊接口，请咨询	Special interface please consult
阀盖适用于：Cover is suitable for	两通阀体	Two-way valve body
	焊接组合式阀体	Welded sectional body
	T-型阀体	T type valve body
	多通道阀体	Multi-channel valve body
	罐底阀体	Tank bottom valve body

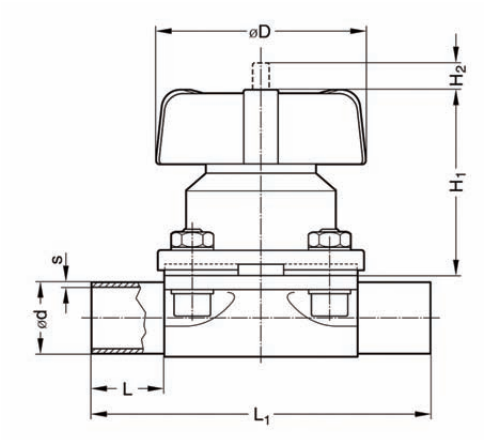
手动隔膜阀 DN25-80mm(3/8")
Manual diaphragm valve DN25-80mm(3/8")

产品特点 Product features

· 不锈钢阀盖和耐高温工程塑料手轮
· 带就地阀位指示的止升式手轮
· DN50 以下的阀体隔膜和阀体间具有固定的密封圆环
· 柔性隔膜悬浮结构
· 包覆式安装的阀体隔膜
· Stainless steel valve cover and high temperature resistant engineering plastic hand wheel
· With valve position indicator on the spot check up the handwheel
· (the following valve body between the diaphragm and the valve body has a fixed seal ring
· The flexible diaphragm suspended structure
· The diaphragm body of cladding type installation

技术参数 Technical parameters

控制方式：Control mode	手动	
最大工作压力：Maximum working pressure	DN25~50	DN65~100
	10 bar	8 bar
最高工作温度：Highest working temperature	175℃	
隔膜材质：Diaphragm material	EPDM、PTFE	
阀体材质：Valve body material	锻造不锈钢 Wrought stainless steel 1.4435 / 316L、ASME / BPE 铸造不锈钢 1.4435 / 316L 其它合金 Other alloy	
连接方式：Connection method	对焊接口 Butt welding interface 卡箍和法兰接口 Clamp and flange interface 特殊接口，请咨询 Special interface please consult	
阀盖适用于：Cover is suitable for	两通阀体 Two-way valve body 焊接组合式阀体 Welded sectional body T- 型阀体 T type valve body 多通道阀体 Multi-channel valve body 罐底阀体 Tank bottom valve body	
隔膜尺寸：Size of the diaphragm	MA 请参见下表 See table below for MA	



规格 (DN)	外形尺寸 (mm)					
	MA	L	L_1	H_1	H_2	D
25	25	25	120	71	10	90
40	40	25	153	91	14	114
50	50	30	173	110	23	140
65	80	30	216	180	38	198
80	80	30	254	180	38	198

气动隔膜阀 DN10-20mm(3/8''-3/4'')
Pneumatic diaphragm valve DN10-20mm(3/8''-3/4'')

产品特点 Product features

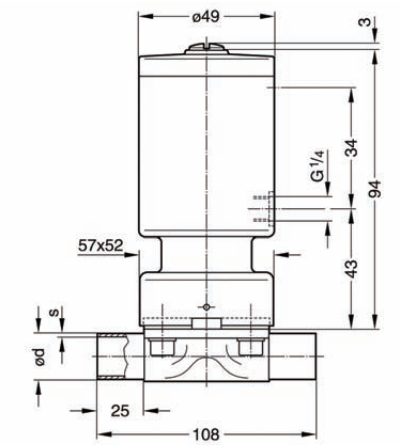
- 高循环的双活塞不锈钢气动执行结构
- 设计紧凑，气动头的外径尺寸与连接
- 隔膜和阀体的阀盖法兰尺寸一样
- 非常适合于多通道阀体和多阀门的组合安装
- 进气口位于执行机构上部，远离产品生产线
- 控制气体进气口可旋转 90° 安装
- 阀体隔膜和阀体之间具有固定的密封圆环
- 柔性隔膜悬浮结构
- 包覆式安装的阀体隔膜
- 清洁、抛光的执行机构外表面非常适合消毒的冲洗
- High cycle dual piston stainless steel pneumatic actuator structure
- The design is compact and the outer diameter of the pneumatic head is connected
- The diaphragm and valve cover flange dimensions are the same
- Suitable for multi-channel body and multi-valve assembly installation
- The inlet is located at the top of the actuator, far from the product line
- Control gas inlet can rotate 90 ° installation
- A fixed seal ring between the valve body diaphragm and valve body
- Flexible diaphragm suspension structure
- Covered body diaphragm
- The outer surface of the clean, polished actuator is well suited for disinfection

技术参数 Technical parameters

控制方式：	气动常闭、气动常开、双作用	
最大工作压力：	EPDM 膜片	PTFE 膜片
	8 bar	7 bar
最高工作温度：	160℃	
隔膜材质：	EPDM、PTFE	
控制压力：	气动常闭	气动常开、双作用
	4~7 bar	4~5 bar
阀体材质：	锻造不锈钢 1.4435 / 316L、ASME / BPE 铸造不锈钢 1.4435 / 316L 其它合金	
连接方式：	对焊接口 卡箍和法兰接口 特殊接口，请咨询	
此种执行结构适用于：	两通阀体 焊接组合式阀体 T- 型阀体 多通道阀体 罐底阀体	
隔膜尺寸：	参考第四页	

可选附件 Optional accessories

- 可选装多种控制附件，形式多样
- 进气口方向可与工作介质流向成 90°
- 高压消毒
- Optional multiple control accessories, various forms
- Air inlet direction to the flow direction of medium can work with 90 °
- High pressure disinfection



气动隔膜阀 DN25-80mm(1"-3")
Pneumatic diaphragm valve DN25-80mm(1"-3")

产品特点 Product features

· 高循环的活塞式不锈钢气动执行机构
· 设计紧凑，气动头的外径尺寸与连接隔膜的阀盖法兰尺寸一样
· 非常适合于多通道阀体和多阀门的组合安装
· 进气口方向与工作介质流向一致
· 阀体隔膜和阀体之间具有固定的密封圆环
· 柔性隔膜悬浮结构
· 包覆式安装的阀体隔膜
· 清洁、抛光的执行机构外表面非常适合消毒后冲洗
· High cycle piston stainless steel pneumatic actuator
· The design is compact, and the outer diameter of the pneumatic head is the same as the valve cover flange of the diaphragm
· Suitable for multi-channel body and multi-valve assembly installation
· The inlet direction is in line with the working medium
· A fixed seal ring between the valve body diaphragm and valve body
· Flexible diaphragm suspension structure
· Covered body diaphragm
· The outer surface of the clean and polished actuator is well suited for post-sterilization

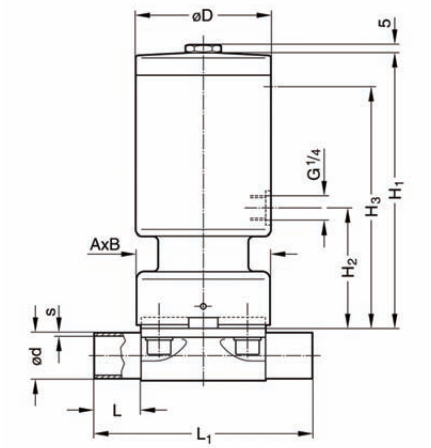
可选附件 Optional accessories

· 可选装多种控制附件
· 进气口方向可与工作介质流向调成 90 度
· 高压消毒
· Optional multiple control accessories
· The inlet direction can be adjusted to 90 degrees with the working medium
· High pressure disinfection

技术参数

控制方式： Control mode	气动常闭、气动常开、双作用 Pneumatic normally closed、open and double-acting	
最大工作压力： Maximum operating pressure	DN 25~50	DN 65~80
	10 bar（EPDM）	7 bar（EPDM）
	8 bar（PTFE）	6 bar（PTFE）
最高工作温度： Maximum operating temperature	175℃	
控制压力： Control the pressure	气动常闭 Pneumatic normally closed	气动常开、双作用 Pneumatic normally closed and double-acting
	5~8 bar	4.5~6 bar
隔膜材质： Diaphragm material	EPDM、PTFE	
阀体材质： Valve body material	锻造不锈钢 Wrought stainless steel	1.4435 / 316L、ASME / BPE
	铸造不锈钢 Wrought stainless steel	1.4435 / 316L
	其它合金 Other alloy	
连接方式： Connection method	对焊接口	Butt welding interface
	卡箍和法兰接口	Clamp and flange interface
	特殊接口，请咨询	Special interface please consult
此种执行结构适用于： This kind of actuator applies to	两通阀体	Two-way valve body
	焊接组合式阀体	Welded sectional body
	T- 型阀体	T type valve body
	多通道阀体	Multi-channel valve body
	罐底阀体	Tank bottom valve body
隔膜尺寸： Size of the diaphragm	MA 请参见左表 See the left table for MA	

换装不同的执行机构可以达到更高的工作压力
Different actuators can achieve higher working pressure



规格 (DN)	外形尺寸 (mm)							
	MA	L	L_1	AxB	H_1	H_2	H_3	D
25	25	25	120	73x79	146	66	133	75
40	40	25	153	96x105	180	75	160	105
50	50	30	173	111x130	216	77	180	105
65	80	30	216	190x170	309	135	285	175
80	80	30	254	190x170	309	135	285	175

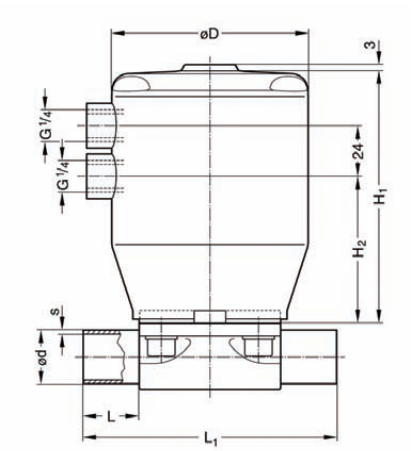
气动隔膜阀 DN25-50mm(1''-2'')
Pneumatic diaphragm valve DN25-50mm(1''-2'')

产品特点 Product features

- 耐高温工程塑料的活塞式气动执行机构
- 设计紧凑
- 工程塑料执行机构具有高抗热传递
- 进气口方向与工作介质流向一致
- 阀体隔膜和阀体之间具有固定的密封圆环
- 柔性隔膜悬浮结构
- 包覆式安装的阀体隔膜
- 清洁光滑的执行机构外表面非常适合冲洗
- Piston pneumatic actuator for high temperature engineering plastics
- Compact design
- Engineering plastic actuator has high heat resistance transmission
- The inlet direction is in line with the working medium
- A fixed seal ring between the valve body diaphragm and valve body
- Flexible diaphragm suspension structure
- Covered body diaphragm
- The clean, smooth surface of the actuator is well suited for flushing

可选附件 Optional accessories

- 可选装多种控制附件
- 进气口方向可与工作介质流向调成 90 度
- 高压消毒
- Optional multiple control accessories
- The inlet direction can be adjusted to 90 degrees with the working medium
- High pressure disinfection



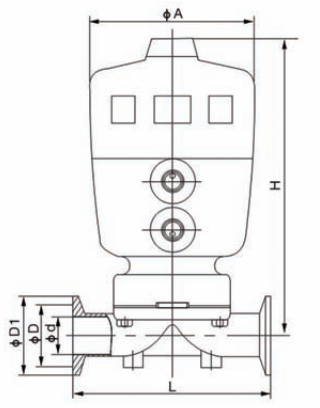
规格 (DN)	外形尺寸 (mm)					
	MA	L	L1	H1	H2	D
25	25	25	120	120	70	92
40	40	25	153	133	75	112
50	50	30	173	173	111	143

技术参数 Technical parameters

控制方式： Control mode	气动常闭、气动常开、双作用 Pneumatic normally closed、open and double-acting	
最大工作压力： Maximum operating pressure	EPDM膜片 EPDM diaphragm	PTFE膜片 PTFE diaphragm
	10 bar	8 bar
最高工作温度： Maximum operating temperature	150℃	
控制压力： Control the pressure	气动常闭 Pneumatic normally closed	气动常开、双作用 Pneumatic normally closed and double-acting
	4.5~7 bar	4~5 bar
隔膜材质： Diaphragm material	EPDM、PTFE	
阀体材质： Valve body material	锻造不锈钢 Wrought stainless steel 1.4435 / 316L、ASME / BPE 铸造不锈钢 Wrought stainless steel 1.4435 / 316L 其它合金 Other alloy	
连接方式： Connection method	对焊接口 Butt welding interface 卡箍和法兰接口 Clamp and flange interface 特殊接口，请咨询 Special interface please consult	
此种执行结构适用于： This kind of actuator applies to	两通阀体 Two-way valve body 焊接组合式阀体 Welded sectional body T- 型阀体 T type valve body	
隔膜尺寸： Size of the diaphragm	MA 请参见左表 See the left table for MA	

换装不同的执行机构可以达到更高的工作压力
Different actuators can achieve higher working pressure

气动隔膜阀 DN08-50mm
Pneumatic diaphragm valve DN08-50mm



型号	d	D	D1	L	A	H	执行器
DN08	8	25.2	20.2	89	64	122	050
DN10	10	25.2	20.2	89	64	122	050
DN15	15	43.5	50.5	108	80	145	063
DN20	19	43.5	50.5	118	100	167	080
DN25	22.6	43.5	50.5	130	100	170	080
DN32	28	43.5	50.5	150	100	175	080
DN40	36	43.5	50.5	161	126	225	100
DN50	50	56.5	64	172	126	238	100

产品特点 Product features

· 高循环的活塞式不锈钢气动执行机构
· 设计紧凑，气动头的外径尺寸与连接隔膜的阀盖法兰尺寸一样
· 非常适合于多通道阀体和多阀门的组合安装
· 进气口方向与工作介质流向一致
· 阀体隔膜和阀体之间具有固定的密封圆环
· 柔性隔膜悬浮结构
· 包覆式安装的阀体隔膜
· 清洁、抛光的执行机构外表面非常适合消毒后冲洗
· High cycle piston stainless steel pneumatic actuator
· The design is compact, and the outer diameter of the pneumatic head is the same as the valve cover flange of the diaphragm
· Suitable for multi-channel body and multi-valve assembly installation
· The inlet direction is in line with the working medium
· A fixed seal ring between the valve body diaphragm and valve body
· Flexible diaphragm suspension structure
· Covered body diaphragm
· The outer surface of the clean and polished actuator is well suited for post-sterilization

可选附件 Optional accessories

· 可选装多种控制附件
· 进气口方向可与工作介质流向调成 90 度
· 高压消毒
· Optional multiple control accessories
· The inlet direction can be adjusted to 90 degrees with the working medium
· High pressure disinfection

技术参数 Technical parameters

控制方式： Control mode	气动常闭、气动常开、双作用 Pneumatic normally closed、open and double-acting	
最大工作压力： Maximum operating pressure	EPDM膜片 EPDM diaphragm	PTFE膜片 PTFE diaphragm
	10 bar	8 bar
最高工作温度： Maximum operating temperature	150℃	
控制压力： Control the pressure	气动常闭 Pneumatic normally closed	气动常开、双作用 Pneumatic normally closed and double-acting
	4.5~7 bar	4~5 bar
隔膜材质： Diaphragm material	EPDM、PTFE	
阀体材质： Valve body material	锻造不锈钢 Wrought stainless steel 1.4435 / 316L、ASME / BPE 铸造不锈钢 Wrought stainless steel 1.4435 / 316L 其它合金 Other alloy	
连接方式： Connection method	对焊接口 Butt welding interface 卡箍和法兰接口 Clamp and flange interface 特殊接口，请咨询 Special interface please consult	
此种执行结构适用于： This kind of actuator applies to	两通阀体 Two-way valve body 焊接组合式阀体 Welded sectional body T- 型阀体 T type valve body	
隔膜尺寸： Size of the diaphragm	MA 请参见左表 See the left table for MA	

换装不同的执行机构可以达到更高的工作压力
Different actuators can achieve higher working pressure

T 型隔膜阀
T-type diaphragm valve

应用说明 Application shows that

T 型阀体焊接在药液或者纯水系统中的环形管路上。通过这种技术方案可以做到无死角的状态下取样或者用水。除此之外，根据工艺的要求，也可进行两种介质的混合。重要的是 T 型阀的密封脊要尽可能地靠近主管道的管路。

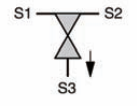
T – type valve body is welded to a circular tube in a liquid or pure water system. This technique can be used for sampling or water use without a dead Angle. In addition, according to the requirements of the process, the mixing of two media can also be carried out. It is important that the seal of the t-type valve should be as close to the main pipe as possible.

产品特点 Product features

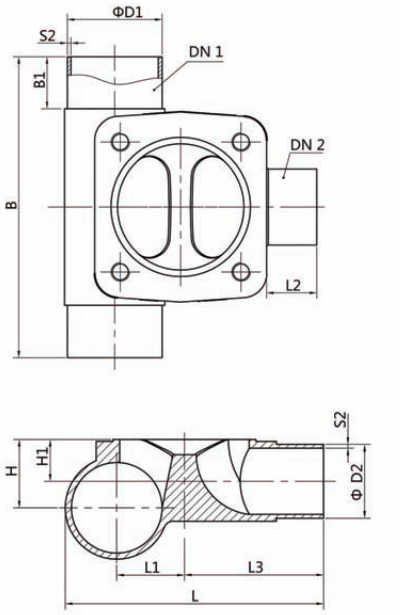
· 构造简洁，阀门安装时占用空间最小。
· 根据安装位置，阀门可以实现无死角和自动排空。
· 阀门可适用 CIP/SIP 流程，可高温消毒。阀体表面的光洁度可根据客户要求进行机械或者电抛光，抛光度可至 0.25 μ m。
· 阀门的内部结构使阀门可实现最大流量。
· 可提供所有常见标准的接口形式如焊接口，卡箍接口等。
· 阀体的标准材料为 1.4435/316L，但也根据客户要求提供所需的合金材质。
· 可提供手动、气动、电动的执行机构
· The structure is simple and the valve is installed with minimal space.
· According to the installation position, the valve can realize the non-dead Angle and automatic discharge.
· Valves can be used for CIP/SIP process and can be sterilized at high temperature. The finish of the body surface can be mechanically or electrically polished according to the customer's requirements. The polishing degree can be up to 0.25 mu m.
· The valve's internal structure allows the valve to achieve maximum flow.
· All common standard interfaces can be provided such as welding joint, clamp interface, etc.
· The standard material for the valve body is 1.4435/316l, but also provides the required alloy material according to the customer's requirements.
· Can provide manual, pneumatic, electric actuator

T 型阀或 U 型阀（零肆角阀）
T type valve or u-type valve (zero Angle valve)

1 个用水点阀座
1 water point seat



安装建议：
S3 口朝下
Installation Suggestions:
S3 mouth down



规格		外形尺寸 (mm)								
DN1	DN2	L	L1	L2	L3	H	H1	H2	B	B1
20	20	93	16.7	25	59	36	22.3	19.0	124	25
25	20	96	20.1	25	59	42	25.3	19.0	124	25
25	25	96	20.1	25	59	42	25.3	19.0	124	25
40	20	108	26.7	25	59	54	31.3	19.0	124	25
40	25	108	26.7	25	59	54	31.3	19.0	124	25
40	40	122	28.8	25	71	57	34.2	26.0	152	25
50	20	121	33.4	25	59	66	37.3	19.0	134	30
50	25	121	33.4	25	59	66	37.3	19.0	134	30
50	40	135	35.5	25	71	69	40.2	26.0	162	30
50	50	151	36.7	30	85	71	42.3	32.0	184	30

罐底隔膜阀
Tank bottom diaphragm valve

应用说明 Application specification

罐底阀主要应用于生物制药、食品饮料和化妆品等卫生要求行业。其内表面光滑、无死区，阻止了介质的滞留，避免潜在的过程污染。罐底阀具有与标准隔膜阀同样的特性和功能，使用同样的阀门组件，如执行机构、隔膜等。罐底阀通常直接焊接在罐底，也可以焊接在罐壁上，作为罐壁阀或取样阀用。
罐底阀典型的应用是用来实现罐子内物料的排放、排空、取样、清洗、消毒、冲洗以及与下游处理的隔断。
The tank bottom valve is mainly used in biological pharmacy, food and beverage and cosmetics, etc. The inner surface is smooth and free of dead zones, preventing the retention of the medium and avoiding the potential process pollution. The tank bottom valve has the same characteristics and functions as the standard diaphragm valve and USES the same valve components, such as actuator, diaphragm, etc.
Tank bottom valves are usually soldered directly to the bottom of the tank and can be soldered to the tank wall as a tank wall valve or sample valve.
The typical application of tank bottom valve is to realize the discharge, emptying, sampling, cleaning, disinfection, washing and separation of the material in the tank.

产品介绍 Product introduction

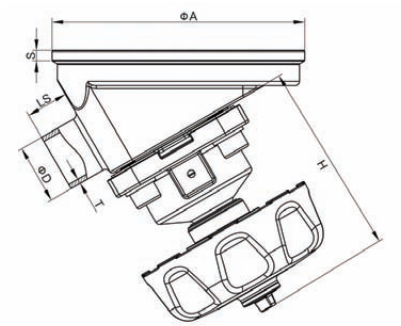
罐底阀的标准设计是只带一个阀座出口。此外，可提供许多功能形式的罐底阀适用于不同的应用领域，如取样、消毒和多个出口结构等，以标准化这些产品。
罐底阀的首选安装方式就是将其直接焊接到罐子上。这种阀和罐的直接安装大大减少了介质的滞留量，这就是使用罐底阀的最重要的标准。但是，如果需要把罐底阀从罐子上拆卸掉，则可以选择阀和罐之间采用法兰连接或者卡箍连接。
罐底阀出料口的接口方式有：对焊连接、卫生卡箍连接。
The standard design of the bottom valve is to carry only one seat exit. In addition, many functional forms of tank bottom valves are available for different applications, such as sampling, disinfection, and multiple export structures to standardize these products.
The preferred way to install the bottom valve is to weld it directly to the jar. The direct installation of the valve and tank greatly reduces the amount of the medium, which is the most important standard for using a tank bottom valve. However, if the tank bottom valve needs to be removed from the tank, a flange connection or clamp connection may be selected between the valve and the tank.
The interface of the valve outlet of the bottom valve is: welding connection, health card coupling.

产品特点 Product features

· 罐底阀阀体是由不锈钢材料机精密铸造而成
· 阀体材料为 1.4435/316L 不锈钢
· 可提供不锈钢锻造或其他合金钢材质阀体
· 零死角、无死区
· 可选装加长的手动杆
· Tank bottom valve body is made of precision casting of stainless steel material
· Body material is 1.4435/316l stainless steel
· Can provide stainless steel forging or other alloy steel body
· Zero dead Angle, no dead zone
· Optional lengthened manual lever

手动罐底阀
Hand tank bottom valve

气动罐底阀
Pneumatic tank bottom valve



规格（DN）	外形尺寸 (mm)			
	A	S	LS	H
20	90	6	16	93/103.5
25	120	6	20	93/103.5
32	160	6	20	107/124.5
40	160	6	20	107/124.5
50	200	6	30	129/151.5

比例调节隔膜阀
Proportional regulating diaphragm valves

产品特点 Product features

- 不锈钢外壳设计
- 电器防水接头
- 带背光液晶显示屏
- 快速简易启动
- 丰富的附加功能
- Stainless steel case design
- Electric water-proof joint
- With a backlit LCD screen
- Quick start
- Rich add-ons

应用说明 Application specification

智能阀门定位器斯专为一体式气动调节阀所设计的，特别适用于角座阀和隔膜阀产品。其产品可分为过程控制阀和比例调节阀。
该产品操作简便，软件功能丰富，可轻松通过液晶面板和按键进行操作。
该产品通过位置传感器感知阀门开度，同时将能量消耗降低到最少。
Intelligent valve locator is designed for one-piece pneumatic valve, especially for Angle seat valve and diaphragm valve products. Its products can be divided into process control valve and proportional control valve.
This product is easy to operate and rich in software functions. It can be operated easily through LCD panel and key.
The product senses valve opening through position sensor and minimizes energy consumption.

智能定位器参数 Intelligent locator parameters

材料 Material	PC、PA、不锈钢、硅橡胶 PC、PA、Stainless steel、Silicone rubber
电源 Power	直流 24V +/- 10% DC 24 v + / - 10%
信号输入 Signal input	0/4 ~ 20mA 或 0 ~ 5/10 V 0/4~20mA or 0~5/100
设定信号输入阻抗 Set signal input impedance	0/4~20mA 信号时 240Ω 0~5/10V 信号时 21KΩ 240 Ω 0/4 ~ 20 mA signal 21KΩ 0/4 ~ 10V signal
压缩空气要求 Compressed air requirement 颗粒度要求 Particle size requirement 颗粒密度要求 Particle density requirement 凝点要求 Condensation point requirements 油脂浓度要求 Oil concentration requirement	中性气体，符合 DIN ISO 8573-1 要求 The neutral gas meets DIN ISO 8573-1 Class 5 (<40μm) Class 5(<40μm) Class 5 (<10mg/m^3) Class 5(<10mg/m) Cass 3 (<-20℃) Class 3(<-20℃) Class 5 (<25mg/m^3) Class 5(<25mg/m)
环境温度 Environment temperature	-20 ~ 55℃ -20~55℃
气体接口 Gas interface	直插式快速接头 (内径 Φ8 mm 、6mm 或 1/4") Straight plug quick joint(inner diameter ϕ8mm，6mm or 1/4")
电气快速接头 Electric quick coupling	M13 x 1.0 三针 (电缆直径 ø5mm) M13x1.0 Three stitches(Cable diameter ϕ5mm) M17 x 1.0 九针 (电缆直径 ø6mm) M17x1.0 Nine stitches(Cable diameter ϕ6mm) M13 x 1.0 四针 (电缆直径 ø5mm) M13x1.0 Four stitches(Cable diameter ϕ5mm)
气源压力 Air pressure	高于执行器最小动作压力 0.5 ~ 1bar, 最大不超过 7bar The minimum operating pressure of the actuator is 0.5 ~ 1bar, maximum no more than 7bar
位置传感器行程 / 阀杆行程 Position sensor stroke/stem stroke	5 ~ 50mm
安装方式 Installation	倾向于安装在执行器顶端，通过 M26 螺纹和执行器连接 Tends to be mounted at the top of the executor and is connected via M26 threads and actuators
防护等级 Protection grade	IP65 符合 EN60529 要求 IP65 meet EN60529
功耗 Power consumption	<5W

GMP/SAP 隔膜阀

产品介绍 Product introduction

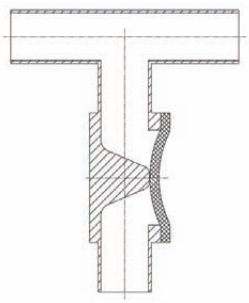
设计焊接组合式隔膜阀是根据 GMP 规范，达到减少死角，改善卫生生产设备的工艺流程。焊接组合式隔膜阀既可以做成非常简单的和管道组合的单阀，也可以做成非常复杂的、将不同尺寸的阀体焊接在一起行程阀组的多样阀门。所有形式的焊接接口都可做成焊接组合式隔膜阀。
每一个焊接组合式隔膜阀都进行严格的质量控制。阀门上的每一个焊缝都是按照阀体内表面的抛光等级进行抛光处理，从而保证阀门的内表面质量。
The design of the welded sectional diaphragm valve is based on GMP specification to reduce the dead Angle and improve the process flow of sanitary production equipment. Welding combined diaphragm valve can be made very simple single valve and pipe combination, can also make it very complicated, different size of the valve body welding together trip valve group of various valves. All forms of welding interfaces can be made into solder composite diaphragm valves.
Each welded composite diaphragm valve has strict quality control. Each weld on the valve is polished according to the inside surface of the valve to ensure the internal surface quality of the valve.

D- 规则 Rules of D

D- 规则是根据 ASME BPE 标准描述的尺寸 B 和 D 之间的关系来反映死角的一种规则。
该规则确定了一种非常有用的原则，描述了安装在卫生管道系统中相互连接部件之间允许的最大死角。该死角斯通过尺寸 B 的绝对值或 B/D 的比值来反映的。依据组合的通径和或定位阀体的通径，B/D 的比值应在 2:1 和 5:1 之间转换。如果该值已被详细确定，且焊接组合式隔膜阀不能满足此要求，那么可以用整块钢加工成的多通道阀来解决这个问题。
D − the rule is a rule that reflects the dead Angle based on the relationship between size B and D described by ASME BPE standard.
The rule defines a very useful principle that describes the maximum dead Angle that is allowed between interconnected parts of the plumbing system. The dead corner stone is reflected by the absolute value of B or the ratio of B/D.
The ratio of B/D should be converted between 2:1 and 5:1 depending on the combination of the size of the body and the size of the valve body. If the value has been specified and the solder combined diaphragm valve cannot meet this requirement, the multi-channel valve can be used to solve this problem.

特点 Characteristic

- 完全自排空功能
- 死角最少化
- 设计紧凑、节省安装空间
- 减少焊接点
- 集成的焊接组合方便现场安装，减少现场工作量
- Completely empty function
- Dead Angle minimization
- Compact design, save installation space
- Reduction point
- The integrated welding combination is convenient for site installation and reduce site workload



D- 规则 =B/D
D − rule = B/D

主阀门定位不同的两种焊接组合式 The main valve locates different welding combination

1）GMP 阀门

GMP 阀门（Good Manufacturing Practice 的缩写）主要运用在高纯水或其他分配系统的用水点垂直管路上，可有效地减少管路死角。GMP 设计的阀门有两种：一种是带 90 度直角弯管的零角阀，另一种是阀阀相连接的零死角阀。在阀阀相连接中，其中一个阀水平放置，并保持一定的自排空角度，另一个没有细菌滋生或受工艺交叉感染的取样口。

对于这种结构形式，无论是主阀还是 L 阀或者分管口，其最大通径可达 DN80（3"）。

下图给出的是一些可能的 GMP 连接结构：

1) GMP valve

GMP valve (abbreviation for Good Manufacturing Practice) is mainly used in high purity water or other distribution system with water point vertical pipe, which can effectively reduce the dead Angle of pipeline. There are two types of valves designed by GMP: one is the zero Angle valve with a 90-degree Angle bend, and the other is the zero Angle valve connected to the valve. In the valve phase connection, one of the valves is placed horizontally and maintains a certain self-discharge Angle, and the other does not have a bacterial breeding or process cross infection sampling port.

For this type of structure, whether the main valve or the L valve or the outlet, the maximum size of the unit is DN80 (3 ').

Here are some possible GMP connections:

2）SAP 阀门

SAP 阀门（Sterile Access Port 的缩写）主要运用在水平管路系统中，其中主阀水平放置，并保持一定的自排空角度，通路孔在主阀水路最低的排放点上。SAP 结构可以是主阀和分管的组合，也可以主阀和垂直或水平放置的阀门的组合。

对于这种结构形式，无论是主阀还是通路阀或分管，其最大通径可达 DN80（3"）。

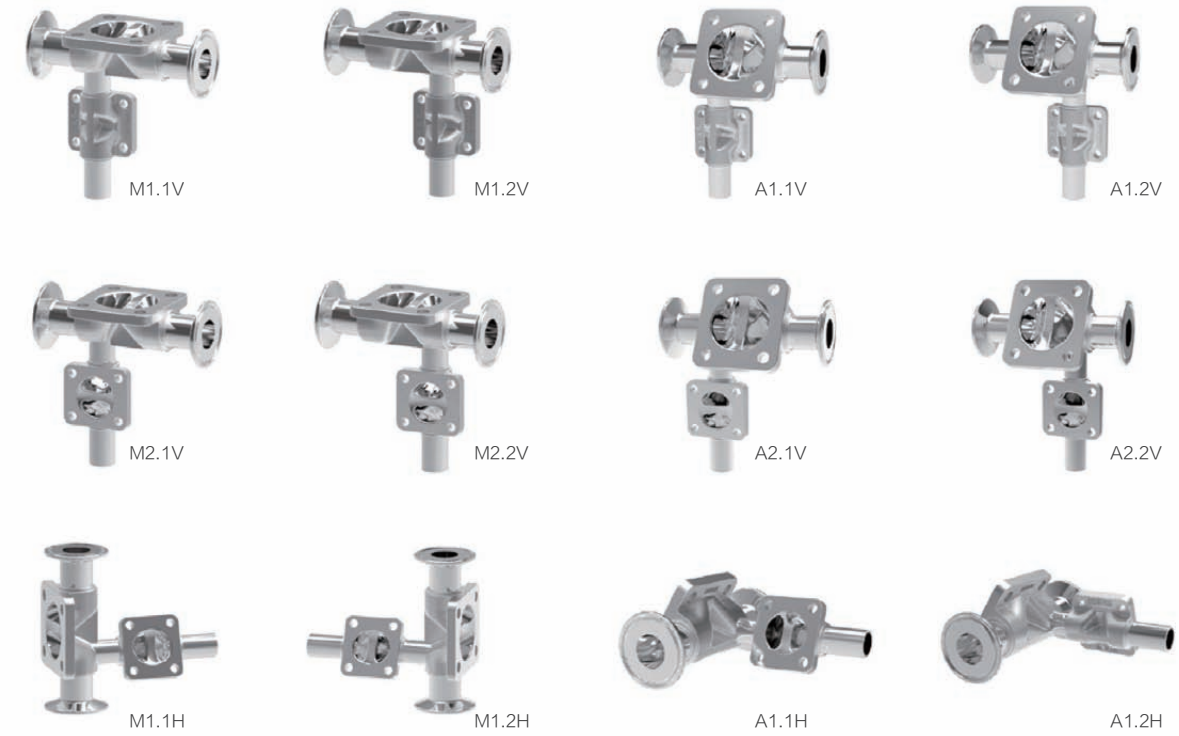
下图给出的是一些可能的 SAP 连接结构：

2) SAP valve

SAP valve (the abbreviation of Sterile Access Port) is mainly used in horizontal piping system, including the main valve is in horizontal, and maintain the emptying of Angle, via hole in the main valve of the lowest waterway discharge point. The SAP structure can be a combination of main and partial valves, as well as a combination of valve and vertical or horizontal valves.

For this kind of structure, whether the main valve or the channel valve or the branch, its maximum size can reach DN80 (3 ').

Here are some possible SAP connectivity structures:



根据要求，气动头可同时安装机械限位和信号反馈装置。
According to the requirement, the pneumatic head can install the mechanical limit and the signal feedback device simultaneously.