

Sanitary Diaphragm Valves

卫生级隔膜阀系列



卫生级隔膜阀 Sanitary Diaphragm Valve

应用:

SM 隔膜阀是一款卫生型的隔膜阀系列, 广泛适用于卫生级的酿酒、乳制品以及饮料等食品工业以及无菌工况的制药领域, 实现对管道流体的控制和开/关任务。

Application:

SM diaphragm valve is a series of sanitary diaphragm valve, it is widely used on wine, dairy products, beverage, foodstuff industry, pharmacy etc. achieving the requirement of control and open/close for the pipeline system.

工作原理:

隔膜阀常规状态下为封闭状态, 此时膜片紧贴阀体的内腔, 关闭着管道流体通向路径。当隔膜阀需要清洗任务或需要开启任务时, 通过手动旋转手轮或驱动气动控制执行装置来带动阀杆向上运动, 球形膜片随之向上弯曲, 从而使阀门形成导通状态, 则可实现清洗和开启的目的。其中膜片把下部阀体内腔和上部阀盖内腔隔开, 使位于膜片上部的阀杆、阀芯等零件不受介质的腐蚀, 省去了填料密封结构, 而且不会产生介质泄漏。优化的阀体设计, 使清洗液完全排泄, 不会形成滞留现象。

Work Principle:

The diaphragm is close under normal state, and that moment the diaphragm clung to the valve body cavity, and closing off the flow path through the pipeline. When the diaphragm valve have the requirement of clean or open, the valve stem moves upwards according to the manual or pneumatic actuator equipment, spherical diaphragms naturally bend upwards, so that the valve is open and reach the requirement of clean and open. The diaphragm make the lower body cavity and the upper chamber separated from the valve cover, so that the stem at the top of the diaphragm, disc media and other parts from corrosion, eliminating the need for packing structure, and no media leaks. The optimize valve body made the cleaning liquid flow out totally, so that don't have any entrapment.



材料:

钢质部件: 不锈钢 304、不锈钢 316L。
密封件: EPDM+PTFE (三元乙丙 + 聚四氟乙烯) 此密封件均采用进口密封材料 (均符合 FDA177.2600 标准)。用森明特有技术, 将一个连接螺栓与 EPDM/PTFE 完美结合成一体密封部件, 此密封部件与介质接触部位的 PTFE 材质具有良好的耐寒性 (-25°C) 极好的耐热性 (+250°C) 对各种化学制剂有良好的耐受性以及流体具有极好的耐磨性!

Material:

Steel components: stainless steel 304, stainless 316L
Seal: EPDM + PTFE the seals are imported seal material (which conform to the FDA177.2600 standard). With SENMING unique technology, will be a bolt coupling nut with EPDM/PTFE perfect combination into a whole sealing parts, the sealing parts contact with the media of the parts of the PTFE material has good cold resistance (-25°C) excellent heat-resistance (+250°C) of all sorts of chemical preparation is well tolerated and excellent wear resistance to flow.

标准设计

有各种标准的隔膜阀系列可向客户提供，即用于 DIN 标准系列，3A 标准系列，SMS 标准系列，ISO/IDF 标准系列，BS/RJT 标准系列，ASME /BPE 等标准系列。

该阀门的组成部件包括：一个执行装置，膜片和阀体，是用螺栓及螺母组装在一起，整个阀门的组装都是精心细致的。其执行装置包括手动和气动，膜片具有各种软硬程度的人造橡胶，阀体为两通或三通阀。

森明现有的隔膜阀系列规格有：卡式隔膜阀、焊接式隔膜阀、T 型三通式隔膜、U 型三通式隔膜阀等系列隔膜阀。

Standard Design:

Various standards of valves can be provided to clients: DIN,3A,SMS,ISO/IDF,BS/RJT,ASME/BPE etc.

The parts of valves: an actuator, diaphragm and body which assemble together with bolts and nuts.The entire valve assembly in meticulously. The actuator can be manual and pneumatic, the diaphragm made of artificial rubber which can have all kinds of soft and hard degree.The body can be two way or three way.

The connection of the diaphragm as follows: clamp, weld, T-type tee,U type tee etc.



Diaphragm



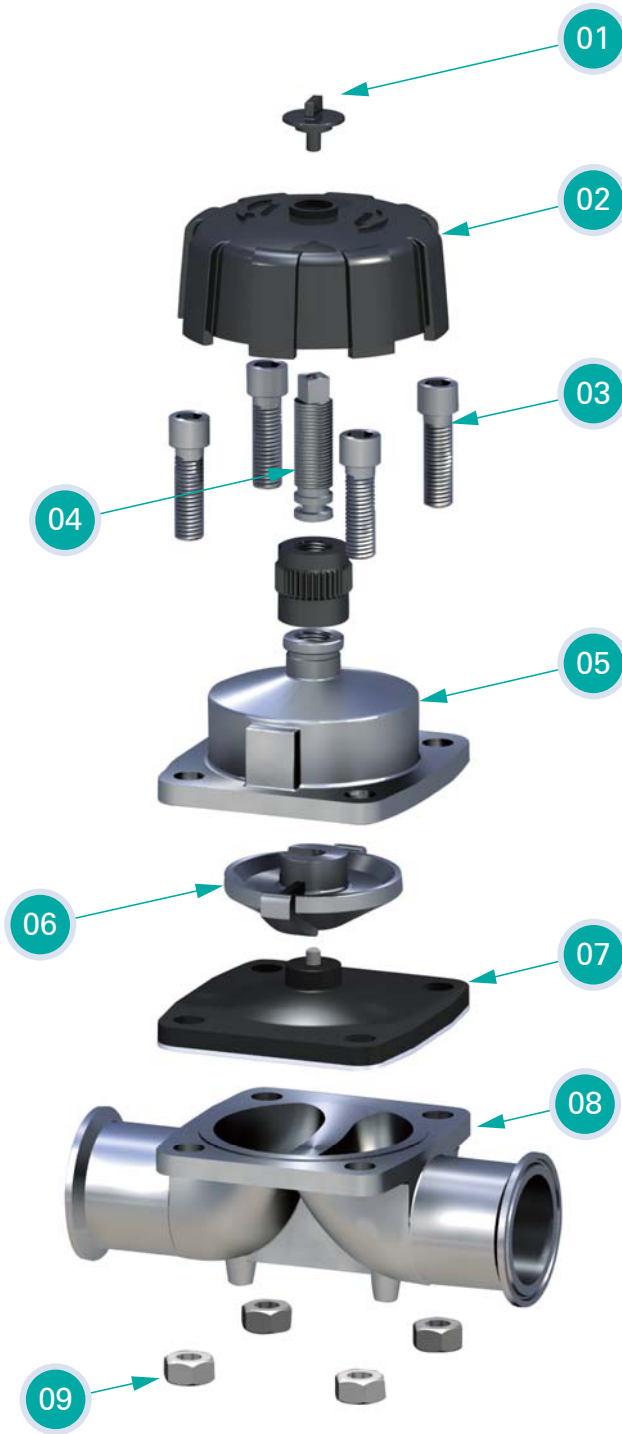
卫生级气动隔膜阀 Sanitary Pneumatic Diaphragm Valve

The diagram shows an exploded view of a sanitary pneumatic diaphragm valve. The components are numbered as follows:

- 01: Bolt Nut Cap
- 02: Bolt
- 03: Pneumatic Cap
- 04: Spring
- 05: Spring
- 06: Spring
- 07: Pneumatic Head Diaphragm Component
- 08: Pneumatic Head
- 09: Gasket
- 10: Bolt
- 11: Nut
- 12: Valve Seat
- 13: Valve Core
- 14: Diaphragm
- 15: Valve Body
- 16: Bolt

Parts List			
No.	Description		
01	螺栓盖帽 Bolt Nut Cap	09	垫片 Gasket
02	螺栓 Bolt	10	螺栓 Bolt
03	气动头盖 Pneumatic Cap	11	螺母 Nut
04	弹簧 Spring	12	阀座 Valve Seat
05	弹簧 Spring	13	阀芯 Valve Core
06	弹簧 Spring	14	膜片 Diaphragm
07	气动头隔膜组件 Pneumatic Head Diaphragm Component	15	阀体 Valve Body
08	气动头座 Pneumatic Head	16	螺栓 Bolt

卫生级手动隔膜阀 Sanitary Manual Diaphragm Valve



Parts List	
No.	Description
01	盖帽 Cap
02	手轮 Handwheel
03	螺钉 Screw
04	阀杆 Valve Rod
05	阀盖 Valve Cap
06	阀芯 Valve Core
07	膜片 Diaphragm
08	阀体 Valve Body
09	螺母 Nut



卫生级隔膜阀 Sanitary Diaphragm Valve

技术参数 Technical Data

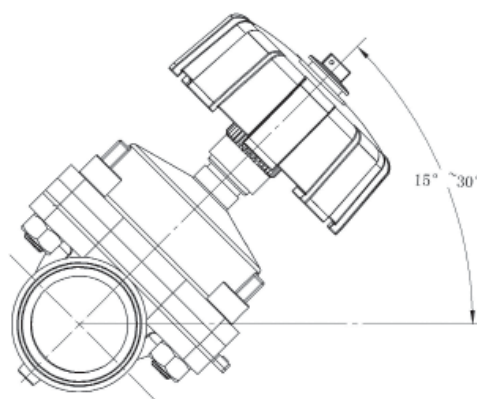
金属材质 Material	与产品接触的零部件 Contact with the product components	304L / 316L (1.4306 / 1.4404) 锻造 304L / 316L (1.4306 / 1.4404) Forging	可提供材质检测报告单 Can provide material inspection report
	不与产品接触的零部件 Material No contact with the product components	304 / 202 (1.4301 / 202)	
密封材质 Sealing material	标配 Standard	EPDM+PTFE	采用进口密封材料, 所有密封材质均符合 FDA 117.2600 Adopt import sealing materials, with all the seal material The FDA 117.2600
	选配 Option	硅橡胶 VMQ	
压力 Pressure	工作压力 Pressure of work	0~10bar	
	控制气源压力 Control air pressure	5~8bar	
温度 Temperature	工作温度 Working temperature	VMQ:(-50 ~ +180°C) EPDM :(-20 ~ +135°C) FPM:(-30 ~ +230°C)	
	灭菌温度 Sterilization temperature	150°C (MAX 20min)	
表面处理 Surface treatment	内表面处理 Inside surface treatment	Ra ≥ 0.4-0.8 μm	
	外表面处理 Surface treatment	Ra ≥ 0.8-1.6 μm	
连接方式 Connection	焊接端管径 The diameter welding	焊接口: DIN 11850 - 2 与 11850-1 / SMS / 3A / ISO 等系列 Welding mouth: DIN 11850-2 with 11850-1 / SMS / 3A / ISO Series etc	
	连接方式: 焊接、快装、外螺纹、由任、法兰等 Connection mode: welding, fast loading, Union, flange, etc		
气动控制 Pneumatic control	气动头及固定支架 Pneumatic head and fixed bracket		

隔膜阀最优安装角度示意图

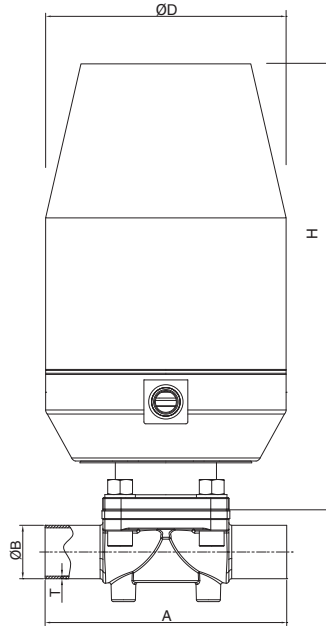
Optimal Installation Angle Diagram

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。

According to the structure feature, fifteen thirty degree is optimal, which makes for complete drain after cleaning and keep no residue.



卫生级气动隔膜阀 Sanitary Pneumatic Diaphragm Valve

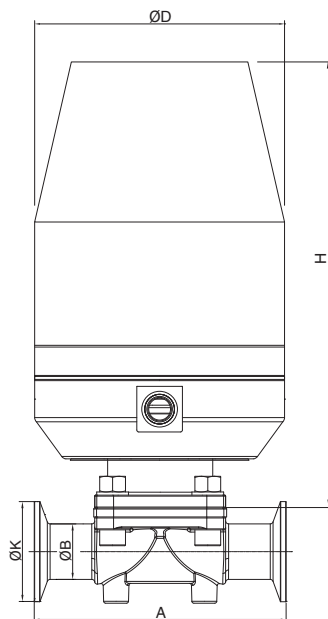


No.SM1001

焊接式隔膜阀 Welded Diaphragm Valve

Size				A	D	H
DIN	3A	SMS	ISO			
DN20 B×T 22×1.5	3/4" B×T 19.1×1.65	19 B×T 19.1×1.5	Ø19 B×T 19.1×1.5	107.0	72.5	125.0
DN25 B×T 28×1.5	1" B×T 25.4×1.65	25 B×T 25.4×1.5	Ø25 B×T 25.4×1.5	126.0	72.5	125.0
DN32 B×T 34×1.5	1 1/4" B×T 31.8×1.65	32 B×T 31.8×1.5	Ø32 B×T 31.8×1.5	161.0	92.5	157.0
DN40 B×T 40×1.5	1 1/2" B×T 38.1×1.65	38 B×T 38.1×1.5	Ø38 B×T 38.1×1.5	161.0	92.5	157.0
DN50 B×T 52×1.5	2" B×T 50.8×1.65	51 B×T 50.8×1.5	Ø51 B×T 50.8×1.5	193.0	114.0	185.0
DN65 B×T 70×2	2 1/2" B×T 63.5×1.65	63 B×T 63.5×2	Ø63 B×T 63.5×2	254.0	114.0	185.0

卫生级气动隔膜阀 Sanitary Pneumatic Diaphragm Valve



No.SM2002

快装式隔膜阀 Clamped Diaphragm Valve

Size				A	D	H
DIN	3A	SMS	ISO			
DN20 B 22 K 50.5	3/4" B 19.1 K 25.4	19 B 19.1 K 25.4	Ø19 B 19.1 K 25.4	107.0	72.5	125.0
DN25 B 28 K 50.5	1" B 25.4 K 50.5	25 B 25.4 K 50.5	Ø25 B 25.4 K 50.5	126.0	72.5	125.0
DN32 B 34 K 50.5	1 1/4" B 31.8 K 50.5	32 B 31.8 K 50.5	Ø32 B 31.8 K 50.5	161.0	92.5	157.0
DN40 B 40 K 50.5	1 1/2" B 38.1 K 50.5	38 B 38.1 K 50.5	Ø38 B 38.1 K 50.5	161.0	92.5	157.0
DN50 B 52 K 64.0	2" B 50.8 K 64.0	51 B 50.8 K 64.0	Ø51 B 50.8 K 64.0	193.0	114.0	185.0
DN65 B 70 K 91.0	2 1/2" B 63.5 K 77.5	63 B 63.5 K 77.5	Ø63 B 63.5 K 77.5	254.0	114.0	185.0

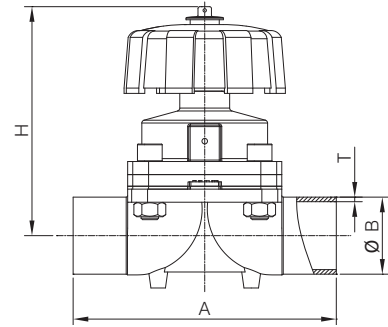
DIN

卫生级手动隔膜阀 Sanitary Manual Diaphragm Valve

焊接式隔膜阀 Welded Diaphragm Valve

Siz	A	B	H	T
DN10	71.0	12.0	67.0	1.5
DN15	107.0	18.0	97.0	1.5
DN20	107.0	22.0	91.0	1.5
DN25	126.0	28.0	125.0	1.5
DN32	161.0	34.0	140.0	1.5
DN40	161.0	40.0	140.0	1.5
DN50	193.0	52.0	150.0	1.5
DN65	254.0	70.0	180.0	2.0

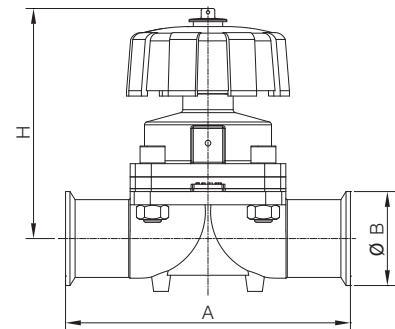
No.SM11003



卡箍式隔膜阀 Clamped Diaphragm Valve

Siz	A	B	H
DN10	71.0	25.0	67.0
DN15	107.0	34.0	97.0
DN20	107.0	50.5	97.0
DN25	126.0	50.5	125.0
DN32	161.0	50.5	140.0
DN40	161.0	50.5	140.0
DN50	193.0	64.0	150.0
DN65	254.0	91.0	180.0

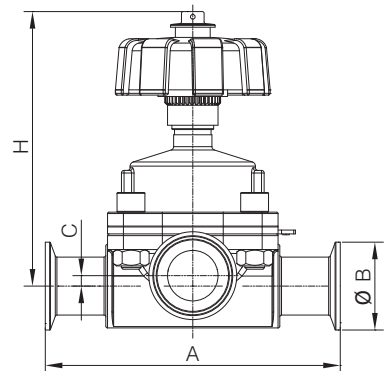
No.SM12004



T型三通隔膜阀 T-type Three-way Diaphragm Valve

Siz	A	B	C	H
DN10	71.0	25.0	6.0	67.0
DN15	107.0	34.0	6.0	97.0
DN20	107.0	50.5	6.0	97.0
DN25	126.0	50.5	6.0	125.0
DN32	161.0	50.5	6.0	140.0
DN40	161.0	50.5	6.0	140.0
DN50	193.0	64.0	6.0	150.0
DN65	254.0	91.0	6.0	180.0

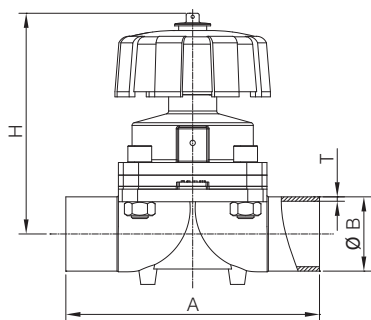
No.SM12005



3A

卫生级手动隔膜阀 Sanitary Manual Diaphragm Valve

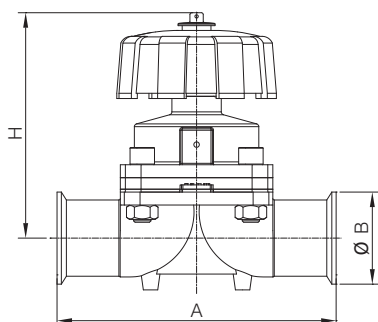
No.SM21006



焊接式隔膜阀
Welded Diaphragm Valve

Siz	A	B	H	T
1/2"	71.0	12.7	67.0	1.65
3/4"	107.0	19.1	97.0	1.65
1"	126.0	25.4	125.0	1.65
1 1/4"	161.0	31.8	140.0	1.65
1 1/2"	161.0	38.1	140.0	1.65
2"	193.0	50.8	150.0	1.65
2 1/2"	254.0	63.5	180.0	1.65

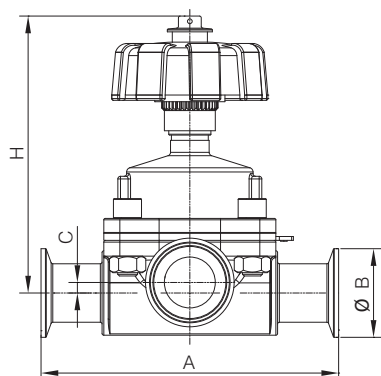
No.SM22007



卡箍式隔膜阀
Clamped Diaphragm Valve

Siz	A	B	H
1/2"	71.0	67.0	
3/4"	107.0	97.0	
1"	126.0	125.0	
1 1/4"	161.0	140.0	
1 1/2"	161.0	140.0	
2"	193.0	150.0	
2 1/2"	254.0	180.0	

No.SM22008



T 型三通隔膜阀
T-type Three-way Diaphragm Valve

Siz	A	B	C	H
1/2"	71.0	25.4	6.0	67.0
3/4"	107.0	25.4	6.0	97.0
1"	126.0	50.5	6.0	125.0
1 1/4"	161.0	50.5	6.0	140.0
1 1/2"	161.0	50.5	6.0	140.0
2"	193.0	64.0	6.0	150.0
2 1/2"	254.0	77.5	6.0	180.0

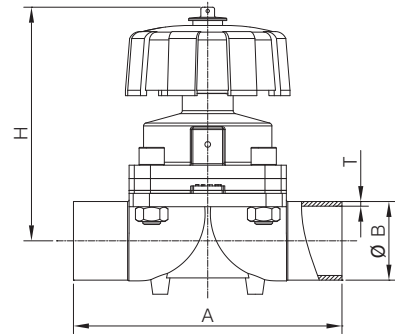
SMS

卫生级手动隔膜阀
Sanitary Manual Diaphragm Valve

焊接式隔膜阀
Welded Diaphragm Valve

Siz	A	B	H	T
12.7	71.0	12.7	67.0	1.5
19	107.0	19.1	97.0	1.5
25	126.0	25.4	125.0	1.5
32	161.0	31.8	140.0	1.5
38	161.0	38.1	140.0	1.5
51	193.0	50.8	150.0	1.5
63	254.0	63.5	180.0	2.0

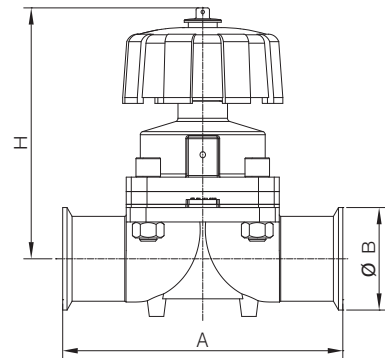
No.SM31009



卡箍式隔膜阀
Clamped Diaphragm Valve

Siz	A	B	H
12.7	71.0	25.4	67.0
19	107.0	25.4	97.0
25	126.0	50.5	125.0
32	161.0	50.5	140.0
38	161.0	50.5	140.0
51	193.0	64.0	150.0
63	254.0	77.5	180.0

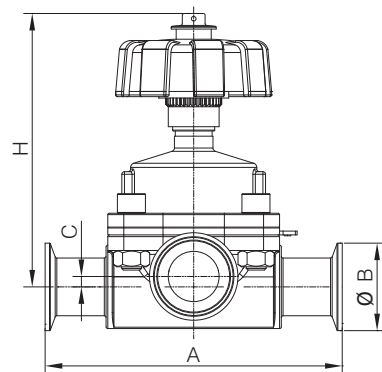
No.SM32010



T型三通隔膜阀
T-type Three-way Diaphragm Valve

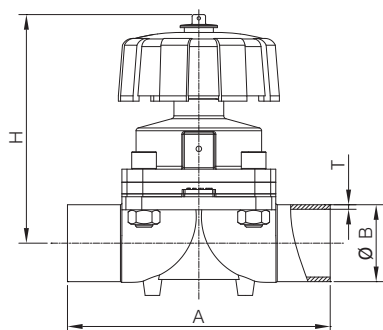
Siz	A	B	C	H
12.7	71.0	25.4	6.0	67.0
19	107.0	25.4	6.0	97.0
25	126.0	50.5	6.0	125.0
32	161.0	50.5	6.0	140.0
38	161.0	50.5	6.0	140.0
51	193.0	64.0	6.0	150.0
63	254.0	77.5	6.0	180.0

No.SM32011



ISO 卫生级手动隔膜阀 Sanitary Manual Diaphragm Valve

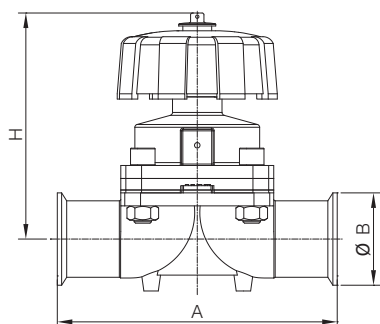
No.SM41012



焊接式隔膜阀
Welded Diaphragm Valve

Siz	A	B	H	T
Ø12.7	71.0	12.7	67.0	1.5
Ø19	107.0	19.1	97.0	1.5
Ø25	126.0	25.4	125.0	1.5
Ø32	161.0	31.8	140.0	1.5
Ø38	161.0	38.1	140.0	1.5
Ø51	193.0	50.8	150.0	1.5
Ø63	254.0	63.5	180.0	2.0

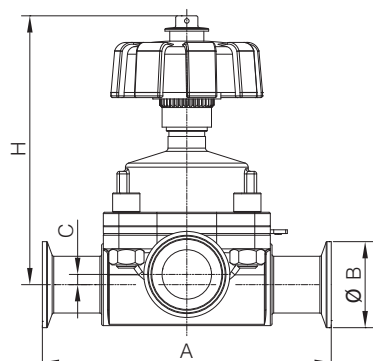
No.SM42013



卡箍式隔膜阀
Clamped Diaphragm Valve

Siz	A	B	H
Ø12.7	71.0	25.4	67.0
Ø19	107.0	25.4	97.0
Ø25	126.0	50.5	125.0
Ø32	161.0	50.5	140.0
Ø38	161.0	50.5	140.0
Ø51	193.0	64.0	150.0
Ø63	254.0	77.5	180.0

No.SM42014



T型三通隔膜阀
T-type Three-way Diaphragm Valve

Siz	A	B	C	H
Ø12.7	71.0	25.4	6.0	67.0
Ø19	107.0	25.4	6.0	97.0
Ø25	126.0	50.5	6.0	125.0
Ø32	161.0	50.5	6.0	140.0
Ø38	161.0	50.5	6.0	140.0
Ø51	193.0	64.0	6.0	150.0
Ø63	254.0	77.5	6.0	180.0