

隔膜阀

Diaphragm Valves

YODSN 永德信®



隔膜阀 Diaphragm Valves

应用 / Applications

- 隔膜阀，手动或气动操作，专门应用于制药工业中的卫生和无菌过程。
- 该阀门非常适用于流体控制和开关的任务。
- 该隔膜阀同其他阀门设计相比，更容易清洁，很好的处理带颗粒的物料，在流量控制的应用上，气穴现象也更少些。
- Diaphragm valves manually or pneumatically operated, and specifically designed for use on hygienic and aseptic processes in the pharmaceutical industries.
- The valve is excellent for flow control as well as for open/close.
- The diaphragm valves are better in nature of flow in comparison with other valves. It is easier to clean up and better to process the substance with particles. The phenomenon of air pocket is during rare application of flow control.

工作原理 / Operating Principles

- 膜片提供阀体密封和阀座密封。里面没有路径通到外部环境，所以该阀门适用于无菌过程。
- 当阀门关闭时，支撑膜片的压力垫朝阀体上的密封面移动。当压力板移动时，膜片弯曲。被迫推向阀体中心的阀座区域。因此关闭了通向阀体的流体路径。
- 阀体和压力板的相互关系，防止了膜片的挤压。
- 该阀门可以手动可以气动操作，也可以通过控制器和电磁阀控制。
- The diaphragm provides the body seal as well as the seat seal. There are no paths to the outside environment so it suitable for aseptic processes.
- When the valve is closed a pressure pad which supports the diaphragm moves towards the sealing face on the body. When the pressure plate moves the diaphragm flexes and is forced down onto the seat area in the centre of the body thus closing off the flow path through the body.
- The inter relationship of body to the pressure plate prevents over compression of the diaphragm.
- The valve can be actuated either manually or pneumatically controlled by control tops of solenoid valves.



隔膜阀认证 / Certificates

- 制造工艺中用到的合成树脂和添加剂都符合 FDA 认证
- 材料化学成分、物理性能和制造工艺都备有证明文件
- 所有隔膜片 FDA 一致性认证
 - 21-CFR-FDA177.1550 全氟合成树脂
 - 21-CFR-FDA-177.2600 橡胶
- USP 28 CLASS VI CHAPTER 87 IN VITON 和 CHAPTER 88 IN- VITON 一致性认证
- 3-A 一致性认证
- EN 10204-3.1 关于不锈钢化学成分合成追溯性证书
- 国内卫生许可批件
- CE-PED/97/23/EC
- All synthetic resin and additive are comply with FDA 、certification
- Material chemical composition, physical properties and manufacturing process are documented
- All diaphragm seal consistency with FDA certificate
 - 21-CFR-FDA177.1550 perfluorocarbon synthetic resin
 - 21-CFR-FDA-177.2600 rubber
- USP 28 class VI CHAPTER 87 IN VITON and CHAPTER 88 IN-VITON consistency the authentication
- 3-A consistency the authentication
- EN 10204-3.1
- Domestic hygiene license
- CE-PED/97/23/EC

流量和隔膜阀通径的关系

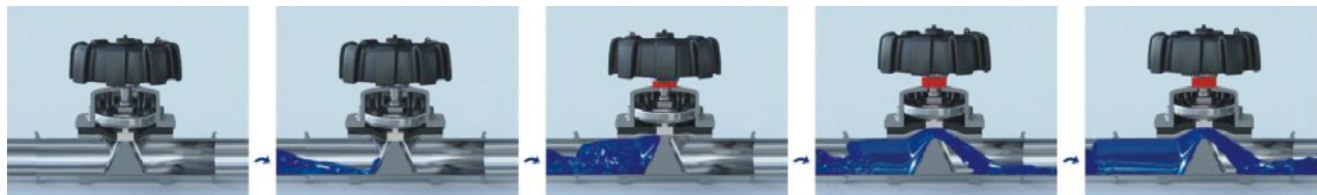
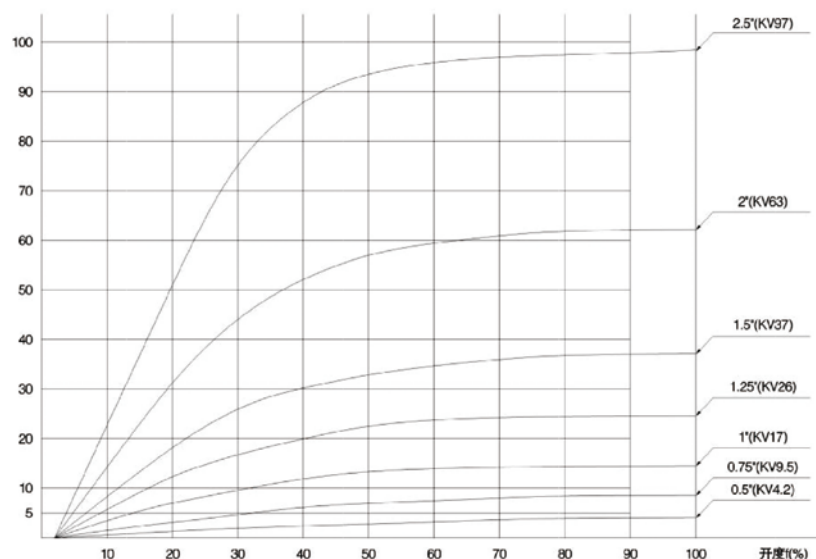
Relations Between Flow Rate And O.d

- KV 值是用来定义阀门流量的一个技术参数。该数据描连了 5℃ 到 30℃ 的水在压差为 1Bar 情况下阀门的流量。
- KV 值是表示阀门 100% 开启状态下的 KV 值。
- KV is a data of the flow rate. The data describes valve flux when the water of 5 °C to 30°C in the pressure difference for 1bar.
- KV data is the valve flow open.

流量 / 选择 (开度 f) 图表

The diaphragm valve flow/choice(opening f) chart.

$$\text{流量 } Q(\text{M}^3/\text{h}) \quad Q = \text{KV} \cdot \sqrt{\Delta P}$$



注意：上面图表适用于，介质：水（20℃）

Note: the above chart suitable for, medium: water (20°C)

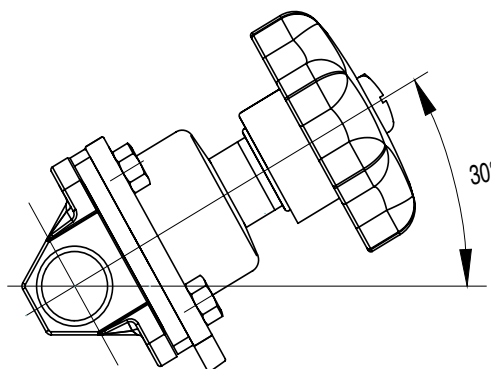
- 表面抛光
- Ra= 粗糙度
- 平均粗糙度 Ra 值被作为衡量一个阀体内表面光洁度的一个参数。
- LT5.6mm 长度 / 测量 Lc0.8mm 进行 5 次测量粗糙度得出的平均值粗糙度 Ra 值
- 按照 ASME BPE 表 SF-3 标准进行分类
- Surface polishing
- Ra=roughness
- Average roughness Ra data is used as a measure of valve body surface finish of a parameter.
- LT5.6mm length/measurement Lc0.8mm for five measuring
- Roughness obtained average roughness Ra data
- According ASME BPE table to classified

隔膜阀安装角度示意图

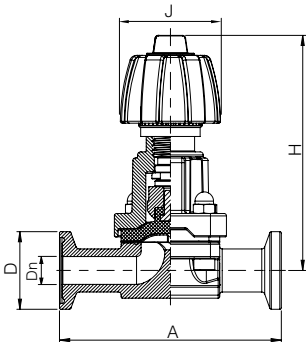
Schematic Diaphragm Mounting Angle

无菌隔膜阀根据其结构特点：推荐按下表安装，有利于阀门清洗后完全排泄，不易造成液体滞留阀门内部。

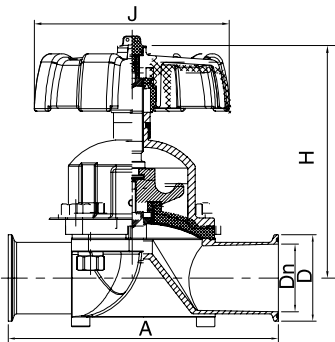
According to the structure feature, which makes for complete drain after cleaning and keep no residue.



直通隔膜阀
Straight Diaphragm Valve



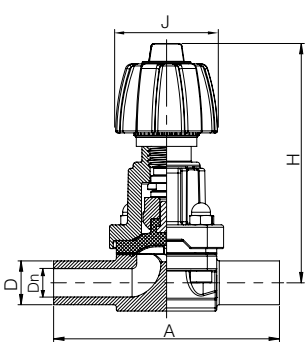
DN10 NO.1104001



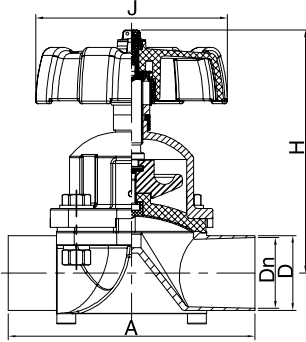
NO.1104002

直通卡箍式隔膜阀 Clamped Straight Diaphragm Valve						DIN
SIZE	Dn	D	A	H	J	
DN10	9	25.4	71.5	75	38	
DN15	15	25.4	108	75	38	
DN20	19	50.5	127	122	89	
DN25	25	50.5	127	122	89	
DN32	31	50.5	147	150	113	
DN40	37	50.5	161	150	113	
DN50	49	64	200	167	138	
DN65	66	91	216	210	138	
DN80	81	106	216	210	138	

						INCH
SIZE	Dn	D	A	H	J	
1"	22.4	50.5	127	122	89	
1 1/4"	28.8	50.5	147	150	113	
1 1/2"	35	50.5	161	150	113	
2"	47.8	64	200	167	138	
2 1/2"	59.5	77.5	216	210	138	
3"	72.2	91	216	210	138	



DN10 NO.1104003

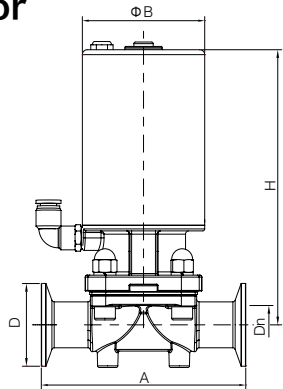


NO.1104004

直通焊接式隔膜阀 Welded Straight Diaphragm Valve						DIN
SIZE	Dn	D	A	H	J	
DN10	9	12	71.5	75	38	
DN15	15	18	108	75	38	
DN20	19	22	127	122	89	
DN25	25	28	127	122	89	
DN32	31	34	147	150	113	
DN40	37	40	161	150	113	
DN50	49	52	200	167	138	
DN65	66	70	216	210	138	
DN80	81	85	216	210	138	

						INCH
SIZE	Dn	D	A	H	J	
1"	22.4	25.4	127	122	89	
1 1/4"	28.8	32	147	150	113	
1 1/2"	35	38	161	150	113	
2"	47.8	51	200	167	138	
2 1/2"	59.5	63.5	216	210	138	
3"	72.2	76.2	216	210	138	

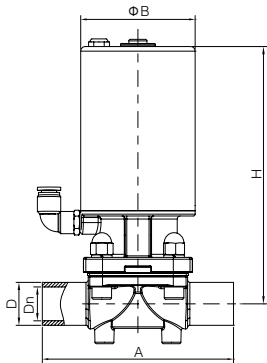
不锈钢气动隔膜阀
 Pneumatic Diaphragm Valve
 With Stainless Steel Actuator



NO.1104005

气动卡箍式隔膜阀					DIN
Clamped Pneumatic Diaphragm Valve					
SIZE	Dn	D	A	H	B
DN20	19	50.5	117	170	86
DN25	25	50.5	127	170	86
DN32	31	50.5	147	208	86
DN40	37	50.5	161	208	88
DN50	49	64	200	245	108
DN65	66	91	216	270	133
DN80	81	106	216	270	133

INCH					
SIZE	Dn	D	A	H	B
1"	22.4	50.5	127	170	86
1 1/4"	28.8	50.5	147	208	86
1 1/2"	35	50.5	161	208	86
2"	47.8	64	200	245	108
2 1/2"	60.5	77.5	216	270	133
3"	72.2	91	216	270	133

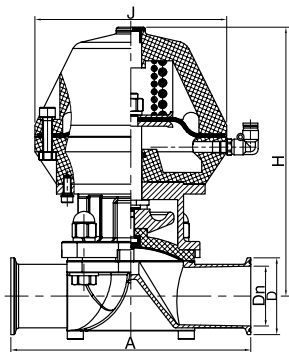


NO.1104006

气动焊接式隔膜阀					DIN
Welded Pneumatic Diaphragm Valve					
SIZE	Dn	D	A	H	B
DN20	19	22	117	170	86
DN25	25	28	127	170	86
DN32	31	34	147	208	86
DN40	37	40	161	208	86
DN50	49	52	200	245	108
DN65	66	70	216	270	133
DN80	81	85	216	270	133

INCH					
SIZE	Dn	D	A	H	B
1"	22.4	25.4	127	170	86
1 1/4"	28.8	50.5	147	208	86
1 1/2"	35	38	161	208	86
2"	47.8	50.8	200	245	108
2 1/2"	60.5	63.5	216	270	133
3"	72.2	76.2	216	270	133

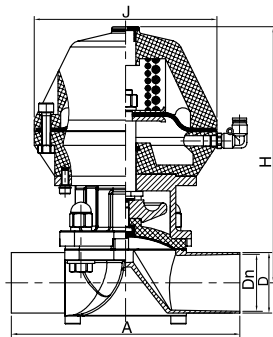
塑料气动隔膜阀
Diaphragm Valve With
Plastic Pneumatic Actuator



NO.1104007

气动卡箍式隔膜阀 Clamped Pneumatic Diaphragm Valve					DIN
SIZE	Dn	D	A	H	J
DN20	19	50.5	117	180.2	132
DN25	25	50.5	127	180.2	132
DN32	31	50.5	147	233.5	161
DN40	37	50.5	161	233.5	161
DN50	49	64	200	241.5	161
DN65	66	91	216	272	194
DN80	81	106	216	272	194

INCH					
SIZE	Dn	D	A	H	J
1"	22.4	50.5	127	180.2	132
1 1/4"	28.8	50.5	147	233.5	161
1 1/2"	35	50.5	161	233.5	161
2"	47.8	64	200	241.5	161
2 1/2"	60.5	77.5	216	272	194
3"	72.2	91	216	272	194



NO.1104008

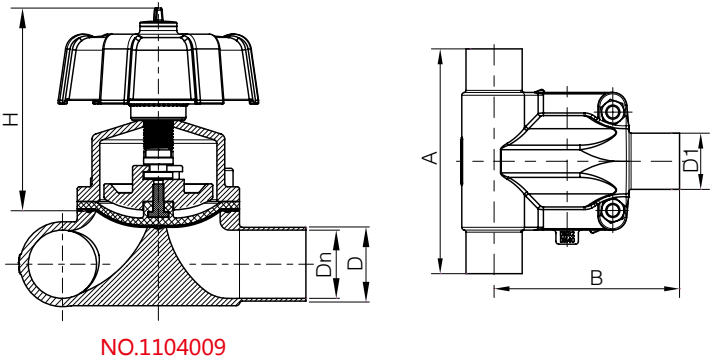
气动焊接式隔膜阀 Welded Pneumatic Diaphragm Valve					DIN
SIZE	Dn	D	A	H	J
DN20	19	22	117	180.2	132
DN25	25	28	127	180.2	132
DN32	31	34	147	233.5	161
DN40	37	40	161	233.5	161
DN50	49	52	200	241.5	161
DN65	66	70	216	272	194
DN80	81	85	216	272	194

INCH					
SIZE	Dn	D	A	H	J
1"	22.4	25.4	127	180.2	132
1 1/4"	28.8	31.8	147	233.5	161
1 1/2"	35	38.1	161	233.5	161
2"	47.8	50.8	200	241.5	161
2 1/2"	60.5	63.5	216	272	194
3"	72.2	76.2	216	272	194

三通隔膜阀

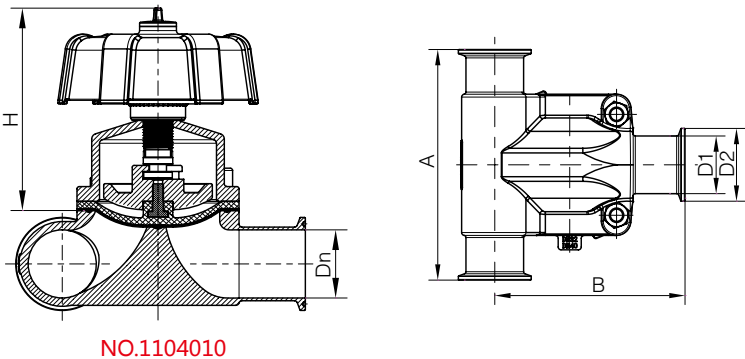
Three-Way Diaphragm Valve

焊接式
Welded Type



NO.1104009

快装式
Clamp Type

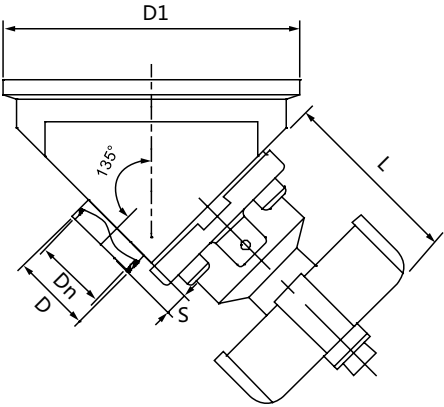


NO.1104010

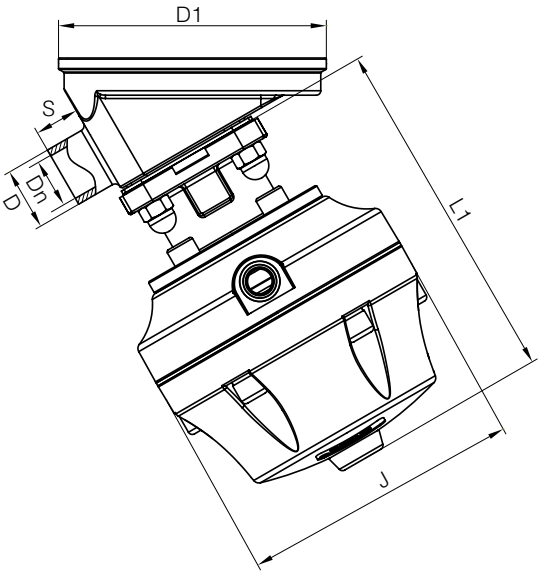
DIN						
SIZE	Dn	D1	D2	A	B	H
DN20	19	22	50.5	117	81	103
DN25	25	28	50.5	127	101.5	103
DN32	31	34	50.5	147	123	123
DN40	37	40	50.5	161	132	123
DN50	49	52	64	200	157	150

INCH						
SIZE	Dn	D1	D2	A	B	H
3/4"	16.05	22	50.5	117	81	103
1"	22.4	28	50.5	127	101.5	103
1 1/4"	28.8	34	50.5	147	123	123
1 1/2"	35.1	40	50.5	161	132	123
2"	47.8	52	64	200	157	150

手动隔膜罐底阀
Manual Diaphragm Tank Bottom Valve



NO.1104011



NO.1104012

DIN							
SIZE	Dn	D	D1	S	J	L1	L
DN20	19	22	120	25	132	163	92
DN25	25	28	120	25	132	163	92
DN32	31	34	140	25	161	210	110
DN40	37	40	140	29	161	210	110
DN50	49	52	200	30	161	215	153

INCH							
SIZE	Dn	D	D1	S	J	L1	L
Φ19	16.05	19.1	120	25	132	163	92
Φ25.4	22.4	25.4	120	25	132	163	92
Φ31.8	28.8	31.8	140	25	161	210	110
Φ38.1	35.1	38.1	140	29	161	210	110
Φ50.8	47.8	50.8	200	30	161	215	153