

# G Type Diaphragm Valve Series



## Processing Technics

With CNC precision machining, ensure the sealing surface and fit the diaphragm valve chamber solitary degrees, reducing the diaphragm friction and prolong the working life of the diaphragm.

Valve chamber surface finish can be mechanical or electrolytic polishing according to customer requirements, polishing face smooth reach  $0.25\mu\text{m}$ .

## Soft Elastic Diaphragm

Diaphragm made of soft elastic material will not emerge sensitive response for those working medium fiber, solid particles, catalytic pollution etc. Generally, will not affect valve and seal's working. According to work or sterilization temperature, and chemical properties of the working medium, you can select different diaphragm materials.

## FDA Certification

Aseptic diaphragm valve diaphragm is produced according to FDA standards. We can also provide other standard certification of certificates in accordance with the requirements of customers.

## Material Selection

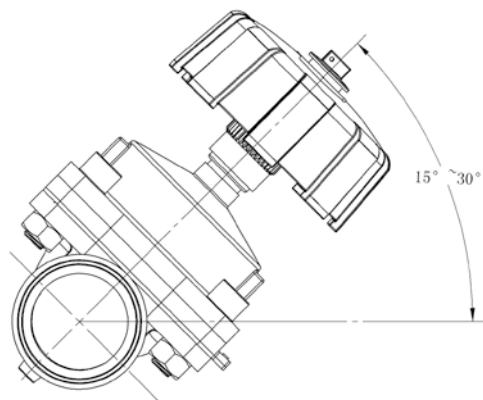
Due to the different conditions, we will choose different types of valves and materials. Before selected in the valve body and diaphragm, we must analyze the use of each product, especially for the use of a chemical reaction caused by chemical medicine and high temperatures. Through effective chemical data or expert certification, material suitability testing in order to ensure the safety and long-term effectiveness of the product.

## Diaphragm Fixed

A typical diaphragm screw fixing method, in contrast with the fixed aperture, such fixed method by dispersing the force area to the entire surface of the bolt, which is under vacuum conditions to prevent the destruction of the diaphragm mechanical connection.

## Optimal installation Angle of Diaphragm Schematic

Aseptic diaphragm valve according to their structural characteristics, the recommended installation angle is  $15^\circ$  to  $30^\circ$  degree (depending on specifications), this will help the drain valve being fully cleaned, and will not easy to cause fluid retention inside the valve.



Standard material body is 1.4435 / 316L stainless steel, in line with ASME BPE standards and requirements of EN10204 test certificate 3.1 material test report. All valve bodies printed a stamp heat number on, through this number can be traced to the characteristics of the material body and its physical Composition. The contact surface of the inner profile of the body and the medium are specially designed, meet the GMP standard requirements. Best of self-cleaning ability and no dead zone design. Eliminate the residue of remaining space. Increase the service life of the diaphragm.

Body Type	Connection Size	Manufacturing Process
Two-way valve	10 ~ 80 mm / 3/8 ~ 3" 10 ~ 80 mm / 3/8 ~ 3"	Forging Casting
Multi-channel body	20 ~ 65 mm / 3/4 ~ 2"	Piece steel machining
Tank bottom valve	20 ~ 50 mm / 3/4 ~ 2"	Casting

### Casting Valve Body

Cast stainless steel body is made of molded with the body shape of the final product made of paraffin mold, it can produce its products exactly the same.

By immersing the ceramic body in wax, to make the whole body covered with a layer of solid wax surface of the ceramic.

After melt away the ceramic body cavity wax, and then injected into the molten steel solution, after cooling, the outer covering of ceramic knock, rough body is formed, cast body with very precise dimensions and quite smooth and clean outer surface.

In order to obtain high-quality castings, molds are specially designed and best processed.

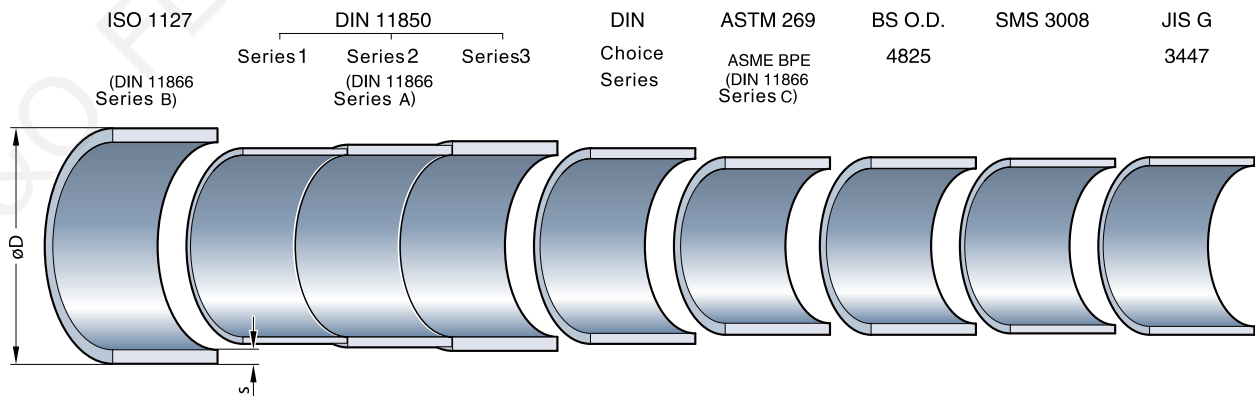
Considering the the structure and density problems, DEKON's valve bodies were tested in accordance detailed test data requirements, undergo a rigorous inspection to ensure product quality and high reliability.

### Chemical Composition Main Element Standard Manufacturing

Element	1.4435	316L ASME BPE
	Wt.%	Wt.%
Carbon ( max )	0.030	0.035
Chrome	17.00 ~ 19.00	16.00 ~ 18.00
Manganese ( max )	2.00	2.00
Mo-Ni	2.50 ~ 3.00	2.00 ~ 3.00
Mo-Ni	12.50 ~ 15.00	10.00 ~ 15.00
P ( max )	0.045	0.045
Silicon ( max )	1.00	1.00
Sulfur ( max )	0.030	
Sulfur		0.005 ~ 0.017

### Pipeline Interface Standard

The following table: Diameter difference to DN25 different international standard sanitary stainless steel pipe



# G Type Proportional Modulating Diaphragm Valve



## Features

- Stainless steel housing
- Stainless steel housing Display
- Quick and easy start
- Extensive supplementary features



Smart valve positioner is designed for one-pneumatic control valve design, particularly suitable for angle seat valve and diaphragm valve products. Its products can be divided into process control type and proportional control type.

Easy to operate, feature-rich software, it can easily be operated via the LCD panel and buttons.

The product is perceived through the valve opening position sensor, while the energy consumption is reduced to a minimum.

## Smart positioning parameters

Material	PC、PA、Stainless Silicon Ruber
Power	Direct-current 24V+/-10%
Signal Input	4~20mA or 0~5/10V
Setting signal input impedance	4~20mA Signal at 240Ω 0~5/10V Signal at 21Ω
Compressed air requirements Particle size requirements Particle density requirements Pour point requirements Oil concentration requirements	Neutral gas, comply with the requirements of DIN ISO 8573-1 Class 5(<40μm) Class 5(<10mg/m ) Class 3(<-20℃) Class 5(<25mg/m )
Ambient temperature	-20 ~ 55℃
Gas connection	In-line quick connector (Inner Diameter Φ8mm,6mm or 1/4")
Electric quick connector	M13 x 1.0 Three Pin(Cable Diameter Φ5mm) M17 x 1.0 Nine Pin(Cable Diameter Φ6mm) M13 x 1.0 Four Pin(Cable Diameter Φ5mm)
Air Supply	Higher than the minimum operating pressure actuator 0.5~1.0 bar,Max 7.0bar
Position Sensor stroke / stem stroke	5~50mm
Installation	Tend mounted actuators top M26 threaded connection and actuators
Protection class	IP65,comply with the requirements of EN60529
Power Consumption	<5W

# M200KG-Manual Tri-clamp Diaphragm Valve



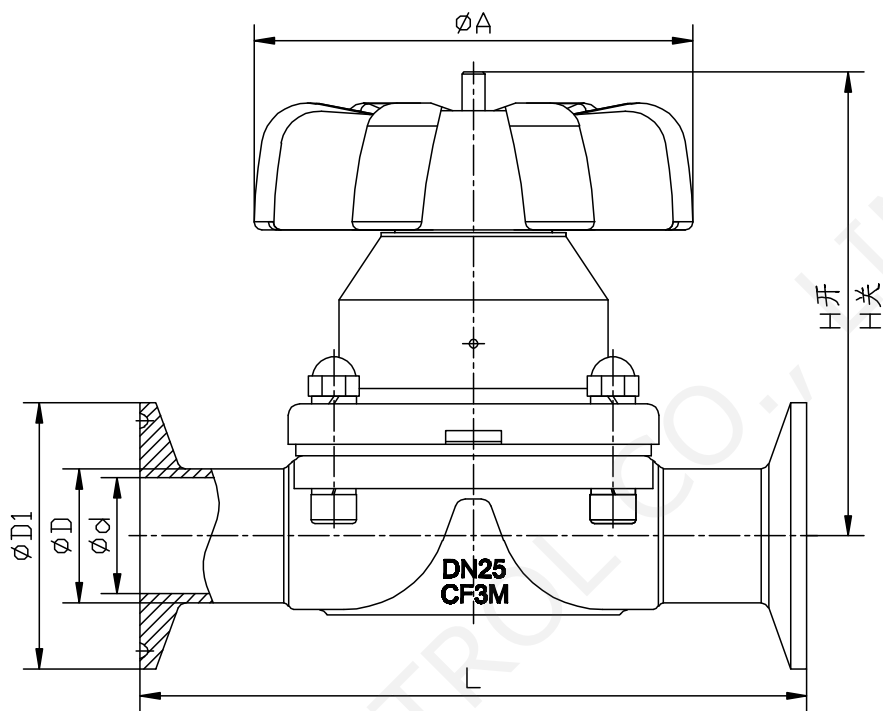
## Features

- Rising Handwheel
- With position indicating sealing bonnet
- Adjustable closed limit
- A fixed sealing ring is available between diaphragm and valve body
- Flexible diaphragm suspension structure



## Technical Details

Operation	Manual
Max Working Pressure	10 bar
Max Working Temperature	160°C
Diaphragm Material	EPDM, PTFE
Body Material	Forged Stainless Steel 1.4435 / 316L, ASME / BPE Casting Stainless Steel 1.4435 / 316L Other Alloy materials
Connections	Butt Weld Clamp and Flange Please contact us for other connections
Bonnet suitable for	Two Way Body Welded Body T Type Body Multi-Way Body Bottom Valve Body



### Size

NPS	DN	L	A	H open	H close	d	D	D1
1/8"	DN6	86	33	92	87	4	6.4	25.0
1/4"	DN8	86	33	92	87	6	8.4	25.0
3/8"	DN10	86	33	92	87	7.4	10	25.0
1/2"	DN15	86	33	92	87	9.4	12.7	25.0
3/4"	DN20	108	58	85	79	15.8	19.1	25.0
1"	DN25	127	90	102	91	22.1	25.4	50.5
1-1/4"	DN32	146	90	108	97	28.5	31.8	50.5
1-1/2"	DN40	159	114	122	110	34.8	38.1	50.5
2"	DN50	190	140	138	126	47.5	50.8	64.0
2-1/2"	DN65	216	140	142	130	59.5	63.5	77.5

# R200KG-Stainless Steel Pneumatic Tri-clamp Diaphragm Valve



Diaphragm Valve

## Product Features

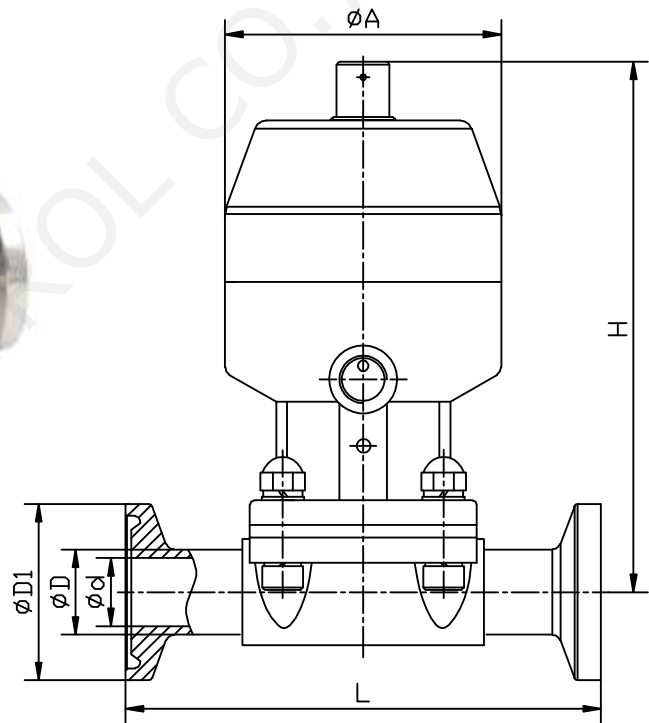
- High cycle piston stainless steel actuator
- Compact design, the outer diameter of the head with a pneumatic valve connected to the diaphragm and the same size as the bonnet flange
- Ideally suited to a combination of multi-channel and multi-valve body mounting
- Air intake in the same direction and working medium flow
- A fixed ring seal between the diaphragm and the valve body
- Flexible diaphragm suspension structure
- Body-mounted membrane and coating
- Clean, after polishing the outer surface of the actuator is ideal for disinfecting rinse

## Technical Detail

Operation	Pneumatic Normal Open	Pneumatic Normal Close	Double Acting
Max Working Pressure	EPDM Diaphragm		EPDM Diaphragm
	10bar		8bar
Max Working Temperature	150°C		
Pressure Supply	Pneumatic Normal Close		Double Acting Pneumatic Normal Open
	4.5~7 bar		4~5 bar
Diaphragm Material	EPDM, PTFE		
Body Material	Forged Stainless Steel		
	Casting Stainless Steel		
	Other Alloy material		
Connections	Butt Weld		
	Clamp and Flange		
	Please contact us for other connections		
Bonnet suitable for	Two Way Body Welded Body T Type Body		

# R200KG-Stainless Steel Pneumatic Tri-clamp Diaphragm Valve

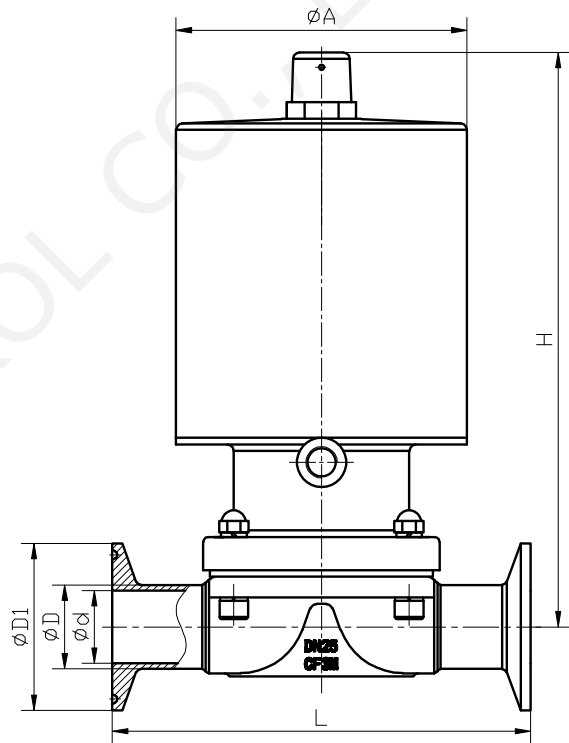
Diaphragm Valve



## Size

NPS	DN	L	A	H	d	D	D1	Actuator
1/8"	DN6	86	43	92	4	6.4	25.0	Φ35
1/4"	DN8	86	43	92	6	8.4	25.0	Φ35
3/8"	DN10	86	43	92	7.4	10	25.0	Φ35
1/2"	DN15	86	43	92	9.4	12.7	25.0	Φ35

# R200KG-Stainless Steel Pneumatic Tri-clamp Diaphragm Valve



Diaphragm Valve

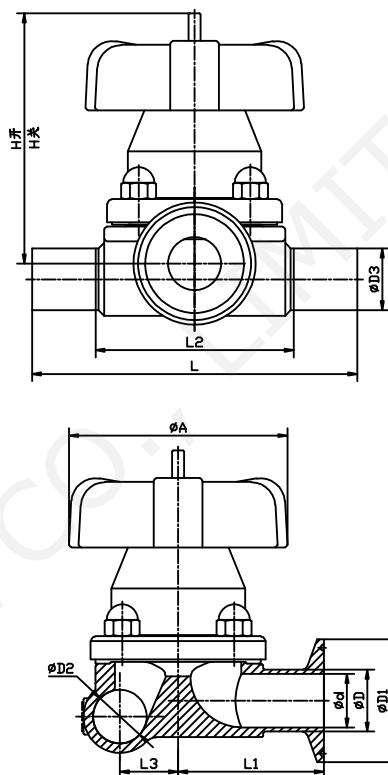
## Size

NPS	DN	L	A	H	d	D	D1
3/4"	DN20	108	57	140	15.8	19.1	25.0
1"	DN25	127	88	175	22.1	25.4	50.5
1 1/4"	DN32	146	88	180	28.5	31.8	50.5
1 1/2"	DN40	159	109	213	34.8	38.1	50.5
2"	DN50	190	109	228	47.5	50.8	64.0
2 1/2"	DN65	216	109	235	59.5	63.5	77.5



# M300TG-T Type Manual 3-way Diaphragm Valve

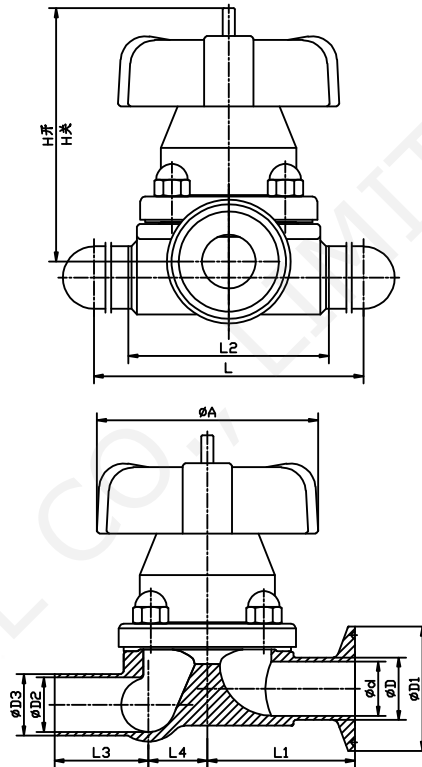
Diaphragm Valve



## Size

Model	L <sub>Weld</sub>	L <sub>Clamp</sub>	L1	L2	L3	d	D	D1	D2	D3	A	H <sub>Open</sub>	H <sub>Close</sub>
DN80×80	265	242.2	125	185	82	80	89	106	80	89	195	290	260
DN65×50	210	187.2	85	130	42	47.5	50.8	64	59.5	63.5	140	138	126
DN50×50	34				47.5				50.8				
DN65×40	190	167.2	72	110	42	34.8	38.1	50.5	59.5	63.5	114	122	110
DN50×40	34				47.5				50.8				
DN40×40	170				31				34.8	38.1			
DN50×32	142	139.2	60	82	31	28.5	31.8	50.5	47.5	50.8	90	102	91
DN40×32					28				34.8	38.1			
DN32×32					25				28.5	31.8			
DN65×25	162	117.2	53	60	42	22.1	25.4	19.1	59.5	63.5	58	85	79
DN50×25	34				47.5				50.8				
DN40×25	142				26				34.8	38.1			
DN32×25	25				28.5				31.8				
DN25×25	24				22.1				25.4				
DN65×20	140	139.2	60	82	31	15.8	19.1	"25/ 50.5"	59.5	63.5	90	102	91
DN50×20	120				26				47.5	50.8			
DN40×20	142				18				34.8	38.1			
DN32×20	120				24				28.5	31.8			
DN25×20	142				24				22.1	25.4			
DN20×20	120				13.5				15.8	19.1			

# M300UG-U Type Manual 3-way Diaphragm Valve



Diaphragm Valve

## Size

Model	L	L1	L2	L <sub>Weld</sub>	L <sub>Clamp</sub>	L4	d	D	D1	D2	D3	A	H <sub>Open</sub>	H <sub>Close</sub>			
DN80×80	362	125	185	128.5	117.1	82	80	89	106	80	89	195	290	260			
DN65×50	297	85	130	123.5	112.1	42	47.5	50.8	64	59.5	63.5	140	138	126			
DN50×50	251			90.5	89.1	34				47.5	50.8						
DN65×40	277	72	110	123.5	112.1	42	34.8	38.1	50.5	59.5	63.5	114	122	110			
DN50×40	231			90.5	89.1	34				47.5	50.8						
DN40×40	207			78.5	77.1	31				34.8	38.1						
DN50×32	203			90.5	89.1	31				47.5	50.8						
DN40×32	179	60	82	78.5	77.1	28	28.5	31.8	50.5	34.8	38.1	90	108	97			
DN32×32	158			68	66.6	25				28.5	31.8						
DN65×25	249			123.5	112.1	42				22.1	25.4				59.5	63.5	
DN50×25	203			90.5	89.1	34									47.5	50.8	
DN40×25	179			78.5	77.1	26									34.8	38.1	
DN32×25	158			68	66.6	25									28.5	31.8	
DN25×25	149	63.5	62.1	24	22.1	25.4											
DN65×20	227	53	60	123.5	112.1	31	15.8	19.1	"25/ 50.5"	59.5	63.5	58	85	79			
DN50×20	181			90.5	89.1	26				47.5	50.8						
DN40×20	179	60	82	78.5	77.1	26	15.8	19.1	"25/ 50.5"	34.8	38.1	90	102	91			
DN32×20	136	53	60	68	66.6	18				28.5	31.8				58	85	79
DN25×20	149	60	82	63.5	62.1	24				22.1	25.4				90	102	91
DN20×20	117	53	60	58.5	57.1	13.5				15.8	19.1				58	85	79

## Two main valve positioning of different welding modular

### 1) GMP Valve

GMP Valve (short for 'Good Manufacturing Practice') mainly used in vertical piping water points or other high purity water distribution system, which can effectively reduce the line dead. GMP design valve has two types: one is with a 90-degree angle bends zero dead valve, the other is a zero dead valve valve connecting structure. In the valve connecting structure in which a valve in a horizontal position and maintain a certain self-draining angle, another no bacteria or cross-contamination of samples by the process of opening.

For this kind of structure, whether it is the main valve or L valve or charge port, the maximum diameter of up to DN 80 (3").

The following figure shows the number of possible connections GMP structure:

### 2) SAP Valve

SAP Valves (Short for 'Sterile Access Port') mainly used in horizontal piping system in which the main valve is horizontal, and maintain a certain self-draining angle, the via hole in the main valve waterway lowest point of discharge. SAP structure may be a combination of the main valve and the charge to be a combination of the main valve and the vertical or horizontal placement of the valve.

For this form of structure, whether it is the main valve, or via a valve or charge, the maximum diameter of up to DN80 (3").

The following figure shows are some of the possible structure SAP connection:



### Application Specifications

Tank bottom valve is mainly used in pharmaceutical, food and beverage and cosmetics industry hygiene requirements. Its inner surface is smooth, no dead zone, preventing the retention medium, the process to avoid potential contamination. Tank bottom valve has the same standard features and functions with diaphragm valve, using the same valve components, such as actuators, diaphragm. Tank bottom valve is usually soldered directly to the bottom of the tank to be welded to the tank wall, as the tank wall valve or sample valve. Typical applications tank bottom discharge valve is used to achieve the jar material, emptying, sampling, cleaning, disinfecting, rinsing and blocking with downstream processing.

### Product Features

Tank bottom valve body is made of stainless steel precision casting machine

Body material is 1.4435 / 316L stainless steel

Provides forged stainless steel or other alloy steel body.

Zero dead, no dead zone

Optional extended manual lever

### Product Introduction

Standard design tank bottom valve is a valve with only outlet port. In addition, many of the features available in the form of tank bottom valve is suitable for different applications, such as sampling, disinfecting and a plurality of outlet structure. These products have been standardized.

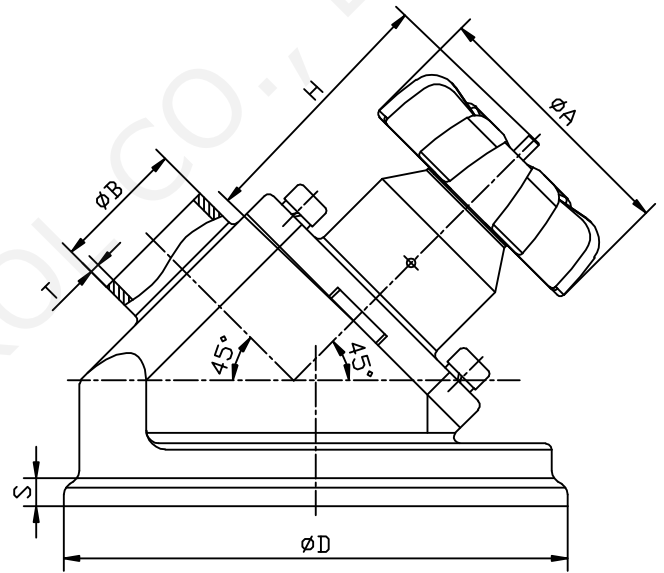
The preferred way to install the tank bottom valve is to be welded directly to the jar. Direct mounting such a valve and tank greatly reduces the retention medium, this is the most important standard using tank bottom valve. However, if you need to disassemble the tank bottom valve off from the jar, you can choose to clamp connection or flange connection between the valve and the tank.

Tank bottom valve of the discharge port interface mode are: welded connections (see page 7), Sanitary clamp connection (see page 8).



# M500DG-Manual Tank Bottom Valve

Diaphragm Valve



## Size

NPS	DN	D	S	B	T	A	H
1/2 "	DN15	89	6	12.7	1.65	90	92
3/4 "	DN20	89	6	19.1	1.65	90	102
1 "	DN25	110	6	25.4	1.65	90	102
1 1/4 "	DN32	158	6	31.8	1.65	90	102
1 1/2 "	DN40	158	6	38.1	1.65	114	115
2 "	DN50	198	6	50.8	1.65	114	124