

### **Hygienic Diaphragm Valve**

NWW. Sakilitaliy

J&O BRAND, RELIABLE QUALITY FOR YOU CE&ISO 9001:2015 CERTIFIED ACQUIRED 15 YEARS FLUID SOLUTION EXPERIENCES EXPORTING TO OVER 40 COUNTRIES EXCELLENT VALUE-ADDED SERVICE.



We focus on Details
We Make Different
J&O Brand, that can be trust.

### J&O PROFILE

J&O Fluid Control Co., Limited established in 2008, a leading Manufacturer and Supplier of high quality hygienic stainless steel flow control equipments.

J&O services the Food, Dairy, Beverage, Cosmetic, Pharmaceutical, Biological engineering, Lithium battery, Semiconductor, Water treatment, Petroleumand Chemical industries.

J&O product series consists of sanitary stainless steel Valves & Fittings:

- >>Sanitary Stainless Steel Pumps
- >>Sanitary Stainless Steel Valves
- >>Stainless Steel Tank Accessories
- >> Stainless Steel Pipe Fittings
- >> Stainless Steel Flanges
- >>Stainless Steel Double Ferrule Tube Fittings
- >>Hydraulic Pneumatic Quick Coupling
- >> Carbon Steel Pipe Fittings
- >>Customized Valve and Fittings

Through the years, "Perfection" has been the only goal we pursue. In order to satisfy customers, with continuous efforts, we are working towards perfection through a Quality Assurance System. With persistence and effort, we have become one of the leading enterprises of sanitary valves and pipe fittings in China.

Our organization is dedicated to provide our customers with best service of every aspect. We strongly believe, that the friendship and trust given by our customers, is the great treasure we have.

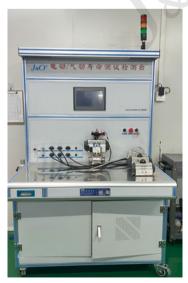


### **Certificate**





### **Testing Machine**



**Actuator Testing** 



Helium Leak Detector



Pressure Test for Large Valve



Pressure Test for Small Valve

### **Plant & Prducing**

















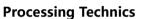


## Hygienic Diaphragm Valve

Our Core Values: Team, Details, Altruism, Innovation and Embrace Change.

### **Diaphragm Valve**





CNC precision machining is adopted to ensure the solitary degree between the sealing surface and the diaphragm valve chamber. That reduces the diaphragm friction and extends the working life of the diaphragm.

The surface finish of valve chamber can be mechanical or electrolytic Polished according to the customer's requirements, and the finish of the polished surface reaches  $0.25\mu m$ .

#### **Soft Elastic Diaphragm**

Diaphragm made of soft elastic material will not emerge sensitive response to those working media, such as fiber, solid particles, catalytic pollution and etc. Generally, the diaphragm will not affect the working of the valve and seals. According to the working or sterilization temperature temperature and the chemical property of the working medium, you can select different diaphragm materials.

#### **FDA Certification**

The diaphragm of the aseptic diaphragm valve is produced according to FDA standard.

We can also provide certificates of other standards in accordance with the requirements of customers.

#### **Material Selection**

Due to the different conditions,we will choose different types of valves and materials.Before selecting the valve body and diaphragm,we must analyze the use of each product,especially the use of chemical reaction caused by chemical medicines and high temperatures. We select the appropriate valve and material according to the effective chemical data,expert certification and material suitability test in order to ensure the safety and long-term effectiveness of the product.



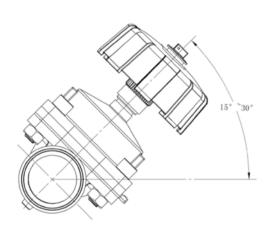
#### **Diaphragm Fixed**

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

The typical fixing method of diaphragm screw, in contrast with the fixed aperture, is to spread the stress area to the whole surface of the bolt, which is under vacuum condition to prevent the mechanical connection of the diaphragm from being damaged.

#### Diagram of Optimal installation Angle of a Diaphragm Valve

According to the structural characteristics, the recommended installation angle of an aseptic diaphragm valve is 15 to 30 degree(depending on specifications) this will help the drain valve being fully cleaned, and will not be easy to cause fluid retention inside the valve.



The standard material of valve body is 1.4435/316L stainless steel, which meets the requirements of ASME BPE standard and EN10204 3.1 certificate. All valve bodies are printed with a heat number, through which the characteristics of the valve body material and its physical composition can be traced.

The internal contour of the valve body and the contact surface of the medium are specially designed to meet the requirements of GMP specifications. The best self-cleaning ability and non-dead zone design eliminate the retention of residual liquid and improve the service life of the diaphragm.

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

#### **Casting Valve Body**

The cast stainless steel valve body is molded. The wax mold made according to the shape of the final valve body can produce the same product.

By immersing the wax mold of the valve body into the ceramic, the whole surface of the wax mold of the valve body is covered with a layer of solid ceramic.

After melting the wax mold of the valve body in the ceramic cavity, inject molten stainless steel solution. After cooling, knock off the ceramic covered on the surface, then the rough body will be formed.

The cast valve body size is very accurate. The external surface is quite smooth and clean.

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

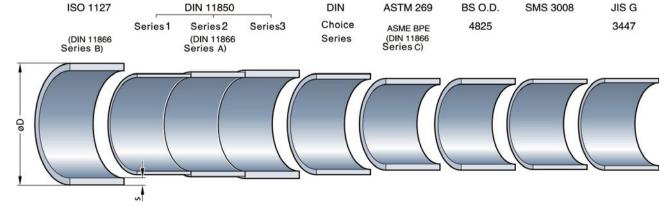
Considering the material structure and density, the valve body of J&O is strictly inspected according to the requirements of detailed test data. That ensures the high reliability of product quality.

#### Chemical Composition Main Element Standard Manufacturing

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

#### **Pipeline Interface Standard**

The following table shows the diameter differences of sanitary stainless steel pipes in different international standards, taking DN25 as an example.

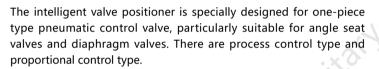


### JID CONTROL CO., LIMITED $J_{lpha}O^{lpha}$

## **Pneumatic Diaphragm Valve with Positioner**



# **Features**Stainless steel housing Quick display and easy start Plentiful additional functions



It is easy to operate. With feature-rich software, it can be operated easily through the LCD panel and buttons. It senses the opening status of the valve through the position sensor and meanwhile reduces the energy consumption to the minimum.



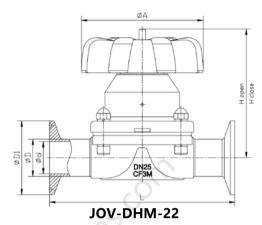
Material	PC、PA、Stainless Steel, Silicone Rubber
Power	Direct-current 24V+/-10%
Signal Input	4~20mA or 0~5/10V
Setting signal input impedance	4~20mA Signal at 240Ω 0~5/10V Signal at 21Ω
Compressed air requirements Particle size requirements Particle density requirements Pour point requirements Oil concentration requirements	Neutral gas,comply with the requirements of DIN ISO 8573-1 Class 5(<40µm) Class 5(<10mg/m³) Class 3(<-20°C) Class 5(<25mg/m³)
Ambient temperature	-20~55°C
Gas connection	In-line quick connector(Inner Diameter Φ8mm,6mm or 1/4")
Electric quick connector	M13x1.0 Three Pin(Cable Diameter Φ5mm) M17x1.0 Nine Pin(Cable Diameter Φ6mm) M13x10 Four Pin(Cable DiameterΦ5mm)
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 to be installed on the top of the actuator and connected by M26 screw
Protection class	IP65,comply with the requirements of EN60529
Power Consumption	<5W

### Manual Tri-clamp Diaphragm Valve









#### **Features**

Rising handwheel

Sealing bonnet with position indication

Adjustable closing limit

A fixed sealing ring is available between the diaphragm and the valve body

Flexible diaphragm suspension structure

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-Port Body Bottom Valve Body

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

# **Hygienic Pneuamtic Tri-clamp Diaphragm Valve**





#### **Product Features**

High-cycle double-piston stainless steel pneumatic actuator

Compact design, the outer diameter of the pneumatic actuator is the same as that of the bonnet flange connecting the diaphragm and the valve body

Ideally suited to a combination of multichannel and multi-valve body mounting

The air inlet is located on the upper part of the actuator, away from the pipeline production line

The air inlet can be installed by 90 ° rotation

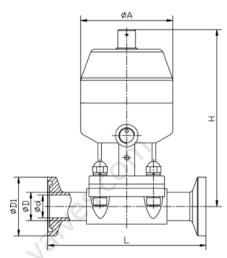
A fixed sealing ring is available between the diaphragm and the valve body Flexible diaphragm suspension structure Cladding mounted valve body diaphragm The smooth external surface of the actuator is easy to wash after disinfection

#### Technical Detail

Operation	Pneumatic Normal Open, Pneumatic Normal Close, Double Acting							
Max Working	EPDM Diaphragm	PTFE Diaphragm						
Pressure	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 1.4435/316L,ASME/BPE Casting Stainless Steel 1.4435/316L Other Alloy material							
Connections	В	Butt Weld						
Bonnet suitable for	Two Way Body Welded Body T Type Body							

### **Hygienic Pneuamtic Tri-clamp Diaphragm Valve**

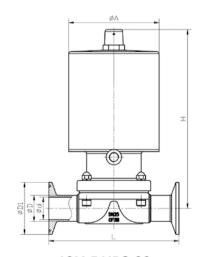




JOV-DHPS-22

NPS	DN	L	Α	Н	7 d	D	D1	Actuator
1/8"	DN6	86	43	92	4	6.4	25.0	Ф35
1/4"	DN8	86	43	92	6	8.4	25.0	Ф35
3/8"	DN10	86	43	92	7.4	10	25.0	Ф35
1/2"	DN15	86	43	92	9.4	12.7	25.0	Ф35





**JOV-DHPS-22** 

NPS	DN	L	Α	н	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

**J**&O<sup>®</sup>

### **Pneumatic Diaphragm Valve**

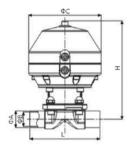


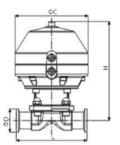






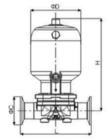


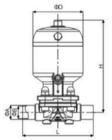




**JOV-DHPPGM-11 JOV-DHPPGM-22 Pneumatic Diaphragm Valve with Plastic Actuator** 

Siz	Size		ФD	ΦL	Н	ФС
DN10	3/8"	9.4	25.2	63.5	95	Ф44
DN15	1/2"	9.4	25.2	63.5	111	Ф58
DN20	3/4"	15.8	25.2	117	114	Ф58
DN25	1"	22.1	50.5	127	146	Ф89
DN32	1 1/4"	28.5	50.5	159	180	Ф112
DN40	1 1/2"	34.8	50.5	159	180	Ф112
DN50	2"	47.5	64	190	215	Ф138
DN65	2 1/2"	59.5	77.5	190	221	Ф138
DN80	3"	72.2	91	265	345	Ф168
DN100	4"	97.4	119	340	450	Ф198





JOV-DHPS02-22

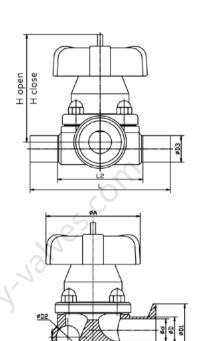
JOV-DHPS02-11

#### **Pneumatic Diaphragm Valve with S.S Actuator**

Siz	ze	ФВ	ФD	ΦL	Н	ΦС
DN10	3/8"	9.4	25.2	63.5	100	Ф65
DN15	1/2"	9.4	25.2	63.5	110	Ф65
DN20	3/4"	15.8	25.2	117	130	Ф70
DN25	1"	22.1	50.5	127	175	Ф130
DN32	1 1/4"	28.5	50.5	159	215	Ф168
DN40	1 1/2"	34.8	50.5	159	220	Ф168
DN50	2"	47.5	64	190	240	Ф168
DN65	2 1/2"	59.5	77.5	190	250	Ф168
DN80	3"	72.2	91	265	320	Ф190
DN100	4"	97.4	119	340	350	Ф218

### T Type Manual 3-way **Diaphragm Valve**





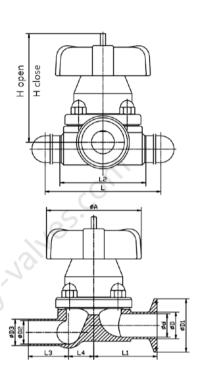
**JOV-DHM3-112** 

Modal	L/weld	L/clamp	L1	L2	L3	d	D	D1	D2	D3	Α	H/Open	H/Close														
DN80x80	265	242.2	125	185	82	80	89	106	80	89	195	290	260														
DN65x50	210	187.2	85	130	42	47.5	50.8	64	59.5	63.5	140	138	126														
DN50x50	190	107.2	65	130	34	47.5	50.6	04	47.5	50.8	140	130	120														
DN65x40	190		01		42				59.5	63.5																	
DN50x40	170	167.2	72	110	34	34.8	38.1		47.5	50.8	114	122	110														
DN40x40	170				31				34.8	38.1																	
DN50x32			/						47.5	50.8																	
DN40x32	142				28	28.5	31.8		34.8	38.1																	
DN32x32		139.2			25			50.5	28.5	31.8																	
DN65x25	162		139.2	60	82	42				59.5	63.5	90	102	91													
DN50x25				159.2	139.2			139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	139.2	00	02	34				47.5	50.8		102	91
DN40x25	142																					26	22.1	25.4		34.8	38.1
DN32x25					25				28.5	31.8																	
DN25x25					24				22.1	25.4																	
DN65x20	140	117.2	53	60	31				59.5	63.5	- 58	85	79														
DN50x20	120	117.2	33	00	26				47.5	50.8	36	03	73														
DN40x20	142	139.2	60	82	20	15.8	19.1	"25/50.5"	34.8	38.1	90	102	91														
DN32x20	120	117.2	53	60	18	13.8	13.1	23/30.3	28.5	31.8	58	85	79														
DN25x20	142	139.2	60	82	24				22.1	25.4	90	102	91														
DN20x20	120	117.2	53	60	13.5				15.8	19.1	58	85	79														

**J**&O<sup>®</sup>

### **U Type Manual 3-way Diaphragm Valve**



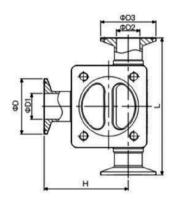


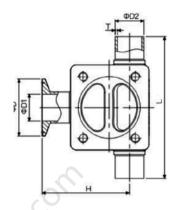
JOV-DHMU301-112

Modal	L	L1	L2	L3/weld	L3/clamp	L4	d	D	D1	D2	D3	Α	H/Open	H/Close
DN80x80	362	125	185	128.5	117.1	82	80	89	106	80	89	195	290	260
DN65x50	297	85	130	123.5	112.1	42	47.5	50.8	64	59.5	63.5	140	138	126
DN50x50	251	03	130	90.5	89.1	34	47.5	30.6	04	47.5	50.8	140	130	120
DN65x40	277			123.5	112.1	42				59.5	63.5			
DN50x40	231	72	110	90.5	89.1	34	34.8	38.1		47.5	50.8	114	122	110
DN40x40	207			78.5	77.1	31				34.8	38.1			
DN50x32	203			90.5	89.1	31				47.5	50.8			
DN40x32	179			78.5	77.1	28	28.5	31.8		34.8	38.1		108	97
DN32x32	158			68	66.6	25			50.5	28.5	31.8			
DN65x25	249	60	82	123.5	112.1	42				59.5	63.5	90		
DN50x25	203	00	02	90.5	89.1	34				47.5	50.8	90		
DN40x25	179			78.5	77.1	26	22.1	25.4		34.8	38.1		108	91
DN32x25	158			68	66.6	25		23.1		28.5	31.8			
DN25x25	149			63.5	62.1	24				22.1	25.4			
DN65x20	227	53	60	123.5	112.1	31				59.5	63.5	58	85	79
DN50x20	181	33	00	90.5	89.1	26				47.5	50.8	30	03	73
DN40x20	179	60	82	78.5	77.1	20	15.8	19.1	"25/50.5"	34.8	38.1	90	102	91
DN32x20	136	53	60	68	66.6	18	13.0	13.1	23/30.3	28.5	31.8	58	85	79
DN25x20	149	60	82	63.5	62.1	24				22.1	25.4	90	102	91
DN20x20	117	53	60	58.5	57.1	13.5				15.8	19.1	58	85	79

### **Pneumatic 3-Way T Type Diaphragm Valve**







#### **Technical Parameters**

ltem	Details
Morking Procesure	0-10bar, 145psi(EPDM)
Working Pressure	0-7bar,101psi(EPDM+PTFE)
Morking Tomporature	-40~130°C (EPDM)
Working Temperature	-40~150°C (EPDM+PTFE)
Actuator	Manual/Pneumatic
Body	CF3M(316L), 1.4435(316L)
Surface	Outside: Sand Blast
Surface	Inside Ra ≤ 0.375µm(SF4)
Connection End	Weld/Tri-Clamp
Connection End	DIN 3A BEP ASME

#### 3-Way Diaphragm Valve

D	D1	D2	D3	D4	Н	L
25.2	9.4	9.4	25.2	12.7	44.5	97.4
25.2	15.8	15.8	25.2	19.1	64.8	126.4
25.2	9.4	22.1	50.5	25.4	51.3	107.4
25.2	15.8	22.1	50.5	25.4	68.5	126.4
50.5	22.1	22.1	50.5	25,4	76.9	150.4
25.2	9.4	34.8	50.5	38.1	59.5	107.4
25.2	15.8	34.8	50.5	38.1	75.5	126.4
50.5	22.1	34.8	50.5	38.1	84	149.4
50.5	34.8	34.8	50.5	38.1	98.1	175.4
25.2	9.4	47.5	64	508	66.6	117.4
25.2	15.8	47.5	64	50.8	82.6	136.4
50.5	22.1	47.5	64	50.8	92	159.4
50.5	34.8	47.5	64	50.8	105.1	185.4
64	47.5	47.5	64	50.8	120.3	201.4
25.2	9.4	59.5	77.5	63.5	73.6	117.4
25.2	15.8	59.5	77.5	63.5	89.6	136.4
50.5	22.1	59.5	77.5	63.5	98.1	160.4
50.5	34.8	59.5	77.5	63.5	112.2	185.4

### Two welding combinations

#### Two main valve positioning of different welding modular

1)GMP Valve

GMP Valve (abbreviation for Good Manufacturing Practice) is mainly used in the vertical pipeline of high purity water or other distribution system water points, which can effectively reduce the dead angle of the pipeline.

There are two types of GMP designed valves: one is the zero dead angle valve with a 90-degree connected tube, and the other is the zero dead angle valve with additional valves connected. In the valve and valve connected structure, one valve is placed horizontally and maintains a certain selfemptying angle, and the other is a sampling port without bacteria breeding or infection due to cross process.

For this type of structure, the maximum diameter of the main valve, L valve and branch outlet can reach DN80 (3 ").

The following figure shows some possible GMP connection structures:

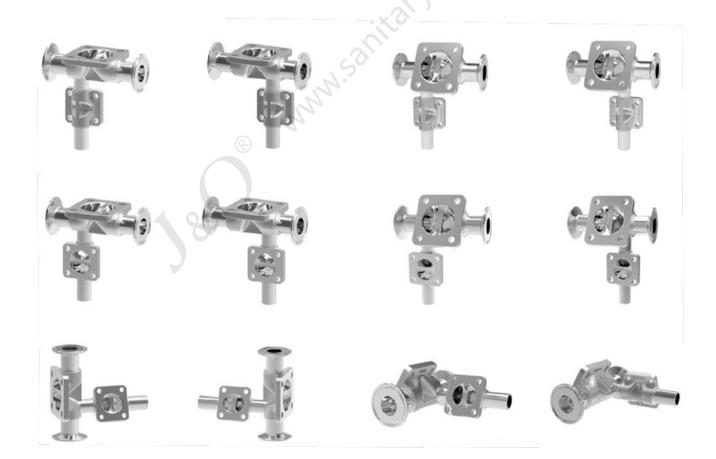
#### 2)SAP Valve

SAP valve (abbreviation of Sterile Access Port) is mainly used in horizontal pipeline system, where the main valve is placed horizontally and maintains a certain self-emptying angle, and the passage port is at the lowest discharge point of the main valve waterway.

SAP structure can be a combination of a main valve and a branch tube, or a combination of a main valve and a vertical or horizontal valve.

For this type of structure, the maximum diameter of the main valve, passage valve and branch tube can reach DN80 (3

The following figure shows some possible SAP connection structures:



#### \_\_\_\_ I&O®

#### **Tank Bottom Valve**

#### **Application Specifications**

The tank bottom valve is mainly used in industries with hygienic requirements such as pharmaceuticals, food, beverage, cosmetics etc.

Its internal surface is smooth without dead zone, preventing the retention of medium and avoiding potential process pollution.

The tank bottom valve has the same features and functions as the standard diaphragm valve, and uses the same valve components, such as actuator, diaphragm, etc. The tank bottom valve is usually welded to the tank bottom directly,but it can also be welded to the tank wall as a tank wall valve or a sampling valve.

The typical application of a tank bottom valve is to realize the functions of discharge, emptying, sampling, cleaning, disinfection, flushing of materials in the tank and the isolation from downstream processing.

#### **Product Features**

The body of the tank bottom valve is made of stainless steel by precision casting

Body material is stainless steel 1.4435/316L

Stainless steel forged or other alloy steel valve bodies are available

Zero dead angle

Optional extended manual leverr





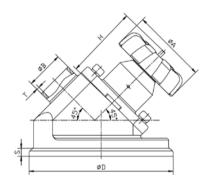
#### **Product Introduction**

As standard design, a tank bottom valve has only one outlet port.

Tank bottom valve with multiple functions can be provided, which can be applied in different fields, such as sampling, disinfection and multi-outlet structures. These products have been standardized.

The preferred installation way of the tank bottom valve is to weld it directly to the tank. This way greatly reduces the retention of medium, which is the most important standard of a tank bottom valve. However, if the tank bottom valve needs to be removed from the tank, flange connection or clamp connection can be selected.

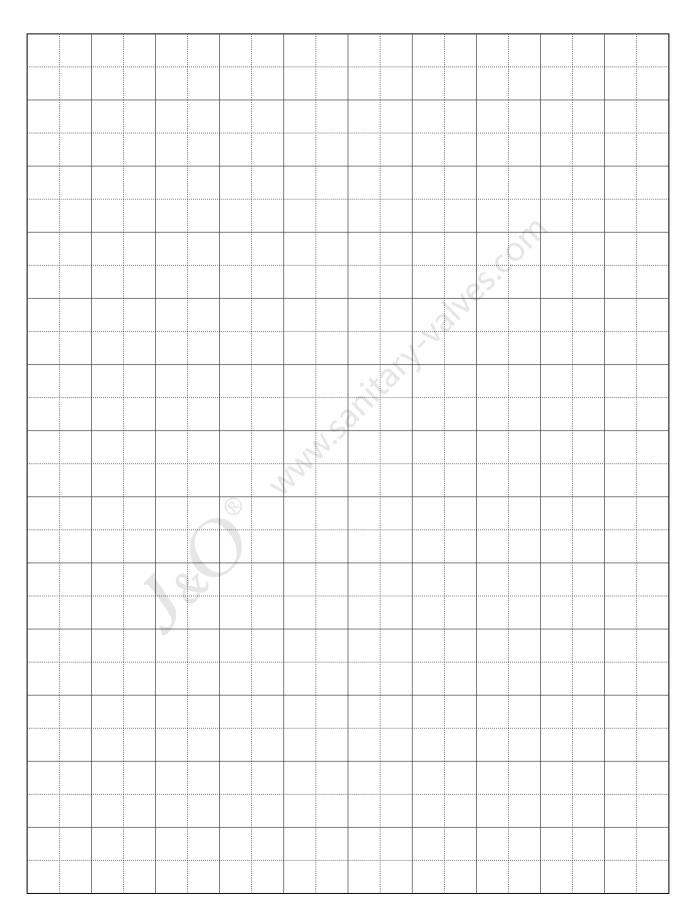
The outlet of the tank bottom valve is connected by butt welding or sanitary clamp.



JOV-DHTBM-11

NPS	DN	D	S	В	Т	Α	Н
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







Address: Binhai ETDZ, 5 Road, Longwan, Wenzhou, China. 325000

Tel: +86 577 8663 2750 Fax: +86 577 8663 2850

Mob./WhatsApp: +86 186 5778 5727

Site: www.sanitary-valves.com

Email: Info@jo-pv.com





With more than 15 years of market experiences, we have become the leading supplier service for pharmaceutical, chemical, food, Beverage and Lithium battery companies

Site Code V