

J&O®

J&O FLUID CONTROL CO., LIMITED

Hygienic Diaphragm Valve

J&O®

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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



WhatsApp Code

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, Petroleum and 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.

J&O[®]
J&O FLUID CONTROL CO., LIMITED

Certificate



Plant & Producing



Testing Machine



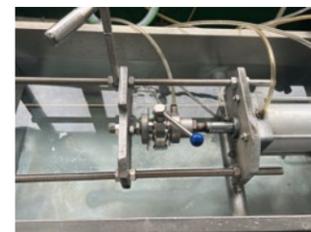
Actuator Testing



Helium Leak Detector



Pressure Test for Large Valve



Pressure Test for Small Valve

Diaphragm Valve



Hygienic Diaphragm Valve

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



Processing Technics

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 0.25µm.

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 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.

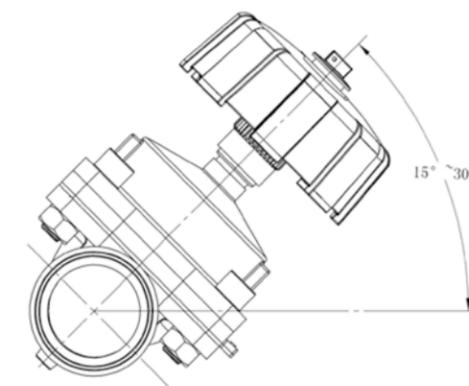
Diaphragm Fixed

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

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.

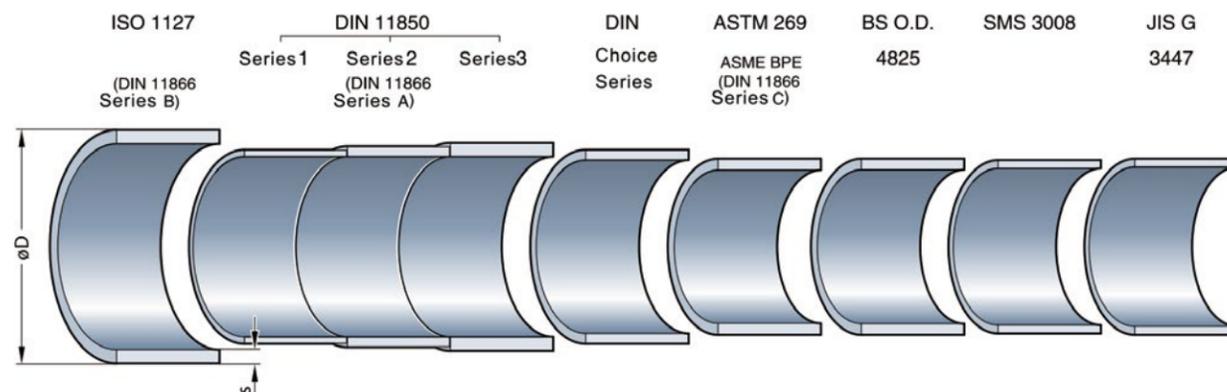
Body Type	Connection Size	Manufacturing Process
Two-way valve	10~80mm / 3/8" ~3" 10~80mm / 3/8" ~3"	Forging Casting
Multi-channel body	20~65mm / 3/4" ~2"	monoblock steel machining
Tank bottom valve	20~50mm / 3/4" ~2"	Casting

Chemical Composition Main Element Standard Manufacturing

	1.4435	316L ASME BPE
Element	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	1.00	1.00
Sulfur(max)	0.030	
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.



Pneumatic Diaphragm Valve with Positioner



Features

- Stainless steel housing
- Quick display and easy start
- Plentiful additional functions

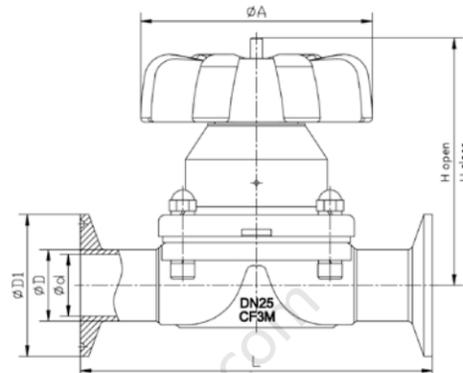


The intelligent valve positioner is specially designed for one-piece type pneumatic control valve, particularly suitable for angle seat valves and diaphragm valves. There are process control type and proportional control type.

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	Neutral gas, comply with the requirements of DIN ISO 8573-1
Particle size requirements	Class 5 (<40μm)
Particle density requirements	Class 5 (<10mg/m ³)
Pour point requirements	Class 3 (<-20°C)
Oil concentration requirements	Class 5 (<25mg/m ³)
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) M13x1.0 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 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



JOV-DHM-22

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 Pneumatic Tri-clamp Diaphragm Valve



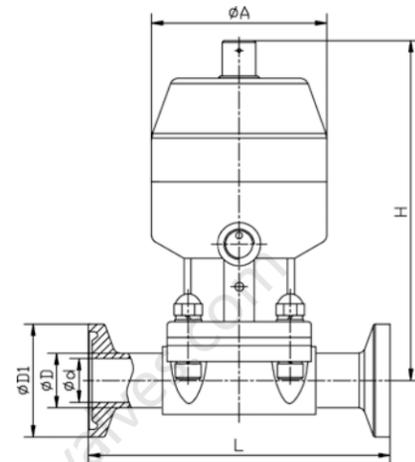
Product Features

- 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 multi-channel 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

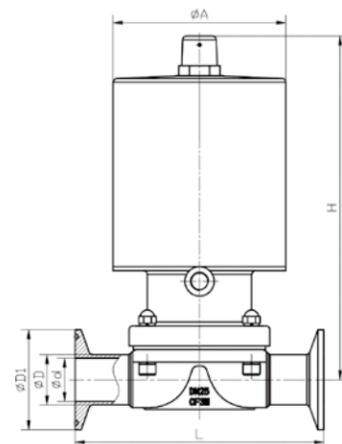
Operation	Pneumatic Normal Open, Pneumatic Normal Close, Double Acting	
Max Working Pressure	EPDM Diaphragm 10bar	PTFE Diaphragm 8bar
Max Working Temperature	150° C	
Pressure Supply	Pneumatic Normal Close 4.5~7 bar	Double Acting Pneumatic Normal Open 4~5 bar
Diaphragm Material	EPDM, PTFE	
Body Material	Forged Stainless Steel 1.4435/316L,ASME/BPE Casting Stainless Steel 1.4435/316L Other Alloy material	
Connections	Butt Weld	
Bonnet suitable for	Two Way Body Welded Body T Type Body	

Hygienic Pneumatic Tri-clamp Diaphragm Valve



JOV-DHPS-22

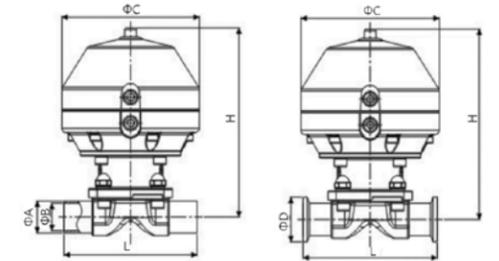
NPS	DN	L	A	H	d	D	D1	Actuator
1/8"	DN6	86	43	92	4	6.4	25.0	Φ35
1/4"	DN8	86	43	92	6	8.4	25.0	Φ35
3/8"	DN10	86	43	92	7.4	10	25.0	Φ35
1/2"	DN15	86	43	92	9.4	12.7	25.0	Φ35



JOV-DHPS-22

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

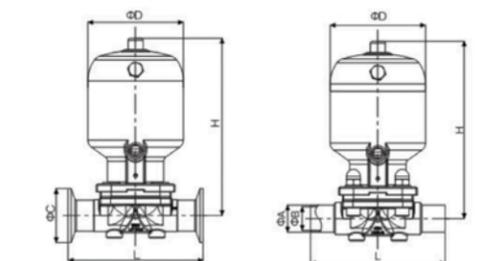
Pneumatic Diaphragm Valve



JOV-DHPPGM-11 JOV-DHPPGM-22

Pneumatic Diaphragm Valve with Plastic Actuator

Size	ΦB	ΦD	ΦL	H	ΦC	
DN10	3/8"	9.4	25.2	63.5	95	Φ44
DN15	1/2"	9.4	25.2	63.5	111	Φ58
DN20	3/4"	15.8	25.2	117	114	Φ58
DN25	1"	22.1	50.5	127	146	Φ89
DN32	1 1/4"	28.5	50.5	159	180	Φ112
DN40	1 1/2"	34.8	50.5	159	180	Φ112
DN50	2"	47.5	64	190	215	Φ138
DN65	2 1/2"	59.5	77.5	190	221	Φ138
DN80	3"	72.2	91	265	345	Φ168
DN100	4"	97.4	119	340	450	Φ198

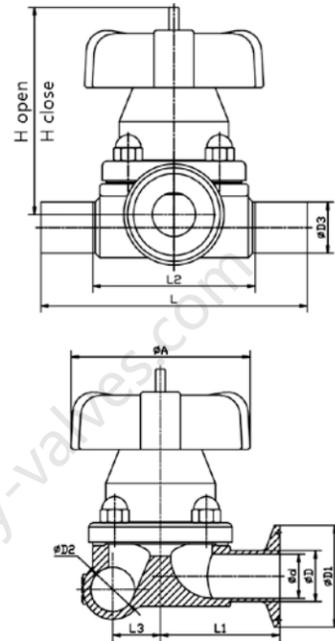


JOV-DHPS02-22 JOV-DHPS02-11

Pneumatic Diaphragm Valve with S.S Actuator

Size	ΦB	ΦD	ΦL	H	ΦC	
DN10	3/8"	9.4	25.2	63.5	100	Φ65
DN15	1/2"	9.4	25.2	63.5	110	Φ65
DN20	3/4"	15.8	25.2	117	130	Φ70
DN25	1"	22.1	50.5	127	175	Φ130
DN32	1 1/4"	28.5	50.5	159	215	Φ168
DN40	1 1/2"	34.8	50.5	159	220	Φ168
DN50	2"	47.5	64	190	240	Φ168
DN65	2 1/2"	59.5	77.5	190	250	Φ168
DN80	3"	72.2	91	265	320	Φ190
DN100	4"	97.4	119	340	350	Φ218

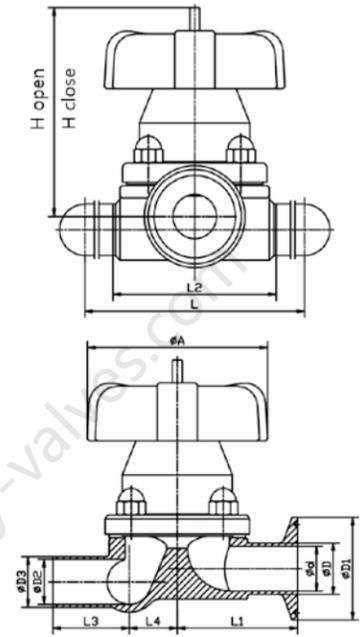
T Type Manual 3-way Diaphragm Valve



JOV-DHM3-112

Modal	L/weld	L/clamp	L1	L2	L3	d	D	D1	D2	D3	A	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	34				47.5				50.8				
DN65x40	190	167.2	72	110	42	34.8	38.1	50.5	59.5	63.5	114	122	110
DN50x40					34				47.5	50.8			
DN40x40	170	139.2	60	82	31	22.1	25.4	50.5	34.8	38.1	90	102	91
DN50x32	28				47.5				50.8				
DN40x32	25				34.8				38.1				
DN32x32	25				28.5				31.8				
DN65x25	24				59.5				63.5				
DN50x25	142	117.2	53	60	42	15.8	19.1	"25/50.5"	47.5	50.8	58	85	79
DN40x25					26				34.8	38.1			
DN32x25					25				28.5	31.8			
DN25x25					24				22.1	25.4			
DN65x20	140	139.2	60	82	31	22.1	25.4	50.5	59.5	63.5	90	102	91
DN50x20	26				47.5				50.8				
DN40x20	18				34.8				38.1				
DN32x20	18				28.5				31.8				
DN25x20	24				22.1				25.4				
DN20x20	120	117.2	53	60	13.5	15.8	19.1	58	85	79			

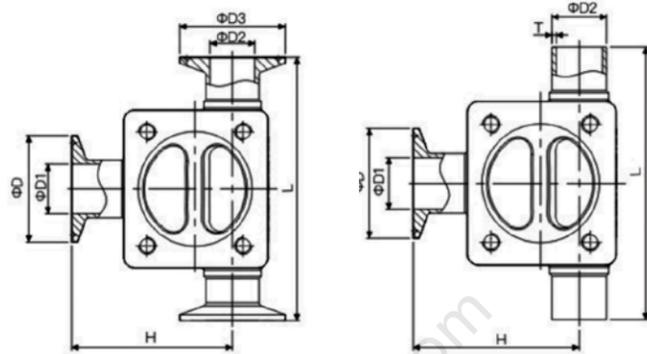
U Type Manual 3-way Diaphragm Valve



JOV-DHMU301-112

Modal	L	L1	L2	L3/weld	L3/clamp	L4	d	D	D1	D2	D3	A	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			90.5	89.1	34				47.5	50.8			
DN65x40	277	72	110	123.5	112.1	42	34.8	38.1	50.5	59.5	63.5	114	122	110
DN50x40	231			90.5	89.1	34				47.5	50.8			
DN40x40	207	60	82	78.5	77.1	31	22.1	25.4	50.5	34.8	38.1	90	108	97
DN50x32	203			90.5	89.1									
DN40x32	179			78.5	77.1									
DN32x32	158			68	66.6									
DN65x25	249			123.5	112.1									
DN50x25	203	90.5	89.1	34	47.5	50.8	22.1	25.4	50.5	34.8	38.1	108	91	
DN40x25	179	78.5	77.1											
DN32x25	158	68	66.6											
DN25x25	149	63.5	62.1											
DN65x20	227	53	60	123.5	112.1	31	15.8	19.1	"25/50.5"	59.5	63.5	58	85	79
DN50x20	181			90.5	89.1									
DN40x20	179	60	82	78.5	77.1	26	15.8	19.1	"25/50.5"	34.8	38.1	90	102	91
DN32x20	136	53	60	68	66.6	18								
DN25x20	149	60	82	63.5	62.1	24								
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

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

3-Way Diaphragm Valve

D	D1	D2	D3	D4	H	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	50.8	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

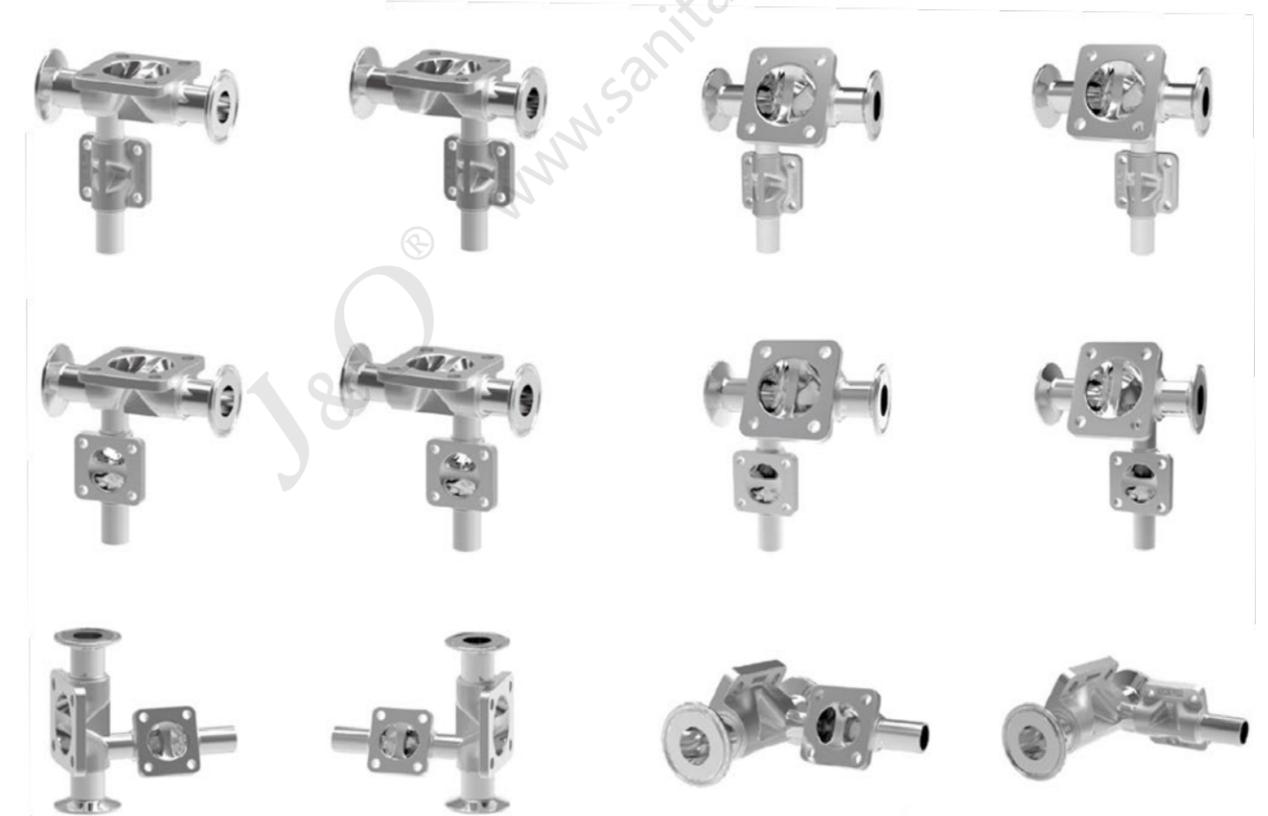
1)GMP Valve

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 self-emptying 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:

