



Adamant Valves design and manufacture a wide range of stainless steel sanitary valves and fittings such as sanitary butterfly valves, sanitary ball valves, sanitary check valves, etc.

### **Material Selection**

1.4435-BN2(316L) Fe<0.5% Forged ASME BPE 316L ASTM 304L 1.4301 ASTM 316L 1.4404



carbon, max 0.035 1600-18.00 chromium 2.00 manganese, max molybdenum 2.00-3.00 10.00-15.00 nickel 0.045 phosphorus, max silicon, max 1.00 0.005-0.017 sulfur

### Honor and Certification







### Surface Treatment

For high clean piping system, roughness of surface is a crucial technical index.



Surface finish: machined, Ra 1.2µm



Surface finish: machined, Ra 0.8µm



Surface finish: fine-machined and grinded, Ra 0.4µm



Surface finish: fine-machined and grinded, Ra 0.2µm



## **SOME OF OUR LEADING PRODUCTS**



# SUPPLYING HIGH QUALITY SANITARY VALVES AND FITTINGS FOR VARIOUS CUSTOMERS AROUND THE GLOBE

Adamant Valves supplies high quality valves to meet our customers ever-changing requirements.

Our products are mainly used in:

Food-processing

Beverage

Dairy

Brewing

Winery

Water treatment

Pharmaceutical

Fine chemicals industries

For more information, contact us via Email at sales@adamantvalves.com or via telephone at

(949) 407-8897



# SANITARY VALVES APPLCATIONS







**BIOPHARMACEUTICAL** 

**DAIRY** 





**FOOD** 

**BEVERAGE** 







**BREWING** 



FINE CHEMICAL



# SANITARY BUTTERFLY VALVES





Multi-position stainless steel handle+ lock

SIZE: 1"-4"



Multi-position stainless steel handle butterfly valve

SIZE:

1"-6", DN25-DN150



Pull handle butterfly valve

SIZE:

1"-12", DN25-DN300



Multi-position plastic handle butterfly valve

SIZE:

1"-4", DN25-DN100



Three-way butterfly valve

SIZE:

1"-4", DN25-DN100



Manual butterfly valve +position sensor

SIZE:

1"-6", DN25-DN150



# SANITARY BUTTERFLY VALVES





Pneumatic butterfly valve (basic type)

Size: 1"-12", DN25-DN300



Pneumatic butterfly valve + Positioner

Analog signal Input:0/4-20mA,0-5/10V Output:0/4-20mA,0-5/10V DEVICE NET BUS Power supply: DC 24V



Pneumatic butterfly valve +position sensor

Sensor: PNP NPN



Pneumatic butterfly valve + C-TOP

Terminal connection AS – I BUS DEVICE NET Power supply: DC 24V



# SANITARY BUTTERFLY VALVES





# Electric butterfly valve

AC 220/110V DC 24V

Functions: on/off, intelligent, position sensor





# Pneumatic butterfly valve + MINIC-TOP

SIZE: 1"-2"

Pneumatic 3PC butterfly valve + sensor









NO.VSB011	Pull handle			
SI	ZE	L1	L2	В
DN10-DN40	0.5"-1.5"	126	20.2	8
DN50	2"	133	22.2	10
DN65	2.5"-3"	144	22.2	10
DN80-DN100	3.5"-4"	160	22.2	11
DN125-DN150	5"-6"	220	30.2	14
DN200-DN300	8"-12"	284	30.2	14

SIZ	Œ	L1	L2	
DN10-DN40	0.5"-1.5"	126	20.2	8
DN50	2"	133	22.2	10
DN65	2.5"-3"	144	22.2	10
DN80-DN100	3.5"-4"	160	22.2	11
DN125-DN150	5"-6"	220	30.2	14
DN200-DN300	8"-12"	284	30.2	14

NO.VSB02 Pull handle



# SANITARY BALL VALVES





1"-4", DN25-100



It is widely used in beverage, brewing, oil refinery, cosmetic, chemical industries.

### **Design and Features**

- ◆Free of maintenances
- ◆Compact and portable
- ◆ Small operating torque
- ◆ Gasket complies with PTFE FDA 177.2600
- ◆ Hand lever can be installed on the side of the valve body, no matter of the flow direction.
- ◆Connection ends: thread, clamp ,weld, flange, DIN, SMS, RJT,
- ◆It can be installed with pneumatic and electric actuators.
- ◆The part contacted with media is AISI 304/316L
- ◆Other parts AISI 304
- ◆ Certifictions: PED, 97/23/EC

### **Options**

- ◆Ball: T port, L port
- ◆With cleaning and drainage port
- ◆ Material: AISI 304, 316L





# SANITARY BALL VALVES



Clamp Non-retention Ball Valve



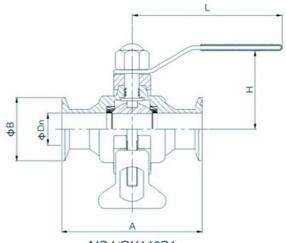


### **Applications**

Overall valve body design prevents the medium from retaining in the valve after flowing through the body. This kind of ball valve is applied to pharmacy and biotechnology industries.

### **Design and Features**

- ◆ Valve bodes Combined with clamp connection
- ◆ Easily disassemble without special tools
- ◆ Small Operating torque
- ◆Gasket complies with FDA 177.2600
- ◆ Connection:clamp,weld,thread,DIN,SMS,ISO,IDF,BPE,RJT
- ◆Valve body can be replaced in any connections. And Valve length will not change



NO.VQK110S1

SIZE			Н		Dn
DN15	90	105	65	34.0	15
DN20	100	105	65	34.0	19
DN25	110	105	70	50.5	25
DN32	120	130	80	50.5	31
DN40	140	150	80	50.5	37
DN50	164	160	85	64.0	49
DN65	180	180	110	91.0	66

SIZE			н		Dn
Φ19	90	105	65	25.4	16.0
Φ25	110	105	70	50.5	22.4
Ф32	120	105	80	50.5	28.8
Ф38	140	130	80	50.5	35.1
Φ51	164	150	85	64.0	47.8
Φ57	170	160	110	77.5	53.0
Φ63	180	180	110	77.5	59.5



# SANITARY BALL VALVES



1"-4", DN25-DN100 Pneumatic ball valve+ Positioner Flow regulating valve Input/output: 0/4-20mA 1"-4", DN25-DN100



Pneumatic Valve + MINI-C-TOP SIZE1/2"-1", DN10-DN25 Material: 304 / 316L Feedback Output: 0 / 4-20mA / DC24V Bus: AS-I BUS



Horizontal pneumatic ball valve 1/2 "-4", DN10-DN100 Connection: welding, clamp, thread, etc.



Pneumatic Valve + C-TOP SIZE1/2"-1", DN10-DN25 Material: 304 / 316L Feedback Output: 0 / 4-20mA / DC24V Bus: AS-I BUS



Pneumatic ball valve+ positioner Flow regulating valve input/output: 0/4-20mA 1"-4", DN25-DN100



Electric valve
Switch type:
Output electrical signal, valve
position lights in place
Modulating
Input: 4–20mA
Feedback Output: electrical
Power: DC24V AC110V / 220V
Explosion levels: EXDII BT4
(option)



# SANITARY CHECK VALVES



### **Applications**

- ◆ Check valve is a valve that prevents the fluid from flowing back and ensures to flow in only one direction.
- It can be used to prevent the flow less from returning avoid pipe – hammering.
- ◆It is used in the food processing, beverages, wine, oil, cosmetics, pharmaceutical and chemical industries.

### Design and features

- ◆Sizes DN25/1" to DN100/4"
- ◆Easy disassemble
- ◆Small size construction
- ◆DIN11851 connections (standard)

### Operating principle

◆The valve opens when the pressure of the fluid exceeds the pressure to spring, When the two pressures are equalised, the valve closes. A stronger counter –pressure also makes the valve close.









# SANITARY CHECK VALVES

### Materials

- ◆ Casing / shaft AISI 316L/AISI 304
- ◆Spring AISI 301
- ◆EPDM Seal according to FDA 177.2600
- ◆Surface finishing Ra≤0.8 µ m

### **Technical specifications**

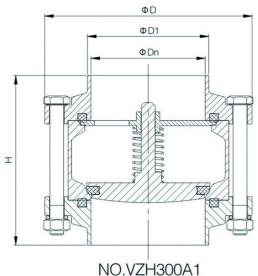
- ◆Max. Pressure 10 bar
- ◆Opening pressure: 0.3 bar (DN25)

0.2 bar (DN32/40)

0.1 bar (DN50/100)

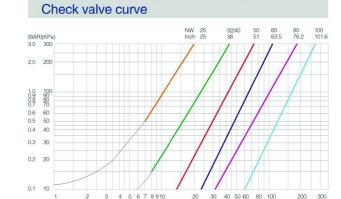
◆Working temperature: -10°Cto+120°C(EPDM)





### **Options**

- ◆Seals in NBR, FPM(Viton) or PTFE, All of them according to FDA 177.2600
- ◆Connections: weld, thread, clamp, DIN SMS, RJT, IDF, ISO, 3A



### Three piece check valves

SIZE		D1	Dn	D
DN40	83	40	37	90
DN50	88	52	49	102
DN65	98	70	66	120
DN80	108	85	81	142
DN100	116	104	100	168
DN125	156	129	125	210
DN150	166	154	150	240
DN200	200	204	200	300

INCH				
SIZE	н	D1	Dn	D
11/2"	83	38.1	35.1	90
2"	88	50.8	47.8	102
21/2"	98	63.5	59.5	120
3"	108	76.2	72.2	142
31/2"	108	89	85	142
4"	116	101.6	97.6	168
5*	156	127	122.8	210
6"	166	152.4	146.8	240
8"	200	203.2	197.6	300



# SANITARY DIAPHRAGM VALVES



### **Applications**

- Diaphragm valves, manually or pneumatically operated, and specifically designed for use on hygiene and aseptic processes in the pharmaceutical industries.
- ◆The valve is excellent for flow control as well as for open/ close duties.
- ◆The diaphragm valves are better in feature 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 rare during application of flow control.



# SANITARY DIAPHRAGM VALVES









### Mini-type pneumatic diaphragm valve

- ◆SIZE: 1/4 "- 3/4", DN6 DN15
- ◆Max temperature: 30 to 150 °C (depending on diaphragm) (stainless steel actuator)
- ◆Max temperature: 30 to 130 °C (depending on diaphragm) (plastic actuator)
- Max pressure: one way (DELTA P = 100%)
   Normally close EPDM 8 bar, PTFE 6 bar (option)
   Normally close EPDM 6 bar, PTFE 4.5 bar (standard)
   Normally open and double action EPDM 8 bar, PTFE 6 bar
- ◆ Assemble different actuators can meet the higher pressure rating
- ◆Forging body: 1.4404/316 L ASME BPE/1.4435 Nb2 Fe < 0.5%
- ◆Casting body: 1.4404/316 L
- ◆Connection: welding, clamp, flange, thread
- Pneumatic actuator suitable for body: straight, tee, multichannel body, welding combination valve, tank bottom valve





# SANITARY SAFETY VALVES





Pressure regulating ruler



### **Applications**

- ◆The safety valve is used to protecting pipe, pump from over pressure
- ◆Sanitary and safe design is to prevent operation danger and equipment breakdown due to pressure.
- With sanitary design stainless steel, the valve is the best choice for protection equipments in diary,food, beverage, pharmacy and fine chemical industries.

### Operating principles

- ◆The valve is normally closed.
- ◆ Pressure is set by spring with pressure nut.
- •When the pressure in the pipe exceeds to the specify pressure, the valve open automatically to make the liquid flow in order to reduce pressure.
- ◆The valve can be with handle to realize partial open. When the handle remains open on the spot, liquid can flow through the valve.

### **Options**

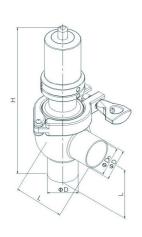
- ◆Connections: DIN, IDF, RJT, 3A, SMS, Clamp, Flange, Weld, Thread
- ◆Material of gasket: EPDM, NBR, FPM
- ◆ Pressure range (Calibrating spring)
- ◆The assembly with handle can open the valve partially. When CIP (use with), the liquid flowed through.

### **Technical Specifications**

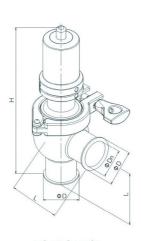
- ◆Max. Temperature: 121°C(EPDM)/250°F
- ◆Max. Operating pressure: Spring adjustable(0-3bar / 0-6bar/ 0-10bar / 0-43, 5PSI/0-87PSI/0-145PSI)



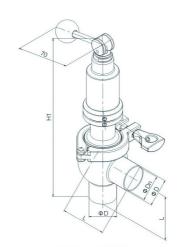
# SANITARY SAFETY VALVES



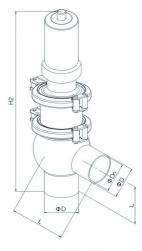




NO.VAQ110S1



NO.VAQ100S2



NO.VAQ100Q1



Safety valve (Standard)

Size: DN25-DN100,1"-4" Material: 304, 316L



Manual quick-release safety valve

Manually open when cleaning or in emergency



Four-way Safety valve

No dead corner, no stagnation



Pneumatic quick-release safety Valve

Pneumatically open when cleaning or in emergency

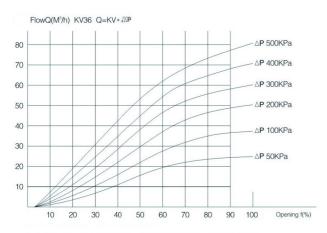


# SANITARY CONSTANT PRESSURE VALVES



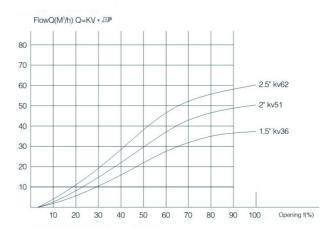
### Standard design

- ◆Contact part of the material: 1.4404/316L, other parts: 304
- ◆Seal: EPDM + PTFE (FDA177.2600)
- ullet Connections: clamp, thread, welding, ISO, DIN, SMS, RJT
- ullet Surface: sand blast outside, mirror finished inside (Ra  $\leq$  0.6  $\mu$  m)
- ◆Working temperature: -10 to 150 °C
- ◆Working pressure: 8 bar
- ◆The max working pressure: 12 bar Supercheuger(option)



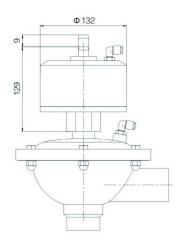
### **Applications**

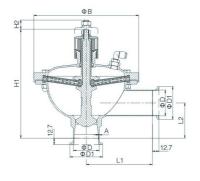
- ◆ V type (inlet constant pressure); maintain constant pressure at the valve inlet. Such design is specially applied at the back of heat-exchanger. It is used as safety valve.
- ◆ A type (Outlet constant pressure): maintain constant pressure at the outlet. Such design is used as the front of filling machine and bottle filling machine.

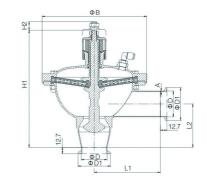




# SANITARY CONSTANT PRESSURE VALVES







With superchanger NO.VHY300Q1

V Type(inlet constant pressure) NO.VHY100Q1

A Type(Outlet constant pressure)
NO.VHY200Q1

### Constant pressure valve dimension

SIZ	ΖE		D1				L2				
	DN40	40	E0 E	1.5	206	130	62	215	18		
	1.5"	38.1	50.5	50.5 1.5	206	130	62	215	18		
V Type	DN50	52	64	- 64 1.5	206	130	69	215	18		
	2"	50.8			200	130	03	213	16		
	2.5"	63.5	77.5	2	206	130	69	215	18		
	DN40	40	50.5	FO.F. 1.F.	50.5	50.5 1.5	206	130	78	230	18
	1.5"	38.1	50.5	1.5	206	130	75	230	10		
A Type	DN50	52	- 64	1.5	206	130	85	230	18		
	2"	50.8	04	64 1.5	200	130	30 63	230	10		
	2.5"	63.5	77.5	2	206	130	85	230	18		

### Operating principles

- ◆Constant pressure valve operated by compressed air, automatically run without sensor on piping system or other auxiliary instruments, and only one compressed air pressure regulating valve that maintains pressure stability can be realized the normal work of the valve.
- Diaphragm slice and valve rod can be fit to transport product any pressure changes to make a quick response, and the corresponding change the valve stem position, in order to continue to keep the preset pressure value.
- ◆Constant pressure valve V: inlet pressure constant, in conveying medium pressure higher than the set pressure under the condition of the valve opens, the transmission medium pressure decreases flow has become, conveying medium pressure is insufficient valve closed. (see chart 1)
- ◆ Constant pressure valve A type: outlet pressure constant, when transmitting medium pressure higher than the set pressure under the condition of the valve will be closed, conveying medium pressure decreases flow changes, conveying medium pressure is insufficient valve opens. (see chart 2)

Note: Please specify inlet/outlet constant pressure when you are ordering the constant pressure valve.





Note: Figure 1 input constant pressure designto keep constant pressure inlet pipe

Figure 2 outlet constant pressure design, of outlet pipeline pressure constant



# SANITARY PRESSURE RELIEF VALVES





### **Applications**

- Medium—controlled pressure reducers are simple control valves offering accurate control while being easy to install and maintain. They control the pressure downstream of the valve without requiring pneumatic or electrical control elements.
- ◆DONJOY pressure reducing valve is a twin seat diaphragm—controlled spring—loaded proportional control valve which is primarily used for hygienic applications in the food processing and pharmaceutical industries. A PTFE protective foil renders the diaphragm physiologically safe and steam proof up to 180℃. The valve does not require an external pilot line.
- ◆This valve is manufactured from deep-drawn stainless steel featuring excellent corrosion resistance. It contains virtually no dead pockets and is suitable for useing in CIP and SIP systems. The angled design allows complete draining.



- ◆The spring module comprising spring cap, spring, adjusting screw, diaphragm and internal components, is connected to the valve body only by means of a clamp ring and two bolts. Changing the diaphragm or the complete spring assembly for a different control pressure range is extremely simple and does not call for special tools. Also applies to servicing and maintenance.
- ◆The outlet pressure to be controlled is balanced across the control unit by the force of the valve spring (set pressure). As the outlet pressure rises above the pressure set using the adjusting screw, the valve cone moves towards the seat and the volume of medium is reduced. As the outlet pressure drops, the valve control orifice increases; when the pipeline is depressurised, the valve is open. Rotating the adjusting screw clockwise increases the outlet pressure.

### **Technical Specifications**

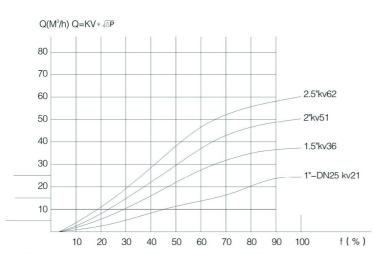
SIZE:1 "-3", DN25-DN80 Nominal pressure: PN2.5-10

Inlet pressure: 8bar

The outlet pressure: 0.3–5bar
The value of KV: 4–70m3/h
The highest temperature: 180℃
The use of steam, gas, liquid medium:
Connection: clamp, screw thread, flange, welding

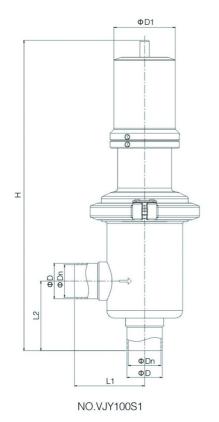


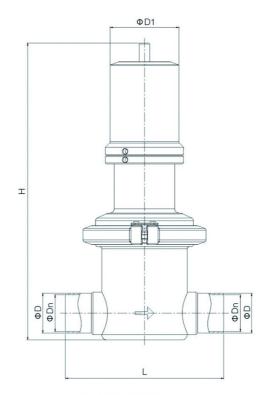
# SANITARY PRESSURE RELIEF VALVES





Note:above diagram suit for the medium,water(20°C),measuring,according to VDI 2173





NO.VJY200S1

### L-type reducing valve

SIZE	D	Dn	D1	н	L1	L2
1"	Φ25.4	Ф22.4	Φ66	316	76	70
1.5"	Ф38.1	Ф35.1	Φ66	334	76	75
2"	Φ50.8	Φ47.8	Φ66	352	89	80

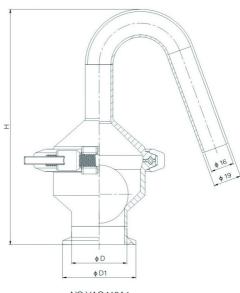
### S-type reducing valve

SIZE	D	Dn	D1		L
1"	Φ25.4	Ф 22.4	Φ66	265	152
1.5"	Ф38.1	Ф35.1	Φ66	285	152
2"	Φ50.8	Ф 47.8	Φ66	310	178



# SANITARY AIR RELEASE VALVES





NO.VAQ410A1

SIZE	D	D1	Н
1"	25.4	50.5	162
1.5"	38.1	50.5	162

### Standard design

The valve body is composed of two parts and assembled by a clamp. The lower body has a welding cube.

### Technical data

- ◆Max.product pressure: 1000kPa/145psi(10bar).
- $\bullet$  Max.temperature: 90° C/194° F(because of the plastic ball).
- ◆Density of ball: 0.906kg/dm3

### **Options**

Alternative elastomers:

- NBR (Buna N)
- FPM(SFY)

Polypropylene(PP)

### Materials

Body: Stainless steel AlSI304 Ball: Polypropylene(PP) Seal ring: EPDM

### **Application**

Air Release valve is a reliable, automatic air—relief valve which is installed vertically on the top of a pipeline or container or before the inlet of removal a pump, where the releasing air is required. Here below are two examples of pplications.

### Example 1:

Air cavity is formed due to the installation of the pipeline, and thus need to release air. In this case the valve is installed at the top of the pipe.

### Example 2:

Discharge air at inside of the pipeline of the pump. When the pump opened the air will be automatically discharged and forming a vaccum. In order to avoid the air mixed with products and the apperance of cavitation. In this case the valve is installed in front of the pump, on top of the inlet pipe.

### Working principle

Air Release valve is a double—seat valve with a freely movable plastic ball. The ball, which is lighter than water, According the conditions of pressure to close the upper or lower valve seat.



# SANITARY AIR RELEASE VALVES





### **Application**

This valve used in pressure vessel or pipe system, the air release valve has two functions:

- when pressure is higher than the set pressure (standard 1 bar) release air, Otherwise is closed;
- when the pipe system in vacuum (standard 0.9 bar) valve will automatically open. which is to ensure the equipment and related instrument security, at the same time it can meet various production process demand. This valve with stainless steel materials, hygienic design, applied to all kinds of food processing, drink, and pharmaceutical and other industrial fields.

DIN									
SIZE	Dn	D1	D2						
DN25	25	50.5	62	72	95.5				
DN40	37	50.5	62	72	95.5				
DN50	49	64	62	72	95.5				

INCH					
SIZE	Dn	D1	D2		
1"	22.4	50.5	62	72	95.5
1.5"	35.1	50.5	62	72	95.5
2"	47.8	64	62	72	95.5

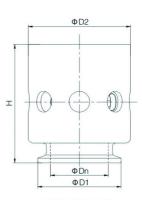
### **Technical specifications**

- ◆Size: 1 "-2", DN25-DN50
- ◆Connection: Clamp, welding, thread, DIN, SMS, IDF, ISO
- ◆material: ASTM 304/1.4301, 316L1. 4404
- ◆Gasket: EPDM FPM
- ♦pressure: 0.5..... 2 bar
- ◆vacuum: 0.3..... 0.9 bar
- ◆temperature: -10°C to 130°C



	E
	,
ΦDn ΦD1	

NO.VAQ510A1



NO.VAQ310A1



# SANITARY SAMPLING VALVES



### Operating principles

- ◆The aseptic sampling valve is designed for sterilization before and after each sampling.
- ◆Open: Sampling—The manual valve is opened by rotating the handle(adjustable valve) or by activating the lever(on/off valve). The stem and the membrane are then retracted, allowing liquid to pass.
- ◆ Closed: Sterilizing—The built—in spring closes the valve and keeps the channel open between the hoses though reverse process in order to sterilize. If using by steam, a small pressure relief valve(optional) on the outlet is recommended.
- ◆ Standard Design: the aseptic sampling valve consists of three parts, a valve body, a handle and a membrane. The rubber membrane is placed on the stem of the valve and works as a stretchable plug.
- ◆Connection: Thread, pipe welding, tank welding, Clamp.
- ◆ Handle: (1) Turning handle (2) removable key.
- ◆ Application: The aseptic sampling valve is applied to beer, milk, beverage, fruit juice, pharmacy industries tec.

### Material

◆ Valve body: AISI 316L◆ Handle: AISI 304◆ Membrane: EPDM PTFE

### Technical specification

Max. Temperature: 130°C(EPDM)
Max. Temperature: 150°C(PTFE)
Max. Working pressure: 600kpa(6bar)



# SANITARY SAMPLING VALVES







Sample valve+tank connector



Sample valve+protective sleeve

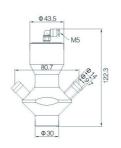


Pneumatic aseptic sampling valve

### Installation dimension

Pneumatic sampling valve





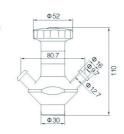
Pneumatic aseptic sampling valve NO.VQY100Q1

Features:

Sampling valve automatically closed after sampling

### Automatic return type sampling valve





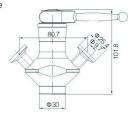
Manual aseptic sampling valve NO.VQY100S1

Features:

Automatic reset after sampling

### Turning handle type sampling valve





Manual aseptic sampling valve NO.VQY100S2

### Features:

This type can be removed after each sampling to avoid accident open.

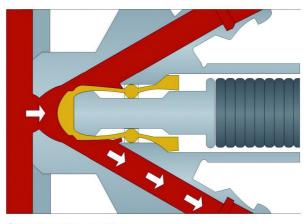


Lock handle sample valve

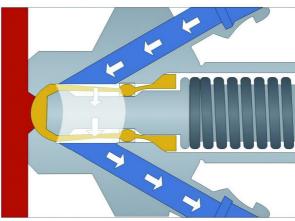


Auto reset sample valve

### Operating principles



Open the valve, sampling



Close the valve, sterilizing



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