Perfect Valves For The World !

ESG®

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ESG Corporate Website

ESG Official Wechat

2025 English edition

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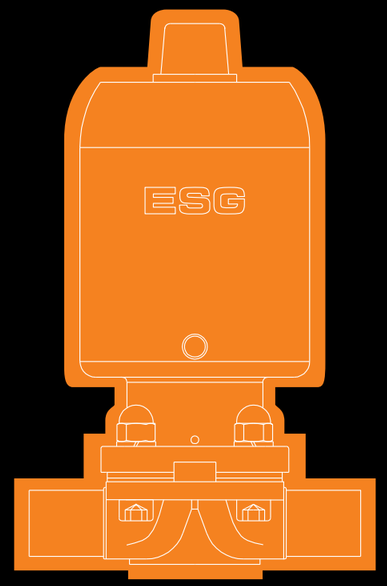


QINGDAO ELITE MACHINERY MANUFACTURE CO., LTD.

INDUSTRIAL FLOW CONTROL EXPERT

Elite | **S**ervice | **G**lobal

ESG®

Perfect Valves For The World !

Be the industry benchmark and create a century-old enterprise

Qingdao Elite Machinery Manufacturing Co., Ltd. (hereinafter referred to as "ESG") is a high–tech enterprise that integrates the research and development, production, and sales of valves. The company pays closely attention on customer needs and is committed to becoming a leader in fluid process control system solutions.

Since its establishment in 2001, ESG has obtained over 130 patents, including 16 invention patents. Various mainstream valve series products such as angle seat valves, shuttle valves, diaphragm valves, butterfly valves, ball valves, drain valves, and membrane plug valves have been widely praised by customers. Valve products are exported to 82 countries, covering 19 key industries such as nuclear industry, new energy, medicine, food and beverage, rubber tires, and 9 Fortune 500 companies.

Fortune Global 500 Partners **9+**

Industries Served **19+**

Countries ESG Registered **34+**

Countrnes Covered **82+**

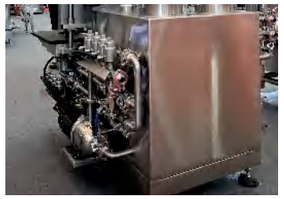
Patents **130+**

Number Of Employees **300+**

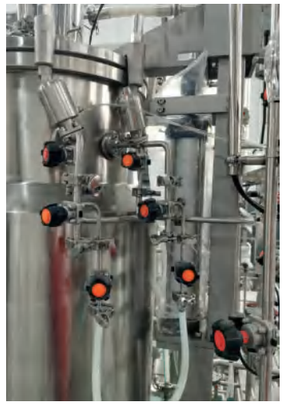
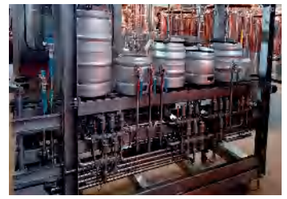
Pharmaceutical/Food and Beverage Industries

With the rapid transformation of China's pharmaceutical, food and beverage industries and in combination with the requirements of industrial intelligent manufacturing, ESG has fully utilized its over 20 years of rich manufacturing experience and professional skills in valve products. It has continuously innovated cutting–edge technologies and optimized product solutions, developed a number of standard valve products applicable to the main and auxiliary processes in the pharmaceutical and food and beverage fields, and can provide customized services for special needs, offering systematic solutions for the industries. Currently, ESG's valve products are widely used in different fields such as biopharmaceutical, food processing, beer and beverage, filling, semiconductor, microelectronics, ultra–pure chemicals, and chemical pharmaceuticals.










ESG®

ESG has served customers in 82+ counstries and regions

ESG
Qingdao Elite Machinery Manu
Qingdao

Product Catalog

Two-way diaphragm valve

P08-P18

T-Shape/U-Shape Diaphragm Valve

P19-P22

Tank Bottom Diaphragm Valve

P23-P24

Multi-Channel Diaphragm Valve

P25-P27

Combination Welded Diaphragm Valve

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Sampling Valve

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Angle Seat Valve

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Proportional Control Angle Seat Valve

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Multi-channel Valve

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Filling Valve

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Strainer

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Butterfly Valve

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Ball Valve

P103-P110

Steam Trap

P111-P118

Check Valve

P119-P122

Control Accessory

P123-P127

ESG®

Diaphragm Valve

Sanitary valves feature high cleanliness and low residue, and are widely used in fields such as pharmaceutical, beverage, food and fine chemical fluid control, with the characteristics of high safety and high reliability. The diaphragms used in the products comply with the safety standards stipulated by authoritative organizations like the FDA and USP for the pharmaceutical and food industries, so as to meet various requirements and conditions of customers and use high–quality products to adapt to the demands of the gradually developing new technology market.

Application Industry

Pharmaceutical, food and beverages, cosmetics, brewing, chemicals, etc.




Two-Way Diaphragm Valve

The ESG series of sanitary diaphragm valves adopts a modular design. You can choose different valve bodies, diaphragms and actuators according to your needs.

Control Accessory


Mechanical Override


Proximity Switch


Position Indicator


Intelligent Positioner


Two-pieceIntelligent Positioner

Actuator


Pneumatic Actuator


Manual Actuator

Diaphragm


Double Layer


Single Layer

Valve Body


Two-Way Vavle


T-Shape Valve


Tank Bottom Valve


Tank Bottom Combination Valve


Combination Valve


i-body Vavle


U-Shape Diaphragm Valve with Sampling

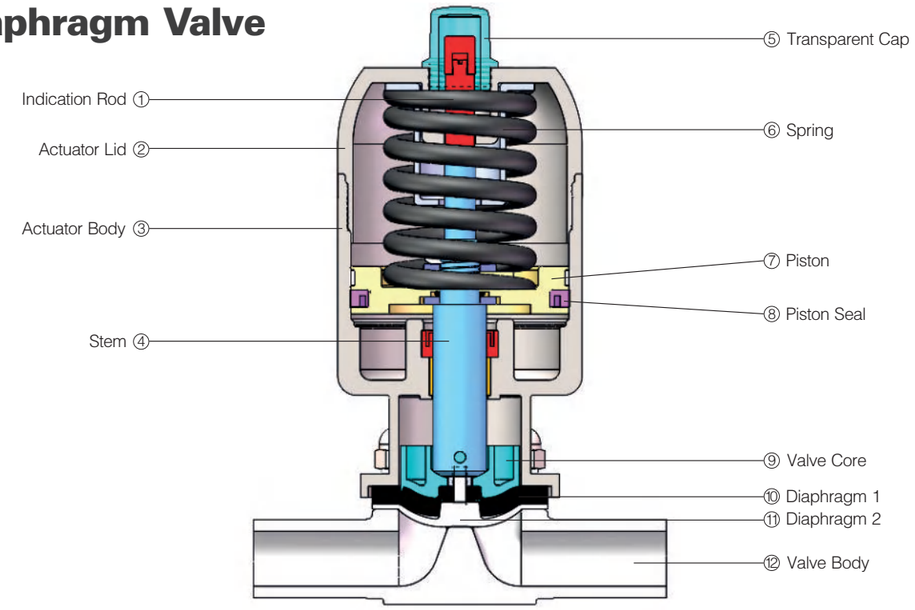

Multi-port Valve Block


Water Machine System Valve Block


Chromatography System Valve Block

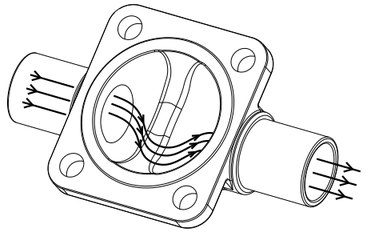
ESG®

Diaphragm Valve



Technical Specification

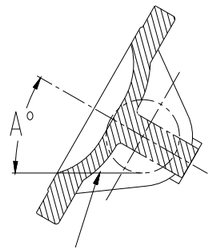
- Material: (Body) Investment casting CF3M, Forged F316L (Customized special materials)
  (Pneumatic) Actuator + Valve seat CF8; (Manual) Valve seat CF8
- Internal surface: Ra≤0.4 μ m, mechanically polished (Electro–polishing optional)
- Diaphragm material: EPDM + PTFE (double–layer diaphragm),
  EPDM (Single–layer diaphragm)
- Operating pressure: 0–10bar (0–145psi)
- Fluid temperature: –10℃ — 130℃ (sterilization at 150℃ for 60mins)
- Control pressure(pneumatic): 4.5–7bar (65–102psi)



Installation Angle(±1°)

Size	ASME BPE	SMS3008	JIS-G3447	1127/ DIN 11866-B	11850-0	11850-1/2/3 DIN 11866-A
	A	A	A	A	A	A
DN8	45.5	/	/	/	/	/
DN10	22.2	/	/	/	/	/
DN15	28	/	/	18.5	22.3	23
DN20	23	/	/	26	31	30.5
DN25	25	27	25.3	16	20.5	20
DN40	25	23.5	23.2	15	20.5	20
DN50	19.5	20	20.5	13.5	18	17.5
DN65	9.5	/	/	/	/	/

1.For all angles during installation, simply round down by discarding the decimal part.
2.The tolerance for the installation angle is –2° .



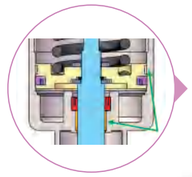
The optimal angle is when the tangent line between one end of the Weir and the inner hole of the pipeline is horizontal.

Typical Applications

Fermentation tank, Preparation vessel, Filling machine, Sterilizing equipment, Aseptic fluid transfer, CIP/SIP, etc.

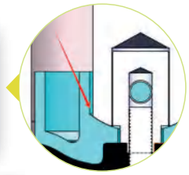



Two-Way Diaphragm Valve



01
Patented valve stem double guide ring structure, ensuring more stable operation.

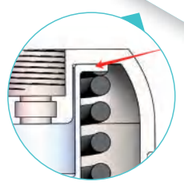
02
The concave connection of stem and valve core enables tighter sealing.



03
Patented dedicated spring base, convenient for maintenance and easier for customers to disassemble.

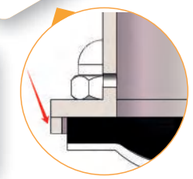
Advantages

04
Anti-extrusion design to guarantee the performance of the diaphragm, prevent damage and extend its service life.



05
3.1 certificates for free.

06
Sealing diaphragm is independently developed and molded by pressurizing powdered PTFE.



Advantages

Double-Layer
The PTFE + EPDM double-layer diaphragm is a high-standard diaphragm form used in sanitary diaphragm valves internationally. The PTFE diaphragm is a product independently developed by ESG. It adopts imported raw materials and is processed and molded by using high-temperature compression molding technology. It is widely used in fields such as blood products, vaccines, biopharmaceuticals, injections, aseptic production, fermentation, water for injection supply and distribution loops.
The EPDM diaphragm on the double-layer not only plays a role in protecting the PTFE diaphragm that contacts the product but also can enhance the sealing effect of the PTFE diaphragm.
Single-Layer
The EPDM single diaphragm is suitable for hot water, cold water, alkaline and weakly acidic media as well as vacuum working conditions. It is especially applicable to polar substances and steam media and is highly suitable for sanitary applications.
It is not recommended to use the EPDM diaphragm for media such as mineral oils and vegetable oils, plant and animal fats, aliphatic or aromatic hydrocarbons, halogenated solvents or concentrated acids, which may cause damage to the diaphragm and lead to leakage.

Diaphragm Introduction

*** Diaphragms can be ordered separately.**


	Working temperature
Single layer <EPDM>	–10℃ — 130℃ (Sterilization 150℃，60mins)
Double layer <EPDM+PTFE>	

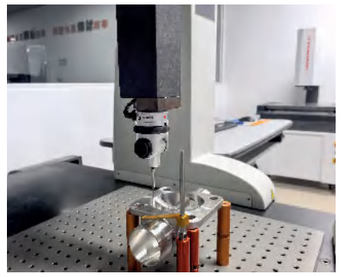
Diaphragm Valve

Quality Control

1. Valve assembly inspection:
   100% inspection according to the shipping inspection form.
2. Diaphragm valve seal test:
   100% valve assembly seal test, tested according to DIN EN 12266–1.
3. Inner surface finish:
   100% IPQC (in–process control), roughness sampling test according to GB2828.
4. Contact surface inspection:
   Material testing—Spectrometer; Three–Dimension inspection—Coordinate Measuring Machine.
5. Qualification:
   Quality Management System IS09001, Food Contact Raw Materials and Products Directive EC1935–2004, Explosion–proof Safety ATEX Directive 2014/34/EU.

Roughness -
Profile Integrated
Inspection Instrument

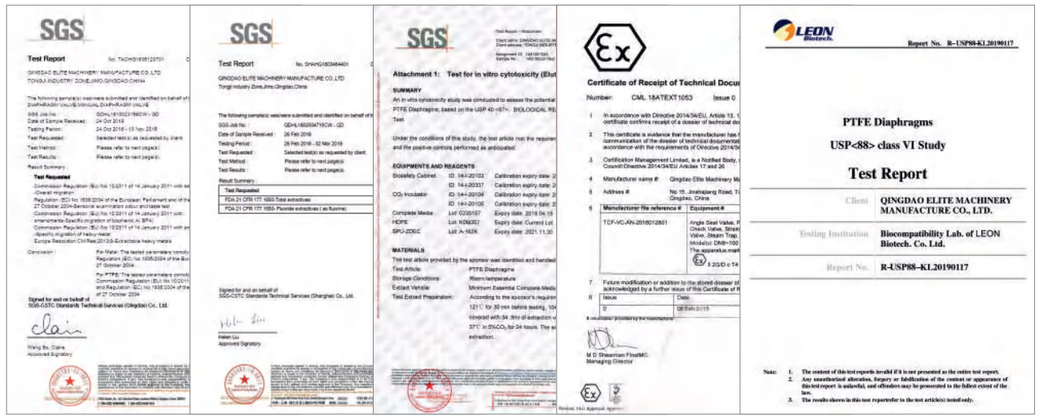
Spectro -
Spectrometer



Hexagon -
Coordinate Measuring Machine

Certification

Certification of Diaphragm Valves (Whole Valve) and Diaphragms



- EC 1935 / FDA(Food and Drug Administration) Certificate / USP(US Pharmacopeia) Certificate / ATEX anti–explosion certificate

A00 Series
Welded Pneumatic
Diaphragm Valve

A00 Series
Tri-Clamp Pneumatic
Diaphragm Valve

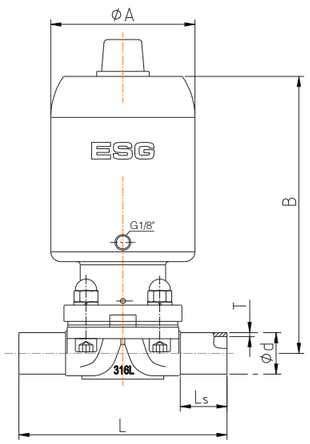
Order Instruction

A00 XXX X XXX XX X X X X X (*)

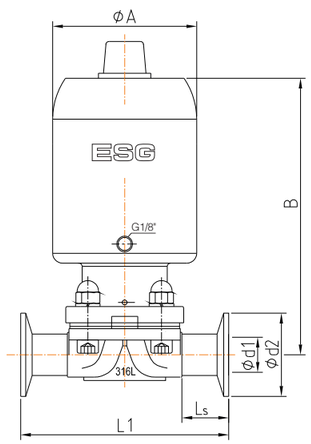
- Series No.: A00
- Diaphragm size: M08、M10、M25、M40、M50
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D08、D10、D15、D20、D25、D40、D50、D65
- Connection type:
  - H1: Welded ASME–BPE
  - H2: Welded SMS3008/ISO–2037
  - H3: Welded JIS–G3447
  - H4: Welded ISO1127/DIN11866 B
  - H5: Welded DIN11850–0
  - H6: Welded DIN11850–1
  - H7: Welded DIN11850–2/DIN11866 A
  - H8: Welded DIN11850–3
  - K1: Tri–clamp ASME–BPE
  - K2: Tri–clamp SMS3008/ISO–2037
  - K3: Tri–clamp JIS–G3447
  - K4: Tri–clamp ISO1127
  - K5: Tri–clamp DIN11850
  - K6: Tri–clamp ASME–BPE EN558–1
- Body material: 6: CF3M; G: F316L
- Actuator material: 1: CF8
- Diaphragm material:
  - A: PTFE+EPDM (Double–layer diaphragm)
  - B: EPDM (Single–layer diaphragm)
- Polishing: 1: Mechanical polishing ⩽0.4 μm; 2: Electropolishing
- *: Special customization

ESG®

Diaphragm Valve



Welded connection



Tri–clamp connection

* If the valve is in a normally open state, the G1/8" air inlet port is located on the side of the cylinder barrel at the upper position.

Main Dimension

Pneumatic diaphragm valve –Welded connection							ASME-BPE	SMS3008 ISO–2037	JIS-G3447	ISO-1127	DIN-11850				DIN-11866	
											-0	-1	-2	-3	A	B
Size	Diaphragm	Actuator	ΦA	B	Ls	L	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T
DN8	8	42	47	85	20	72	6.35×0.89	–	–	–	–	–	–	–	–	–
DN10	8	42	47	85	20	72	9.53×0.89	–	–	–	–	–	–	–	–	–
DN15	8	50	57	106	17	72	12.70×1.65	–	–	–	–	–	–	–	–	–
	10	57	65	134	29.5	108	–	–	–	21.3×1.6	18×1.5	18×1.0	19×1.5	20×2	19×1.5	21.3×1.6
DN20	10	57	65	134	29.5	108	19.05×1.65	–	–	–	–	–	–	–	–	–
	25	80	88	170	26.5	120	–	–	–	26.9×1.6	22×1.5	22×1.0	23×1.5	24×2	23×1.5	26.9×1.6
DN25	25	80	88	170	26.5	120	25.4×1.65	25.0×1.2	25.4×1.2	33.7×2	28×1.5	28×1.0	29×1.5	30×2	29×1.5	33.7×2
DN40	40	105	109	196	30	153	38.1×1.65	38.0×1.2	38.1×1.2	48.3×2	40×1.5	40×1.0	41×1.5	42×2	41×1.5	48.3×2
DN50	50	125	129	226	30.5	173	50.8×1.65	51.0×1.2	50.8×1.5	60.3×2	52×1.5	52×1.0	53×1.5	54×2	53×1.5	60.3×2
DN65	50	125	129	232	30.5	173	63.5×1.65	–	–	–	–	–	–	–	–	–

Pneumatic diaphragm valve –Tri–clamp connection					ASME-BPE				ASME-BPE EN558-1 Series 7				SMS3008 ISO–2037				JIS-G3447				ISO-1127				DIN-11850			
Size	Diaphragm	Actuator	ΦA	B	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1
DN8	8	42	47	85	4.57	25	15.5	63.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DN10	8	42	47	85	7.75	25	15.5	63.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DN15	8	50	57	106	9.4	25	15.5	63.5	9.4	25	35	108	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	10	57	65	134	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18.1	50.5	29.5	108	16.0	34	29.5	108
DN20	10	57	65	134	15.75	25	26.3	101.6	15.75	25	34	117	15.75	25	34	117	–	–	–	–	–	–	–	–	–	–	–	–
	25	80	88	170	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23.7	50.5	25	117	20.0	34	25	117
DN25	25	80	88	170	22.1	50.5	23.5	114.3	22.1	50.5	30	127	22.6	50.5	30	127	23	50.5	30	127	29.7	50.5	30	127	26.0	50.5	30	127
DN40	40	105	109	196	34.8	50.5	23	139.7	34.8	50.5	33	159	35.6	50.5	33	159	35.7	50.5	33	159	44.3	64	33.5	159	38.0	50.5	33.5	159
DN50	50	125	129	226	47.5	64	23	158.8	47.5	64	39	190	48.6	64	39	190	47.8	64	39	190	56.3	77.5	39	190	50.0	64	39	190
DN65	50	125	129	232	60.2	77.5	39	190	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

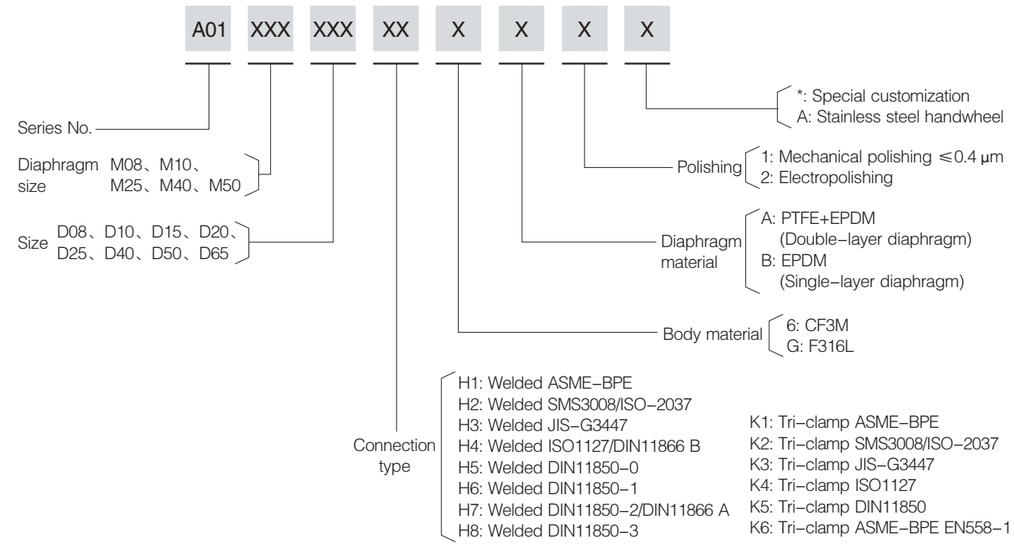
Other specifications available for customization.

Two-Way Diaphragm Valve

A01 Series
Welded Manual
Diaphragm Valve

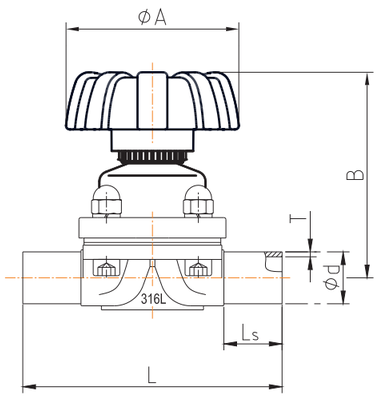
A01 Series
Tri-clamp Manual
Diaphragm Valve

Order Instruction

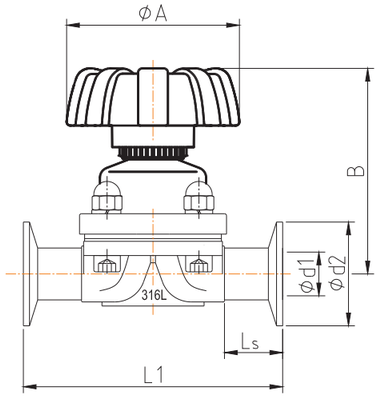


ESG®

Diaphragm Valve



Welded connection



Tri–clamp connection

Main Dimension

Manual diaphragm valve –Weld connection						ASME–BPE	SMS3008 ISO–2037	JIS–G3447	ISO–1127	DIN–11850 –0	DIN–11850 –1	DIN–11850 –2	DIN–11850 –3	DIN–11866 A	DIN–11866 B
Size	Diaphragm	ΦA	B	Ls	L	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T	Φd×T
DN8	8	40	64	20	72	6.35×0.89	–	–	–	–	–	–	–	–	–
DN10	8	40	64	20	72	9.53×0.89	–	–	–	–	–	–	–	–	–
DN15	8	50	64	17	72	12.70×1.65	–	–	–	–	–	–	–	–	–
	10	65	85	29.5	108	–	–	–	21.3×1.6	18×1.5	18×1.0	19×1.5	20×2	19×1.5	21.3×1.6
DN20	10	65	85	29.5	108	19.05×1.65	–	–	–	–	–	–	–	–	–
	25	85	102	26.5	120	–	–	–	26.9×1.6	22×1.5	22×1.0	23×1.5	24×2	23×1.5	26.9×1.6
DN25	25	85	102	26.5	120	25.4×1.65	25.0×1.2	25.4×1.2	33.7×2	28×1.5	28×1.0	29×1.5	30×2	29×1.5	33.7×2
DN40	40	105	115	30	153	38.1×1.65	38.0×1.2	38.1×1.2	48.3×2	40×1.5	40×1.0	41×1.5	43×2	41×1.5	48.3×2
DN50	50	125	133	30.5	173	50.8×1.65	51.0×1.2	50.8×1.5	60.3×2	52×1.5	52×1.0	53×1.5	54×2	53×1.5	60.3×2
DN65	50	125	139	30.5	173	63.5×1.65	–	–	–	–	–	–	–	–	–

Manual diaphragm valve –Tri–clamp connection				ASME-BPE				ASME-BPE EN558-1 Series 7				SMS3008 ISO–2037				JIS-G3447				ISO-1127				DIN-11850			
Size	Diaphragm	ΦA	B	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1	Φd1	Φd2	Ls	L1
DN8	8	40	64	4.57	25	15.5	63.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DN10	8	40	64	7.75	25	15.5	63.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DN15	8	50	64	9.4	25	15.5	63.5	9.4	25	35	108	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	10	65	85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18.1	50.5	29.5	108	16.0	34	29.5	108
DN20	10	65	85	15.75	25	26.3	101.6	15.75	25	34	117	15.75	25	34	117	–	–	–	–	–	–	–	–	–	–	–	–
	25	85	102	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23.7	50.5	25	117	20.0	34	25	117
DN25	25	85	102	22.1	50.5	23.5	114.3	22.1	50.5	30	127	22.6	50.5	30	127	23	50.5	30	127	29.7	50.5	30	127	26.0	50.5	30	127
DN40	40	105	115	34.8	50.5	23	139.7	34.8	50.5	33	159	35.6	50.5	33	159	35.7	50.5	33	159	44.3	64	33.5	159	38.0	50.5	33.5	159
DN50	50	125	133	47.5	64	23	158.8	47.5	64	39	190	48.6	64	39	190	47.8	64	39	190	56.3	77.5	39	190	50.0	64	39	190
DN65	50	125	139	60.2	77.5	39	190	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Other specifications available for customization.

Proportional Diaphragm Valve

A02 Series Proportional Diaphragm Valve

Technical Specification

- Voltage: 24V DC
- Power: <4W
- Input signal: 0/4–20mA, 0–5/10V
- Output signal: Analog signal (0/4–20mA, 0–5/10V)
  Digital signal (High voltage level)
  (Alternative choice of two)
- Enclosure material: PA6–GF15+PC+304
- Control pressure: 4.5–7bar (65–102psi)
- Ambient temperature: 0–60℃
- Protection level: IP65
- Explosion–proof: II 3G Ex ec IIC T4 Gc

Advantages

1. Compact size to save space.
2. Reliable performance and sensitive reaction.
3. Large LCD display makes it easy to operate.
4. Standard electrical interface allows convenient wiring.
5. High adjustment precision and strong anti–interference performance.
6. Spring–loaded feedback rod for easy installation.
7. Allows various types of connection interface.

Function Principle

Intelligent positioner is a microprocessor–based valve regulator. The valve's open/close state is controlled by external input signals. It is widely used in industrial fluids control systems in order to enable remote and automated control.

ESG®

Proportional Diaphragm Valve

Electrical Terminal

Electrical Terminal	Descriptions	Color	Signal Type
1	Power+	Brown	+24VDC ± 10%
2	Input Signal+	White	0/4–20mA or 0–5/10V
3	Common Ground Wire(GND)	Blue	GND
4	Feedback Signal+ (Optional: Alarm output for insufficient adjustment)	Black	0/4–20mA or 0–5/10V (High electric level)
5	Standby	Grey	/

Pneumatic Terminal

Port Label	Description
P	Air supply port
A	Control port
R	Exhaust port

Order Instruction

A02 XXX X XXX XX X X X X (*) XXX

- A02 — Series No.
- XXX — Diaphragm size: M08、M10、M25、M40、M50
- X — Control type: 0: Normally open; 1: Single acting normally closed
- XXX — Size: D15、D20、D25、D40、D50、D65
- XX — Connection type:
  - H1: Welded ASME–BPE
  - H2: Welded SMS3008/ISO–2037
  - H3: Welded JIS–G3447
  - H4: Welded ISO1127/DIN11866 B
  - H5: Welded DIN11850–0
  - H6: Welded DIN11850–1
  - H7: Welded DIN11850–2/DIN11866 A
  - H8: Welded DIN11850–3
  - K1: Tri–clamp ASME–BPE
  - K2: Tri–clamp SMS3008/ISO–2037
  - K3: Tri–clamp JIS–G3447
  - K4: Tri–clamp ISO1127
  - K5: Tri–clamp DIN11850
  - K6: Tri–clamp ASME–BPE EN558–1
- X — Body material: 6: CF3M; G: F316L
- X — Actuator material: 1: 304
- X — Diaphragm material: A: PTFE+EPDM (Double–layer diaphragm); B: EPDM (Single–layer diaphragm)
- X — Polishing: 1: Mechanical polishing ≤0.4 μm; 2: Electropolishing
- (*) — *: Special customization
- XXX — X: D Digital display control; P Process control; X: A Analog signal; D Digital signal; X: E Extended safety type of explosion proofing

T-Shape Diaphragm Valve

A10 Series Pneumatic T-shape Valve

A11 Series Manual T-shape Valve

Technical Specification

- Material: Investment casting CF3M,
  Forged F316L (Customized special materials)
  (Pneumatic) Actuator+Valve seat CF8;
  (Manual) Valve seat CF8
- Internal Surface: Ra≤0.4 μ m mechanically polished
- Diaphragm Material: EPDM+PTFE (Double–layer diaphragm)
  EPDM (Single–layer diaphragm)
- Operating Pressure: 0–10bar (0–145psi)
- Fluid Temperature: –10℃ — +130℃ (sterilization at 150℃ for 60mins)
- Control Pressure(pneumatic): 4.5–7bar (65–102psi)

Advantages

1. Compact structure to minimize installation space.
2. 0 D design for the branch flow channel,with no dead ends, enabling self–draining
3. Applicable to CiP/SIP process to actualize online high temperature disinfection.
4. The surface finish of the inner surface of the valve body can reach Ra0.4.

Function Principle

The T–shape valve body is welded to the annular lines of liquid or pure water system. Through this technical method, it can achieve the best effect of sampling or usage of water seamlessly. In addition, based on the requirement of the process, the technology is able to mix two kinds of working mediums. Most importantly, the seal ridge of the T–shape valve has to be as close to the main pipe as possible.

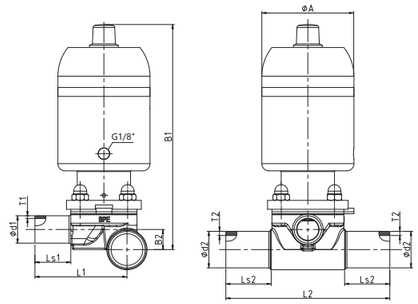
Order Instruction

A10 XXX X XXX XXX XX X X X X (*)

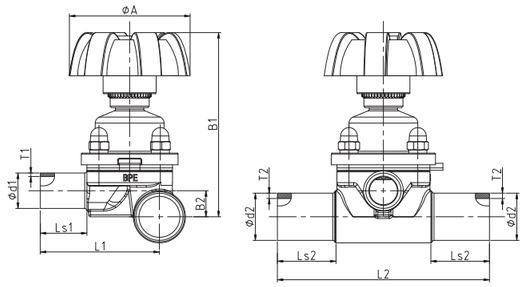
- A10 — Series No.
- XXX — Diaphragm size: M08、M10、M25、M40
- X — Control type: 0: Normally open; 1: Single acting normally closed
- XXX — Size (Main line) D20、D25、D40、D50
- XXX — Size (Sub line) D15、D20、D25、D40
- XX — Connection type: H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE
- X — Body material: 6: CF3M; G: F316L
- X — Actuator material: 1: CF8
- X — Diaphragm material: A: PTFE+EPDM (Double layer); B: EPDM (Single layer)
- X — Polishing: 1: Mechanical polishing ≤0.4 μm; 2: Electropolishing
- (*) — *: Special customization

ESG®

T-Shape Diaphragm Valve



Pneumatic T–shape



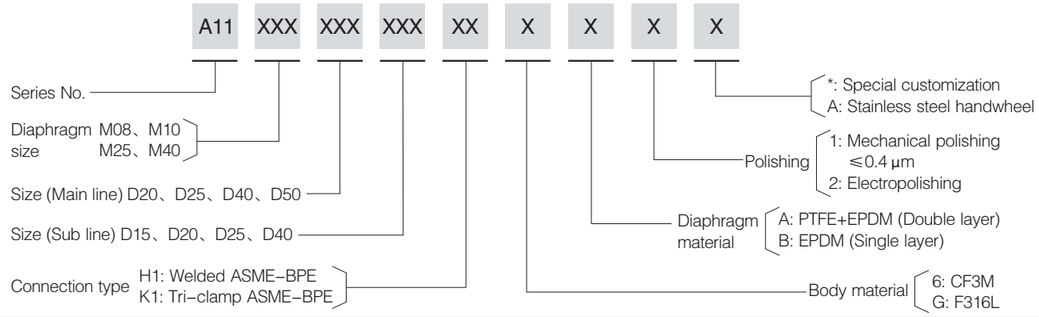
Manual T–shape

Main Dimension

Pneumatic T–shape Valve — Welded Connection										ASME–BPE	
Size	Diaphragm	Actuator	ΦA	B1	B2	Ls1	Ls2	L1	L2	Φd1 X T1	Φd2 X T2
20–20	10	57	65	160	10	25	31	59	114	19.05 × 1.65	19.05 × 1.65
25–15	8	50	57	140	15	20	33	49	103	12.7 × 1.65	25.4 × 1.65
25–20	10	57	65	165	14	25	31	62.5	114	19.05 × 1.65	25.4 × 1.65
25–25	25	80	88	205	13	25	25	72	124.5	25.4 × 1.65	25.4 × 1.65
40–15	8	50	57	145	21	20	36	55	124.5	12.7 × 1.65	38.1 × 1.65
40–20	10	57	65	170	20	25	36	68.5	124.5	19.05 × 1.65	38.1 × 1.65
40–25	25	80	88	215	20	25	25	78	124.5	25.4 × 1.65	38.1 × 1.65
40–40	40	105	109	235	13	25	27	92	152	38.1 × 1.65	38.1 × 1.65
50–15	8	50	57	155	28	20	38	61.5	137	12.7 × 1.65	50.8 × 1.65
50–20	10	57	65	180	28	25	38	75	137	19.05 × 1.65	50.8 × 1.65
50–25	25	80	88	220	26	25	28	84.5	137	25.4 × 1.65	50.8 × 1.65
50–40	40	105	109	240	20	25	31	98.5	160	38.1 × 1.65	50.8 × 1.65

Manual T–shape Valve — Welded Connection									ASME–BPE	
Size	Diaphragm	ΦA	B1	B2	Ls1	Ls2	L1	L2	Φd1 X T1	Φd2 X T2
20–20	10	65	95	10	25	31	59	114	19.05 × 1.65	19.05 × 1.65
25–15	8	50	85	15	20	33	49	103	12.7 × 1.65	25.4 × 1.65
25–20	10	65	100	14	25	31	62.5	114	19.05 × 1.65	25.4 × 1.65
25–25	25	85	120	13	25	25	72	124.5	25.4 × 1.65	25.4 × 1.65
40–15	8	50	90	21	20	36	55	124.5	12.7 × 1.65	38.1 × 1.65
40–20	10	65	105	20	25	36	68.5	124.5	19.05 × 1.65	38.1 × 1.65
40–25	25	85	125	20	25	25	78	124.5	25.4 × 1.65	38.1 × 1.65
40–40	40	105	130	13	25	27	92	152	38.1 × 1.65	38.1 × 1.65
50–15	8	50	95	28	20	38	61.5	137	12.7 × 1.65	50.8 × 1.65
50–20	10	65	115	28	25	38	75	137	19.05 × 1.65	50.8 × 1.65
50–25	25	85	130	26	25	28	84.5	137	25.4 × 1.65	50.8 × 1.65
50–40	40	105	145	20	25	31	98.5	160	38.1 × 1.65	50.8 × 1.65

Order Instruction



U-Shape Diaphragm Valve

A12 Seires Pneumatic U-Shape Valve

Overview

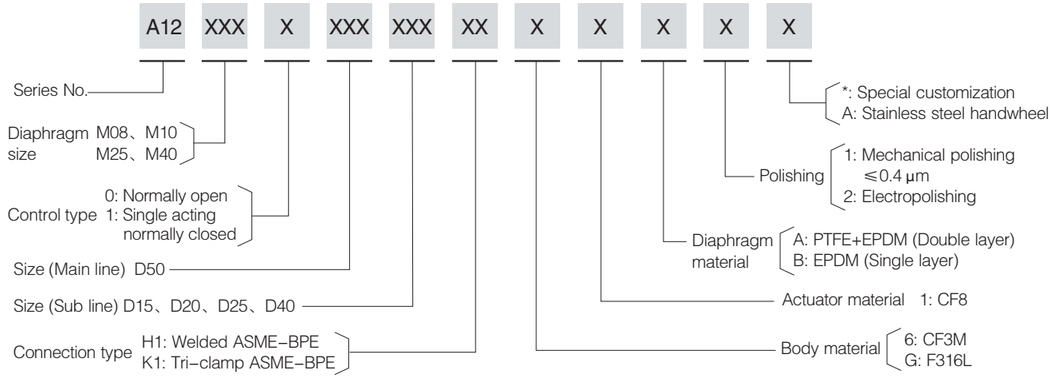
We have developed U–Shape valves based on T–Shape valves to meet different working condition requirement,and customization can be provided according to customer needs.

Technical Specification

- Material: Investment casting CF3M,
  Forged F316L (Customized special materials)
  (Pneumatic) Actuator+Valve seat CF8;
  (Manual) Valve seat CF8
- Internal Surface: Ra≤0.4 μ m mechanically polished
- Diaphragm Material: EPDM+PTFE (Double–layer diaphragm)
  EPDM (Single–layer diaphragm)
- Operating Pressure: 0–10bar (0–145psi)
- Fluid Temperature: –10℃ — +130℃ (sterilization at 150℃ for 60mins)
- Control Pressure(pneumatic): 4.5–7bar (65–102psi)

Advantages

1. No dead ends on the product surface,easy to clean.
2. Optimized bend curvature design,low flow resistance
3. Suitable for CIP/SIP processes,enabling high–temprature sterilization
4. The surface finish of the valve body can reach Ra0.4
5. Both main valve and sampling port can be provided with welded /tri–clamp connection type.
6. Both the main valve and sampling port can be provided with manual and pheumatic ctuators.
7. Sampling position can be customized according to requirements



U-Shape Diaphragm Valve

A13 Series
Manual U-Shape
Valve

Overview

We have developed U–Shape valves based on T–Shape valves to meet different working condition requirement,and customization can be provided according to customer needs.

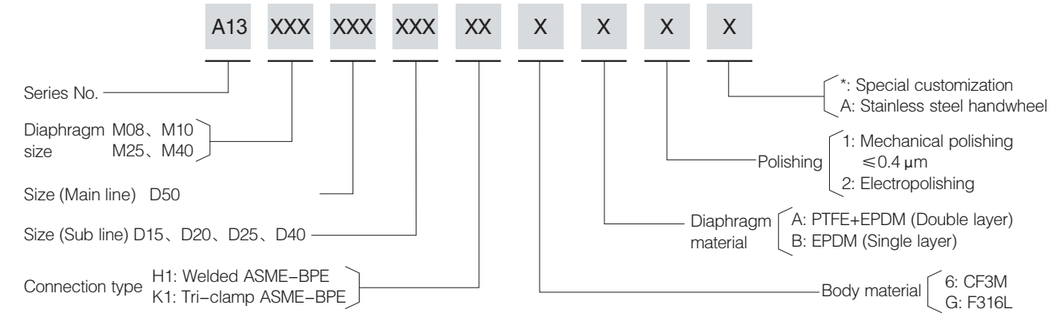
Technical Specification

- Material: Investment casting CF3M,
  Forged F316L (Customized special materials)
  (Pneumatic) Actuator+Valve seat CF8;
  (Manual) Valve seat CF8
- Internal Surface: Ra≤0.4 μ m mechanically polished
- Diaphragm Material: EPDM+PTFE (Double–layer diaphragm)
  EPDM (Single–layer diaphragm)
- Operating Pressure: 0–10bar (0–145psi)
- Fluid Temperature: –10℃ — +130℃ (sterilization at 150℃ for 60mins)
- Control Pressure(pneumatic): 4.5–7bar (65–102psi)

Advantages

1. No dead ends on the product surface,easy to clean.
2. Optimized bend curvature design,low flow resistance
3. Suitable for CIP/SIP processes,enabling high–temprature sterilization
4. The surface finish of the valve body can reach Ra0.4
5. Both main valve and sampling port can be provided with welded /tri–clamp connection type.
6. Both the main valve and sampling port can be provided with manual and pheumatic actuators.
7. Sampling position can be customized according to A13 Series Manual U–Shape Diaphragm Valve requirements

Order Instruction



Tank Bottom Diaphragm Valve

A20 Series
Pneumatic Tank
Bottom Diaphragm

A21 Series
Manual Tank
Bottom Diaphragm

Technical Specification

- Material: Investment casting CF3M,
  Forged F316L (Customized special materials)
  (Pneumatic) Actuator+Valve seat CF8;
  (Manual) Valve seat CF8
- Internal Surface: Ra≤0.4 μ m mechanically polished
- Diaphragm Material: EPDM+PTFE (Double–layer diaphragm)
  EPDM (Single–layer diaphragm)
- Operating Pressure: 0–10bar (0–145psi)
- Fluid Temperature: –10℃ — +130℃ (sterilization at 150℃ for 60mins)
- Control Pressure(pneumatic): 4.5–7bar (65–102psi)

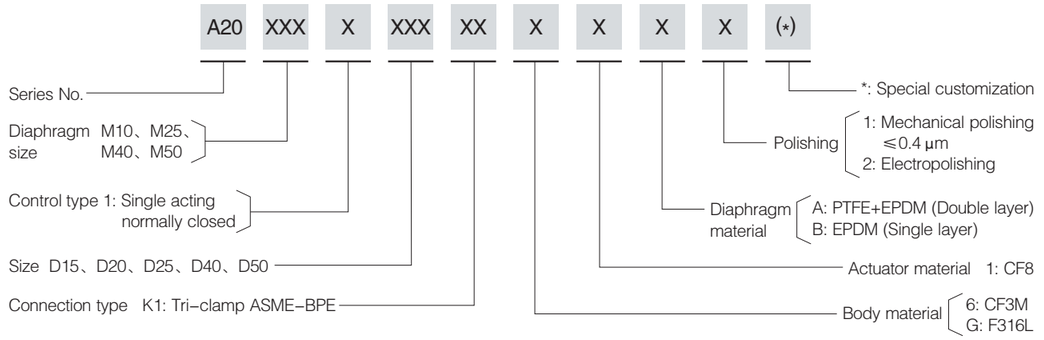
Advantages

1. Compact structure to minimize installation space.
2. No dead angle, auto emptying and no turbulence phenomenon during the emptying process.
3. Applicable to CiP/SIP process to actualize online high temperature disinfection.
4. The surface finish of the inner surface of the valve body can reach Ra0.4.
5. Manual and pneumatic actuator is optional.

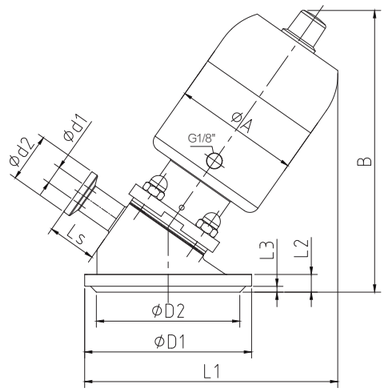
Function Principle

The bottom valve of the tank is welded to the bottom of the container to achieve the best effect of emptying, cleaning and disinfection. In addition, the working medium can be well mixed according to various technological requirements during the operation. The most important thing is that the sealing weir of the tank bottom valve has been close to the tank bottom wall to the greatest extent, so as to achieve the effect of zero dead angle.

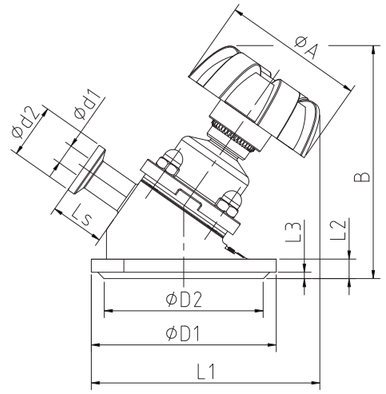
Order Instruction



Tank Bottom Diaphragm Valve



Pneumatic Tank
Bottom Diaphragm



Manual Tank
Bottom Diaphragm

Main Dimension (Pneumatic Tank Bottom Valve)

Size	Diaphragm	ΦA	B	ΦD1	ΦD2	Φd1	Φd2	L1	L2	L3	Ls
DN15	10	65	145	85	73	9.4	25	130	12	3	25
DN20	10	65	145	85	73	15.75	25	130	12	3	25
DN25	25	88	195	120	108	22.1	50.5	178	16	3	30
DN40	40	109	220	150	138	34.8	50.5	210	18	3	35
DN50	50	129	255	180	168	47.5	64	240	22	3	35

Main Dimension (Manual Tank Bottom Valve)

Size	Diaphragm	ΦA	B	ΦD1	ΦD2	Φd1	Φd2	L1	L2	L3	Ls
DN15	10	65	110	85	73	9.4	25	105	12	3	25
DN20	10	65	110	85	73	15.75	25	105	12	3	25
DN25	25	85	135	120	108	22.1	50.5	138	16	3	30
DN40	40	105	155	150	138	34.8	50.5	165	18	3	35
DN50	50	125	180	180	168	47.5	64	195	22	3	35

Order Instruction

A21 XXX XXX XX X X X X

- Series No.: A21
- Diaphragm size: XXX — M10、M25、M40、M50
- Size: XXX — D15、D20、D25、D40、D50
- Connection type: XX — K1: Tri–clamp ASME–BPE
- Body material: X — 6: CF3M; G: F316L
- Diaphragm material: X — A: PTFE+EPDM (Double layer); B: EPDM (Single layer)
- Polishing: X — 1: Mechanical polishing ≤0.4 μm; 2: Electropolishing
- *: Special customization; A: Stainless steel handwheel

Multi-Channel Diaphragm Valve

A40 Series
I-Body valve

Advantages

Based on the user's requirements for self–draining and minimum dead ends of two linked valves, we have further launched the Ibody multi–channel valve solution on top of the SAP welding solution.

The I–body valve, machined integrally from a single piece of steel, meets the requirement of zero dead ends and has no welding in the production area, which greatly reduces the risk of material residue. Both the main valve and the branch valve can be equipped with manual or pneumatic actuators, and accessories such as limit stops can be added according to customer needs; the installation method can be either welding or tri–clamp.

1. Compact design and light weight
2. Minimized dead ends
3. No welding in the production area
4. Better drainage performance than welded combined valves
5. Vertical drainage possible in accordance with 3D standards
6. Customizable design for specification matching and pipeline standards.

ESG®

Multi-Channel Diaphragm Valve

A60 Series
Multi-Channel Block Valve

Overview

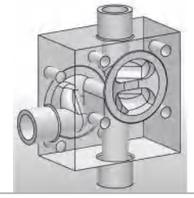
For this series, based on the actual needs on site, ESG conducts the design after fully understanding the detailed working conditions of customers, such as their usage processes, installation positions and the flow relationships among various valves. During the design process, the cleaning, sterilization, emptying performance, dead corners and residues of the valves are taken into consideration. ESG designers present the optimal and most reasonable designs to customers.

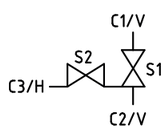
Advantages

1. Customized design according to requirements.
2. CNC machining of integral steel.
3. Compact structure.
4. No dead corners and automatic emptying.
5. Convenient installation.
6. Shorten the commissioning time.
7. Improve the safety of production.
8. Free choice between manual and pneumatic actuators.

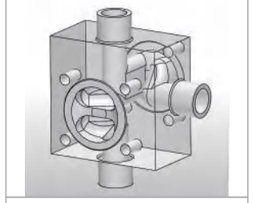
Multi-Channel Diaphragm Valve

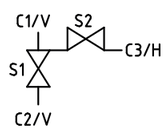
GMP4





GMP6





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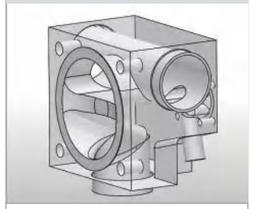

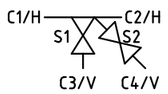

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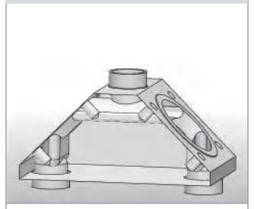

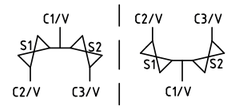

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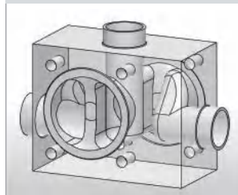

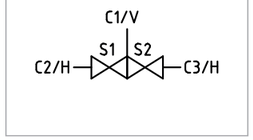

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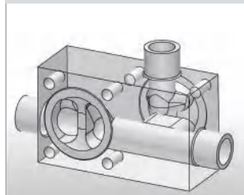

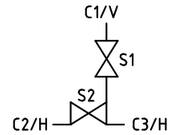

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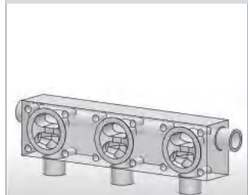

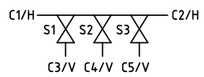

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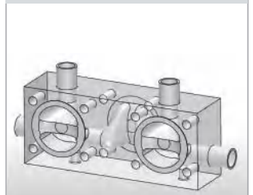

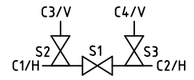

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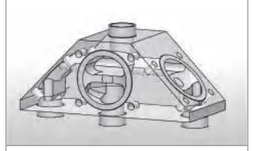

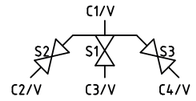

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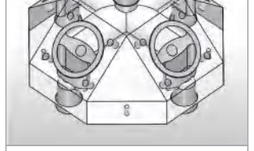

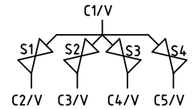

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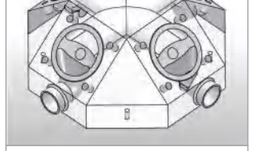

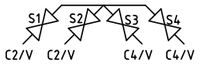

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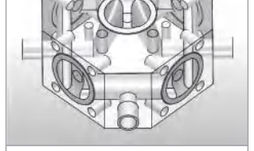
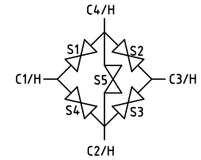




ESG®

Combination Welded Diaphragm Valve

A50 series
Combination
Diaphragm Valve

Overview

In order to better balance the material costs and processing costs, on the premise of meeting the customer's process requirements such as cleaning, sterilization, and self–discharging, ESG has carried out specific arrangements and layouts for the valves, thus obtaining the most reasonable solutions for customers to use.

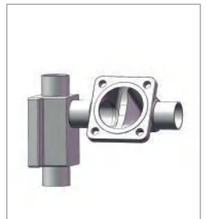
The GMP combination valve combines two two–way diaphragm valves or combines one two–way diaphragm valve and a tri–clamp chuck by means of welding. According to the application situation in the industry, ESG has launched 10 GMP combination modes for customers to choose from.

For working conditions with higher requirements for the effects of cleaning, sterilization, self–discharging, etc., customers often need two two–way diaphragm valves to not only meet the requirements of self–discharging or full–discharging but also minimize the dead corners at the connection points as much as possible. To this end, ESG has launched 8 SAP combination modes and 4 SAP two–way valves with a third outlet interface for customers to choose from.

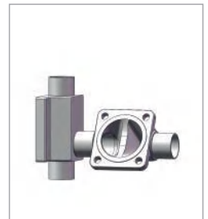
The valve body material of the combination valve can be freely combined according to the needs of customers, and the combination form can also be specially customized according to the customer's process requirements.

GMP1

GMP2



GMP3



GMP4

GMP5

GMP6

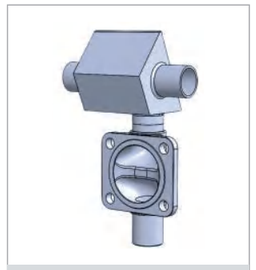
GMP7

GMP8

GMPA

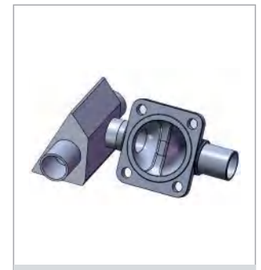
GMPB

Combination Welded Diaphragm Valve

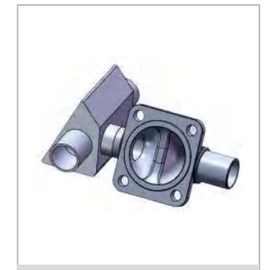


SAP1

SAP2



SAP3



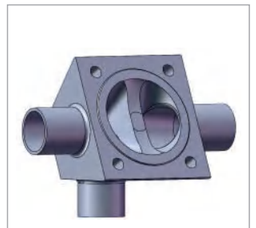
SAP4

SAP5

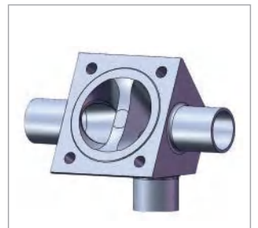
SAP6

SAP7

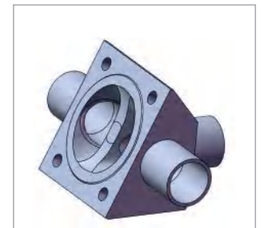
SAP8



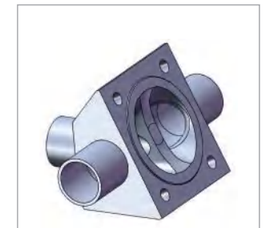
SAPA



SAPB



SAPC



SAPD

ESG®

Combination Valve

Order Instruction

A50 | XXXX | Main | Sub | X | X | X | (*)

- (*): *: Special customization
- X (Polishing): 1: Mechanical polishing ≤0.4 μm; 2: Electropolishing
- X (Branch valve material): 6: CF3M Casting; G: F316L Forging
- X (Main valve material): 6: CF3M Casting; G: F316L Forging
- A50: Series No. A50: Combination diaphragm valve
- XXXX (Combination type): GMP1、GMP2、GMP3、GMP4、GMP5、GMP6、GMP7、GMP8、GMPA、GMPB SAP1、SAP2、SAP3、SAP4、SAP5、SAP6、SAP7、SAP8、SAPA、SAPB、SAPC、SAPD

Main: XXX | X | X | XXX | XX | X

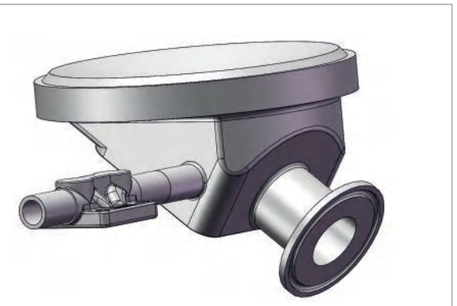
- XXX: Series No. A00 A01
- X: Actuator Material: 1: CF8 (Pneumatic and manual DN08/10/15/20 Optional); E: Engineering–plastics
- X: Control type: 0: Normally open; 1: Single acting normally closed; 8: No acting form (manual slection)
- XXX: Size: D08 (Forged is optional); D10 (Forged is optional); D15、D20、D25、D40、D50、D65
- XX: Connection type: H1、H2、H3、H4、H5、H6、H7、H8、K1、K2、K3、K4、K5、K6
- X: Diaphragm material: A: PTFE+EPDM (Double–layer diaphragm); B: EPDM (Single–layer diaphragm)

Sub: XXX | X | X | XXX | XX | X

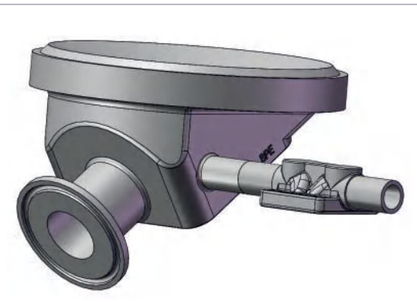
- XXX: Series No. A00 A01; K01 Tri–Clamp (**)Customized
- X: Actuator Material: 1: CF8 (Pneumatic and manual DN08/10/15/20 Optional); E: Engineering–plastics; 0: None
- X: Control type: 0: Normally open; 1: Single acting normally closed; 8: No acting form (manual slection)
- XXX: Size: D08、D10、D15、D20、D25、D40、D50、D65 (Size of vice channel > DN15, main valve need to be forged.)
- XX: Connection type: H1: (**) Customized; K1: (**) Customized
- X: Diaphragm material: A: PTFE+EPDM (Double–layer diaphragm); B: EPDM (Single–layer diaphragm); 0: None

Combination Welded Diaphragm Valve

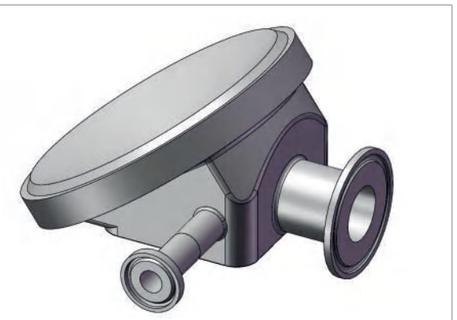
A52 series Combination Bottom Tank Valve



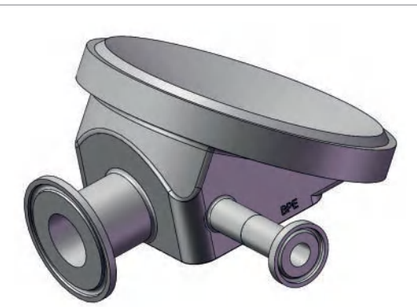
SH1



SH2



SHA



SHB

Overview

In order to take into account the manufacturing cost under the premise of meeting client's requirement during cleaning process, sterilization process and self discharge abilities, ESG has specifically arranged the layout of the valve so to provide the most suitable scheme for our client.

Bottom tank valve can be equipped with CIP/SIP interface at the rear of the valve body, the interface can be optionally chucked or welded to connect the pipe or the valve body. ESG can combine both tank bottom valve and two-way diaphragm valve, or reserve the side wall of the bottom tank valve for welding and chuck interfaces for CIP/SIP process. The following combinations is available and combinations can be customized according to requirements.

Combination Valve

Order Instruction

A52 | XXX | Main | Sub | X | X | X | (*)

- Series No. A52 Combination Bottom Tank Valve
- Combination type: SH1、SH2、SHA、SHB
- Polishing: 1: Mechanical polishing ≤0.4 μm; 2: Electropolishing
- Branch valve material: 6: CF3M Casting; G: F316L Forging
- Main valve material: 6: CF3M Casting; G: F316L Forging
- *: Special customization

XXX | X | X | XXX | XX | X

- Series No. A20 A21
- Actuator Material: 1: CF8 (Pneumatic and manual DN08/10/15/20 Optional); E: Engineering–plastics
- Control type: 0: Normally open; 1: Single acting normally closed; 8: No acting form (manual slection)
- Size: D15、D20、D25、D40、D50
- Connection type K1
- Diaphragm material: A: PTFE+EPDM (Double–layer diaphragm); B: EPDM (Single–layer diaphragm)

XXX | X | X | XXX | XX | X

- Series No. A00 A01 K01 Tri–Clamp (**)Customized
- Actuator Material: 1: CF8 (Pneumatic and manual DN08/10/15/20 Optional); E: Engineering–plastics; 0: None
- Control type: 0: Normally open; 1: Single acting normally closed; 8: No acting form (manual slection)
- Size: Forging body– Sub body < Main body
- Connection type: H1: (**) Customized; K1: (**) Customized
- Diaphragm material: A: PTFE+EPDM (Double–layer diaphragm); B: EPDM (Single–layer diaphragm); 0: None

Combination Welded Diaphragm Valve

A53 Series T Shape Valve With Sampling

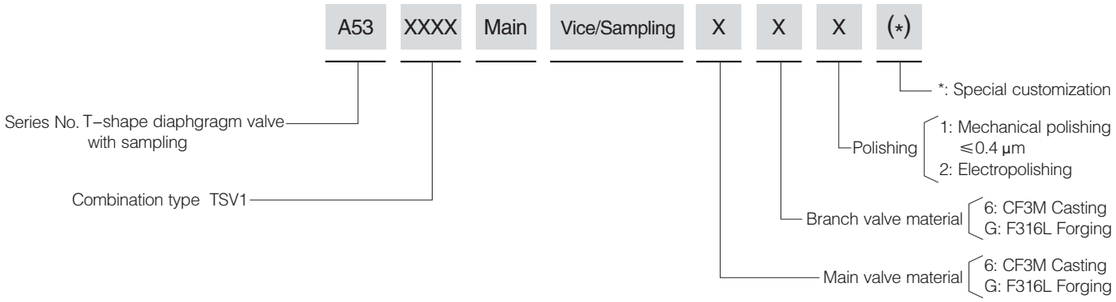
Overview

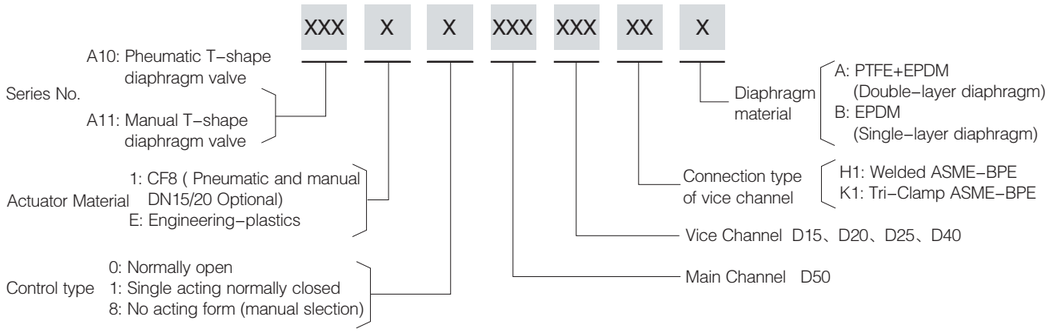
Based on the T–shape diaphragm valve, we have developed a derivative T–shape diaphragm valve with a sampling function. It is designed for customers' different operating conditions and can be customized according to their requirements.

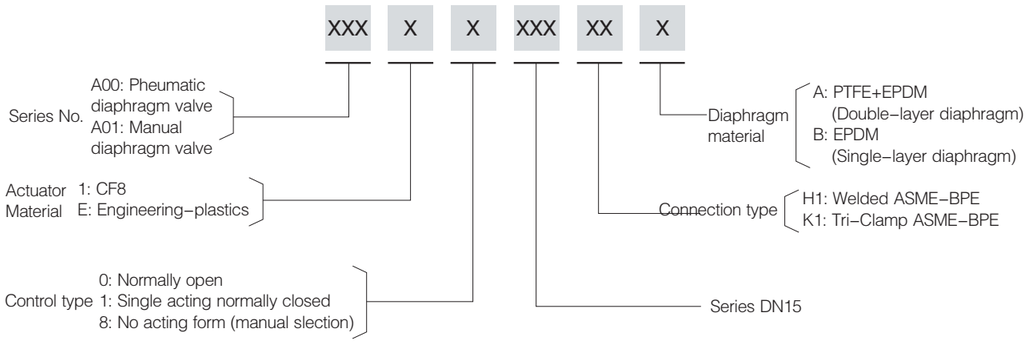
ESG®

Combination Valve

Order Instruction







Combination Welded Diaphragm Valve

A54 Series U Shape Valve With Sampling

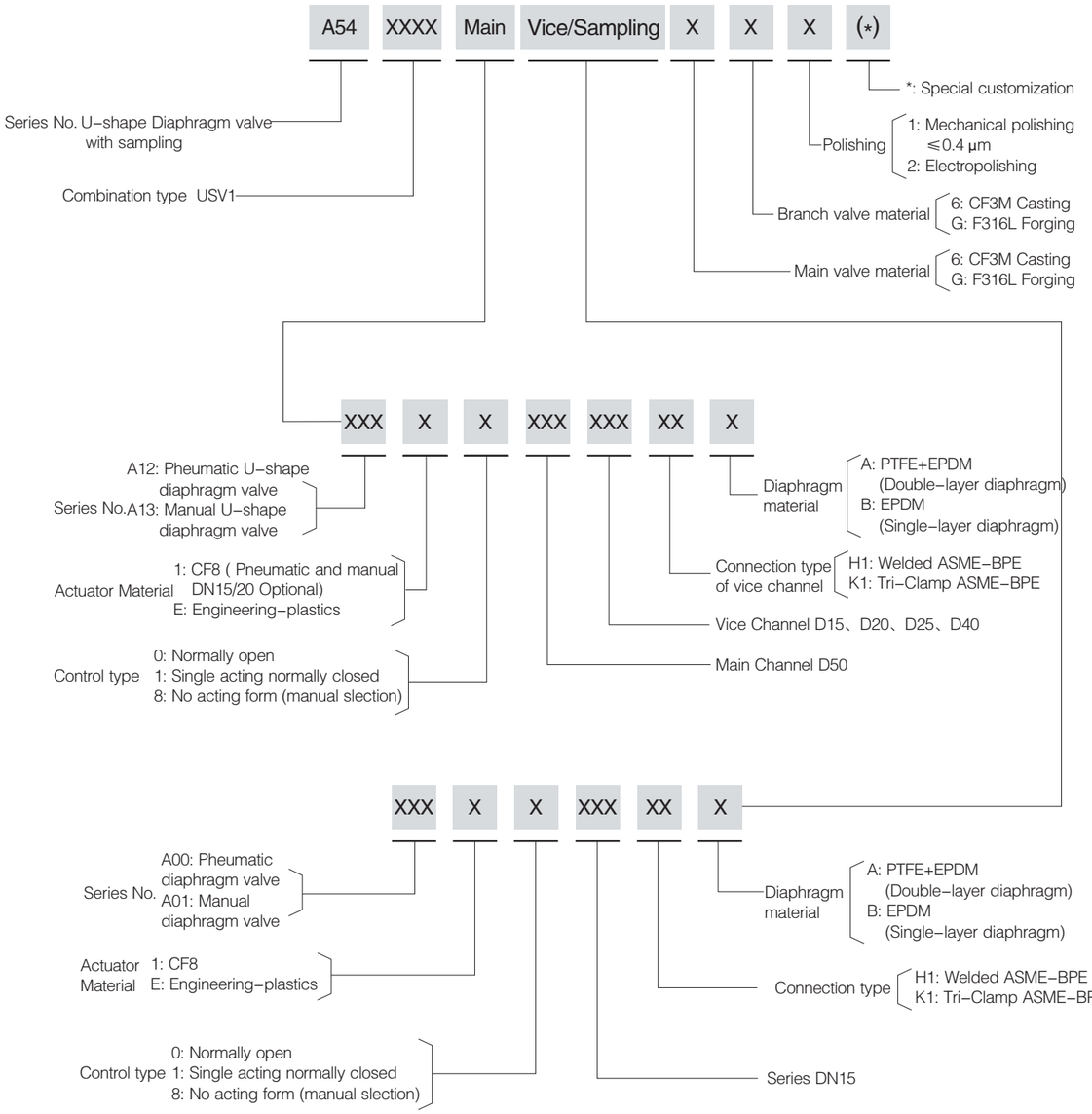
Overview

Based on the U–shape diaphragm valve, we have developed a derivative U–shape diaphragm valve with a sampling function. It is designed for customers' different operating conditions and can be customized according to their requirements.

ESG®

Combination Valve

Order Instruction



Sampling Valve

A31 Series Single Port Manual Sampling Valve

Welded Connection　　Tri–clamp Connection

A31 Series Dual-Port Manual Aseptic Sampling Valve

Welded Connection　　Tri–clamp Connection

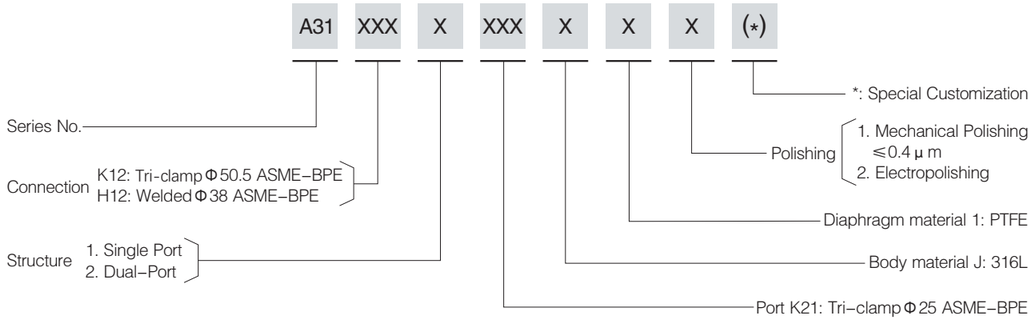
Technical Specification

- Valve Body Material: AISI 316L
- Internal Surface: Mechanical Polishing Ra≤0.4 μm; Electropolishing
- Connecton Type: Welded Connection, Clamp Connection
- Valve Body Bore Diameter: Φ8
- Nominal Pressure: PN16
- Control Type: Manual
- Connection Type: ASME–BPE Welded, ASME–BPE Clamp
- Diaphragm Material: PTFE
- Operating Pressure: 0–1.0Mpa
- Fluid Temperature: –10℃ — +150℃
- Structure: Single Port (With Sterilization Function), Dual–Port

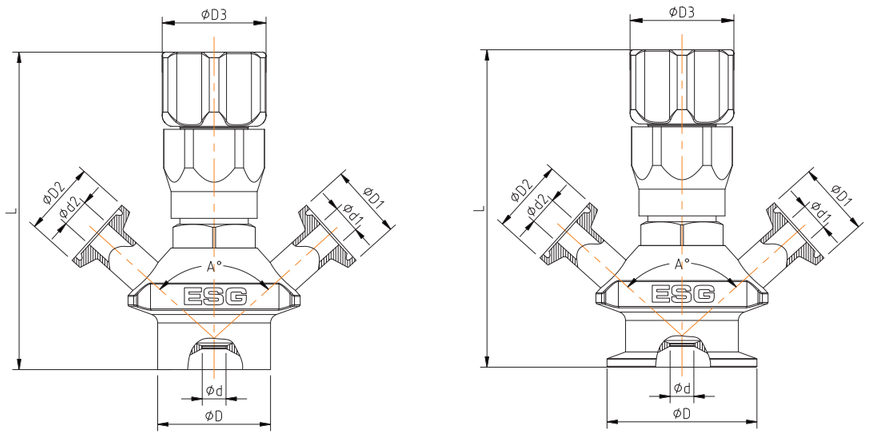
Advantages

1. Valve diaphragm is certified with FDA and USP.
2. Valve bodies with ports are machined in one piece of forging steel, thus avoiding all crevices and fissures from welded or screwed parts.
3. Valve bodies come with welded or clamp connection, customization is acceptable.
4. Sanitary seal has good resistance to high pressure, excellent corrosion resistance and is of long service life.
5. Spring–preloading structure strengthens sealing effect and

Order Instruction



Sampling Valve



Welded Connection

Tri–clamp

Main Dimension (Tri-clamp Connection)

Size	ΦD	Φd	L	ΦD1	Φd1	ΦD2	Φd2	ΦD3	A°
Single Port	50.5	8	110	25	9.4	–	–	38	96
Dual–Port	50.5	8	110	25	9.4	25	9.4	38	96

Port size customization available.

Main Dimension (Welded Connection)

Size	ΦD	Φd	L	L1	ΦD1	Φd1	ΦD2	Φd2	ΦD3	A°
Single–Port	38	8	110	15.5	25	9.4	–	–	38	96
Dual–Port	38	8	110	15.5	25	9.4	25	9.4	38	96

Port size customization available.

Angle Seat Valve

ESG angle seat valve is made entirely of high–quality stainless steel, ensuring stable operation of the valve even in harsh conditions, with corrosion resistance and wear resistance. The valve is precisely designed and can be used in conjunction with the ESG positioner to achieve precise flow and pressure control, meeting needs of various industrial applications. The internal structure of the valve is optimized with sealing and wear–resistant materials, ensuring a long service life for the valve. Even under high–frequency switching conditions, it can maintain stable sealing performance and good operating performance. In terms of configuration options, it includes different materials, connection methods, actuators and accessories to meet the needs of different users and application scenarios. Whether it is in the fine chemical processes that require precise adjustment or the automated production lines that require quick response, ESG angle seat valve can provide reliable solutions.

Applications

Eps Molding, Industrial Gas, Textile Dyeing, Ceramic, Casting, Fodder, Water Treatment, Environmental, Chemical, Pharmaceutical, Food & Beverage, etc.

ESG®

Angle Seat Valve

Angle Seat Valve with Multiple Configurations Available

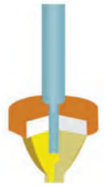
Control Accessory

Position Indicator

Intelligent Positioner

Two-pieceIntelligent Positioner

Solenoid Valve



Adjustable Seat

Proximity Switch

Actuator

Pneumatic Actuator

Manual Actuator

Valve Body

Two-Way Vavle

Manifold Vavle

Modular Vavle

Three-Way Vavle

Three-Way Low Flow Resistance Vavle

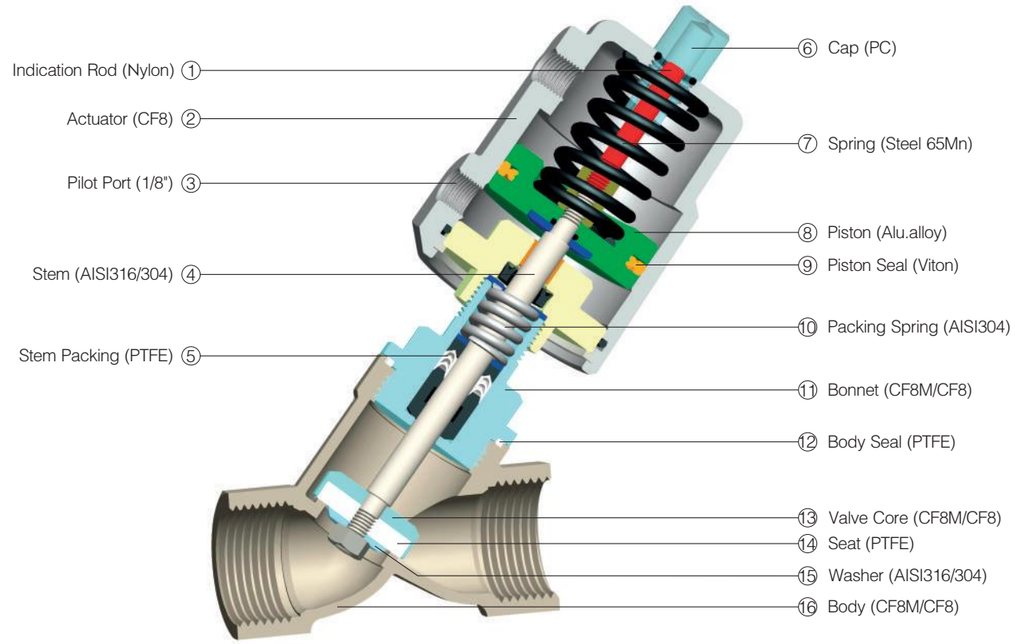
Globe Valve

Shut Off Valve

100 Series Threaded Angle Seat Valve

100 Series Welded Angle Seat Valve

100 Series Tri-clamp Angle Seat Valve



ESG®

Angle Seat Valve

100 Series Flanged Angle Seat Valve with Round Bonnet

100 Series Flanged Angle Seat Valve with Square Bonnet

Technical Specification

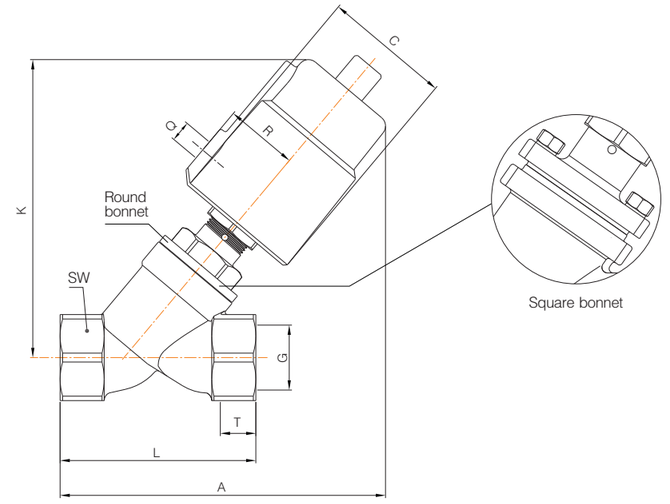
- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Actuator material: CF8 (40mm–90mm Actuator)、AL (125mm Actuator)
- Actuator size: 40mm, 50mm, 63mm, 90mm, 125mm
- Applicable fluid: Water, Alcohol, Oil, Fuel, Steam, Neutral gas or Liquid, Organic solvent, Acid and lye
- Fluid viscosity: Max 600mm^2/s
- Fluid temperature: –10℃ — +180℃
–40℃ — +180℃
+25℃ — +220℃
- Ambient temperature: –10℃ — +80℃
- Control type: Single acting normally closed,
Single acting normally open,
Double acting normally closed,
Double acting without spring
- Connection type: Threaded, Welded, Flanged, Tri–clamp
- Leakage class: DIN EN 12266 Class A

Advantages

1. Large flux, low resistance, prevent water–hammer.
2. Y–type raises flux by 30% and make flow more smooth.
3. Long working life.
4. The stem adjusts and lubricates itself automatically, minimizing needs for maintaince.
5. The stainless steel actuator can be rotated 360° for flexiable uses.

Function Principle

Valve stays closed(open) by spring force in its normal state. When piston is actuated by compressed air, valve becomes opened (closed). For double acting type, valve is opened and closed by compressed air.

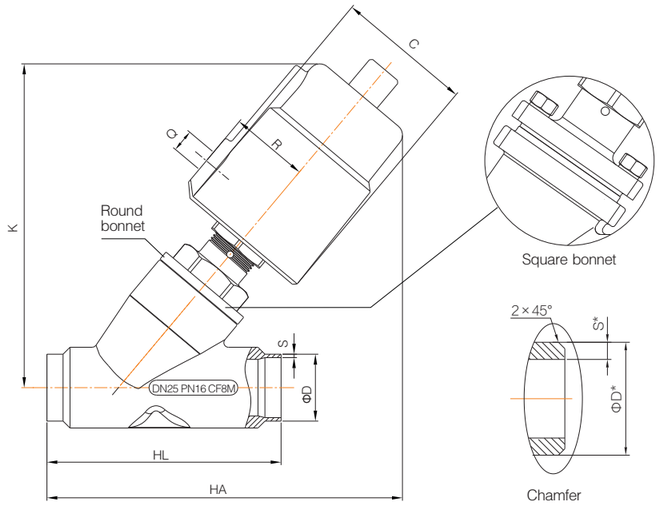


Main Dimension (Threaded Connection)

Size	Actuator (mm)	Q	C	R	K	G	T	A	L	SW
DN8	40	1/8"	50.5	27	112	1/4"	12	124	68	27
	50	1/8"	60	33	125			135		
DN10	40	1/8"	50.5	27	112	3/8"	12	124	68	27
	50	1/8"	60	33	125			135		
DN15	40	1/8"	50.5	27	112	1/2"	15	124	68	27
	50	1/8"	60	33	125			135		
DN20	50	1/8"	60	33	132	3/4"	16	140	75	32
DN25	50	1/8"	60	33	136	1"	17	150	90	40
	63	1/8"	75	41	162			172		
DN32	63	1/8"	75	41	174	1 1/4"	21	190	116	50
	90	1/8"	106	55	223			235		
DN40	63	1/8"	75	41	175	1 1/2"	21	190	116	56
	90	1/8"	106	55	223			235		
DN50	63	1/8"	75	41	183	2"	22	205	138	69
	90	1/8"	106	55	232			250		
	125AL	1/4"	170	85	300			305		
DN65 Square bonnet	90	1/8"	106	55	280	2 1/2"	26	275	178	85
	125AL	1/4"	170	85	330			320		
DN80 Square bonnet	125AL	1/4"	170	85	355	3"	27	340	210	100

ESG®

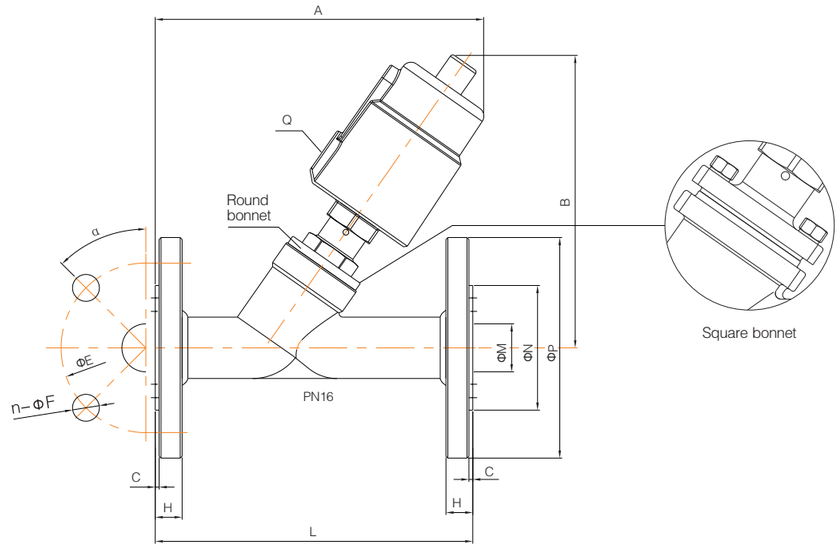
Angle Seat Valve



Main Dimension (Welded Connection)

Size	Actuator (mm)	Q	C	R	K	HA	HL	Chamfer		DIN11850–2		DIN11850–3	
								ΦD*	S*	ΦD	S	ΦD	S
DN15	40	1/8"	50.5	27	112	118	70	22	3.5	19	1.5	20	2
	50	1/8"	60	33	125	128							
DN20	50	1/8"	60	33	132	135	82	29	5	23	1.5	24	2
DN25	50	1/8"	60	33	136	150	100	35	5	29	1.5	30	2
	63	1/8"	75	41	162	175							
DN32	63	1/8"	75	41	174	186	125	39	4	35	1.5	36	2
	90	1/8"	106	55	223	232							
DN40	63	1/8"	75	41	175	190	130	45	4.5	41	1.5	42	2
	90	1/8"	106	55	223	235							
DN50	63	1/8"	75	41	183	206	155	57	4	53	1.5	54	2
	90	1/8"	106	55	232	250							
	125AL	1/4"	170	85	300	307							
DN65 Square bonnet	90	1/8"	106	55	280	320	270	75	5	70	2	–	–
	125AL	1/4"	170	85	330	360						–	–
DN80 Square bonnet	125AL	1/4"	170	85	355	360	284	90	5.5	85	2	–	–

Note: * designates design dimension (the actual dimension may vary)



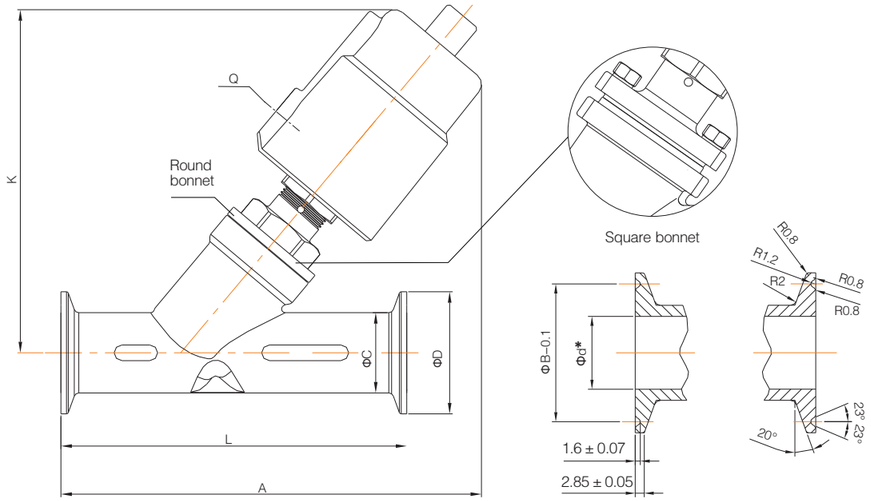
Flange specification: DIN2543/DIN2576/EN1092–1/HG20592; ISO/ANSI/DIN/JIS customization available.

Main Dimension (Flange Connection)

Size	Actuator (mm)	Q	A	B	L	C	H	ΦE	n–ΦF	ΦM	ΦN	ΦP	α
DN15	40	1/8"	135	125	130	2	14	65	4–14	18	45	95	45°
	50		145	140									
DN20	50	1/8"	165	140	150	2	14	75	4–14	21	56	105	45°
DN25	50	1/8"	170	145	160	2	14	85	4–14	28	65	115	45°
	63		190	175									
DN32	63	1/8"	190	188	180	2	16	100	4–18	34	78	140	45°
	90		230	235									
DN40	63	1/8"	206	190	200	3	16	110	4–18	41	84	150	45°
	90		250	240									
DN50	63	1/8"	235	195	230	3	16	125	4–18	54	100	165	45°
	90		277	245									
	125AL	1/4"	330	310									
DN65 Square bonnet	90	1/8"	330	280	290	3	18	145	4–18	71	120	185	45°
	125AL	1/4"	375	330									
DN80 Square bonnet	125AL	1/4"	380	355	310	3	20	160	8–18	84	135	200	22.5°
DN100 Square bonnet	125AL	1/4"	420	395	350	3	20	180	8–18	96	155	215	22.5°

ESG®

Angle Seat Valve



Clamp Specification: ISO 2852; customization available.

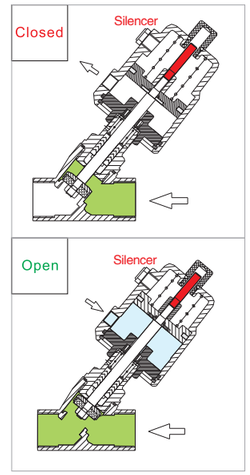
Main Dimension (Tri–clamp Connection)

Size	Actuator (mm)	Q	A	K	L	ΦC	ΦB	Φd*	ΦD
DN15	40	1/8"	130	115	80	20.5	27.5	15	34
	50	1/8"	140	126					
DN20	50	1/8"	158	148	130	25	43.5	19	50.5
DN25	50	1/8"	165	140	130	32	43.5	27	50.5
	63	1/8"	188	166					
DN32	63	1/8"	200	174	146	37	43.5	31	50.5
	90	1/8"	245	223					
DN40	63	1/8"	210	175	160	40	56.5	34	64
	90	1/8"	255	223					
DN50	63	1/8"	221	185	175	53	56.5	45	64
	90	1/8"	265	235					
	125AL	1/4"	325	296					
DN65 Square bonnet	90	1/8"	325	280	278	75	83.5	65	91
	125AL	1/4"	360	330					
DN80 Square bonnet	125AL	1/4"	360	352	290	89.5	97	78.5	106

Note: * designates design dimension (the actual dimension may vary)

Single Acting, Normally Closed (NC)–Enter Above Seat

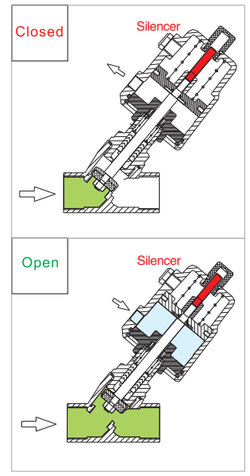
Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	9.5	1.8	28	0–1.0	0.5–0.7
		13	2.2	40	0–1.6	0.4–0.45
				50	0–1.6	0.35–0.4
DN10	G3/8"	9.5	2.2	28	0–1.0	0.5–0.7
		13	3.9	40	0–1.6	0.4–0.45
				50	0–1.6	0.35–0.4
DN15	G1/2"	9.5	2.2	28	0–1.0	0.5–0.7
		13	4.3	40	0–1.6	0.4–0.45
				50	0–1.6	0.35–0.4
DN20	G3/4"	18	7.6	50	0–1.6	0.35–0.5
DN25	G1"	24	15.8	50	0–1.6	0.35–0.55
				63	0–1.6	0.3–0.4
DN32	G1 1/4"	31	26.0	63	0–1.6	0.3–0.55
				90	0–1.6	0.3–0.35
DN40	G1 1/2"	35	32.0	63	0–1.6	0.3–0.7
				90	0–1.6	0.3–0.4
DN50	G2"	45	52.0	63	0–0.9	0.3–0.7
				90	0–1.6	0.3–0.45
				125	0–1.6	0.3–0.4
DN65	G2 1/2"	61	83.2	90	0–1.0	0.3–0.6
				125	0–1.6	0.3–0.4
DN80	G3"	80	119	125	0–1.2	0.3–0.7
DN100	G4"	90	132	125	0–1.0	0.4–0.7



Single Acting, Normally Closed (NC)–Enter Below Seat (Minimize water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	9.5	1.8	28–A	0–1.0	⩾0.5
		13	2.2	40–A	0–1.3	⩾0.4
				50–A	0–1.4	⩾0.45
DN10	G3/8"	9.5	2.2	28–A	0–1.0	⩾0.5
		13	3.9	40–A	0–1.3	⩾0.4
				50–A	0–1.4	⩾0.45
DN15	G1/2"	9.5	2.2	28–A	0–1.0	⩾0.5
		13	4.3	40–A	0–1.3	⩾0.4
				50–A	0–1.4	⩾0.45
DN20	G3/4"	18	7.6	50–A	0–1.4	⩾0.45
DN25	G1"	24	15.8	50–A	0–0.8	⩾0.45
				63–A	0–1.3	⩾0.5
				63–B	0–0.8	⩾0.3
DN32	G1 1/4"	31	26.0	63–A	0–0.6	⩾0.5
				90–A	0–1.6	⩾0.6
				90–B	0–1.3	⩾0.45
DN40	G1 1/2"	35	32.0	63–A	0–0.5	⩾0.5
				90–A	0–1.6	⩾0.6
				90–B	0–1.1	⩾0.45
DN50	G2"	45	52.0	63–A	0–0.2	⩾0.5
				90–A	0–1.0	⩾0.6
				90–B	0–0.7	⩾0.45
				125–A	0–1.6	⩾0.55
				125–B	0–1.1	⩾0.45
DN65	G2 1/2"	61	83.2	90–A	0–0.5	⩾0.6
				90–B	0–0.2	⩾0.45
				125–A	0–0.9	⩾0.55
				125–B	0–0.6	⩾0.45
				125–D	0–0.5	⩾0.35
DN80	G3"	80	119	125–A	0–0.5	⩾0.55
				125–B	0–0.3	⩾0.45
				125–C	0–0.2	⩾0.4
DN100	G4"	90	132	125–A	0–0.25	⩾0.55

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range



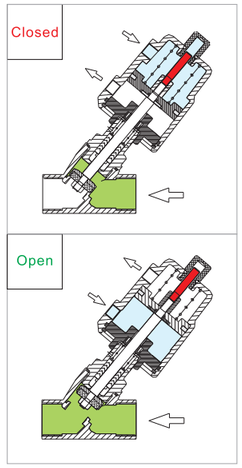
Angle seat valve

ESG®

Angle Seat Valve

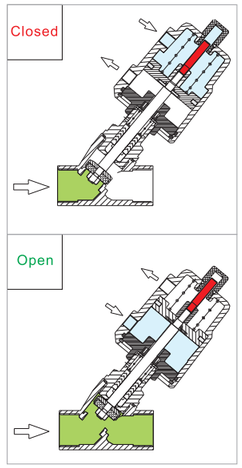
Double Acting, Normally Closed (NC)–Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.4–0.45
				50	0–1.6	0.35–0.4
DN10	G3/8"	13	3.9	40	0–1.6	0.4–0.45
				50	0–1.6	0.35–0.4
DN15	G1/2"	13	4.3	40	0–1.6	0.4–0.45
				50	0–1.6	0.35–0.4
DN20	G3/4"	18	7.6	50	0–1.6	0.35–0.5
DN25	G1"	24	15.8	50	0–1.6	0.35–0.55
				63	0–1.6	0.3–0.4
DN32	G1 1/4"	31	26.0	63	0–1.6	0.3–0.55
				90	0–1.6	0.3–0.35
DN40	G1 1/2"	35	32.0	63	0–1.6	0.3–0.7
				90	0–1.6	0.3–0.4
DN50	G2"	45	52.0	63	0–0.9	0.3–0.7
				90	0–1.6	0.3–0.45
				125	0–1.6	0.3–0.4
DN65	G2 1/2"	61	83.2	90	0–1.0	0.3–0.6
				125	0–1.6	0.3–0.4
DN80	G3"	80	119	125	0–1.2	0.3–0.7
DN100	G4"	90	132	125	0–1.0	0.4–0.7



Double Acting, Normally Closed (NC)–Enter Below Seat (Minimize water-hammer)

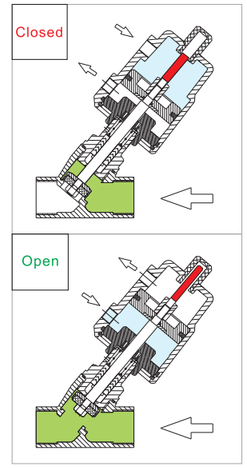
Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	⩾0.4
				50	0–1.6	⩾0.35
DN10	G3/8"	13	3.9	40	0–1.6	⩾0.4
				50	0–1.6	⩾0.35
DN15	G1/2"	13	4.3	40	0–1.6	⩾0.4
				50	0–1.6	⩾0.35
DN20	G3/4"	18	7.6	50	0–1.6	⩾0.35
DN25	G1"	24	15.8	50	0–1.3	0.3–0.6
				63	0–1.6	0.3–0.4
DN32	G1 1/4"	31	26.0	63	0–1.6	0.3–0.6
				90	0–1.6	0.3–0.4
DN40	G1 1/2"	35	32.0	63	0–1.6	0.3–0.7
				90	0–1.6	0.3–0.5
DN50	G2"	45	52.0	63	0–0.8	0.3–0.75
				90	0–1.6	0.3–0.6
				125	0–1.6	0.3–0.4
DN65	G2 1/2"	61	83.2	90	0–1.1	0.3–0.7
				125	0–1.6	0.3–0.55
DN80	G3"	80	119	125	0–1.6	0.3–0.7
DN100	G4"	90	132	125	0–1.2	0.4–0.6



Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

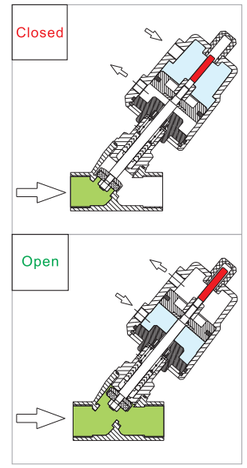
Double Acting Without Spring–Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.3–0.45
				50	0–1.6	0.3–0.35
DN10	G3/8"	13	3.9	40	0–1.6	0.3–0.45
				50	0–1.6	0.3–0.35
DN15	G1/2"	13	4.3	40	0–1.6	0.3–0.45
				50	0–1.6	0.3–0.35
DN20	G3/4"	18	7.6	50	0–1.6	0.3–0.4
DN25	G1"	24	15.8	50	0–1.6	0.3–0.45
				63	0–1.6	0.3–0.35
DN32	G1 1/4"	31	26.0	63	0–1.6	0.3–0.55
				90	0–1.6	0.3–0.4
DN40	G1 1/2"	35	32.0	63	0–1.6	0.3–0.65
				90	0–1.6	0.3–0.4
DN50	G2"	45	52.0	63	0–1.0	0.3–0.7
				90	0–1.6	0.3–0.45
				125	0–1.6	0.3–0.4
DN65	G2 1/2"	61	83.2	90	0–1.0	0.3–0.6
				125	0–1.6	0.3–0.4
DN80	G3"	80	119	125	0–1.2	0.3–0.7
DN100	G4"	90	132	125	0–1.0	0.4–0.7



Double Acting Without Spring–Enter Below Seat (Minimize water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.3–0.4
				50	0–1.6	0.3–0.4
DN10	G3/8"	13	3.9	40	0–1.6	0.3–0.4
				50	0–1.6	0.3–0.4
DN15	G1/2"	13	4.3	40	0–1.6	0.3–0.4
				50	0–1.6	0.3–0.4
DN20	G3/4"	18	7.6	50	0–1.6	0.3–0.4
DN25	G1"	24	15.8	50	0–1.6	0.3–0.65
				63	0–1.6	0.3–0.55
DN32	G1 1/4"	31	26.0	63	0–1.6	0.3–0.7
				90	0–1.6	0.3–0.45
DN40	G1 1/2"	35	32.0	63	0–1.2	0.3–0.75
				90	0–1.6	0.3–0.5
DN50	G2"	45	52.0	63	0–0.4	0.3–0.75
				90	0–1.6	0.3–0.6
				125	0–1.6	0.3–0.4
DN65	G2 1/2"	61	83.2	90	0–1.0	0.3–0.75
				125	0–1.6	0.3–0.6
DN80	G3"	80	119	125	0–1.0	0.3–0.7
DN100	G4"	90	132	125	0–0.8	0.3–0.75



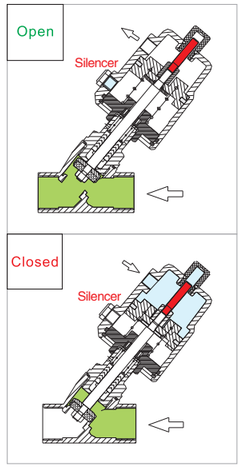
Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

ESG®

Angle Seat Valve

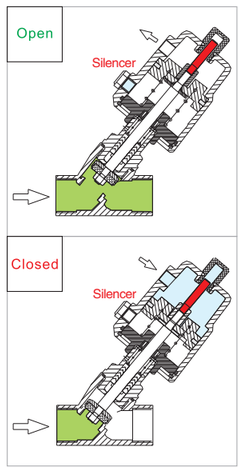
Normally Open(NO)–Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	⩾0.3
				50	0–1.6	⩾0.3
DN10	G3/8"	13	3.9	40	0–1.6	⩾0.3
				50	0–1.6	⩾0.3
DN15	G1/2"	13	4.3	40	0–1.6	⩾0.3
				50	0–1.6	⩾0.3
DN20	G3/4"	18	7.6	50	0–1.2	⩾0.3
DN25	G1"	24	15.8	50	0–0.3	⩾0.3
				63	0–1.6	⩾0.45
DN32	G1 1/4"	31	26.0	63	0–1.4	⩾0.45
DN40	G1 1/2"	35	32.0	63	0–1.4	⩾0.45
DN50	G2"	45	52.0	63	0–0.6	⩾0.45



Normally Open(NO)–Enter Below Seat (Minimize water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.3–0.5
				50	0–1.6	0.3–0.4
DN10	G3/8"	13	3.9	40	0–1.6	0.3–0.5
				50	0–1.6	0.3–0.4
DN15	G1/2"	13	4.3	40	0–1.6	0.3–0.5
				50	0–1.6	0.3–0.4
DN20	G3/4"	18	7.6	50	0–1.6	0.3–0.6
DN25	G1"	24	15.8	50	0–1.3	0.3–0.6
				63	0–1.6	0.3–0.5
DN32	G1 1/4"	31	26.0	63	0–1.3	0.3–0.6
DN40	G1 1/2"	35	32.0	63	0–0.7	0.3–0.6
				90	0–1.6	0.3–0.45
DN50	G2"	45	52.0	63	0–0.5	0.3–0.6
				90	0–1.2	0.3–0.6
DN65	G2 1/2"	61	83.2	90	0–0.75	0.3–0.6
				125	0–1.4	0.3–0.7
DN80	G3"	80	119	125	0–1.2	0.3–0.7



Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Angle Seat Valve with Proximity Switch

Proximity Switch

Proximity switch can be mounted on angle seat valves of all sizes to monitor and feedback open state of the valve.

Technical Specification

- Operating pressure: 10–30V DC
- Protection class: IP67
- Detection distance: 3mm ± 10% (Customization available)
- Temperature range: –25℃ — +70℃
- Enclosure material: brass nickel plating
- Probe material: ABS
- Leakage class: DIN EN 12266 Class A

Angle Seat Valve with Solenoid Valve

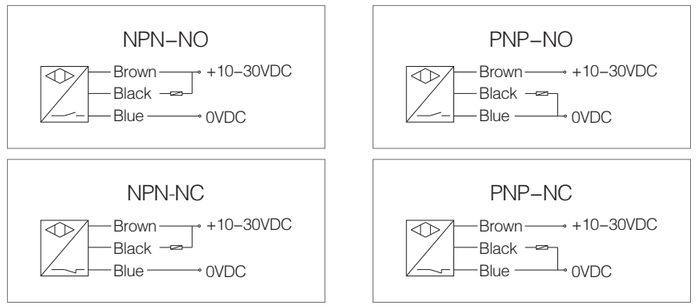
Solenoid Valve

Apply to angle seat valve with any aperture size. Connect to 5/2 or 3/2 way solenoid valve.

Technical Specification

- Applicable Medium: Air (Filtered by 40μm mesh)
- Protection level: IP65
- Connection type: G1/8"
- Power: 24V DC or 220V AC
- Air pressure: 1.5–8bar (22–116psi)
- Temperature range: –5℃ — +50℃
- Leakage class: DIN EN 12266 Class A

Output Signal



ESG®

Angle Seat Valve

Angle Seat Valve with Manual Override

Angle Seat Valve with Position Indicator

Manual Override

It can adjust piston position, restrict travel, and regulate flow.
Applicable to all types of angle seat valves. It can be used for emergency control, in case of lack of control fluids or electrical/ mechanical failure.

Technical Specification

- Handwheel material: Die–casted Aluminum
- Control type: Single acting normally closed
- Leakage class: DIN EN 12266 Class A
- Suitable for 40/50/63/90mm actuator

Position Indicator

Position Indicator can be mounted on angle seat valves of all sizes to monitor and feedback both open and close states of the valve.

Technical Specification

- Operating Voltage: DC12V~DC36V (mechanical type)/ DC12V~DC30V(contactless type)
- Operating Current: MAX.300mA(mechanical type)/ MAX.100mA(contactless type)
- Indicator Light: Visually feedbacks the valve's open/close status
- Temperature Range: –10℃—+70℃
- Environment humidity: ≤90%RH
- Protection Level: IP65
- Explosion–Proof: Ex nA IIC T4
- Shell Material: PA6–GF30+PC
- On–Off Mode: mechanical type/contactless type
- Output Mode: 0S2– 4–wire PNP/4–wire NPN/3–wire PNP
  0S3– Multiple output/contactless
- Electrical Principle: refer the position indicator
- Wiring Method: Unscrew the transparent cover, thread the cable through the cable opening and connect it to the required terminal.
- Leakage Class: DIN EN 12266 Class A

Order Instruction

100 | XXX | X | XXX | X | XX | X | X | X | X | (*) | - | X···X

- Series No.: 100
- Actuator size: A40、A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size: D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- Installation direction: Y: Above seat; W: Below seat
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H7: Welded DIN11850–2/DIN11866 A; H8: Welded DIN11850–3; H9: Welded chamfer; H*: Welded customized dimension; K7: Tri–clamp ISO2852; K*: Tri–clamp customized dimension; F2: Flange JB/T82 (DIN2543/DIN2576/EN1092–1/HG20592); F*: Flange customized dimension
- Body Material: 1: CF8; 2: CF8M; 6: CF3M
- Actuator material (AL only applicable for actuators bigger than 125): 1: CF8; 8: AL
- Spring selection (A by default): 0: No spring; A: Spring A; B: Spring B; C: Spring C; D: Spring D
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; 4: Graphite Normal temperature; 5: Graphite High temperature; 6: PTFE low temperature type; *: Customized sealing
- Customization: E: Complying with EC1935; *: Special customization
- Angle seat valve accessory

J | X | XX | (*)

- Proximity switch
- Electrical type: 1: NPN, NO; 2: NPN, NC; 3: PNP, NO; 4: PNP, NC
- Operating voltage D2: 10–30V DC
- *: Special customization

D | X | XX | (*)

- Solenoid valve
- Control option: A: 3/2; B: 5/2
- Operating voltage: D1: 24V DC; A1: 220V AC
- *: Special customization

S | (*)

- Manual override
  (Except the 125 cylinder)
- *: Special customization

0S0 | XXX | XX | XX | (*)

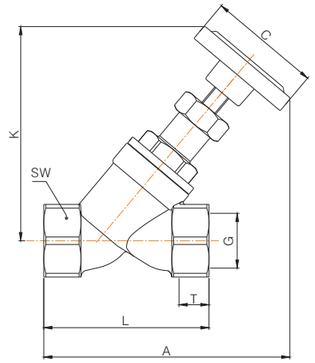
- Position indicator: 0S2: Mechanical type multiple output 4–wire PNP / 4–wire NPN / 3–wire PNP; 0S3: Contactless type/multiple output
- Connection type: G14: G1/4; M26: M26
- Max stroke (mm): 35: 35mm; 30: 30mm
- Operating voltage: D3: 12–36V DC; D4: 12–30V DC
- *: Special customization

ESG®

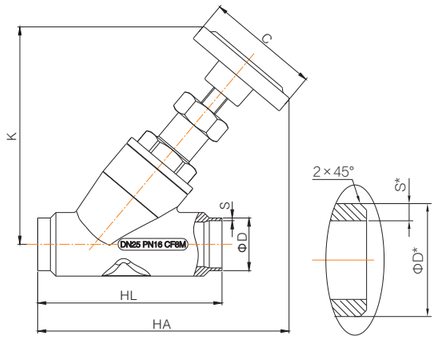
Angle Seat Valve

107 Series
Threaded Manual
Angle Seat Valve

107 Series
Welded Manual
Angle Seat Valve



Threaded connection



Welded connection

Chamfer

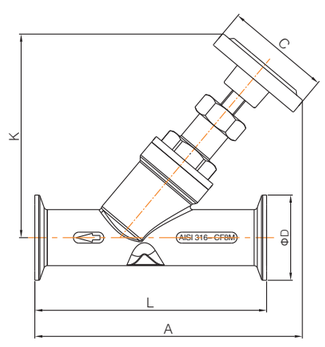
Main Dimension

Size	C	K	Threaded connection					Welded connection							
										Chamfer		DIN11850–2		DIN11850–3	
			G	T	A	L	SW	HA	HL	ΦD*	S*	ΦD	S	ΦD	S
DN8	62	115	1/4"	12	128	68	27	–	–	–	–	–	–	–	–
DN10	62	115	3/8"	12	128	68	27	–	–	–	–	–	–	–	–
DN15	62	115	1/2"	15	128	68	27	120	70	22	3.5	19	1.5	20	2
DN20	62	120	3/4"	16	133	75	32	128	82	29	5	23	1.5	24	2
DN25	62	125	1"	17	142	90	40	144	100	35	5	29	1.5	30	2
DN32	62	146	1 1/4"	21	166	116	50	165	125	39	4	35	1.5	36	2
DN40	62	148	1 1/2"	21	168	116	56	168	130	45	4.5	41	1.5	42	2
DN50	62	155	2"	22	182	138	69	182	155	57	4	53	1.5	54	2
DN65 Square bonnet	80	211	2 1/2"	26	226	178	85	270	270	75	5	70	2		

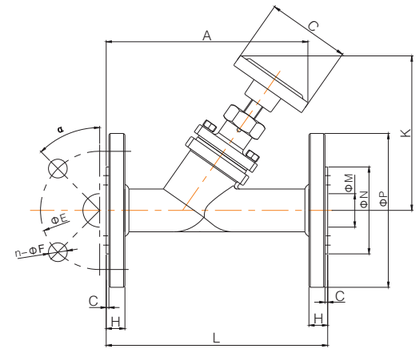
Note: * designates design dimension (the actual dimension may vary)

107 Series
Tri-clamp Manual
Angle Seat Valve

107 Series
Flanged Manual
Angle Seat Valve



Tri–clamp connection



Flange connection

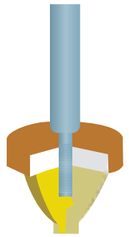
Main Dimension

Size	C	Tri–clamp connection				Flange connection									
		K	ΦD	L	A	K	A	L	C	H	ΦE	n–ΦF	ΦM	ΦN	ΦP	α
DN15	62	113	34	80	132	116	136	130	2	14	65	4–14	16	45	95	45°
DN20	62	122	50.5	130	147	122	157	150	2	14	75	4–14	19	56	105	45°
DN25	62	126	50.5	130	156	127	157	160	2	14	85	4–14	26	65	115	45°
DN32	62	142	50.5	146	174	147	162	180	2	16	100	4–18	31	78	140	45°
DN40	62	141	64	160	185	149	181	200	3	16	110	4–18	38	84	150	45°
DN50	62	152	64	175	195	156	210	230	3	16	125	4–18	54	100	165	45°
DN65 Square bonnet	80	200	91	278	266	201	272	290	3	18	145	4–18	71	120	185	45°

Angle Seat Valve

Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Applicable medium: Water, Alcohol, Oil, Fuel, Steam, Neutral gas or Liquid, organic solvent, weak acid or weak base solution
- Fluid temperature: –10℃ — +180℃
  +25℃ — +220℃
- Ambient temperature: –10℃ — +80℃
- Maximum fluid viscosity: 600m²/s
- Connection type: Threaded, Welded, Tri–clamp, Flange
- Leakage class: DIN EN 12266 Class A



Adjustable seat

Note: Adjustable seat can be installed to achieve manual flow adjustment.

Order Instruction

107 | XXX | X | XX | X | X | (*)

- Series No.: 107
- Size: D08、D10、D15、D20、D25、D32、D40、D50、D65 (XXX)
- Installation direction (X): Y: Above seat; W: Below seat
- Connection type (XX):
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
  - H7: Welded DIN11850–2/DIN11866 A
  - H8: Welded DIN11850–3
  - H9: Welded Chamfer
  - H*: Welded customized dimension
  - K7: Tri–clamp ISO2852
  - K*: Tri–clamp customized dimension
  - F2: Flange JB/T82 (DIN2543/DIN2576/EN1092–1/HG20592)
  - F*: Flange customized dimension
- Body Material (X):
  - 1: CF8
  - 2: CF8M
  - 6: CF3M
- Sealing material (X):
  - 2: PTFE Normal temperature
  - 3: PTFE High temperature
  - 4: Graphite Normal temperature
  - 5: Graphite High temperature
  - *: Customized sealing
- Customization (*):
  - E: Complying with EC1935
  - *: Special customization

120 Series Threaded Pneumatic Angle Seat Valve

120 Series Welded Pneumatic Angle Seat Valve

120 Series Tri-clamp Pneumatic Angle Seat Valve

Technical Specification

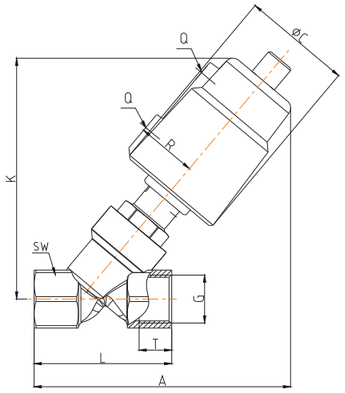
- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Actuator material: CF8 (28mm–90mm Actuator)、AL (125mm Actuator)
- Actuator size: 28mm,40mm, 50mm, 63mm, 90mm, 125mm
- Applicable fluid: Water, Alcohol, Oil, Fuel, Steam, Neutral gas or Liquid, Organic solvent, Acid and lye
- Fluid viscosity: Max 600mm²/s
- Fluid temperature: –10℃ — +180℃, +25℃ — +220℃
- Ambient temperature: –10℃ — +80℃
- Control type: Single acting normally closed, Single acting normally open, Double acting normally closed, Double acting without spring
- Connection type: Threaded (BSP, BSPT, NPT), Welded, Tri–clamp, Flanged
- Leakage class: EN 12266 Class A

Advantages

1. New sealing structure can reduce residues and be easy to clean.
2. High flow rate, low flow resistance, and no water hammer.
3. Y–shaped valve body design, increasing flow by 30%.
4. Ultra long service life.
5. Valve rod auto–correction and self–lubricating.
6. Stainless steel actuator, better performance in harsh environment and can rotate 360° .

ESG®

Angle Seat Valve

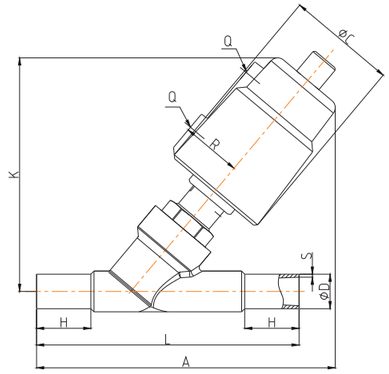


Threaded Connection

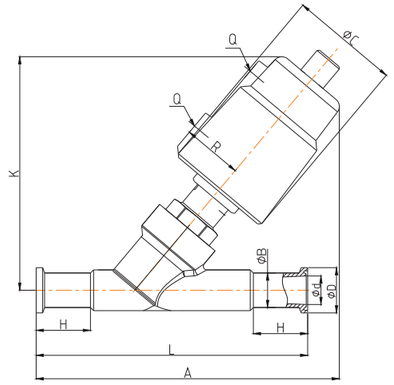
Main Dimension (Threaded Connection)

Size	Actuator (mm)	Q	ΦC	R	K	A	Kv (m^3/h)	G	T	L	SW
DN8	28	1/8"	42	21	110	117	1.8	1/4"	12	65	27
	40	1/8"	50.5	27	125	131	2.2				
	50	1/8"	60	33	139	143					
DN10	28	1/8"	42	20	110	117	2	3/8"	14	65	27
	40	1/8"	50.5	27	125	131	3.9				
	50	1/8"	60	33	139	143					
DN15	28	1/8"	42	20	110	117	2.2	1/2"	16	65	27
	40	1/8"	50.5	27	125	131	4.3				
	50	1/8"	60	33	139	143					
DN20	50	1/8"	60	33	141	146	7.6	3/4"	18	75	32
DN25	50	1/8"	60	33	145	155	15.8	1"	20	90	40
	63	1/8"	75	41	167	177					
DN32	63	1/8"	75	41	180	193	26.0	1 1/4"	22	110	50
	90	1/8"	106	55	227	235					
DN40	63	1/8"	75	41	180	197	32.0	1 1/2"	24	120	56
	90	1/8"	106	55	228	239					
DN50	63	1/8"	75	41	187	215	52.0	2"	26	150	69
	90	1/8"	106	55	235	258					
	125AL	1/4"	170	85	300	312					

Angle seat valve



Welded Connection



Tri–clamp Connection

Main Dimension (Welded Connection)

Size	Actuator (mm)	Q	ΦC	R	K	A	Kv (m^3/h)	L	H	ASME BPE	
										ΦD	S
DN8	40	1/8"	50.5	27	118	122	2.2	70	7	6.35	0.89
DN10	40	1/8"	50.5	27	118	122	3.1	70	7	9.53	0.89
DN15	28	1/8"	42	21	112	143	1.3	135	30	12.7	1.65
	40	1/8"	50.5	27	127	155	1.7				
	50	1/8"	60	33	140	166					
DN20	50	1/8"	60	33	138	170	5.8	145	30	19.05	1.65
DN25	50	1/8"	60	33	146	176	11.8	152	30	25.4	1.65
	63	1/8"	75	41	168	200					
DN40	63	1/8"	75	41	177	216	20.6	182	30	38.1	1.65
	90	1/8"	106	55	225	258					
DN50	63	1/8"	75	41	187	228	55.7	210	30	50.8	1.65
	90	1/8"	106	55	235	270					
	125AL	1/4"	170	85	300	325					
DN65 Square bonnet	90	1/8"	106	55	286	297	71.6	230	26	63.5	1.65
	125AL	1/4"	170	85	338	337					
DN80 Square bonnet	125AL	1/4"	170	85	355	380	105.2	310	26	76.2	1.65

Main Dimension (Tri–clamp Connection)

Size	Actuator (mm)	Q	ΦC	R	K	A	Kv (m^3/h)	L	ASME BPE			
									ΦD	ΦB	Φd	H
DN15	28	1/8"	42	21	112	145	1.3	130	25	12.7	9.4	30
	40	1/8"	50.5	27	127	158	1.7					
	50	1/8"	60	33	140	169						
DN20	50	1/8"	60	33	138	172	5.8	150	25	19.05	15.75	30
DN25	50	1/8"	60	33	146	180	11.8	160	50.5	25.4	22.1	30
	63	1/8"	75	41	169	205						
DN40	63	1/8"	75	41	177	225	20.6	200	50.5	38.1	34.8	30
	90	1/8"	106	55	225	267						
DN50	63	1/8"	75	41	187	238	55.7	230	64	50.8	47.5	30
	90	1/8"	106	55	235	280						
	125AL	1/4"	170	85	300	335						
DN65 Square bonnet	90	1/8"	106	55	286	327	71.6	290	77.4	63.5	60.2	26
	125AL	1/4"	170	85	337	368						
DN80 Square bonnet	125AL	1/4"	170	85	349	383	105.2	315	91	76.2	72.9	26

ESG®

Angle Seat Valve

Order Instruction

120	XXX	X	XXX	X	XX	X	X	X	X	(*)	-	X···X

- Series No.: 120
- Actuator size: A28、A40、A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size: D08、D10、D15、D20、D25、D32、D40、D50、D65、D80
- Installation direction: Y: Above seat; W: Below seat
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE
- Actuator material (AL only applicable for actuators bigger than 125): 1: CF8; 8: AL
- Body Material: 1: CF8; 2: CF8M; 6: CF3M
- Spring selection (A by default): 0: No spring; A: Spring A; B: Spring B; C: Spring C; D: Spring D; *: Customized spring
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; *: Customized sealing
- Customization: E: Complying with EC1935; *: Special customization
- Angle seat valve accessory

J	X	XX	(*)

- Proximity switch
- Electrical type: 1: NPN, NO; 2: NPN, NC; 3: PNP, NO; 4: PNP, NC
- Operating voltage: D2: 10–30V DC
- *: Special customization

D	X	XX	(*)

- Solenoid valve
- Control option: A: 3/2; B: 5/2
- Operating voltage: D1: 24V DC; A1: 220V AC
- *: Special customization

S	(*)

- Manual override (125mm Actuator excluded)
- *: Special customization

0S0	XXX	XX	XX	(*)

- Position indicator: 0S2: Mechanical type multiple output 4–wire PNP / 4–wire NPN / 3–wire PNP; 0S3: Contactless type/multiple output
- Connection type: G14: G1/4; M26: M26
- Max stroke (mm): 35: 35mm; 30: 30mm
- Operating voltage: D3: 12–36V DC; D4: 12–30V DC
- *: Special customization

All the actuators except 28mm can be customized with accessary.

121 Series
Angle Diaphragm Valve

Technical Specification

- Operating pressure: 0–10bar (0–145psi)
- Control pressure: 4–8bar (58–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Actuator material: CF8
- Actuator size: 40mm, 50mm, 63mm, 90mm
- Applicable fluid: Water, Oil, Neutral gas or Liquid, Organic solvent, Acid and lye
- Fluid temperature: –10℃ — +150℃
- Ambient temperature: –10℃ — +80℃
- Control type: Single acting normally closed, Double acting normally closed
- Connection type: Threaded, Welded, Tri–clamp,
- Leakage class: EN 12266 Class A

Advantages

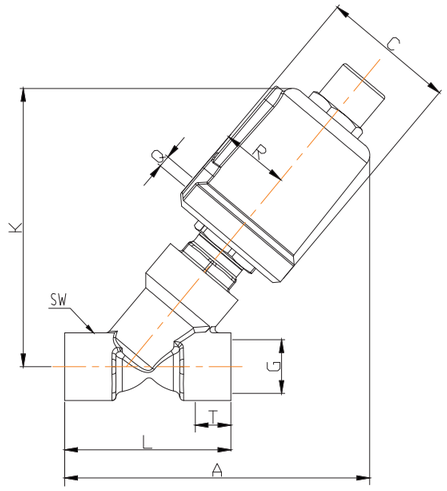
1. Diaphragm is used to isolate the medium, avoiding valve stem from seizing due to medium crystallization or being viscous with particles.
2. Stainless steel actuator, better performance for harsh environments and can rotate 360° .

Function Principle

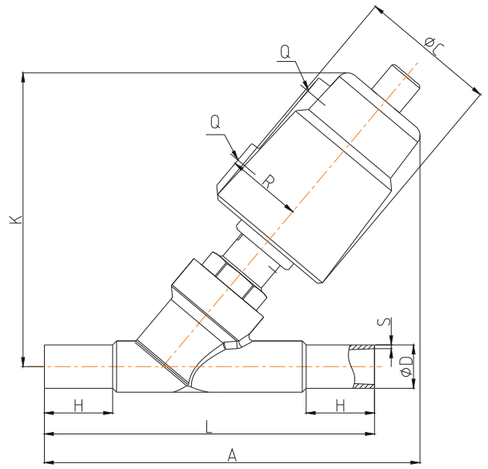
Diaphragm is arranged between the valve body and the bonnet to isolate the medium in place of the stem packing.
Valve stays closed(open) by spring force in its normal state.
When piston is actuated by compressed air, valve becomes opened (close).
For double acting type, valve is opened and closed by compressed air.

ESG®

Angle Seat Valve



Threaded Connection



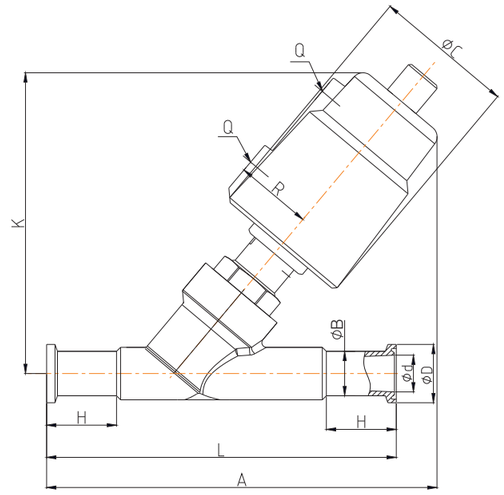
Welded Connection

Main Dimension (Threaded Connection)

Size	Actuator (mm)	Q	C	R	K	A	G	T	L	SW
DN15	40	1/8"	50.5	27	115	125	1/2"	16	65	27
DN20	50	1/8"	60	33	130	140	3/4"	18	75	32
DN25	50	1/8"	60	33	140	150	1"	20	90	40
	63	1/8"	75	41	155	165				
DN32	63	1/8"	75	41	170	185	1 1/4"	22	110	50
	90	1/8"	106	55	215	225				
DN40	63	1/8"	75	41	180	195	1 1/2"	24	120	56
	90	1/8"	106	55	220	230				
DN50	63	1/8"	75	41	180	210	2"	26	150	69
	90	1/8"	106	55	230	255				

Main Dimension (Welded Connection)

Size	Actuator (mm)	Q	C	R	K	A	L	H	ASME BPE	
									ΦD	S
DN8	40	1/8"	50.5	27	118	122	70	7	6.35	0.89
DN10	40	1/8"	50.5	27	118	122	70	7	9.35	0.89
DN15	40	1/8"	50.5	27	115	150	135	30	12.7	1.65
DN20	50	1/8"	60	33	130	165	145	30	19.05	1.65
DN25	50	1/8"	60	33	140	175	152	30	25.4	1.65
	63	1/8"	75	41	155	190				
DN40	63	1/8"	75	41	175	215	182	30	38.1	1.65
	90	1/8"	106	55	215	250				
DN50	63	1/8"	75	41	180	225	210	30	50.8	1.65
	90	1/8"	106	55	225	265				



Tri–clamp Connection

Main Dimension (Tri–clamp Connection)

Size	Actuator (mm)	Q	C	R	K	A	L	ASME BPE			
								ΦD	ΦB	Φd	H
DN15	40	1/8"	50.5	27	115	150	130	25	12.7	9.4	30
DN20	50	1/8"	60	33	125	165	150	25	19.05	15.75	30
DN25	50	1/8"	60	33	140	175	160	50.5	25.4	22.1	30
	63	1/8"	75	41	155	195					
DN40	63	1/8"	75	41	175	225	200	50.5	38.1	34.8	30
	90	1/8"	106	55	215	230					
DN50	63	1/8"	75	41	180	230	230	64	50.8	47.5	30
	90	1/8"	106	55	225	275					

Single Acting, Normally Closed (NC) -Enter Below Seat (Minimize water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN15	1/2"	13	3	40	0–1.0	≥0.5
DN20	3/4"	18	5.8	50	0–1.0	≥0.5
DN25	1"	24	11.6	50	0–0.7	≥5.5
				63	0–1.0	≥0.6
DN32	1 1/4"	31	17.3	63	0–0.6	≥0.6
				90	0–1.0	≥0.5
DN40	1 1/2"	35	22.7	63	0–0.5	≥0.55
				90	0–1.0	≥0.75
DN50	2"	45	35.6	63	0–0.2	≥0.6
				90	0–1.0	≥0.75

Double Acting, Normally Closed (NC) -Enter Below Seat (Minimize water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN15	1/2"	13	3	40	0–1.0	≥0.5
DN20	3/4"	18	5.8	50	0–1.0	≥0.45
DN25	1"	24	11.6	50	0–1.0	≥0.45
				63	0–1.0	≥0.4
DN32	1 1/4"	31	17.3	63	0–1.0	≥0.4
				90	0–1.0	≥0.35
DN40	1 1/2"	35	22.7	63	0–1.0	0.4~0.5
				90	0–1.0	0.3~0.4
DN50	2"	45	35.6	63	0–1.0	0.4~0.7
				90	0–1.0	0.3~0.4

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

ESG®

Angle Seat Valve

Order Instruction

121	XXX	X	XXX	X	XX	X	X	X	X	(*)	-	X...X

- 121 — Series No.
- XXX — Actuator size: A40、A50、A63、A90
- X — Control type: 1: Single acting normally closed; 2: Double acting normally closed
- XXX — Size: D15、D20、D25、D32、D40、D50
- X — Installation direction: W: Below seat
- XX — Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE
- X — Body Material: 1: CF8; 2: CF8M; 6: CF3M
- X — Actuator material: 1: CF8
- X — Spring selection: A: Spring A; *: Customized spring
- X — Sealing material: 2: PTFE Normal temperature; *: Customized sealing
- (*) — Customization: E: Complying with EC1935; *: Special customization
- X...X — Angle seat valve accessory

J	X	XX	(*)

- J — Proximity switch
- X — Electrical type: 1: NPN, NO; 2: NPN, NC; 3: PNP, NO; 4: PNP, NC
- XX — Operating voltage: D2: 10–30V DC
- (*) — *: Special customization

D	X	XX	(*)

- D — Solenoid valve
- X — Control option: A: 3/2; B: 5/2
- XX — Operating voltage: D1: 24V DC; A1: 220V AC
- (*) — *: Special customization

S	(*)

- S — Manual override
- (*) — *: Special customization

127 Series Threaded Manual Angle Seat Valve

127 Series Welded Manual Angle Seat Valve

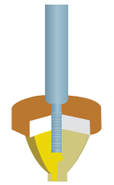
127 Series Tri-clamp Manual Angle Seat Valve

Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Applicable fluid: Water, Alcohol, Oil, Fuel, Steam, Neutral gas or Liquid, Organic solvent, Acid and lye
- Fluid temperature: –10℃ — +180℃ +25℃ — +220℃
- Ambient temperature: –10℃ — +80℃
- Fluid viscosity: Max 600mm²/s
- Connection type: Threaded, Welded ASME–BPE, Tri–clamp ASME–BPE, Flange
- Leakage class: EN 12266 Class A

Advantages

1. New body seal design can reduce residue and easy to clean.
2. Large flux, low resistance, no water–hammer.
3. Y type raises flux by 30% and make smooth flow.
4. The adjustable seat is optional to realize the adjustable flow by hand .



Adjustable seat

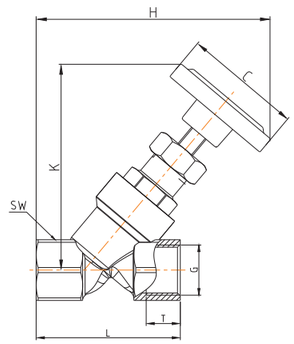
Order Instruction

127	XXX	X	XX	X	X	(*)

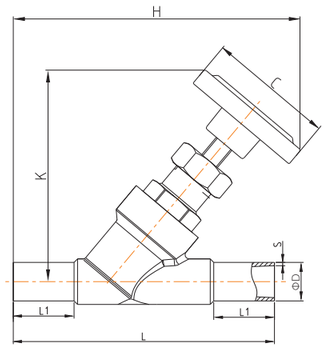
- 127 — Series No.
- XXX — Series: D08、D10、D15、D20、D25、D32、D40、D50、D65
- X — Installation direction: Y: Above seat; W: Below seat
- XX — Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE; F2: Flange JB/T82 (DIN2543/DIN2576/EN1092–1/HG20592)
- X — Body Material: 1: CF8; 2: CF8M; 6: CF3M
- X — Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; *: Customized sealing
- (*) — Customization: E: Complying with EC1935; *: Special customization

ESG®

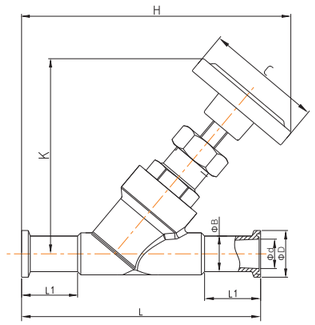
Angle Seat Valve



Threaded Connection



Welded Connection



Tri–clamp Connection

Main Dimension (Threaded Connection)

Size	C	H	K	G	T	L	SW
DN8	62	130	117	1/4	12	65	27
DN10	62	130	117	3/8	14	65	27
DN15	62	130	117	1/2	16	65	27
DN20	62	133	119	3/4	18	75	32
DN25	62	141	125	1	20	90	40
DN32	62	162	143	1 1/4	22	110	50
DN40	62	167	143	1 1/2	24	120	56
DN50	62	185	150	2	26	150	69

Main Dimension (Welded Connection)

Size	C	H	K	L1	L	ASME BPE	
						ΦD	S
DN8	62	145	119	7	70	6.35	0.89
DN10	62	145	119	7	70	9.35	0.89
DN15	62	153	119	30	135	12.7	1.65
DN20	62	157	116	30	145	19.05	1.65
DN25	62	163	125	30	152	25.4	1.65
DN40	62	186	140	30	182	38.1	1.65
DN50	62	198	150	30	210	50.8	1.65
DN65 Square bonnet	80	235	200	26	230	63.5	1.65

Main Dimension (Tri–clamp Connection)

Size	C	H	K	L1	L	ASME BPE		
						ΦD	ΦB	Φd
DN15	62	156	119	30	130	25	12.7	9.4
DN20	62	159	116	30	150	25	19.05	15.75
DN25	62	167	125	30	160	50.5	25.4	22.1
DN40	62	195	140	30	200	50.5	38.1	34.8
DN50	62	208	150	30	230	64	50.8	47.5
DN65 Square bonnet	80	265	200	26	290	77.4	63.5	60.2

Angle seat valve

122 Series
Pneumatic Angle
Stop Valve

Technical Specification

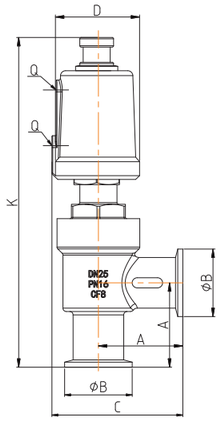
- Operating pressure: 0–10bar (0–145psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Actuator material: CF8 (40mm–90mm Actuator)、
  AL (125mm Actuator)
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: EPDM/FPM
- Applicable fluid: Vacuum and Inert gas, Dusty gas, Water, Oil,
  Steam, Liquid, Organic solvent, Acidand lye
- Fluid temperature: –10℃ — +150℃
- Ambient temperature: –10℃ — +80℃
- Control type: Single acting normally closed,
  Double acting normally closed,
  Double acting without spring
- Connection type: KF
- Valve seat leakage Pa・m^3/s (He): below 1.3×10^{-10}
- External leakage Pa・m^3/s (He): below 1.3×10^{-11}

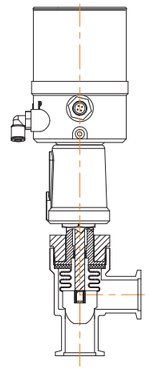
Advantages

1. Lightweight appearance, compact structure, and excellent performance.
2. Stainless steel actuator, better performance for harsh environments and can rotate 360° .
3. Unique sealing structure design, applicable to dusty conditions, and ultra long service life.

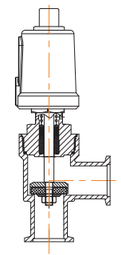
Main Dimension (KF)

Size	Actuator (mm)	Q	D	K	C	A	ΦB
DN16	40	1/8"	50.5	182	67	40	30
DN25	40	1/8"	50.5	194	77	50	40
DN40	50	1/8"	60	245	100	65	55
DN50	50	1/8"	60	255	105	70	75
DN63	90	1/8"	106	375	145	88	87
DN80	125	1/4"	170	440	175	90	114

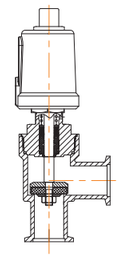




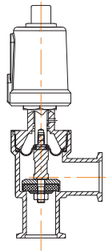
Pharmacetical Industry



General industry



Vacuum/Dust industry

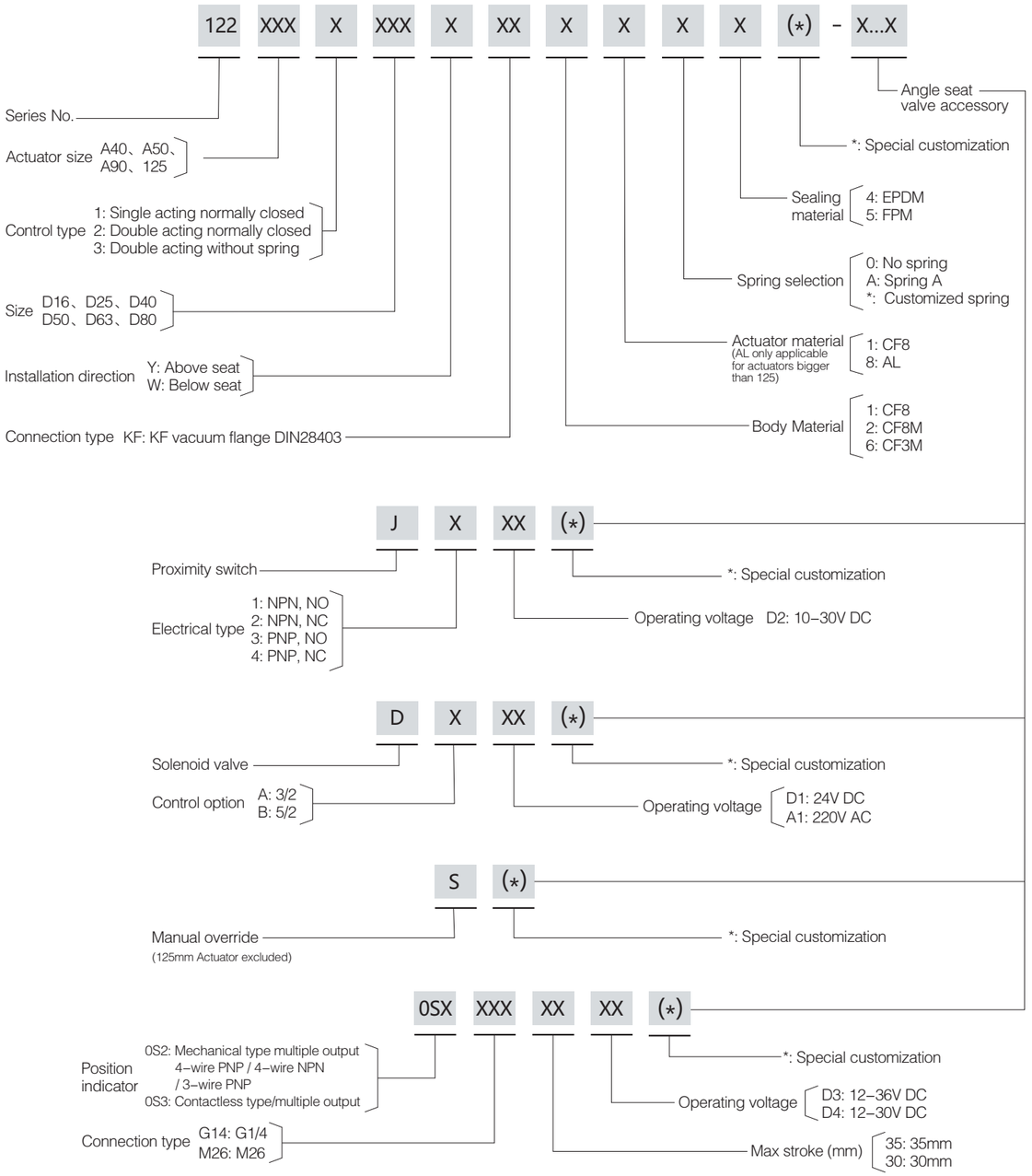


Food and Beverage industry

ESG®

Angle Seat Valve

Order Instruction



Proportional Control Angle Seat Valve

104 Series
Two-piece Pneumatic
Proportional Control
Angle Seat Valve

Technical Specification

- Connection type: Threaded, Welded, Tri–clamp, Flange
- Medium temperature: –10℃ — +180℃
  +25℃ — +220℃
- Medium temperature: 0 — +60℃
- Operating pressure: Refer to the selection table of proportional adjustment angle seat valve
- Control pressure: 3—7bar (43.5–102psi)
- Control power: 24VDC ± 10%
- Valve set signal: 0/4—20mA or 0—5/10V
- Power consumption: <4W
- Input Signal Impedance: 120Ω at 0/4—20mA,
  40KΩ under 0—5/10V
- Simulated Output signal: Max load is 750Ω at 0/4—20mA,
  Max current is 20mA under 0—5/10V3
- Maximum current of digital signal output: 100mA
- Protection: IP65
- Explosion–proof: II 3G Ex ec IIC T4 Gc
- Leakage class: ASME B16.104 Class VI

Advantages

1. Convenient to adjust and easy to operate.
2. Stable operation with vibration resistance.
3. The unique design of adjustable seat establishes a proportional linear relationship between open/close state of the valve with the flow rate, achieving precise flow adjustment.
4. For 104 and 124 series, the intelligent positioner and the valve are separate and can be installed at a distance, making it more suitable for high temperature and humidity environment.
5. No air consumption when in steady state.
6. Can be expanded to digital control or process control functions.

ESG®

Proportional Control Angle Seat Valve

Order Instruction

104 XXX X XXX X XX X X X X (*) XXX

- Series No.
- Actuator: A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D04、D06、D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- Installation direction: Y: Above seat; W: Below seat
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H7: Welded DIN11850–2/DIN11866 A; H8: Welded DIN11850–3; H9: Welded Chamfer; H*: Welded customized dimension; K7: Tri–clamp ISO2852; K*: Tri–clamp customized dimension; F2: Flange JB/T82 (DIN2543/DIN2576/EN1092–1/HG20592); F*: Flange customized dimension
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; 4: Graphite Normal temperature; 5: Graphite High temperature; *: Customized sealing
- Spring selection (A by default): A: Spring A; B: Spring B
- Actuator material (AL only applicable for 125 actuator): 1: CF8; 8: AL
- Body material: 1: CF8; 2: CF8M; 6: CF3M
- Customization: E: Complying with EC1935; *: Special customization
- X: D Digital display control; X: A Analog signal D Digital signal; X: E Extended safety type of explosion–proofing

105 Series Pneumatic Proportional Control Angle Seat Valve

Adjustable seat

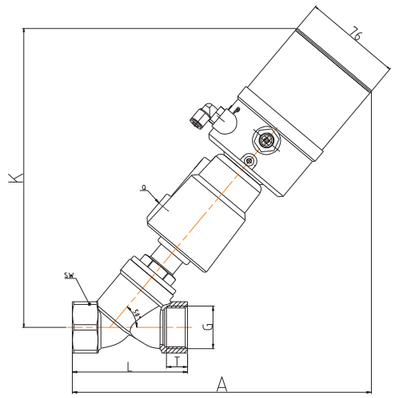
Order Instruction

105 XXX X XXX X XX X X X X (*) XXX

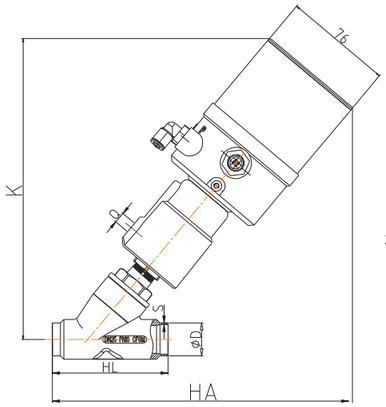
- Series No.
- Actuator: A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D04、D06、D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- Installation direction: Y: Above seat; W: Below seat
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H7: Welded DIN11850–2/DIN11866 A; H8: Welded DIN11850–3; H9: Welded Chamfer; H*: Welded customized dimension; K7: Tri–clamp ISO2852; K*: Tri–clamp customized dimension; F2: Flange JB/T82 (DIN2543/DIN2576/EN1092–1/HG20592); F*: Flange customized dimension
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; 4: Graphite Normal temperature; 5: Graphite High temperature; *: Customized sealing
- Spring selection (A by default): A: Spring A; B: Spring B
- Actuator material (AL only applicable for 125 actuator): 1: CF8; 8: AL
- Body material: 1: CF8; 2: CF8M; 6: CF3M
- Customization: E: Complying with EC1935; *: Special customization
- X: D Digital display control P Process control; X: A Analog signal D Digital signal; X: E Extended safety type of explosion proofing

ESG®

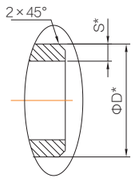
Proportional Control Angle Seat Valve



Threaded connection



Welded connection



Chamfer

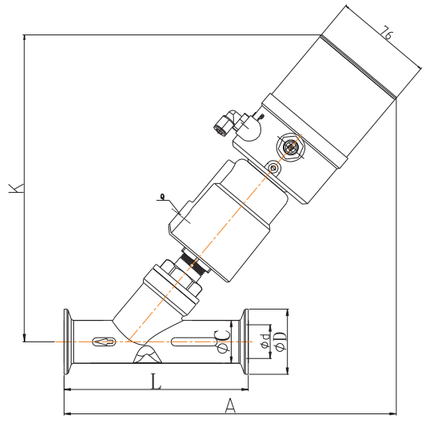
105 Series Main Dimension (Threaded Connection)

Size	Actuator (mm)	Q	K	A	L	G		SW	T
DN4	50	1/8"	224	221	68	1/2"	3/8"	27	12
DN6	50	1/8"	224	221	68	1/2"	3/8"	27	12
DN8	50	1/8"	224	221	68	1/4"		27	12
	63	1/8"	237	233					
DN10	50	1/8"	224	221	68	3/8"		27	12
	63	1/8"	237	233					
DN15	50	1/8"	224	221	68	1/2"		27	15
	63	1/8"	237	233					
DN20	50	1/8"	231	226	75	3/4"		32	16
	63	1/8"	244	237					
DN25	50	1/8"	235	236	90	1"		40	17
	63	1/8"	257	253					
DN32	63	1/8"	269	271	116	1 1/4"		50	21
	90	1/8"	319	301					
DN40	90	1/8"	319	301	116	1 1/2"		56	21
DN50	90	1/8"	328	316	138	2"		69	22
	125AL	1/4"	386	359					
DN65 Square bonnet	125AL	1/4"	416	374	178	2 1/2"		85	26
DN80 Square bonnet	125AL	1/4"	441	394	210	3"		100	27

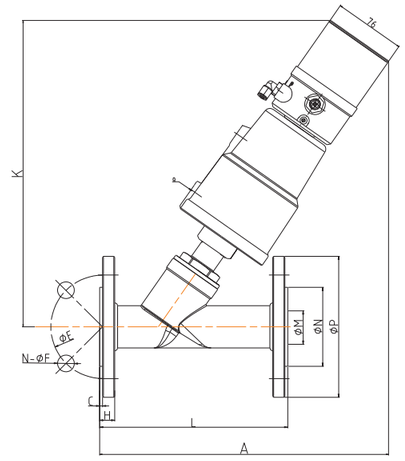
105 Series Main Dimension (Welded Connection)

Size	Actuator (mm)	Q	K	HA	HL	Chamfer		DIN11850–2		DIN11850–3	
						ΦD*	S*	ΦD	S	ΦD	S
DN15	50	1/8"	224	214	70	22	3.5	19	1.5	20	2
	63	1/8"	237	226							
DN20	50	1/8"	231	221	82	29	5	23	1.5	24	2
	63	1/8"	244	232							
DN25	50	1/8"	235	236	100	35	5	29	1.5	30	2
	63	1/8"	257	256							
DN32	63	1/8"	269	267	125	39	4	35	1.5	36	2
	90	1/8"	319	298							
DN40	90	1/8"	319	301	130	45	4.5	41	1.5	42	2
DN50	90	1/8"	318	316	155	57	4	53	1.5	54	2
	125AL	1/4"	386	361							
DN65 Square bonnet	125AL	1/4"	416	414	270	75	5	70	2	—	—
DN80 Square bonnet	125AL	1/4"	441	414	284	90	5.5	85	2	—	—

Note: * Designates design dimension (the actual dimension may vary)



Tri–clamp connection



Flange connection

105 Series Main Dimension (Tri-clamp Connection)

Size	Actuator (mm)	Q	K	A	L	ΦC	ΦD	Φd
DN15	50	1/8"	221	221	80	20.5	34	15
DN20	50	1/8"	243	239	130	25	50.5	19
	63	1/8"	258	256				
DN25	50	1/8"	239	251	130	33	50.5	27
	63	1/8"	261	269				
DN32	63	1/8"	269	281	146	37	50.5	31
	90	1/8"	319	311				
DN40	90	1/8"	319	321	160	40	64	34
DN50	90	1/8"	331	331	175	53	64	45
	125AL	1/4"	382	379				
DN65 Square bonnet	125AL	1/4"	416	414	278	75	91	65
DN80 Square bonnet	125AL	1/4"	438	414	290	89.5	106	78.5

105 Series Main Dimension (Flange Connection)

Size	Actuator (mm)	Q	K	A	L	ΦP	ΦN	ΦM	H	C	ΦE	n–ΦF
DN15	50	1/8"	237	232	130	95	45	16	14	2	65	4–14
DN20	50	1/8"	237	252	150	105	56	19	14	2	75	4–14
DN25	50	1/8"	267	257	160	115	65	26	14	2	85	4–14
	63	1/8"	268	272								
DN32	63	1/8"	281	272	180	140	78	31	16	2	100	4–18
	90	1/8"	329	297								
DN40	90	1/8"	334	317	200	150	84	38	16	3	110	4–18
DN50	90	1/8"	339	344	230	165	100	54	16	3	125	4–18
	125AL	1/4"	394	385								
DN65 Square bonnet	125AL	1/4"	414	430	290	185	120	71	18	3	145	4–18
DN80 Square bonnet	125AL	1/4"	439	435	310	200	135	84	20	3	160	8–18
DN100 Square bonnet	125AL	1/4"	467	482	350	215	155	96	20	3	180	8–18

ESG®

Proportional Control Angle Seat Valve

124 Series
Two-piece Pneumatic
Proportional Control
Angle Seat Valve

Function Principle

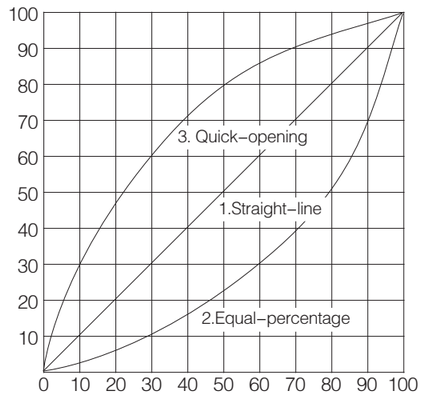
Positioner receives 0/4–20mA(0–5/10V) electrical signals from control system and converts them into air signals to control the valve and make precise flow adjustment using the adjustable seat.

Control Output Chart

By selecting characteristic curve of the positioner, the controlled valve can output to straight–line, equal–percentage, quick–opening and other custom characteristics.

Attention

- Ensure that the inlet pressure of P port is sufficient and has been opened.
- Ensure that there is no leakage in the air supply pipeline, especially when there are changes in the air supply.
- Ensure that the power supply wiring is correct.
- Ensure that the signal source input mode matches and there is no interference.
- Ensure that the contro valve takes protective measures to avoid water droplets and causing disfunction in operation panel.
- While installation, if the valve body needs to be removed, please adjust to the zero point again after installation.
- It is recommended that the signal to be 4–20mA to reduce the interference when signal value is low.
- It is recommended to use shielding wire for the signal line.
- Make sure the positioner is waterproof.



Order Instruction

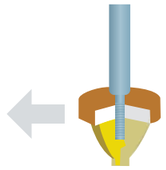
124	XXX	X	XXX	X	XX	X	X	X	X	(*)	XXX

- Series No.: 124
- Actuator: A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D08、D10、D15、D20、D25、D32、D40、D50、D65、D80
- Installation direction: Y: Above seat; W: Below seat
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE
- Body material: 1: CF8; 2: CF8M; 6: CF3M
- Actuator material (AL only applicable for 125 actuator): 1: CF8; 8: AL
- Spring selection (A by default): A: Spring A; B: Spring B
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; *: Customized sealing
- Customization: E: Complying with EC1935; *: Special customization
- X: D Digital display control; X: A Analog signal D Digital signal; X: E Extended safety type of explosion–proofing

ESG®

Proportional Control Angle Seat Valve

125 Series
Pneumatic Proportional
Control Angle Seat Valve

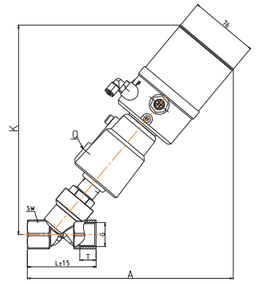


Adjustable seat

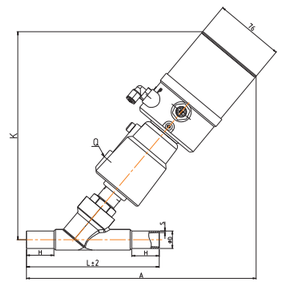
Order Instruction

125	XXX	X	XXX	X	XX	X	X	X	X	(*)	XXX

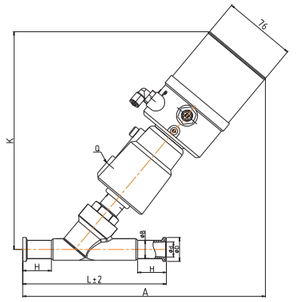
- Series No.: 125
- Actuator: A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D08、D10、D15、D20、D25、D32、D40、D50、D65、D80
- Installation direction: Y: Above seat; W: Below seat
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE
- Body material: 1: CF8; 2: CF8M; 6: CF3M
- Actuator material (AL only applicable for 125 actuator): 1: CF8; 8: AL
- Spring selection (A by default): A: Spring A; B: Spring B
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; *: Customized sealing
- Customization: E: Complying with EC1935; *: Special customization
- X: D Digital display control; P Process control; X: A Analog signal; D Digital signal; X: E Extended safety type of explosion proofing



125 Series Threaded connection



125 Series Welded connection



125 Series Tri–clamp connection

125 Series Main Dimension (Threaded connection)

Size	Actuator (mm)	Q	K	A	L	G	SW	T
DN8	50	1/8"	229	224	65	1/4"	27	12
	63	1/8"	244	236				
DN10	50	1/8"	229	224	65	3/8"	27	14
	63	1/8"	244	236				
DN15	50	1/8"	229	224	65	1/2"	27	16
	63	1/8"	244	236				
DN20	50	1/8"	232	229	75	3/4"	32	18
	63	1/8"	246	239				
DN25	50	1/8"	235	235	90	1"	40	20
	63	1/8"	259	254				
DN32	63	1/8"	270	271	110	11/4"	50	22
	90	1/8"	312	304				
DN40	90	1/8"	312	308	120	11/2"	56	24
DN50	90	1/8"	319	326	150	2	69	26
	125AL	1/4"	374	372				

125 Series Main Dimension (Welded connection)

Size	Actuator (mm)	Q	K	A	L	H	ASME BPE	
							ΦD	S
DN15	50	1/8"	230	247	135	30	12.7	1.65
	63	1/8"	246	259				
DN20	50	1/8"	229	251	145	30	19.05	1.65
	63	1/8"	242	264				
DN25	50	1/8"	236	258	152	30	25.4	1.65
	63	1/8"	259	276				
DN40	90	1/8"	309	329	182	30	38.1	1.65
DN50	90	1/8"	319	339	210	30	50.8	1.65
	125AL	1/4"	374	386				
DN65 Square bonnet	125AL	1/4"	417	386	230	26	63.5	1.65
DN80 Square bonnet	125AL	1/4"	436	436	310	26	76.2	1.65

125 Series Main Dimension (Tri-clamp connection)

Size	Actuator (mm)	Q	K	A	L	ASME BPE			
						D	B	d	H
DN15	50	1/8"	230	251	130	25	12.7	9.4	30
	63	1/8"	246	262					
DN20	50	1/8"	229	254	150	25	19.05	15.75	30
	63	1/8"	244	263					
DN25	50	1/8"	236	261	160	50.5	25.4	22.1	30
	63	1/8"	259	281					
DN40	90	1/8"	309	336	200	50.5	38.1	34.8	30
DN50	90	1/8"	319	351	230	64	50.8	47.5	30
	125AL	1/4"	374	396					
DN65 Square bonnet	125AL	1/4"	417	416	290	77.4	63.5	60.2	26
DN80 Square bonnet	125AL	1/4"	439	437	315	91	76.2	72.9	26

ESG®

Proportional Control Angle Seat Valve

Single Acting, Normally closed (NC) -Enter Below Seat

Size	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range △P(MPa)	Control pressure (MPa)
DN4	4	0.52	50A	0–1.6	⩾0.45
DN6	6	1.1	50A	0–1.6	⩾0.45
DN8	13	2.2	50A	0–1.4	⩾0.45
			63A	0–1.6	⩾0.50
			63B	0–1.6	⩾0.30
DN10	13	3.1	50A	0–1.4	⩾0.45
			63A	0–1.6	⩾0.50
			63B	0–1.6	⩾0.30
DN15	13	3.1	50A	0–1.4	⩾0.45
			63A	0–1.6	⩾0.50
			63B	0–1.6	⩾0.30
DN20	18	6.2	50A	0–1.4	⩾0.45
			63A	0–1.6	⩾0.50
			63B	0–1.6	⩾0.30
DN25	24	10.1	50A	0–0.8	⩾0.45
		10.8	63A	0–1.3	⩾0.50
			63B	0–0.7	⩾0.30
DN32	31	19.2	63A	0–0.6	⩾0.50
			90B	0–1.3	⩾0.45
DN40	35	25	63A	0–0.5	⩾0.50
		22.4	90A	0–1.6	⩾0.60
			90B	0–1.1	⩾0.45
DN50	45	41.1	90A	0–1.0	⩾0.60
			90B	0–0.7	⩾0.45
		44.6	125A	0–1.6	⩾0.55
			125B	0–1.1	⩾0.45
DN65	61	68.7	90A	0–0.5	⩾0.60
			125A	0–0.9	⩾0.55
			125B	0–0.6	⩾0.45
DN80	80	84.4	125A	0–0.5	⩾0.55

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Single Acting, Normally Closed (NC)-Enter Above Seat
(Please pay attention to the selection of spring. 6325, 6332 and 6340 need a customized positioner.)

Size	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range △P(MPa)	Control pressure (MPa)
DN15	13	3.1	50A	0–1.6	⩾0.45
		3.1	63B	0–1.6	⩾0.30
DN20	18	6.2	50A	0–1.6	0.45–0.55
		6.2	63B	0–1.6	0.30–0.40
DN25	24	10.8	63B	0–1.6	0.30–0.45
DN32	31	19.2	63B	0–1.6	0.30–0.60
		19.2	90B	0–1.6	⩾0.45
DN40	35	25	63B	0–1.6	0.30–0.70
		22.4	90B	0–1.6	0.45–0.50
DN50	45	41.1	90B	0–1.6	0.45–0.70
		44.6	125A	0–1.6	0.30–0.35
DN65	61	68.7	90B	0–0.9	0.45–0.70
		68.7	125A	0–1.6	0.30–0.55
DN80	80	84.4	125A	0–1.2	0.30–0.70
DN100	90	113	125A	0–1.0	0.30–0.70

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Single Acting, Normally Open(NO)-Enter below Seat

Size	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range △P(MPa)	Control pressure (MPa)
DN15	13	3.3	50K	0–1.6	0.30–0.40
DN20	18	6.7	50K	0–1.6	0.30–0.50
DN25	24	11.4	50K	0–1.3	0.30–0.60
			63K	0–1.6	0.30–0.50
DN32	31	18.3	63K	0–1.3	0.30–0.60
DN40	35	21.3	90K	0–1.6	0.30–0.40
DN50	45	40.4	90K	0–1.6	0.30–0.55
DN65	61	46.8	90K	0–1.0	0.30–0.70
			125K	0–1.6	0.30–0.65
DN80	80	84.0	125K	0–1.0	0.30–0.70

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Opening (%) - Kv value (m^3 /h) chart of Tri-clamp, threaded and welded proportional angle seat valve

Size	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
DN4–50mm	0.01	0.02	0.04	0.07	0.11	0.14	0.19	0.26	0.35	0.43	0.52
DN6–50mm	0.03	0.04	0.08	0.14	0.22	0.33	0.43	0.57	0.75	0.93	1.1
DN8–50mm	0.29	0.45	0.76	1.11	1.50	1.86	2.16	2.20	2.20	2.20	2.2
DN10–50mm	0.29	0.45	0.76	1.11	1.50	1.86	2.16	2.47	2.70	2.92	3.1
DN15–50mm	0.29	0.45	0.76	1.11	1.50	1.86	2.16	2.47	2.70	2.92	3.1
DN20–50mm	0.85	1.22	2.04	2.82	3.60	4.26	4.62	5.00	5.42	5.84	6.2
DN25–50mm	0.76	1.06	2.28	3.71	4.87	5.96	7.07	8.12	9.04	9.60	10.1
DN25–63mm	0.49	1.26	2.45	3.63	4.96	6.11	7.22	8.25	9.02	9.82	10.8
DN32–63mm	1.74	2.85	5.43	8.09	10.51	12.84	14.81	15.78	16.89	18.03	19.2
DN40–63mm	3.0	4.8	8.5	12.2	15.4	18.7	20.3	21.4	22.6	23.9	25.0
DN40–90mm	2.7	4.4	7.6	10.7	13.6	16.3	17.7	18.8	20.0	21.1	22.4
DN50–90mm	4.1	7.3	14.4	21.0	27.0	31.4	34.3	36.3	38.0	39.5	41.1
DN50–125mm	4.7	8.7	16.9	24.4	31.1	34.4	36.6	37.7	39.7	41.9	44.6
DN65–125mm	7.5	9.5	15.9	25.1	33.9	41.7	48.6	54.4	59.4	63.7	68.7
DN80–125mm	11.4	13.5	17.4	20.2	24.3	30.3	39.4	50.6	62.9	74.1	84.4

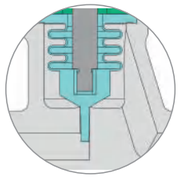
Opening (%) - Kv value (m^3 /h) chart of Flanged proportional angle seat valve

Size	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
DN15–50mm	0.30	0.44	0.79	1.16	1.57	1.94	2.24	2.49	2.66	2.87	3.1
DN20–50mm	0.88	1.28	2.11	2.87	3.54	4.20	4.61	4.98	5.24	5.56	5.9
DN25–50mm	0.89	1.28	2.47	3.81	4.95	5.93	6.87	7.62	8.16	8.58	9.2
DN25–63mm	0.70	1.38	2.62	4.03	5.26	6.34	7.26	7.87	8.51	9.27	10.1
DN32–63mm	1.83	3.04	5.54	8.02	10.04	11.94	12.74	13.79	15.19	16.36	17.2
DN40–63mm	3.0	4.8	8.6	12.2	15.6	17.7	18.9	19.6	20.9	22.2	23.6
DN40–90mm	2.8	4.5	7.7	10.9	14.1	16.7	18.1	19.1	20.3	21.4	22.9
DN50–90mm	4.4	7.7	14.9	21.0	27.0	30.8	33.4	35.6	37.2	38.5	40.2
DN50–125mm	5.2	9.4	18.0	25.8	30.6	34.4	36.6	38.8	40.3	42.5	45.3
DN65–125mm	7.6	9.2	15.3	25.1	32.8	40.6	48.1	53.9	59.4	63.9	68.4
DN80–125mm	10.9	13.0	17.3	20.6	25.0	31.1	41.3	51.3	63.8	74.4	84.7
DN100–125mm	10.8	11.6	14.4	26.6	39.1	51.8	64.5	77.0	89.4	101.5	113.0

ESG®

Proportional Control Angle Seat Valve

135 Series
Micro Flow Control Valve



Technical Specification

- Operating pressure: 0–10bar (0–145psi)
- Control pressure: 4,5–7bar (65–102psi)
- Seal material: PTFE
- Applicable fluid: Water, Neutral gas or Liquid, Organic solvent, Acid and lye
- Fluid temperature: –10℃ — +150℃
- Ambient temperature: –10℃ — +60℃
- Control type: Single acting normally closed
- Connection type: Tri–clamp, Welded

Function Principle

Positioner receives 0/4–20mA(0–5/10v) electrical signals from control system and converts them into air signals to control the valve and make precise low adjustment using the bellow adjustable seat.
Diaphragm is arranged between the valve body and the bonnet to isolate the medium in place of the stem packing.
Valve stays closed(open) by spring force in its normal state.
When piston is actuated by compressed air, valve becomes opened
(Closed).

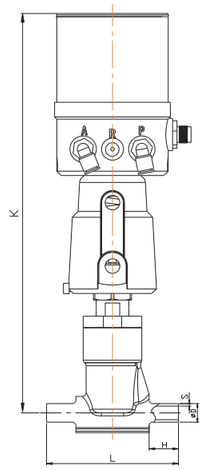
Advantages

Bellows are used to isolate the medium and meet the requirements of harsh working conditions.

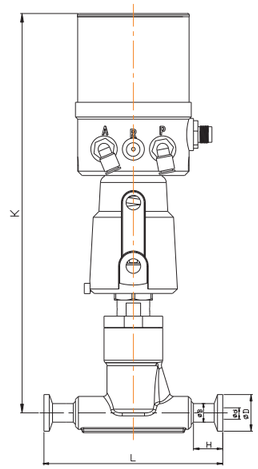
Order Instruction

135	XXX	X	XXX	X	XX	X	X	X	X	X	(*)	XXX

- Series No.
- Actuator A50
- Control type 1: Single acting normally closed
- Size 1.5、D03、D06、D08、D10
- Installation direction W: Below seat
- Connection type H1: Welded ASME–BPE; K1: Tri–clamp ASME–BPE
- Body material 6: CF3M
- Actuator material 1: CF8
- Spring selection A: Spring A
- Sealing material 2: PTFE Normal temperature; *: Customized sealing
- Body type 0 Unpolished; 1: Mechanical polishing ⩽0.4 μm; 2 Electrolytic Polishing Ra0.4
- *: Special customization
- X: D Digital display control; P Process control; X: A Analog signal; D Digital signal; X: E Extended safety type of explosion proofing



Welded connection



Tri–clamp connection

135 Series Main Dimension (Welded connection)

Size	Actuator (mm)	K	L	H	ASME BPE	
					D	S
DN1.5/3/6	50	275	90	16	12.7	1.65
DN8/10	50	275	90	16	19.05	1.65

135 Series Main Dimension (Tri-clamp connection)

Size	Actuator (mm)	K	L	ASME BPE			
				D	B	d	H
DN1.5/3/6	50	275	122	25	12.7	9.4	20
DN8/10	50	275	122	25	19.05	15.75	20

Single Acting, Normally Closed (NC)-Enter Below Seat Pressure Selection Table

Size	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range △P(MPa)	Control pressure (MPa)
BPE–DN1.5	1.5	0.09	50A	0–1.0	⩾0.45
BPE–DN3	3	0.26	50A	0–1.0	⩾0.45
BPE–DN6	6	0.8	50A	0–1.0	⩾0.45
BPE–DN8	8	1.43	50A	0–1.0	⩾0.45
BPE–DN10	10	2.16	50A	0–1.0	⩾0.45

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Opening (%) - Kv value (m^3/h) chart of proportional angle seat valve

Size	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
BPE–DN1.5	0.008	0.011	0.021	0.032	0.043	0.054	0.064	0.073	0.082	0.085	0.09
BPE–DN3	0.01	0.025	0.06	0.1	0.13	0.16	0.19	0.21	0.23	0.24	0.26
BPE–DN6	0.02	0.033	0.075	0.156	0.247	0.332	0.442	0.53	0.63	0.73	0.8
BPE–DN8	0.02	0.05	0.15	0.26	0.39	0.53	0.73	0.98	1.27	1.42	1.43
BPE–DN10	0.04	0.1	0.26	0.42	0.61	0.82	1.08	1.45	1.8	2.03	2.16

Angle seat valve

ESG®

Multi-channel Valve

103 Series
Threaded Pneumatic
Three-way Angle
Seat Valve

103 Series
Tri-clamp Pneumatic
Three-way Angle
Seat Valve

Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8M/CF3M and other special materials
- Actuator material: CF8
- Seal material: PTFE
- Fluid temperature: –10℃ — +180℃
- Ambient temperature: –10℃ — +80℃
- Control type: Single acting normally closed,
  Double acting normally closed,
  Double acting without spring
- Connection type: Threaded connection, Tri–clamp
- Applicable medium: Water, Steam, Oil, Neutral gas or Liquid,
  Organic solvent, Acid and lye
- Leakage class: DIN EN 12266 Class A

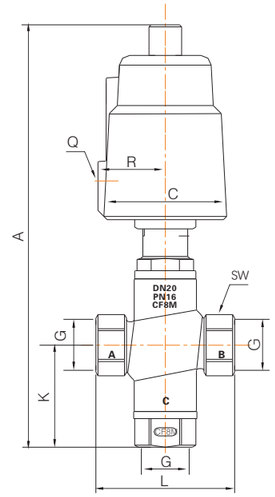
Function Principle

When the valve is in idle state, C port is closed due to spring force. When the actuator piston is compressed, C port is opened and B port is closed. When double acting, the valve opens and closes by compressed air.

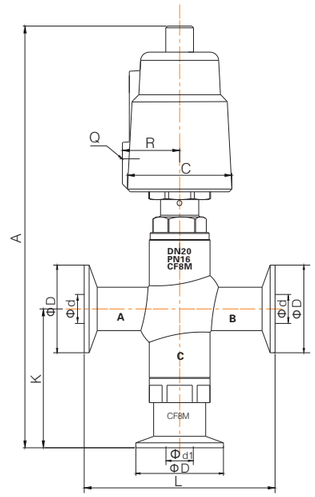
Order Instruction

103	X	XXX	XX	X	X	X	(*)

- Series No.: 103
- Control type: 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size: D15、D20、D25、D32、D40、D50
- Connection type: G1: Threaded BSP DIN ISO 228–1; T1: Threaded BSPT DIN 2999–1/ISO7–1; N1: Threaded NPT ASME B1.20.1; K7: Tri–clamp ISO2852
- Body material: 2: CF8M; 6: CF3M
- Spring selection: 0: No spring; A: Spring A; B: Spring B; C: Spring C
- Sealing material: 2: PTFE Normal temperature; 4: Graphite Normal temperature; 5: Graphite High temperature; *: Customized sealing
- Customization: E: Complying with EC1935; *: Special customization



Threaded connection



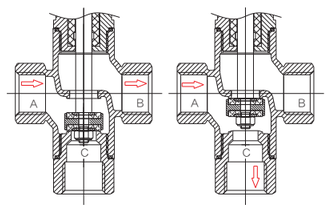
Tri–clamp connection

Main Dimension (Threaded connection)

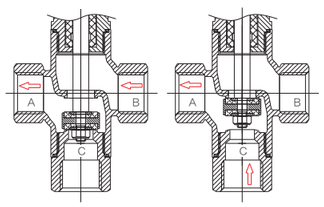
Size	Actuator	Q	C	R	G	A	K	L	SW	Weight (kg)
DN15	40	1/8"	50.5	27	1/2"	195	50	68	27	0.91
DN20	50	1/8"	60	33	3/4"	230	60	75	32	1.25
DN25	50	1/8"	60	33	1"	242	68	90	40	1.64
DN32	63	1/8"	75	41	1 1/4"	301	86	116	50	3.26
	90	1/8"	106	55	1 1/4"	355	86	116	50	4.62
DN40	63	1/8"	75	41	1 1/2"	306	90	116	56	3.79
	90	1/8"	106	55	1 1/2"	360	90	116	56	5.15
DN50	90	1/8"	106	55	2"	382	102	138	69	6.52

Main Dimension (Tri-clamp connection)

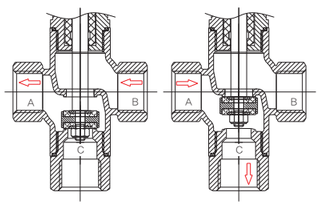
Size	Actuator	Q	C	R	ΦD	Φd	Φd1	A	K	L	Weight (kg)
DN15	40	1/8"	50.5	27	34	16	16	223	80	90	0.99
DN20	50	1/8"	60	33	50.5	19	19	246	80	90	1.48
DN25	50	1/8"	60	33	50.5	26	26	262	90	100	1.78
DN32	63	1/8"	75	41	50.5	31	29	319	104	130	3.39
	90	1/8"	106	55	50.5	31	29	373	104	130	4.75
DN40	63	1/8"	75	41	64	35	33	327	111	150	4.09
	90	1/8"	106	55	64	35	33	381	111	150	5.45
DN50	90	1/8"	106	55	64	43	43	408	128	160	6.65



Split function



Blend function



Reversal function

ESG®

Multi-channel Valve

Single Acting, Normally Closed

Size	Actuator	Interface	Orifice	Flow value Kv(m^3/h)		Split function		Blend function		Reversal function	
				A–B	A–C	Differential pressure range(MPa)	Control pressure (Mpa)	Differential pressure range(MPa)	Control pressure (Mpa)	Differential pressure range(MPa)	Control pressure (Mpa)
DN15–A	40	1/2"	14	4.1	4.9	0–1.6	0.4–0.6	0–1.2	0.4–0.6	0–1.4	0.4–0.6
DN20–A	50	3/4"	18	5.8	6.5	0–1.6	0.45–0.65	0–1.4	0.45–0.65	0–1.6	0.45–0.7
DN20–B						0–1.6	0.3–0.55	0–0.8	0.3–0.55	0–1.6	0.3–0.7
DN25–A	50	1"	24	13.9	14.4	0–1.1	0.45–0.65	0–0.6	0.45–0.65	0–0.7	0.45–0.7
DN25–B						0–1.4	0.3–0.65	0–0.3	0.3–0.65	0–1.2	0.3–0.7
DN32–A	90	1 1/4"	31	20.9	22.8	0–0.55	0.6–0.7	0–1.6	0.6–0.7	0–1.0	0.6–0.7
DN32–B						0–1.4	0.45–0.7	0–1.2	0.45–0.7	0–1.6	0.45–0.7
DN32–C						0–1.6	0.3–0.45	0–0.2	0.3–0.45	0–1.6	0.3–0.5
DN40–A	90	1 1/2"	35	24.4	26.6	0–0.45	0.6–0.7	0–1.6	0.6–0.7	0–0.6	0.6–0.7
DN40–B						0–1.2	0.45–0.7	0–1.0	0.45–0.7	0–1.6	0.45–0.7
DN40–C						0–1.6	0.3–0.5	0–0.1	0.3–0.5	0–1.6	0.3–0.6
DN50–A	90	2"	45	29.3	31.9	0–0.25	0.6–0.7	0–0.9	0.6–0.7	0–0.3	0.6–0.7
DN50–B						0–0.9	0.45–0.7	0–0.5	0.45–0.7	0–0.8	0.45–0.7
DN50–C						0–1.6	0.3–0.6	—	—	0–1.6	0.3–0.7

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Double Acting, Normally Closed

Size	Actuator	Interface	Orifice	Flow value Kv(m^3/h)		Split function		Blend function		Reversal function	
				A–B	A–C	Differential pressure range(MPa)	Control pressure (Mpa)	Differential pressure range(MPa)	Control pressure (Mpa)	Differential pressure range(MPa)	Control pressure (Mpa)
DN15–A	40	1/2"	14	4.1	4.9	0–1.6	0.4–0.6	0–1.6	0.4–0.6	0–1.4	0.4–0.6
DN20–B	50	3/4"	18	5.8	6.5	0–1.6	0.3–0.55	0–1.6	0.3–0.55	0–1.6	0.3–0.7
DN25–B	50	1"	24	13.9	14.4	0–1.4	0.3–0.65	0–1.4	0.3–0.65	0–1.2	0.3–0.7
DN32–D	63	1 1/4"	31	20.9	22.8	0–1.3	0.35–0.7	0–1.3	0.35–0.7	0–1.3	0.35–0.7
DN32–C	90	1 1/4"	31	20.9	22.8	0–1.6	0.3–0.55	0–1.6	0.3–0.55	0–1.6	0.3–0.55
DN40–D	63	1 1/2"	35	24.4	26.6	0–1.0	0.35–0.7	0–1.0	0.35–0.7	0–1.0	0.35–0.7
DN40–C	90	1 1/2"	35	24.4	26.6	0–1.6	0.3–0.6	0–1.6	0.3–0.6	0–1.6	0.3–0.6
DN50–C	90	2"	45	29.3	31.9	0–1.6	0.3–0.65	0–1.6	0.3–0.65	0–1.6	0.3–0.7

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

Double Acting Without Spring

Size	Actuator	Interface	Orifice	Flow value Kv(m^3/h)		Split function		Blend function		Reversal function	
				A–B	A–C	Differential pressure range(MPa)	Control pressure (Mpa)	Differential pressure range(MPa)	Control pressure (Mpa)	Differential pressure range(MPa)	Control pressure (Mpa)
DN15	40	1/2"	14	4.1	4.9	0–1.6	0.3–0.5	0–1.6	0.3–0.5	0–1.6	0.3–0.5
DN20	50	3/4"	18	5.8	6.5	0–1.6	0.3–0.5	0–1.6	0.3–0.5	0–1.6	0.3–0.5
DN25	50	1"	24	13.9	14.4	0–1.6	0.3–0.55	0–1.6	0.3–0.6	0–1.6	0.3–0.55
DN32	63	1 1/4"	31	20.9	22.8	0–1.6	0.3–0.6	0–1.6	0.3–0.6	0–1.6	0.3–0.6
	90	1 1/4"	31	20.9	22.8	0–1.6	0.3–0.4	0–1.6	0.3–0.45	0–1.6	0.3–0.4
DN40	63	1 1/2"	35	24.4	26.6	0–1.5	0.3–0.7	0–1.4	0.3–0.65	0–1.5	0.3–0.7
	90	1 1/2"	35	24.4	26.6	0–1.6	0.3–0.45	0–1.6	0.3–0.5	0–1.6	0.3–0.45
DN50	90	2"	45	29.3	31.9	0–1.6	0.3–0.6	0–1.6	0.3–0.6	0–1.6	0.3–0.6

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

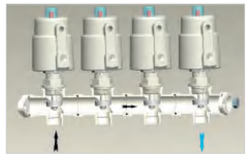
110 Series Pneumatic Manifold Valve

Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control medium: Filtered compressed air or neutral gas
- Seal material: PTFE
- Body material: CF8/CF8M/CF3M and other special materials
- Applicable medium: Water, Oil, Ail and other liquid
- Medium temperature: –10℃ — +180℃, +25℃ — +220℃
- Ambient temperature: –10℃ — +80℃
- Connection type: Welded, Threaded, Tri–clamp, Diamond flange
- Control type: Single acting normally closed,
  Double acting normally closed,
  Double acting without spring
- Leakage class: DIN EN 12266 Class A

Advantages

Manifold valve adopts three–way connection design for optimal pipeline layout. It has aesthetic appearance, compact structure, and superb performance. A great choice for material blending.



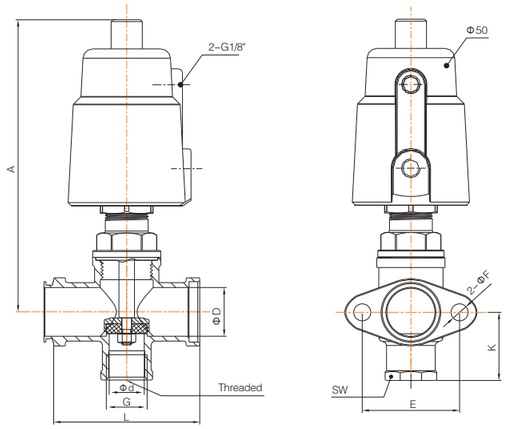
Order Instruction

110 X XXX XX X X X (*)

- Series No.
- Control type: 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size D15、D20、D25
- Bottom connection: G1: Threaded BSP DIN ISO 228–1(DN15, DN 25); HA: Welded Manifold dimension A(DN20, DN25); K7: Tri–clamp ISO2852; F1: Diamond flange(DN20, DN 25)
- Body material: 1: CF8; 2: CF8M; 6: CF3M
- Body material: 0: No spring; A: Spring A; B: Spring B
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; 4: Graphite Normal temperature; 5: Graphite High temperature; *: Customized sealing
- Customization: E: Complying with EC1935; *: Special customization

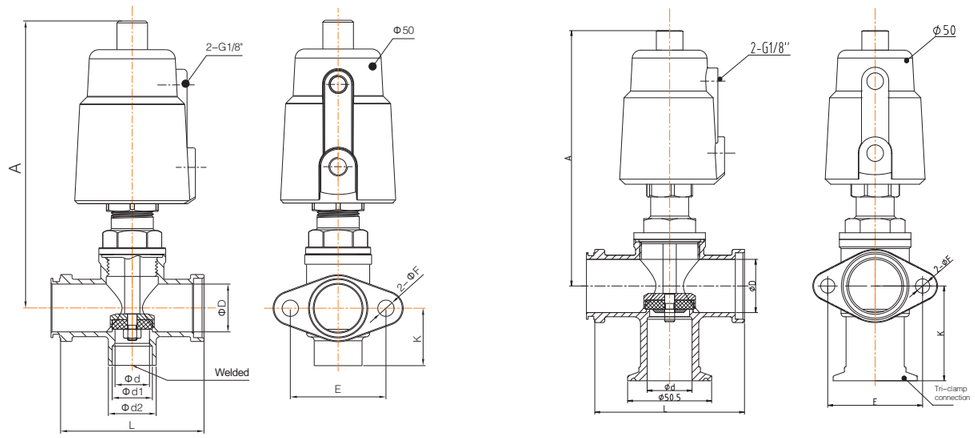
ESG®

Multi-channel Valve



Main Dimension (Threaded connection)

Size	A	K	L	ΦD	Φd	G	SW	ΦE	2–ΦF	Flow value Kv(m³/h)	Weight (kg)
DN15	153	35	76	25	18	1/2"	27	50	8.5	8.1	1.2
DN25	153	46	90	32	24	1"	39	57	8.5	14.8	1.35

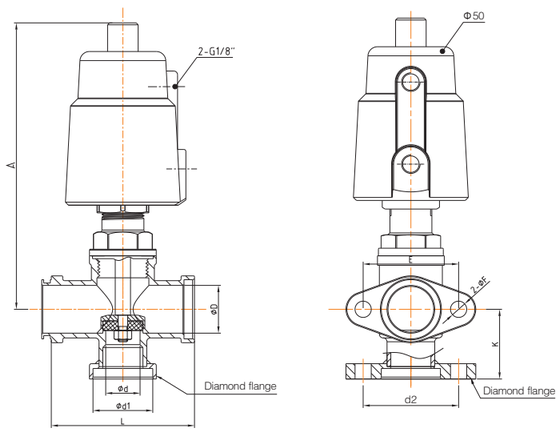


Main Dimension (Welded connection)

Size	A	K	L	ΦD	Φd	Φd1	Φd2	ΦE	2–ΦF	Flow value Kv(m³/h)	Weight (kg)
DN20	153	30	76	25	18	21	25	50	8.5	8.1	1.2
DN25	153	36	90	32	24	27	32	57	8.5	14.8	1.3

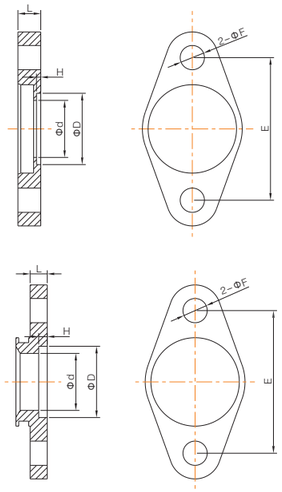
Main Dimension (Tri-clamp connection)

Size	A	K	L	ΦD	Φd	ΦE	2–ΦF	Flow value Kv(m³/h)	Weight (kg)
DN20	153	50.5	76	25	21	50	8.5	8.1	1.3
DN25	153	57	90	32	27	57	8.5	14.8	1.4



Main Dimension (Diamond flange connection)

Size	A	K	L	ΦD	Φd	Φd1	d2	E	2–ΦF	Flow value Kv(m³/h)	Weight (kg)
DN20	153	36.5	76	25	18	31.3	50	50	8.5	8.1	1.2
DN25	153	43	90	32	24	40	57	57	8.5	14.8	1.4



Name	Size	D	d	H	L	E	F	Remark
Flange cover 1	DN15/DN20	/	/	/	8	50	8.5	Blind hole concave cover
	DN25	/	/	/	8.5	57	8.5	Blind hole concave cover
Flange cover 3	DN15/DN20	25.1/25.6	20	1.5	8	50	8.5	Through hole concave cover
	DN25	32.5	28	1.5	8.5	57	8.5	Through hole concave cover

Name	Size	D	d	H	L	E	F	Remark
Flange cover 2	DN15/DN20	/	/	/	6	50	8.5	Blind hole convex cover
	DN25	/	/	/	6	57	8.5	Blind hole convex cover
Flange cover 4	DN15/DN20	25.6	20	3	6	50	8.5	Through hole convex cover
	DN25	32.5	29	1.5	6	57	8.5	Through hole convex cover

Pressure Data Sheet

	Size	Actuator	Single acting valve operating pressure (MPa)			Double acting valve operating pressure (MPa)		
			Enter above seat △P (Mpa)	Enter below seat △P (Mpa)	Control pressure (Mpa)	Enter above seat △P (Mpa)	Enter below seat △P (Mpa)	Control pressure (Mpa)
Config. A	DN15	50	0–1.6	0–0.7	0.3–0.5	0–1.6	0–1.6	0.3–0.5
	DN20	50	0–1.6	0–0.7	0.3–0.5	0–1.6	0–1.6	0.3–0.5
	DN25	50	0–1.6	0–0.4	0.3–0.65	0–1.6	0–1.6	0.3–0.65
Config. B	DN15	50	0–1.6	0–1.4	0.45–0.6	0–1.6	0–1.6	0.45–0.6
	DN20	50	0–1.6	0–1.4	0.45–0.6	0–1.6	0–1.6	0.45–0.6
	DN25	50	0–1.4	0–0.8	0.45–0.7	0–1.4	0–1.6	0.45–0.7

Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

ESG®

Filling Valve

1AA Series
27mm Actuator
Pipe-less Filling Valve

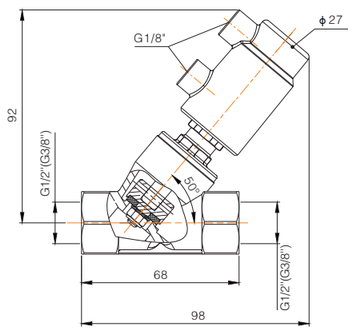
1AB Series
Pipe-less Filling Valve

Technical Specification

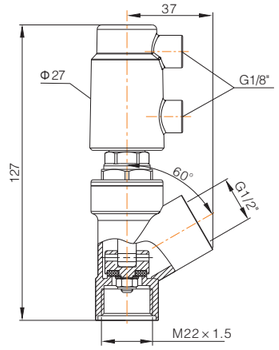
- Control type: Double acting normally closed,
  Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control medium: Filtered compressed air or neutral gas
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature: –10℃ — +120℃
- Ambient temperature: –10℃ — +80℃
- Connection type: Threaded connection (BSP, BSPT, NPT)

Advantages

1. The filling valves is widely used in filling machinery, suitable for viscous, pasty and even foamy fluids with accurate and stable filling.
2. 1AA series with 27mm actuator and 1AS series, the valve core made a flexiable seat, it can be the self–adjustable with good sealing performance.



1AA Series 27mm Actuator
Pipe–less Filling Valve



1AB Series
Pipe–less Filling Valve

1AC/1AF Series
Filling Valve with
Internal Sealing

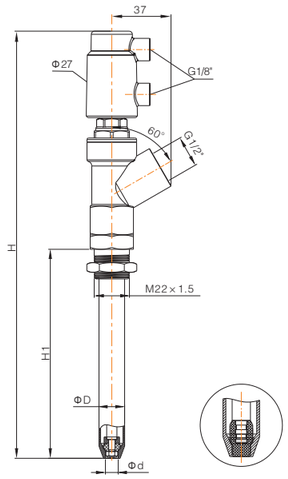
1AP Series
Filling Valve with Internal
Sealing and Suction

Technical Specification

- Control type: Double acting normally closed,
  Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature: –10℃ — +120℃
- Ambient temperature: –10℃ — +80℃

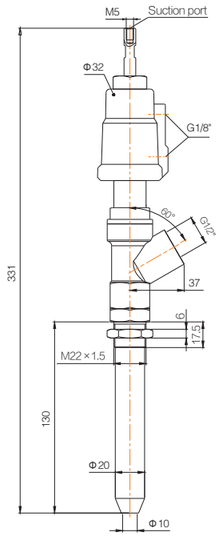
Advantages

1. It is widely used in filling machinery, especially for applications with viscous, pasty and even foamy fluids.
2. Fast, accurate and stable filling.
3. Delicate and compact, easy to arrange pipeline layout.
4. Special nozzle structure and sealing design ensure no dripping leakage.
5. Bottom chamfer structure of the filling nozzle self–locates and enables submerged filling.
6. Internal suction pipe effectively recovers dripping liquid.



1AC Filling Valve
with Internal Sealing

1AF Filling Valve
with Internal Sealing



1AP Filling Valve with Internal
Sealing and Suction

1AC/1AF Main Dimension

Size	ΦD	Φd	H	H1
1AC	20	10	267	130
1AC	18	9	267	130
1AF	16	8	267	130

ESG®

Filling Valve

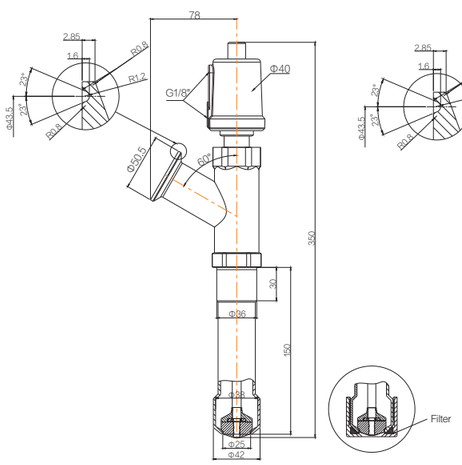
*** Accessory can be installed on top of actuator**

Technical Specification

- Control type: Double acting normally closed,
  Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M
- Seal material: PTFE
- Medium temperature: –10℃ — +120℃
- Ambient temperature: –10℃ — +80℃

Advantages

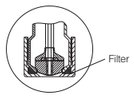
1. It is widely used in filling machinery, especially for applications with viscous, pasty and even foamy fluids.
2. Fast, accurate and stable filling.
3. Delicate and compact, easy to arrange pipeline layout.
4. Special nozzle structure and sealing design ensure no dripping leakage.
5. Bottom chamfer structure of the filling nozzle self–locates and enables submerged filling.
6. The head gourd shape design of the filling tube reduces weight and cost without sacrificing flow rate.
7. With super strong suction function, it can timely recover the liquid sliding down the pipe wall without dripping.



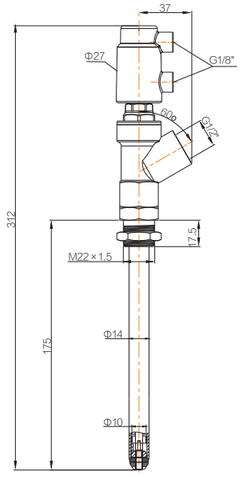
1AL Filling valve with Internal sealing

1AM Filling valve with internal sealing and filter

1AL Filling valve with internal sealing and suction



1AM Filling vale with internal sealing and suction and filter



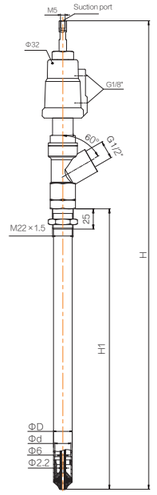
1AD Filling valve with external sealing

Technical Specification

- Control type: Double acting normally closed,
  Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature: –10℃ — +120℃
  Ambient temperature: –10℃ — +80℃
-

Advantages

1. Superior performance in easy foaming fluids filling.
2. Delicate and compact structure easy for pipeline layout.
3. Fast and stable filling.
4. Special suction design ensure no dripping leakage.
5. Special tip seal structure enables convenient maintenance and replacements.



1AJ/1AG/1AE/1AI/1AK/1AH Series

Main Dimension

Size	ΦD	Φd	H1	H
1AJ	20	17	300	501
1AG	20	17	130	331
1AE	16	13	300	501
1AI	16	13	130	331
1AK	12	9	300	501
1AH	12	9	130	331

ESG®

Filling Valve

1A1 Series
Sauce Filling Valve
with Internal Sealing

Technical Specification

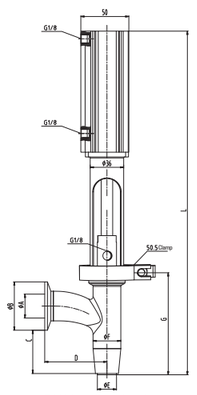
- Control type: Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 4–7bar (58–102psi)
- Control medium: CF8M/CF3M and other special materials
- Seal material: Food–grade PUR
- Medium temperature: –10℃ — +110℃
- Ambient temperature: –10℃ — +60℃

Advantages

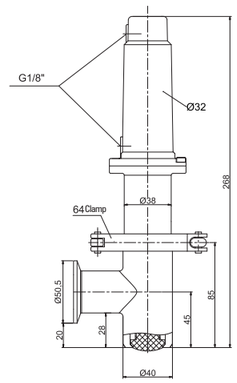
1. Fast, accurate and stable filling.
2. The internal structure adopts plunger design, resulting in easy cleaning and minimal residue.
3. The filling body and the connection are connected by tri–clamp, so that they can be installed, uninstalled, and adjusted easily.
4. Long valve stroke enables large–capacity filling.
5. Accessories, such as proximity switch, can be installed on the actuator to enable feedback of valve open /close state.

Technical Specification

- Control type: Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Control medium: CF8M
- Seal material: UPE
- Medium temperature: –10℃ — +60℃
- Ambient temperature: –10℃ — +60℃



DN20 outline drawing



DN25 outline drawing

Main Dimension

Size	A	B	C	D	E	F	G	L
DN15	20	50.5	44	65	15	24	104	359
DN20	25	50.5	44	65	20	29	104	359
DN25	32	50.5	44	65	25	34	107	362

1A2 Series
Filling Valve with
Internal Sealing

*** Customization available**

Technical Specification

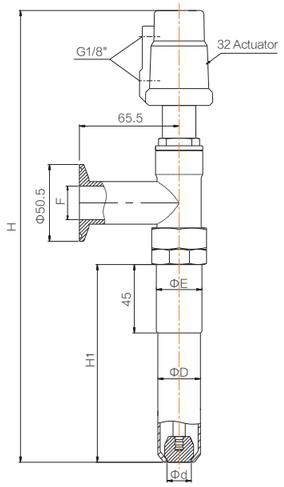
- Control type: Double acting normally closed,
  Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M/CF3M and other special materials
- Seal material: PTFE
- Medium temperature: –10℃ — +120℃
- Ambient temperature: –10℃ — +80℃

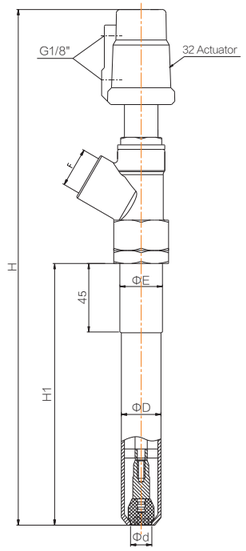
Advantages

1. It is widely used in filling machinery, especially for applications with viscous, pasty and even foamy fluids.
2. Fast, accurate and stable filling.
3. Delicate and compact, easy to arrange pipeline layout.
4. Special nozzle structure and sealing design ensure no dripping leakage.
5. Bottom chamfer structure of the filling nozzle self–locates and enables submerged filling.
6. The valve utilizes bottom seal and seal ring for connection to valve stem in order to avold fluid residue and allow effortless cleaning.
7. The connection and the valve stem sealing adopt angle valve sealing structure, which extends the service life.

ESG®

Filling Valve





Main Dimension (1A2 Series)

Size	Connection method	Actuator	ΦD	Φd	F	H	H1	ΦE (Optional)
DN15	Threaded connection Tri–clamp connection	32	12	5	G1/2 NPT1/2 BSPT1/2 Φ16	220–540	60–380	Φ20/M22X1.5
			14	6.5				
			16	8				
			18	9				Φ25/M25X1.5
			20	10				
			24	13				
DN20	Threaded connection	32	18	9	G3/4" NPT3/4" BSPT3/4" M26X1.5	227–547	60–380	Φ28/M28X1.5
			20	10				
			22	11.5				
			24	13				
			26	14				
			28	16				Φ30/M30X1.5
DN25	Tri–clamp connection	32	18	9	Φ22	227–547	60–380	Φ28/M28X1.5
			20	10				
			22	11.5				
			24	13				
			26	14				
			28	16				Φ30/M30X1.5

Order Instruction

1AX	XXX	X	XXX	XX	XXX	X	X	XX	X	X	(*)
Series	Actuator	Control type	Inlet size	Pipe outer diameter (mm)	Pipe length (mm)	Sealing structure	Suction	Connection type	Valve securement	Body Material	*: Special customization EC 1935
		2:Double acting normally closed				I: Internal sealing	0: Without suction	G1: Threaded BSP DIN ISO 228–1	0: No securement	1: CF8	
		3:Double acting without spring				E: External sealing	1: With suction	T1: Threaded BSPT DIN 2999–1/ISO7–1	M: Thread securement	2: CF8M	
								N1: Threaded NPT ASMEB1.20.1	D: Pipe securement	6: CF3M	
								M1: M26*1.5			
								H7: WeldedDIN11850–2/DIN11866 A			
								H8: WeldedDIN11850–3			
								H9: Welded Chamfer			
								K7: Tri–clamp ISO2852–50.5			
1AA	A27	2/3	D10	00	000	I	0	G1/T1/N1	0	1/2/6	
	A27	2/3	D15	00	000	I	0	G1/T1/N1/H7/H8/H9/K7	0	1/2/6	
1AB	A27	2/3	D15	00	000	I	0	G1/T1/N1	0	1/2/6	
1AC	A27	2/3	D15	20	130	I	0	G1/T1/N1	M/D	2/6	
	A27	2/3	D15	18	130	I	0	G1/T1/N1	M/D	2/6	
1AF	A27	2/3	D15	16	130	I	0	G1/T1/N1	M/D	2/6	
1AP	A32	2/3	D15	20	130	I	1	G1/T1/N1/K7	M/D	2/6	
1AD	A27	2/3	D15	14	175	E	0	G1/T1/N1	M/D	2/6	
1AJ	A32	2/3	D15	20	300	E	1	G1/T1/N1/k7	M/D	2/6	
1AG	A32	2/3	D15	20	130	E	1	G1/T1/N1/k7	M/D	2/6	
1AE	A32	2/3	D15	16	300	E	1	G1/T1/N1/k7	M/D	2/6	
1AI	A32	2/3	D15	16	130	E	1	G1/T1/N1/k7	M/D	2/6	
1AK	A32	2/3	D15	12	300	E	1	G1/T1/N1/k7	M/D	2/6	
1AH	A32	2/3	D15	12	130	E	1	G1/T1/N1/k7	D	2/6	
1AL	A40	2/3	D25	42	150	I	0/1	K7	D	2/6	
1AM	A40	2/3	D25	50	150	I	0/1	K7	D	2/6	
1A1	A32	3	D20	24	44	/	0	K7	/	1/2/6	
	A32	3	D25	29	44	/	0	K7	/	1/2/6	
	A32	3	D32	34	44	/	0	K7	/	1/2/6	
	A32	3	D32	40	10	/	0	K7	/	2	
1A2	A32	2/3	D15	12	60–380	I	0	G1/T1/N1/K7	M/D	2/6	
				14							
				16							
				18							
				20							
				24							
			D20	18							
				20							
				22							
				24							
				26							
				28							
			D25	18				G1/T1/N1/M1			
				20							
				22							
				24				K7			
				26							
				28							

ESG®

Strainer

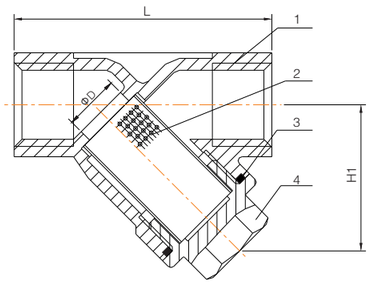
601 Series
Single Cap Strainer

Technical Specification

- Nominal pressure: PN55(DN8–DN50)
  PN16(DN65–DN80)
- Connection type: Threaded connection
  (BSP、BSPT、NPT)
- Body material: CF8/CF8M
- Medium Temperature: –10℃ — +180℃

Part List

No.	Part	Material
1	Body	CF8M/CF8
2	Filter	304
3	Gasket	PTFE
4	Cover	CF8M/CF8



Main Dimension

Size	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
ΦD	14	14	14	20	25	32	40	50	60	80
H1	37	37	37	45	54	59	66	77	93	118
L	65	65	65	80	90	105	120	138	178	210

Filter Option

Filter Option		DN8/ DN10/DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
1	20 mesh perforated filter	√	√	√	√	√	√	√	√
2	30 mesh wired filter	√	√	√	√	√	√		
3	30 mesh + frame	√	√	√	√	√	√		
4	80 mesh + frame	√	√	√	√	√	√	√	
5	100 mesh + frame	√						√	√

Order Instruction

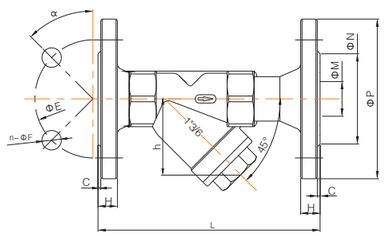
601 XXX X XX X (*)

- Series No.
- Size: D08、D10、D15、D20、D25、D32、D40、D50、D65、D80
- Filter option: 1、2、3、4、5
- Connection type: G1:Threaded BSP DIN ISO 228–1; T1:Threaded BSPT DIN 2999–1/ISO7–1; N1:Threaded NPT ASME B1.20.1
- Body material: 1: CF8; 2: CF8M
- *: Special customization

603 Series
Flanged Strainer

Technical Specification

- Nominal pressure: PN16
- Connection type: Flanged connection
- Body material: CF8/CF8M
- Medium Temperature: –10℃ — +180℃
- Flange standards: JB/T82.1–1994;
  ISO/DIN/JIS is also available



Main Dimension

Size	L	C	H	h	ΦE	n–ΦF	ΦM	ΦN	ϕP	α
DN15	145	2	14	37	65	4–14	16	45	95	45°
DN20	155	2	14	45	75	4–14	20	56	105	45°
DN25	155	2	14	54	85	4–14	25	65	115	45°
DN32	185	2	16	59	100	4–18	32	78	140	45°
DN40	200	3	16	66	110	4–18	36	84	150	45°
DN50	215	3	16	77	125	4–18	49	100	165	45°
DN65	290	3	18	93	145	4–18	66	120	185	45°
DN80	315	3	20	118	160	8–18	78	135	200	22.5°

Filter Option

Filter Option		DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80
1	20 mesh perforated filter	√	√	√	√	√	√	√	√
2	30 mesh wired filter	√	√	√	√	√	√		
3	30 mesh + frame	√	√	√	√	√	√		
4	80 mesh + frame	√	√	√	√	√	√	√	
5	100 mesh + frame	√						√	√

Order Instruction

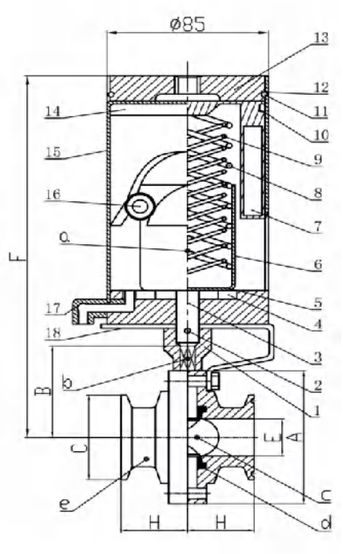
603 XXX X XX X (*)

- Series No.
- Size: D15、D20、D25、D32、D40、D50、D65、D80
- Filter option: 1、2、3、4、5
- Connection type: F2: Flange JB/T82.1 (DIN2543/DIN2576/EN1092–1/HG20592)
- Body material: 1: CF8; 2: CF8M
- *: Special customization

ESG®

Butterfly Valve

B00 Series
Vertical Pneumatic
Tri–clamp Butterfly Valve



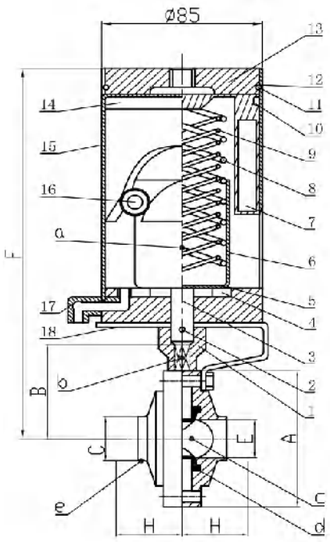
Technical Specification

- Size: 1/2"–4"
- Working pressure: 10bar (0–145psi)
- Control pressure: 5–7bar (72–102psi)
- Body material: F304/F316/F316L
- Sealing material: EPDM
- Control type: Single acting/Double acting
- Internal surface: Ra0.6–0.8um
- Connection type: Tri–clamp 3A, welded 3A
- Temperature: –20℃~+130℃
- Applications: Widely used in food, beverages, brewery, pharmaceuticals industries etc.

Main Dimension (Tri-clamp Connection)

Size	A	B	C	E	H	F
1/2"	79	49.5	25	9.4	35	237
3/4"	79	49.5	25	15.8	35	237
1"	79	49.5	50.5	22.1	35	237
1.5"	85	52.5	50.5	34.8	35	240
2"	100	60	64	47.5	37	246
2.5"	115	67.5	77.5	60.2	38	256
3"	127	73.5	91	72.9	39	256
4"	156	88	119	97.6	45	286

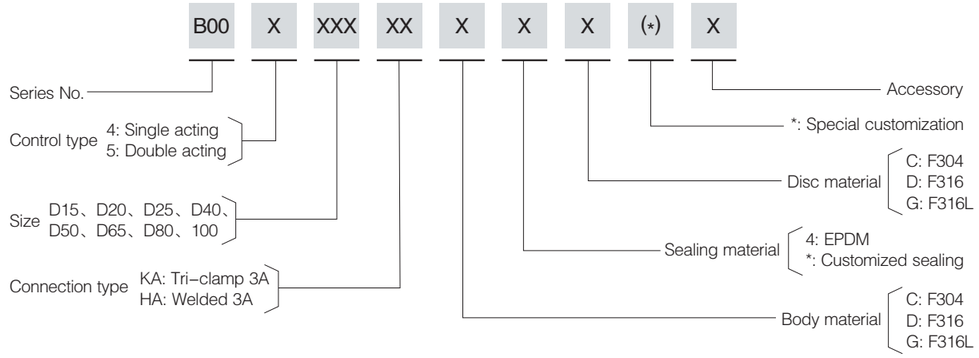
B00 Series
Vertical Pneumatic
Welded Butterfly Valve



Main Dimension (Welded Connection)

Size	A	B	C	E	H	F
1/2"	79	49.5	12.7	9.4	23	237
3/4"	79	49.5	19.1	15.8	23	237
1"	79	49.5	25.4	22.1	23.5	237
1.5"	85	52.5	38.1	34.8	23.5	240
2"	100	60	50.8	47.5	26	246
2.5"	115	67.5	63.5	60.2	27	256
3"	127	73.5	76.2	72.9	28	256
4"	156	88	101.6	97.6	30	286

Order Instruction



ESG®

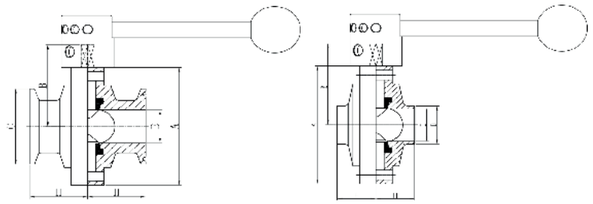
Butterfly Valve

B10 Series
Pull Handles Tri-clamp
Manual Butterfly Valve

B10 Series
Pull Handles Welded
Manual Butterfly Valve

Technical Specification

- Size: 1/2"–6"
- Working pressure: 10bar (0–145psi)
- Body material: F304/F316/F316L
- Sealing material: EPDM
- Connection type: Tri–clamp 3A, welded 3A
- Internal surface: Ra0.6–0.8um
- Temperature: –20℃~+130℃
- Applications: Widely used in food, beverages, brewery, pharmaceuticals industries etc.



Tri–clamp

Welded

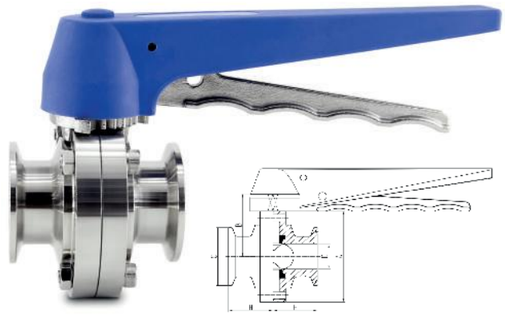
Main Dimension (Tri-clamp Connection)

Size	A	B	C	E	H
1/2"	79	49.5	25	9.4	35
3/4"	79	49.5	25	15.8	35
1"	79	49.5	50.5	22.1	35
1.25"	79	49.5	50.5	29	35
1.5"	85	52.5	50.5	34.8	35
2"	100	60	64	47.5	37
2.5"	115	67.5	77.5	60.2	38
3"	127	73.5	91	72.9	39
3.5"	140	80	106	85	39
4"	156	88	119	97.6	45
6"	215	117.5	166.8	146.8	63

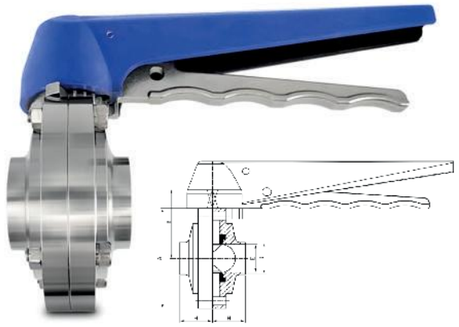
Main Dimension (Welded Connection)

Size	A	B	D	E	H
1/2"	79	49.5	12.7	9.4	23
3/4"	79	49.5	19.1	15.8	23
1"	79	49.5	25.4	22.1	23.5
1.25"	79	49.5	31.8	28.8	23.5
1.5"	85	52.5	38.1	34.8	23.5
2"	100	60	50.8	47.5	26
2.5"	115	67.5	63.5	60.2	27
3"	127	73.5	76.2	72.9	28
3.5"	140	80	88.9	84.9	29
4"	156	88	101.6	97.6	30

B11 Series
Muti-handles Tri-clamp
Manual Butterfly Valve



B11 Series
Muti-handles Welded
Manual Butterfly Valve



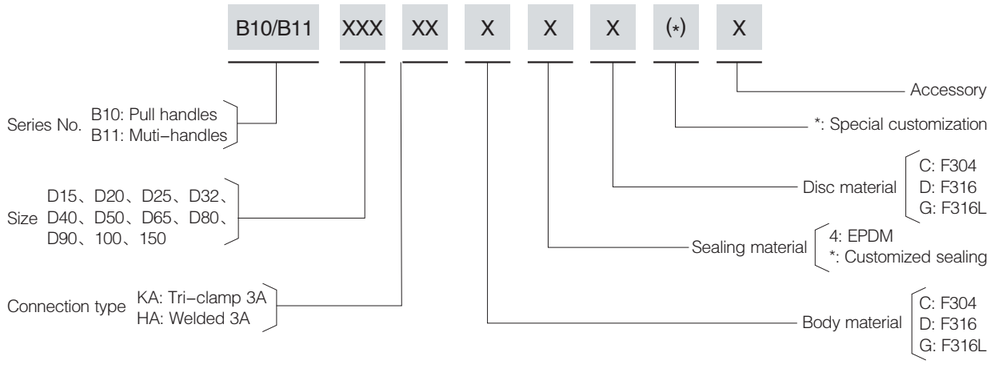
Main Dimension (Tri-clamp Connection)

Size	A	B	C	E	H
1/2"	79	49.5	25	9.4	35
3/4"	79	49.5	25	15.8	35
1"	79	49.5	50.5	22.1	35
1.25"	79	49.5	50.5	29	35
1.5"	85	52.5	50.5	34.8	35
2"	100	60	64	47.5	37
2.5"	115	67.5	77.5	60.2	38
3"	127	73.5	91	72.9	39
3.5"	140	80	106	85	39
4"	156	88	119	97.6	45

Main Dimension (Welded Connection)

Size	A	B	D	E	H
1/2"	79	49.5	12.7	9.8	23
3/4"	79	49.5	19.1	15.8	23
1"	79	49.5	25.4	22.1	23.5
1.25"	79	49.5	31.8	28.8	23.5
1.5"	85	52.5	38.1	34.8	23.5
2"	100	60	50.8	47.5	26
2.5"	115	67.5	63.5	60.2	27
3"	127	73.5	76.2	72.9	28
3.5"	140	80	88.9	84.9	29
4"	156	88	101.6	97.6	30

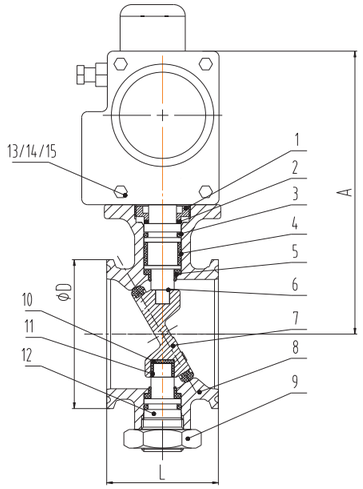
Order Instruction



ESG®

Butterfly Valve

303 Series
Pneumatic Inclined Plate
Butterfly Valve



Technical Specification

- Product specification: DN50
- Operating pressure: 0–10bar (0–145psi)
- Medium temperature: –10℃ — +150℃
- Bodymaterial: CF8/CF8M/CF3M and other materials
- Seal material: FPM
- Connection type: Tri–clamp
- Application range: industrial grade/hygienic grade industries, media such as water/steam/powder

Advantages

1. Patented inclined plate structural design. When the valve is opened, the butterfly plate is completely disengaged from the valve seat, resulting in little wear on the butterfly plate seal.
2. Vulcanized sealing to prevent tearing and scraping.
3. Progressive sealing structure and streamlined design of the valve body's sealing surface.
4. The plate–rod is designed without a pin connection, making valve maintenance more convenient.
5. The streamlined design of the valve body enables internal polishing with no residue.

Main Dimension

Size	ΦD	L	Selection of double acting actuator	A Equipped with double acting actuator	Selection of single acting actuator	A Equipped with single acting actuator
DN50	Φ64	48	AT40	122	AT52	128

Order Instruction

303	XXX	XX	X	X	X	(*)	X

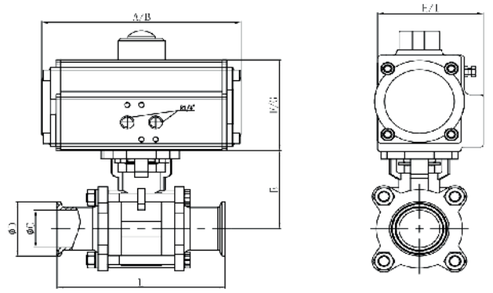
- Series No.
- Size D50
- Connection type K1: Tri–clamp ASME BPE
- Body material 1: CF8 2: CF8M 6: CF3M
- Butterfly plate material 1: CF8 2: CF8M 6: CF3M
- Sealing material 5: FPM
- *: Special customization
- Accessory

Ball Valve

C00 Series
Horizontal Pneumatic
Three-Piece Ball Valve

Technical Specification

- Size: 1/2"–6"
- Body structrue: Straight and all–inclusive ball seat design
- Working pressure: 10bar (0–145psi)
- Control pressure: 5–7bar (72–102psi)
- Body material: CF8/CF8M/CF3M
- Sealing material: PTFE
- Control type: Single acting/Double acting
- Connection type: Tri–clamp 3A, welded 3A
- Internal surface: CNC machining Ra 0.6 μ m
- Temperature: –20℃~+150℃
- Applications: Widely used in food, beverages, brewery, pharmaceuticals industries etc.



Tri–clamp

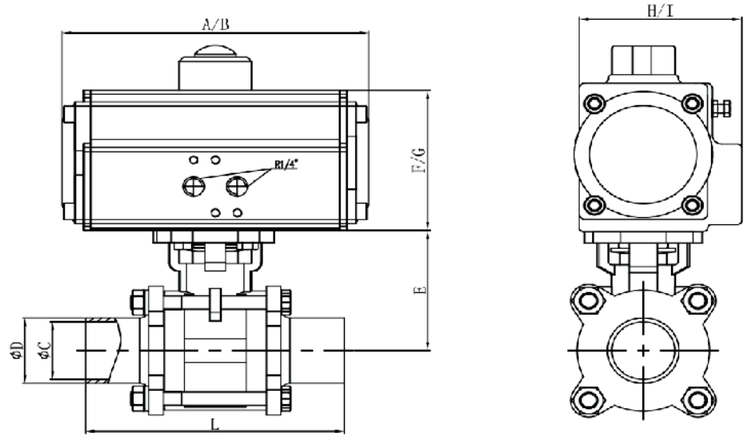
Main Dimension (Tri-clamp Connection)

Size	A/B (SA/DA)	C ± 0.06	D ± 0.06	E ± 0.3	F/G (SA/DA)	H/I (SA/DA)	L ± 0.3	SA Actuator Size	DA Actuator Size	Torque N.m
1/2"	169/154	9.4	25.2	37	88/72	82/71	90.5	AT52	AT52	4~10
3/4"	169/154	15.75	25.2	43	88/72	82/71	103.4	AT52	AT52	4~10
1"	201/169	22.1	50.5	51	100/88	94/82	114.2	AT75	AT52	5~15
1.25"	201/169	28.5	50.5	61	100/88	94/82	126	AT83	AT63	10~20
1.5"	209/201	34.8	50.5	71	108/100	101/94	136.7	AT83	AT63	10~25
2"	275/209	47.5	64	79	133/108	122/101	153.2	AT92	AT75	15~30
2.5"	275/209	60.2	77.5	94	133/108	122/101	167.3	AT105	AT75	20~35
3"	332/275	72.9	91	109.5	155/133	138/122	192.3	AT125	AT92	40~65
4"	385/332	97.4	119	123	172/155	153/138	239.5	AT125	AT92	40~80
6"	507/450	146.8	166.8	169	230/197	206/174	378	AT140	AT140	60~120

ESG®

Ball Valve

C00 Series
3-PC Horizontal Pneumatic
Welded Ball Valve

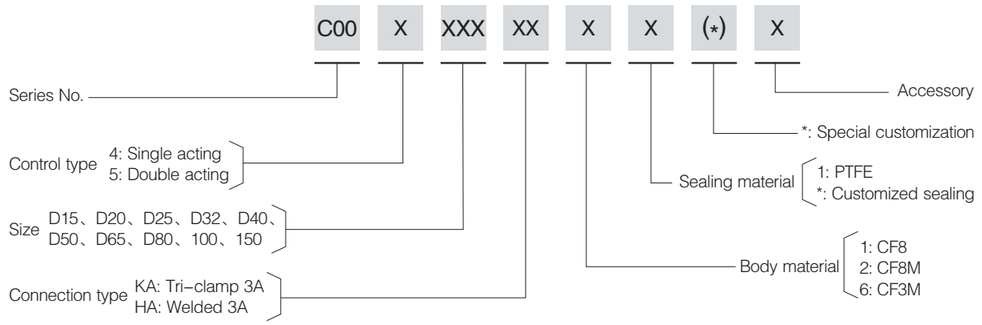


Welded

Main Dimension (Welded Connection)

Size	A/B (SA/DA)	C ± 0.06	D ± 0.06	E ± 0.3	F/G (SA/DA)	H/I (SA/DA)	L ± 0.3	SA Actuator Size	DA Actuator Size	Torque N.m
1/2"	169/154	9.4	12.7	37	88/72	82/71	90.5	AT52	AT52	4~10
3/4"	169/154	15.75	19.05	43	88/72	82/71	103.4	AT52	AT52	4~10
1"	201/169	22.1	25.4	51	100/88	94/82	114.2	AT75	AT52	5~15
1.25"	201/169	28.5	31.8	61	100/88	94/82	126	AT83	AT63	10~20
1.5"	209/201	34.8	38.1	71	108/100	101/94	136.7	AT83	AT63	10~25
2"	275/209	47.5	50.8	79	133/108	122/101	153.2	AT92	AT75	15~30
2.5"	275/209	60.2	63.5	94	133/108	122/101	167.3	AT105	AT75	20~35
3"	332/275	72.9	76.2	109.5	155/133	138/122	192.3	AT125	AT92	40~65
4"	385/332	97.4	101.6	123	172/155	153/138	239.5	AT125	AT92	40~80
6"	507/450	146.8	152.4	169	230/197	206/174	378	AT140	AT140	60~120

Order Instruction

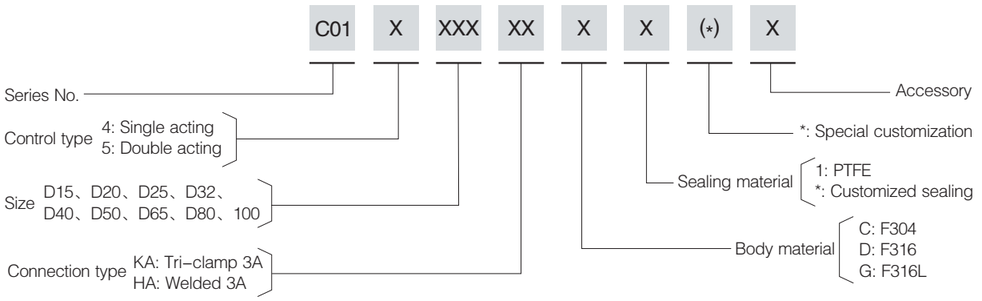


C01 Series
Vertical Pneumatic
Butterfly Ball Valve

Technical Specification

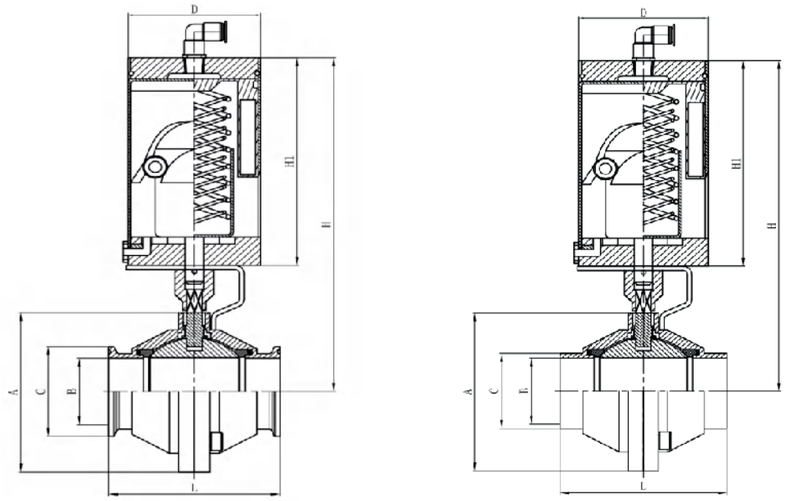
- Size: 1/2"–4"
- Body structrue: Forged body with semi–wrapped floating ball structure
- Working pressure: 10bar (0–145psi)
- Control pressure: 5–7bar (72–102psi)
- Body material: F304/F316/F316L
- Sealing material: PTFE
- Control type: Single acting/Double acting
- Connection type: Tri–clamp 3A, welded 3A
- Internal surface: CNC machining Ra 0.6 μ m
- Temperature: –20℃~+150℃
- Applications: Widely used in food, beverages, brewery, pharmaceuticals industries etc.

Order Instruction



ESG®

Ball Valve



Tri–clamp

Welded

Main Dimension (Tri-clamp Connection)

Size	A ± 0.13	B ± 0.13	C ± 0.13	D ± 0.3	L ± 0.5	H1 ± 2	H ± 5
1/2"	64	9.4	25.2	85	70	148	216
3/4"	64	15.75	25.2	85	70	148	216
1"	76.5	22.1	50.5	85	85	148	220
1.5"	99	34.8	50.5	85	100	148	230
2"	112	47.5	64	85	110	148	234.5
2.5"	141	60.2	77.5	85	125	148	253
3"	163	72.9	91	108	135	182	300
4"	194	97.4	119	108	170	182	318

Main Dimension (Welded Connection)

Size	A ± 0.13	B ± 0.13	C ± 0.13	D ± 0.3	L ± 0.5	H1 ± 2	H ± 5
1/2"	64	9.4	12.7	85	70	148	216
3/4"	64	15.75	19.05	85	70	148	216
1"	76.5	22.1	25.4	85	85	148	220
1.5"	99	34.8	38.1	85	100	148	230
2"	112	47.5	50.8	85	110	148	234.5
2.5"	141	60.2	63.5	85	125	148	253
3"	163	72.9	76.2	108	135	182	300
4"	194	97.4	101.6	108	170	182	318

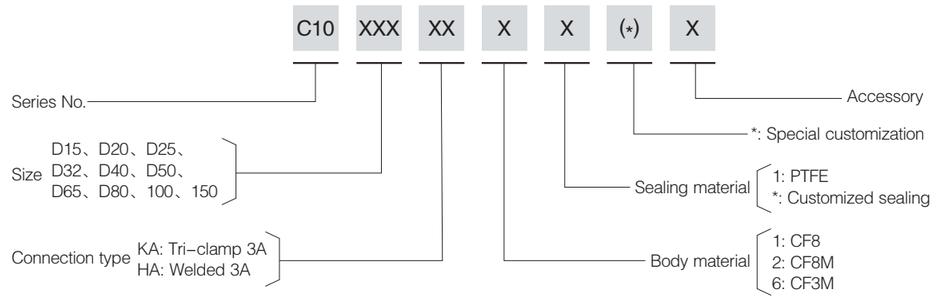
C10 Series
3-PC Tri-clamp Ball Valve
With Mounting Pad

C10 Series
3-PC Weld Ball Valve
With Mounting Pad

Technical Specification

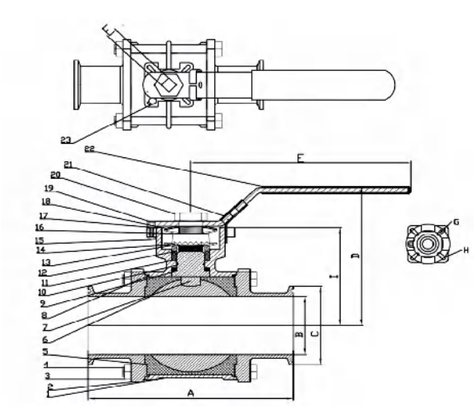
- Size: 1/2"–6"
- Working pressure: 10bar (0–145psi)
- Body material: CF8/CF8M/CF3M
- Sealing material: PTFE
- Connection type: Tri–clamp 3A, welded 3A
- Internal surface: CNC machining Ra 0.6 μ m
- Temperature: –20℃~+150℃
- Applications: Widely used in applications like food & beverage, brewery, pharmaceutical etc.

Order Instruction

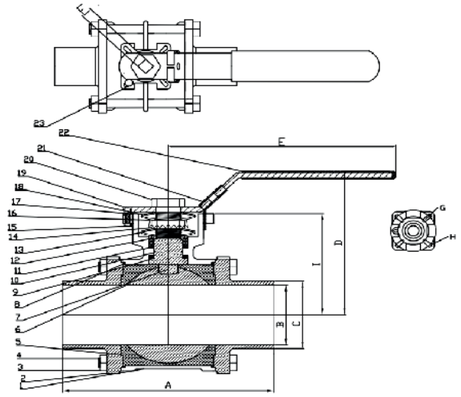


ESG®

Ball Valve



Tri–clamp



Welded

Main dimension—Tri-clamp Ball Valve (Full-wrapped Ball Structure)

Size	A ± 0.3	B ± 0.06	C ± 0.06	D ± 1	E ± 1	F	G	H	I ± 1	Torque N.m
1/2"	90.5	9.4	25.2	64	131	9	F03	F04	37	4~10
3/4"	103.4	15.75	25.2	68	131	9	F03	F04	43	4~10
1"	114.2	22.1	50.5	86	169	11	F04	F05	51	5~15
1.25"	126	28.5	50.5	86	169	11	F04	F05	61	10~20
1.5"	136.7	34.8	50.5	122.5	213	14	F05	F07	71	10~25
2"	153.2	47.5	64	122.5	213	14	F05	F07	79	15~30
2.5"	167.3	60.2	77.5	139.5	213	14	F05	F07	94	20~35
3"	192.3	72.9	91	165	320	17	F07	F10	109.5	40~65
4"	239.5	97.4	119	177	320	17	F07	F10	123	40~80
6"	378	146.8	167	205	490	27	F10	F12	169	60~120

Main dimension—Welded Ball Valve (Full-wrapped Ball Structure)

Size	A ± 0.3	B ± 0.06	C ± 0.06	D ± 1	E ± 1	F	G	H	I ± 1	Torque N.m
1/2"	90.5	9.4	12.7	64	131	9	F03	F04	37	4~10
3/4"	103.4	15.75	19.05	68	131	9	F03	F04	43	4~10
1"	114.2	22.1	25.4	86	169	11	F04	F05	51	5~15
1.25"	126	28.5	31.8	86	169	11	F04	F05	61	10~20
1.5"	136.7	34.8	38.1	122.5	213	14	F05	F07	71	10~25
2"	153.2	47.5	50.8	122.5	213	14	F05	F07	79	15~30
2.5"	167.3	60.2	63.5	139.5	213	14	F05	F07	94	20~35
3"	192.3	72.9	76.2	165	320	17	F07	F10	109.5	40~65
4"	239.5	97.4	101.6	177	320	17	F07	F10	123	40~80
6"	378	146.8	152.4	205	490	27	F10	F12	169	60~120

C11 Series
Butterfly Tri-clamp
Ball Valve

C11 Series
Butterfly Welded
Ball Valve

Technical Specification

- Size: 1/2"–4"
- Working pressure: 10bar (0–145psi)
- Body material: F304/F316/F316L
- Sealing material: PTFE
- Connection type: Tri–clamp 3A, welded 3A
- Internal surface: CNC machining, Ra 0.6um
- Temperature: –20℃~+150℃
- Applications: Widely used in food, beverages, brewery, pharmaceuticals industries etc.

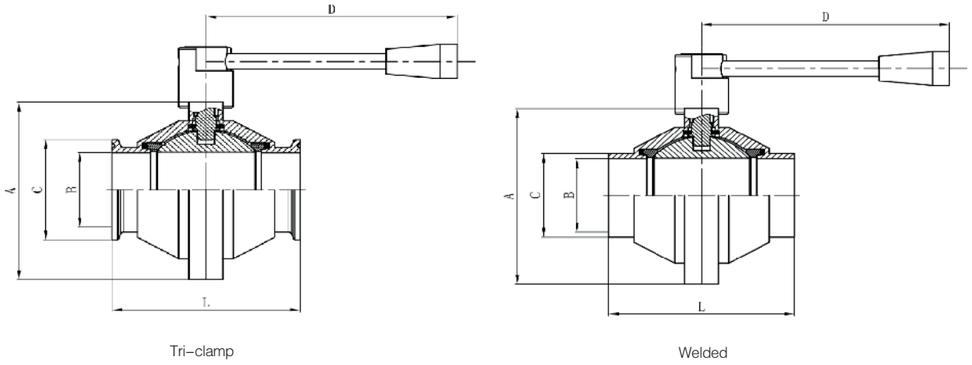
Order Instruction

C11 XXX XX X X (*) X

- Series No.: C11
- Size: D15、D20、D25、D32、D40、D50、D65、D80、100 → XXX
- Connection type: KA: Tri–clamp 3A; HA: Welded 3A → XX
- Body material: C:F304; D: F316; G: F316L → X
- Sealing material: 1: PTFE; *: Customized sealing → X
- *: Special customization → (*)
- Accessory → X

ESG®

Ball Valve



Tri–clamp　　Welded

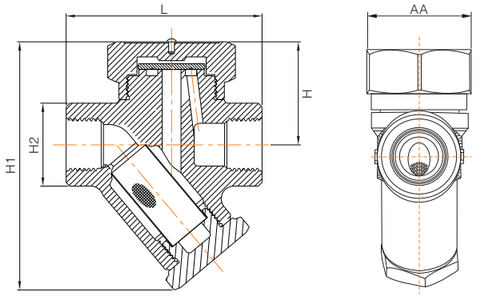
Main Dimension (Tri-clamp Connection)

Size	A ± 0.13	B ± 0.13	C ± 0.13	D ± 5	L ± 0.5
1/2"	64	9.4	25.2	140	70
3/4"	64	15.75	25.2	140	70
1"	76.5	22.1	50.5	140	85
1.5"	99	34.8	50.5	140	100
2"	112	47.5	64	140	110
2.5"	141	60.2	77.5	205	125
3"	163	72.9	91	205	135
4"	194	97.4	119	206	170

Main Dimension (Welded Connection)

Size	A ± 0.13	B ± 0.13	C ± 0.13	D ± 5	L ± 0.5
1/2"	64	9.4	12.7	140	70
3/4"	64	15.75	19.05	140	70
1"	76.5	22.1	25.4	140	85
1.5"	99	34.8	38.1	140	100
2"	112	47.5	50.8	140	110
2.5"	141	60.2	63.5	205	125
3"	163	72.9	76.2	205	135
4"	194	97.4	101.6	206	170

800 Series Thermodynamic Steam Trap



*** Flange connection is available upon request**

Technical Specification

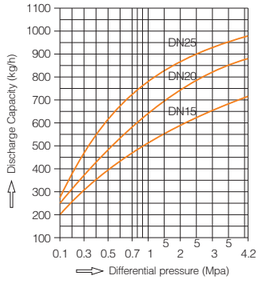
- Operating Pressure: 0.5–42bar (7–609psi)
- Max. Operating Temp: 400℃

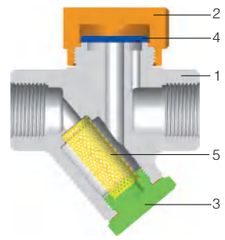
Advantages

1. Compact structure.
2. High durability due to stainless steel inner components and valve body.
3. Long service life.
4. Easy to service and repair.

Application: Steam pipelines, iron machines, drying units, etc.

Discharge Capacity





Part List

No.	Part	Material
1	Body	ASTM CA40
2	Cover	CF8
3	Threaded plug	CF8
4	Disc	2Cr13
5	Filter	304 (30 mesh by default)

Main Dimension

Size	Thread end	Dimension (mm)					Weight (kg)
		L	H	H1	H2	AA	
DN15	1/2"	78	41	99.6	33	44	0.9
DN20	3/4"	90	49.2	109.2	39	48	1.2
DN25	1"	95	57.5	121.6	45	56	1.7

Order Instruction

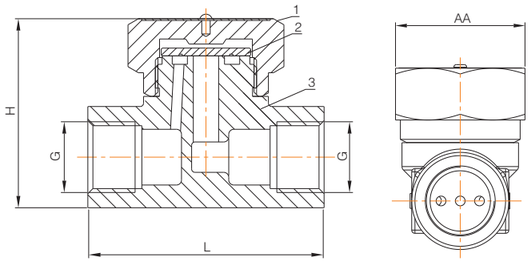
800 XXX XX X (*)

- 800 — Series No.
- XXX — Size D15、D20、D25
- XX — Connection type
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
- X — Body material 7: CA40
- (*) — *: Special customization

ESG®

Thermodynamic Steam Trap

801 Series
Thermodynamic
Steam Trap



Advantages

1. Compact structure.
2. High durability due to stainless steel inner components and valve body.
3. Long service life.
4. Easy to service and repair.

Application: Steam pipelines, iron machines, drying units, etc.

Technical Specification

- Operating Pressure: 1–42bar (15–609psi)
- Max. Operating Temp: 400℃

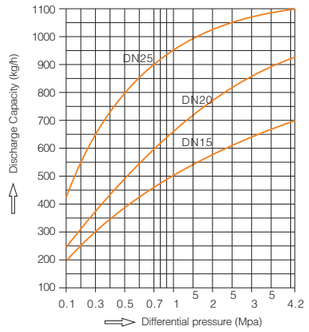
Part List

No.	Part	Material
1	Cover	CF8
2	Disc	2Cr13
3	Body	ASTM CA40

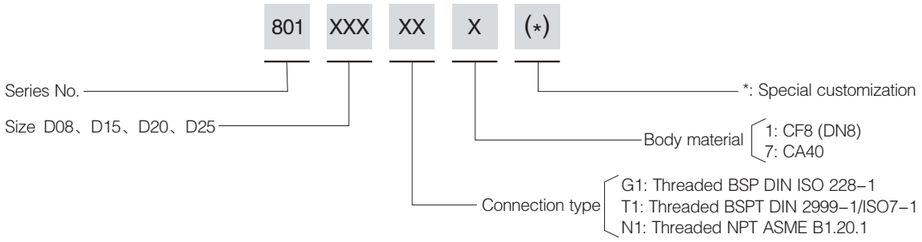
Main Dimension

Size	G	H	L	AA	Weight (kg)
DN15	1/2"	56	70	40	0.5
DN20	3/4"	64	80	44	0.8
DN25	1"	75	89	55	1.25

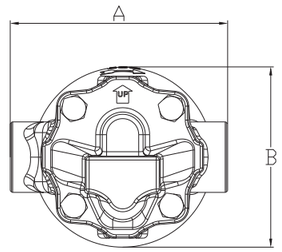
Discharge Capacity

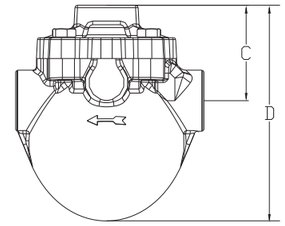


Order Instruction



802 Series
Ball Float Steam Trap





Technical Specification

- Nominal pressure: PN16
- Max allowable pressure PMA: 16bar (232psi)
- Max allowable temperature TMA : 250℃
- Max differential pressure: 8bar (116psi)
- Connection type: Threaded connection (BSP、BSPT、NPT)

Main Dimension

Size	A	B	C	D
DN15	145	120	74	169
DN20	145	120	74	169
DN25	145	120	74	169

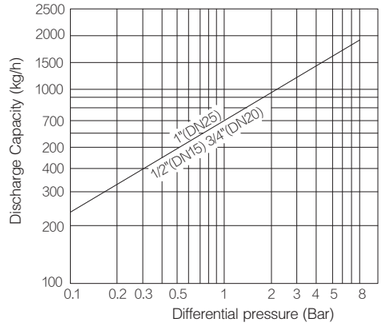
Advantages

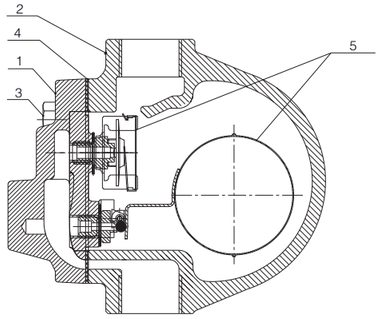
1. Application for both horizontal and vertical installation.
2. Stainless steel material with excellent corrosion resistance and durability.
3. Continuous discharge, with no impact from temperature, pressure and flow. Prevent water hammer due to steam condensation.
4. No steam leakage, minimal heat loss.
5. Automatically discharge non–condensing gas to avoid air resistance.
6. Large discharge capacity improves work efficiency.
7. Compact structure and reliable performance.

Part List

No.	Part	Material
1	Cover	CF8/CF8M
2	Body	CF8/CF8M
3	Stem	304
4	Gasket	Soft graphite
5	Internal component	Stainless steel

Discharge Capacity



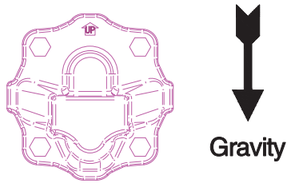


ESG®

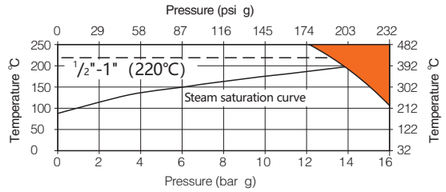
Thermodynamic Steam Trap

Special Note

Please keep valve in opposite direction of gravity.
(As shown in the figure below).



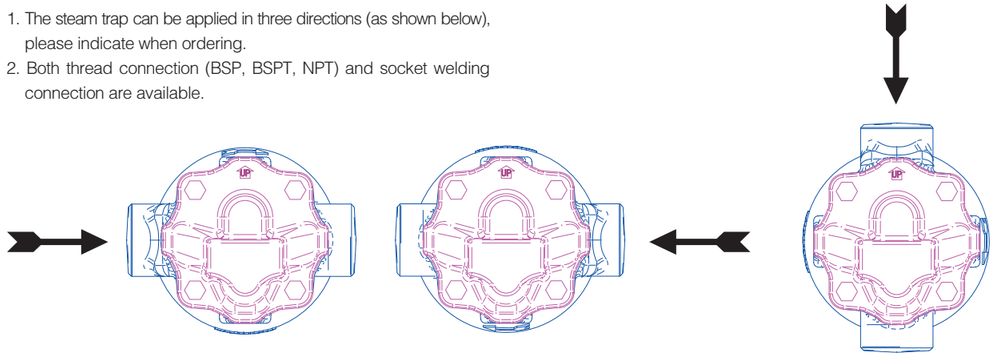
Operating Condition



The product may not be used under the condition highlighted in orange.

Ordering Instructions

1. The steam trap can be applied in three directions (as shown below), please indicate when ordering.
2. Both thread connection (BSP, BSPT, NPT) and socket welding connection are available.

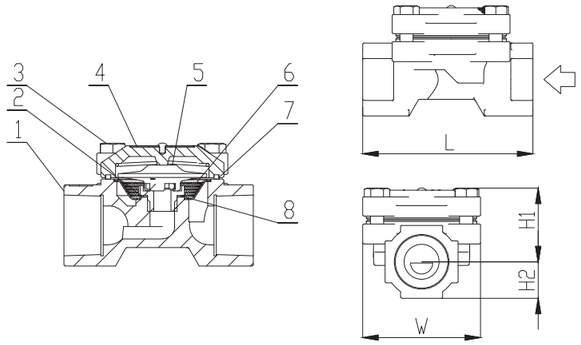


Order Instruction

802 XXX XX X X (*)

- Series No. 802
- Size D15、D20、D25 XXX
- Connection type XX
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
  - SW: Socket Welding
- Body material X
  - 1: CF8
  - 2: CF8M
- Installation direction X
  - L: Left to right
  - R: Right to left
  - U: Up to down
- *: Special customization

803 Series Thermostatic Steam Trap

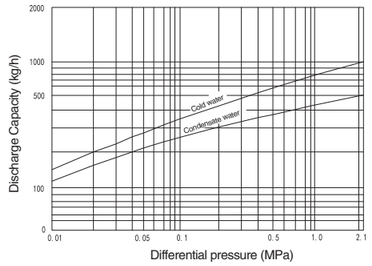


Technical Specification

- Nominal pressure: 2.5MPa
- Connection: thread
- Max working pressure PMO: 2.1MPa
- Max working pressure difference △PMX: 2.1MPa
- Max operating temperature TMO: 220℃
- Four types of bellows:
  A–Discharge condensate below saturation temperature of 3℃.
  B–Discharge condensate below saturation temperature of 5℃.
  C–Discharge condensate below saturation temperature of 15℃.
  D–Discharge condensate below saturation temperature of 25℃.

Attention: To avoid abnormal operation, accidents, or personal injury, please do not use this product beyond the specification range.
If the technical standards or regulations of a country or region have special provisions for the above specifications, the product should be used in accordance with local regulations.

Output Chart



1. Pressure difference refers to the pressure difference between the inlet and outlet of the steam trap.
2. Recommended safety factor not less than 2.

Attention: Do not use the steam trap under conditions exceeding the maximum pressure difference, otherwise condensation water may accumulate.

Advantages

The stainless steel thermostatic steam trap is widely applicable in various fields, including steam main pipes, heat tracing equipment dryers, and heat exchange equipment.

1. Featuring a 'fault normally open' feature to ensure no condensate accumulation in the steam space;
2. The structure is sturdy and lightweight, capable of withstanding superheated steam and water hammer;
3. Automatic regulation of fixed undercooling throughout the entire pressure range;
4. Excellent air emission performance;
5. Can be installed horizontally or vertically;
6. The filter screen with a large flow area and a compact structure has a large drainage capacity;
7. Easy to maintain and clean.

Main Dimension

Size	L	W	H1	H2	Weight (kg)
DN15	75	53	33	17	0.59
DN20	75	53	33	17	0.54
DN25	78	53	33	21	0.63

Part List

No.	Part	Material
1	Body	CF8
2	gasket	copper
3	bolt	304
4	cover	CF8
5	diaphgram box	stainless steel
6	60 mesh filer	304
7	gasket	PTFE
8	seat	stainless steel

Order Instruction

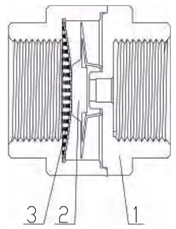
803 XXX XX X X (*)

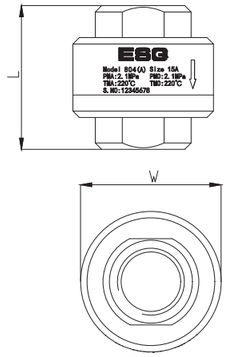
- Series No. 803
- Size D15、D20、D25 XXX
- Connection type XX
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
- Subcooling X
  - A: Subcooling (discharge temperature) 3℃
  - B: Subcooling(discharge temperature) 5℃
  - C: Subcooling (discharge temperature) 15℃
  - D: Subcooling (discharge temperature) 25℃
- Body material 1: CF8 X
- *: Special customization (*)

ESG®

Thermodynamic Steam Trap

804 Series Thermostatic Steam Trap



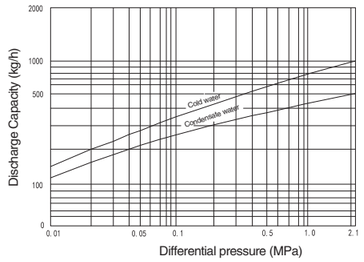


Technical Specification

- Nominal pressure: 3.2MPa
- Connection: thread
- Max working pressure PMO: 2.1MPa
- Max working pressure difference △PMX: 2.1MPa
- Max operating temperature TMO: 220℃
- Four types of bellows:
  A–Discharge condensate below saturation temperature of 3℃.
  B–Discharge condensate below saturation temperature of 5℃.
  C–Discharge condensate below saturation temperature of 15℃.
  D–Discharge condensate below saturation temperature of 25℃.

Attention: To avoid abnormal operation, accidents, or personal injury, please do not use this product beyond the specification range.
If the technical standards or regulations of a country or region have special provisions for the above specifications, the product should be used in accordance with local regulations.

Output Chart



1. Pressure difference refers to the pressure difference between the inlet and outlet of the steam trap.
2. Recommended safety factor not less than 2.

Attention: Do not use the steam trap under conditions exceeding the maximum pressure difference, otherwise condensation water may accumulate.

Advantages

The all stainless steel thermal static steam trap is suitable for heat transfer in tracing pipelines with relatively small condensate flow rates and small heat exchange equipment. It is recommended to install it vertically.

1. Fault Normally Open' feature.
2. The structure is sturdy and lightweight, capable of withstanding superheated steam and water hammer.
3. Automatically adjust the valve opening temperature with a fixed undercooling within the entire working pressure range.
4. Excellent air exhaust performance.
5. Compact structure with large displacement.
6. Maintenance, tenacious and simple.
7. Built–in filter screen with large circulation area.

Main Dimension

Size	L	W	Weight (kg)
DN8	45	44	0.19
DN15	45	44	0.25
DN20	51	44	0.28
DN25	57	44	0.32

Part List

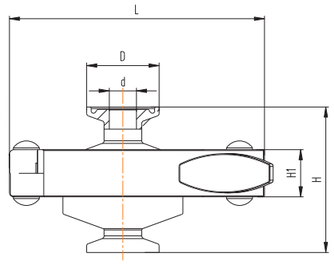
No.	Part	Material
1	Body	316L
2	Diaphgram box	SS
3	Filter screen	304

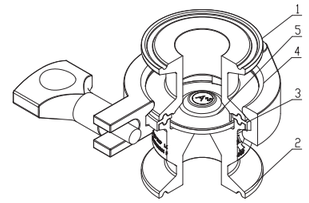
Order Instruction

804 XXX XX X X (*)

- Series No. 804
- Size D08、D15、D20、D25 — XXX
- Connection type — XX
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
- Subcooling — X
  - A:Subcooling (discharge temperature) 3℃
  - B：Subcooling(discharge temperature) 5℃
  - C:Subcooling (discharge temperature) 15℃
  - D: Subcooling (discharge temperature) 25℃
- Body material J: 316L — X
- *: Special customization — (*)

805 Series Thermostatic Steam Trap



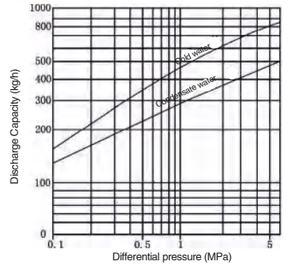


Technical Specification

- Nominal pressure: 1.0MPa
- Max allowable pressure PMA: 1.0MPa
- Max allowable temperature TMA: 200℃
- Max working pressure PMO: 0.6MPa
- Max operating temperature TMO: 165℃
- Four types of bellows:
  A–Discharge condensate below saturation temperature of 3℃
  B–Discharge condensate below saturation temperature of 5℃
  C–Discharge condensate below saturation temperature of 15℃
  D–Discharge condensate below saturation temperature of 25℃

Attention: To avoid abnormal operation, accidents, or personal injury, please do not use this product beyond the specification range.
If the technical standards or regulations of a country or region have special provisions for the above specifications, the product should be used in accordance with local regulations.

Output Chart



1. Pressure difference refers to the pressure difference between the inlet and outlet of the steam trap.
2. Recommended safety factor not less than 2.

Attention: Do not use the steam trap under conditions exceeding the maximum pressure difference, otherwise condensation water may accumulate.

Advantages

The stainless steel thermostatic steam trap is widely applicable in various fields, including steam main pipes, heat tracing equipment dryers, and heat exchange equipment.

1. Free flow of cold water and seamless design in the true sense, maximum inhibition of bacterial aggregation.
2. The feature of 'fault normally open' minimizes the possibility of shutdown under critical operating conditions.
3. The valve nozzle design with a large opening can quickly discharge a large amount of air, ensuring fast start, preventing blockage, and ensuring continuous operation.
4. Tight structure, easy installation and maintenance.
5. Internal polishing to prevent bacterial growth.

Main Dimension

Size	H	d	D	L	H1	Weight (kg)
1/2"	51	9.4	25	88	16	0.47
3/4"	51	15.75	25	88	16	0.51
1"	66	22.6	50.5	88	16	0.65

Part List

No.	Part	Material
1	Top body	SS 316L
2	Low body	SS 316L
3	Sealing gasket	PTFE
4	Clamp	SS 316L
5	Diaphgram	SS 316L

Order Instruction

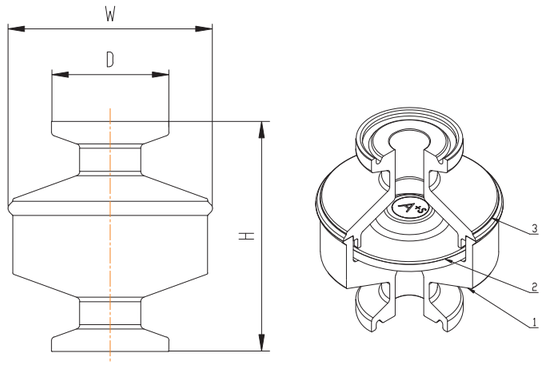
805 XXX XX X X (*)

- Series No. 805
- Size D15、D20、D25 — XXX
- Connection type — XX
  - K1: ASME–BPE
  - K7: ISO 2852
- Subcooling — X
  - A: Subcooling (discharge temperature) 3℃
  - B: Subcooling(discharge temperature) 5℃
  - C: Subcooling (discharge temperature)15℃
  - D: Subcooling (discharge temperature) 25℃
- Body material J: 316L — X
- *: Special customization — (*)

ESG®

Thermostatic Steam Trap

806 Series
Thermostatic
Steam Trap

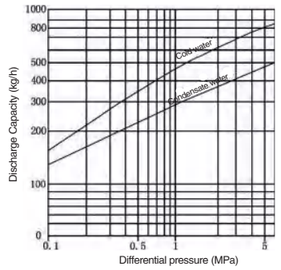


Technical Specification

- Nominal pressure: 1.0MPa
- Max allowable pressure PMA: 1.0MPa
- Max allowable temperature TMA: 220℃
- Max working pressure PMO: 0.8MPa
- Max working temperature TMO:176℃
- Four types of bellows:
  A– Discharge condensate below saturation temperature of 3℃
  B– Discharge condensate below saturation temperature of 5℃
  C– Discharge condensate below saturation temperature of 15℃
  D– Discharge condensate below saturation temperature of 25℃

Attention: To avoid abnormal operation, accidents, or personal injury, please do not use this product beyond the specification range.
If the technical standards or regulations of a country or region have special provisions for the above specifications, the product should be used in accordance with local regulations.

Output Chart



1. Pressure difference refers to the pressure difference between the inlet and outlet of the steam trap.
2. Recommended safety factor: not less than 2.

Attention: Do not use the steam trap under conditions exceeding the maximum pressure difference, otherwise condensation water may accumulate.

Advantages

The all stainless steel thermal static steam trap is suitable for heat transfer in tracing pipelines with relatively small condensate flow rates and small heat exchange equipment. It is recommended to install it vertically.

1. Free flow of cold water and seamless design in the true sense, maximum inhibition of bacterial aggregation.
2. The feature "Normally open on fault" minimizes the possibility of shutdown under critical operating conditions.
3. The valve nozzle design with a large opening can quickly discharge a large amount of air, ensuring fast start, preventing blockage, and ensuring continuous operation.
4. Tight structure, easy installation and maintenance.
5. Internal polishing to prevent bacterial growth.

Main Dimension

Size	H	W	D	Weight (kg)
1/2"	49	44	25	0.17
3/4"	49	44	25	0.19
1"	53	44	50.5	0.28

Part List

No.	Part	Material
1	Low body	SS 316L
2	Diaphgram	SS 316L
3	Top body	SS 316L

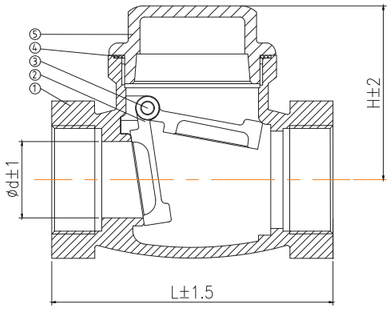
Order Instruction

806	XXX	XX	X	X	(*)

Series No.
Size D15、D20、D25
Connection type K1: ASME–BPE / K7: ISO 2852
Subcooling
A: Subcooling (discharge temperature) 3℃
B: Subcooling(discharge temperature) 5℃
C: Subcooling (discharge temperature) 15℃
D: Subcooling (discharge temperature) 25℃
Body material J: 316L
*: Special customization

Check Valve

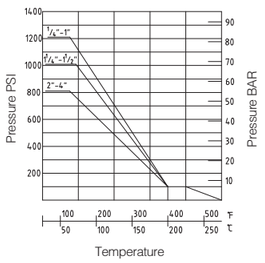
502 Series
Swing Check Valve



Technical Specification

- Nominal pressure: PN16
- Medium temperature: –20℃ — +180℃
- Connection type: Threaded connection (BSP、BSPT、NPT)
- Body material: CF8/CF8M
- Seal material: Metal–to–metal seal

Pressure-temperature Rating



Part List

No.	Part	Material
1	Body	CF8/CF8M
2	DISC	CF8/CF8M
3	Hanger PIN	304/316
4	Gasket	RPTFE
5	Bonnet	CF8/CF8M

Main Dimension

Size	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50
d	12	13	15	20	24.5	31	38	47
L	64	64	64	78	87	100.5	115.5	135.5
H	39.5	41.5	40.5	47	52	58	63	71
Weight(Kg)	0.25	0.24	0.24	0.35	0.56	0.81	1.15	1.67

Order Instruction

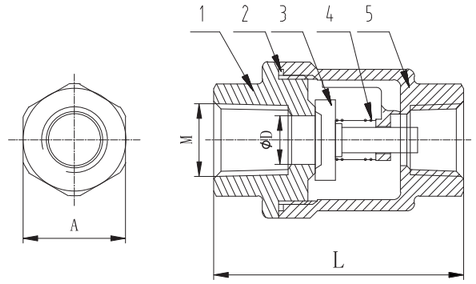
502	XXX	XX	X	(*)

Series No.
Size D08、D10、D15、D20、D25、D32、D40、D50
Connection type G1: Threaded BSP DIN ISO 228–1 / T1: Threaded BSPT DIN 2999–1/ISO7–1 / N1: Threaded NPT ASME B1.20.1
Body material 1: CF8 / 2: CF8M
*: Special customization

ESG®

Check Valve

503 Series
2-PC Spring Vertical
Check Valve



Technical Specification

- Nominal pressure: DN8~DN65 PN63
  DN80~DN100 PN55
- Medium temperature: –20℃—+180℃
- Connection type: Threaded connection
  (BSP、BSPT、NPT)
- Body material: CF8/CF8M
- Seal material: Metal–to–metal seal
- Minimum open pressure: 24–50mbar

Part List

No.	Part	Material	No.	Part	Material
1	Bonnet	CF8/CF8M	4	Spring	304/316
2	Gasket	PTFE	5	Body	CF8/CF8M
3	Disc	CF8/CF8M			

Main Dimension

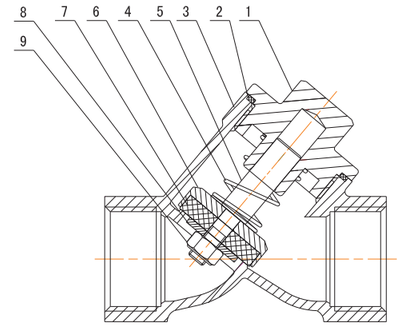
Size	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
M	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ΦD	8	10	15	20	25	30	38	47	61	75	94
A	21	21	25	30.5	37	45.5	52.5	65	81.5	97	124
L	53	53	56	63	74	81	91	97	118	138	158

Order Instruction

503 XXX XX X (*)

- Series No.: 503
- Size: XXX — D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- Connection type: XX
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
- Body material: X
  - 1: CF8
  - 2: CF8M
- *: Special customization

509 Series
Y-Spring Check Valve



Technical Specification

- Nominal pressure: PN16
- Size: DN8–DN50
- Medium temperature: –10℃ — +180℃
- Connection type: Threaded, Welded, Tri–clamp, Flanged
- Minimum open pressure: 30–40mbar

Function Principle

Medium enters valve body through inlet opening, pushes the valve stem and valve core upward, and thereby opens the valve. When the medium starts to flow back from the outlet, the spring force and pressure applied by the medium itself push the valve stem and valve core down, and thereby close the valve.

Part List

No.	Part	Material	No.	Part	Material
1	Bonnet	CF8/CF8M	6	Core	CF8/CF8M
2	Body seal	PTFE	7	Seat	PTFE
3	Body	CF8/CF8M	8	Core gasket	CF8/CF8M
4	Spring	304	9	Self–locking nut	304
5	Stem	304/316			

Order Instruction

509 XXX XX X (*)

- Series No.: 509
- Size: XXX — D08、D10、D15、D20、D25、D32、D40、D50
- Connection type: XX
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
  - H7: Welded DIN11850–2/DIN11866 A
  - H8: Welded DIN11850–3
  - H9: Welded Chamfer
  - H*: Welded customized dimension
  - K7: Tri–clamp ISO2852
  - K*: Tri–clamp customized dimension
  - F2: Flange JB/T82
    (DIN2543/DIN2576/EN1092–1/HG20592)
  - F*: Flange customized dimension
- Body material: X
  - 1: CF8
  - 2: CF8M
- *: Special customization

ESG®

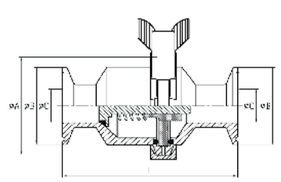
Check Valve

D00 Series
Clamp Type Tri-clamp
Check Valve

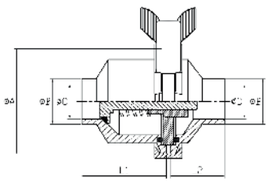
D00 Series
Clamp Type Welded
Check Valve

Technical Specification

- Size: 1/2"–6"/DN15–DN150
- Working pressure: 10bar
- Body material: 304/316/316L
- Sealing material: EPDM
- Connection type: Tri–clamp 3A, welded 3A
- Temperature: –20℃~130℃
- Applications: Widely used in food, beverages, brewery, pharmaceuticals industries etc.



Tri–clamp



Welded

Main Dimension (Tri-clamp Connection)

Size	A	B	C	L
1/2"	50.5	25	9.5	88.9
3/4"	64	25	15.8	88.9
1"	64	50.5	22.1	104.8
1.5"	77.5	50.5	34.8	115.9
2"	91	64	47.5	128.6
2.5"	106	77.5	60.3	136.5
3"	119	91	73.0	155.6
4"	144.5	119	97.6	206.4

Main Dimension (Welded Connection)

Size	A	B	C	L1	L2
1/2"	50.5	12.7	9.4	35	22
3/4"	64	19.05	15.75	35	22
1"	64	25.4	22.1	47.5	30.5
1.5"	77.5	38.1	34.8	50	30
2"	91	50.8	47.5	58	30
2.5"	106	63.5	60.2	58	37
3"	119	76.2	72.9	70	36
4"	144.5	101.6	97.6	68	37
6"	217	152.4	146.8	156	59

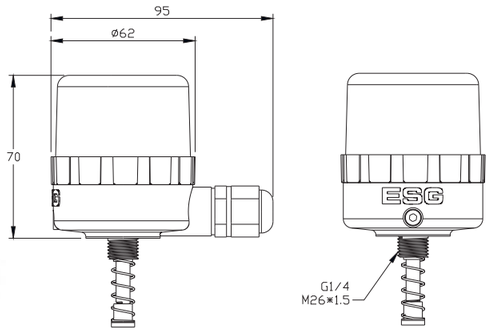
Order Instruction

D00 | XXX | XX | X | X | (*) | X

- Series No.
- Size: D15、D20、D25、D40、D50、D65、D80、100、150
- Connection type: KA: Tri–clamp 3A; HA: Welded 3A
- Body material: 3: 304; 4: 316; J: 316L
- Sealing material: 4: EPDM; *: Customized sealing
- *: Special customization
- Accessory

Control Accessory

0S2 Series Two-position
feedback device
(mechanical type)



Technical Specification

- Stroke range: 5–35mm (Mechanical type)
  /5–30mm (Contactless type)
- Voltage: 12V DC–36V DC (Mechanical type)
  /12V DC~30V DC (Contactless type)
- Current: MAX.300mA (Mechanical type)
  /MAX.100mA (Contactless type)
- Indication Light: Visually feedbacks the valve's open/close status
- Temperature range: –20℃ — +70℃
- Storage temperature: –30℃ — +80℃
- Ambient humidity: ≤90%RH
- Protection level: IP65
- Explosion–proof: II 3G Ex ec IIC T4 Gc
- Enclosure material: PA6–GF30+PC
- Main dimension: Φ62x70
- Installation interface: G1/4, M26x1.5
- Wiring method: Unscrew the transparent cover, thread the cable through the cable opening and connect it to the required terminal.

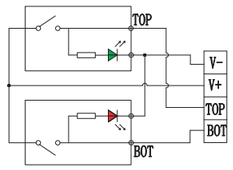
Advantages

1. Compact size to save space.
2. Reliable performance and sensitive reaction.
3. Spring–loaded and threaded connection are easily interchangeable.
4. Quick installation and allows 360° rotation adjustment.
5. Unique slider adjustment, convenient adjustment and precise position.
6. Screw–free terminal block makes wiring more convenient.
7. Waterproof cable lock ensures internal dustproof and moisture proof.
8. A variety of input/output modes canbe realized through simple adjustments.
9. Using magnetic switch to achieve contactless feedback, prolong the service life.

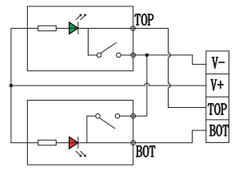
Function Principle

It is used to detect and feedback both open and closed states of the connected valve.

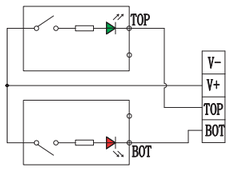
Electrical Schematic



4–wire PNP



4–wire NPN



3–wire PNP

Order Instruction

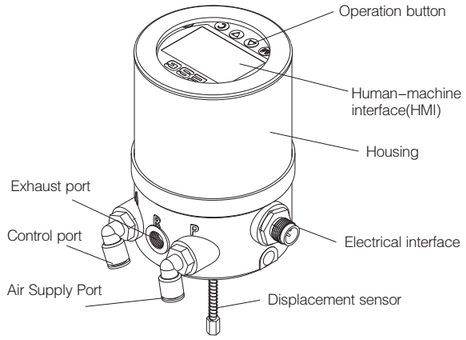
0SX | XXX | XX | XX | (*)

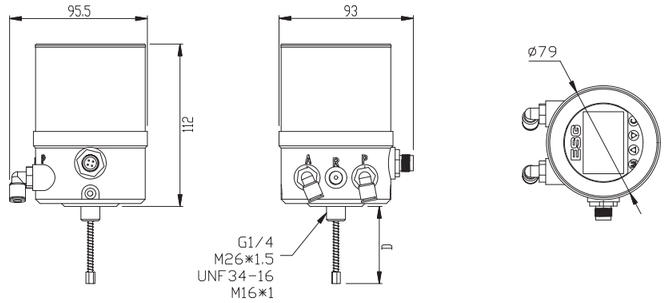
- Position indicator: 0S2: Mechanical type multiple output 4–wire PNP/4–wire NPN/3–wire PNP; 0S3: Contactless type multiple output 4–wire PNP/4–wire NPN/3–wire PNP
- Connection type: G14 : G1/4; M26 : M26
- Max stroke (mm): 35: 35mm; 30: 30mm
- Operating voltage: D3: 12–36V DC; D4: 12–30V DC
- *: Special customization

ESG®

Control Accessory

0P0 Series
Intelligent adjustment positioner (Standard version)





Technical Specification

- Stroke range: 5–13mm, 10–28mm
- Voltage: 24V DC ± 10%
- Power consumption: ＜4W
- Input signal: 0/4–20mA, 0–5/10V
- Feedback signal: Simulated signal (0/4–20mA, 0–5/10V)
  Digital signal (high–level)
- Enclosure Material: PA6–GF15+PC+304
- Dimension: Φ79x112
- Control pressure: 3–7bar (43.5–102psi)
- Temperature range: 0–60℃
- Protection level: IP65
- Explosion–proof: II 3G Ex ec IIC T4 Gc
- Mounting interface: G1/4、M26x1.5 (can be customized)

Advantages

1. Compact size to save space.
2. Reliable performance and sensitive reaction.
3. Large LCD display makes it easy to operate.
4. Standard electrical interface allows convenient wiring.
5. High adjustment precision and strong anti–interference performance.
6. Spring–loaded feedback rod for easy installation.
7. Allows various types of connection interface.

Electrical Terminal

Electrical Terminal	Descriptions	Color	Signal Type
1	Power+	Brown	+24VDC ± 10%
2	Input Signal+	White	0/4–20mA or 0–5/10V
3	Common Ground Wire(GND)	Blue	GND
4	Feedback Signal+ (Optional: Alarm output for insufficient adjustment)	Black	0/4–20mA or 0–5/10V (High electric level)
5	Standby	Grey	/

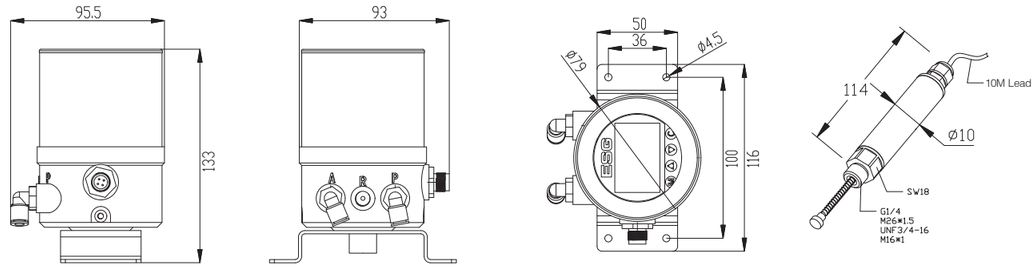
Pneumatic Terminal

Port Label	Description
P	Air supply port
A	Control port
R	Exhaust port

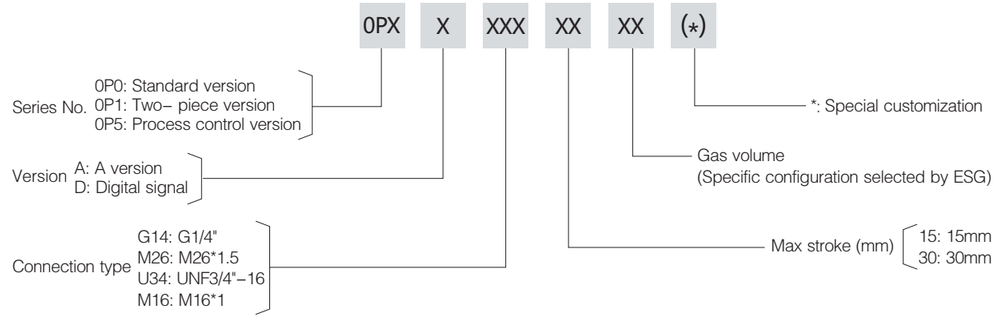
Function Principle

Intelligent positioner is a microprocessor–based valve regulator. The valve's open/close state is controlled by external input signals. It is widely used in industrial fluids control systems in order to enable remote and automated control.

0P1 Series
Intelligent adjustment positioner (Split Version)



Order Instruction

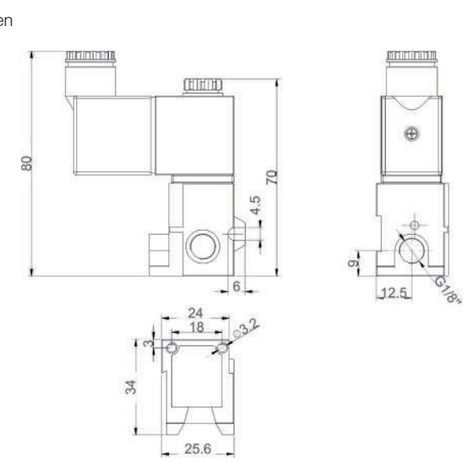


ESG®

Direct - Acting Solenoid Valve

Technical Specification

- Working Medium: Air filtered through a 40–micron filter screen
- Actuation Mode: Direct–acting
- Driving Voltage: AC 220V / DC 24V
- Interface Pipe Diameter: G1/8
- Ambient Temperature: –10 — +60℃
- Gas Temperature: 5 — 60℃
- Outlet Diameter: 1.0mm
- Lubrication: Not required
- Operating Pressure: 0~0.8MPa
- Maximum Pressure Resistance: 1.2MPa
- Power Consumption: AC: 5.5 VA, DC: 4.8W
- Protection Level: IP65
- Wiring Form: Outlet wire type or terminal type
- Body Material: Aluminum alloy
- Maximum Actuation Frequency: 10 times per second
- Insulation: Class F
- Voltage Range: ± 10%
- Minimum Excitation Time: 0.05S
- Flow Orifice Diameter: Φ1mm



Advantages

1. With a brand–new processing technique, the roughness of the inner hole of the solenoid valve body has been improved.
2. It can be installed in multiple combinations, saving space.
3. The core material of the solenoid valve adopts soft magnetic stainless steel imported from Germany, which enhances the magnetic performance and reduces the coil power by 30%.

Inductive Proximity Switch

Technical Specification

- Sensor Type: Inductive
- Shape Type: Cylindrical
- Sensing Surface Material: ABS – engineering plastic
- Installation Method: Non – flush mounting
- Outer Diameter Size: G1/4*57mm
- Sensing object: Magnetic metal iron (sensing area: 13*13*1t)
- Output Type: NPN/PNP
- Output Function: Normally open / normally closed
- External Connection: 3.8mm, 2–meter PVC cable
- Rated Voltage: 24VDC
- Voltage Range: 10–30VDC
- Switching Frequency: 800Hz
- Operating Ambient Temperature: – 25℃ —+70℃
- Maximum Load Current: 200mA
- Sensing Distance Error: <15%(Sr)
- Short – circuit Protection: Available
- Reverse – connection Protection: Available
- Residual Voltage: Below 3.3V (when load current is 100 mA and wire length is 2m)
- Consumption Current: <10mA
- Sensing Distance: 3mm ± 10%

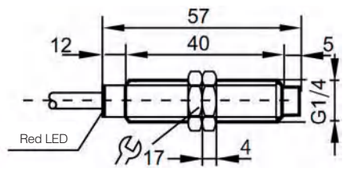
Product Specification

J1D2	DC10–30V.NPN Three–wire NO, G1/4, 2 Two–meter wire
J2D2	DC10–30V.NPN Three–wire NC, G1/4, 2 Two–meter wire
J3D2	DC10–30V.PNP Three–wire NO, G1/4, 2 Two–meter wire
J4D2	DC10–30V.PNP Three–wire NC, G1/4, 2 Two–meter wire

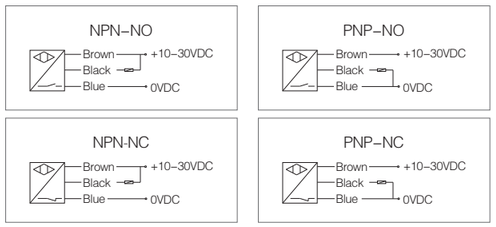
Advantages

1. Used in the fields of automatic control such as sensing ferromagnetic metals, counting, and positioning.
2. Brass – plated nickel, non – flush mounting.
3. Cylindrical shape with G1/4*57, convenient for installation.
4. Output options of NPN/PNP/normally open or normally closed functions are available according to customer requirements.
5. Standard 2 – meter PVC wire outlet.
6. Protection level IP67.

Main Dimension



Output Signal



Seal Materials Chemical Compatibility Guide

Chemicals	NBR	EPDM	FPM	PTFE
Acetic acid–pure	–	O	–	+
Acetone–pure	–	+	–	+
Ammonia (gaseous)–pure	–	+	O	+
Ammonia (liquid)–pure	–	O	O	+
Battery acid (sulphuric acid 20%)	O	+	+	+
Brine (cooling brine)	+	+	+	+
Calcium hydroxide (lime water)–Aqueous	+	+	+	+
Carbon dioxide (dry)–pure	+	O	+	+
Carbon dioxide (humid)	+	O	O	+
Chlorinated lime (calcium hypochlorite)–aqueous	–	+	O	+
Chlorine bleaching lye (sodium hypo–chlorite)–aqueous	–	+	O	+
Chlorine (gaseous)–dry	–	–	O	+
Chlorine (liquid)– pure	–	–	O	+
Chlorine water (chlorine–humid)	–	–	O	+
Citric acid–aqueous	+	+	+	+
Dextrose (glycose)– aqueous	+	+	+	+
Ethyl alcohol (ethanol)–pure	O	+	O	+
Ethyl alcohol + acetic acid	O	+	O	+
Ethyl alcohol–fermented mash	+	+	+	+
Ethylene glycol (glycol)–pure	+	+	+	+
Formaldehyde solution (formalin)–aqueous	O	O	O	+
Glycerine–aqueous	+	+	+	+
Glycerine–pure	O	+	+	+
Inert gases–pure	+	+	+	+
Lactic acid–aqueous	O	O	+	+
Malic acid–aqueous	+	+	+	+
Methanol (methyl alcohol)–pure	–	+	–	+
Nitrogen–pure	+	+	+	+
Oxygen–pure	O	O	+	+
Ozone (humid and dry)	–	O	O	+
Silicone oil	+	+	+	+
Soda lye (sodium hydroxide)–aqueous	O	+	O	+
Sodium carbonate (soda)–aqueous	+	+	+	+
Sodium chloride (table salt)–aqueous	+	+	+	+
Sodium hydrogen carbonate (sodium bi–carbonate)–aqueous	+	+	+	+
Sodium hypochlorite (chlorine bleachinglye)–aqueous	–	O	+	+
Starch solution–aqueous	+	+	+	+
Toluene–pure	–	–	O	+
Water–distilled	+	+	+	+
Water (seawater)	+	+	+	+
Water vapour (130℃)	O	+	+	+
Yeast–aqueous	+	+	+	+

+: suitable O: limited suitability –: unsuitable
Limited suitability parts are rated as wear parts and are not included in the standard warranty conditions.