

INDUSTRIAL VALVE FLUID CON TROL



McSYS[®]
Mechanical and Fluid Control Systems

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McSYS[®]

INDUSTRIAL FLUID CONTROL SPECIAL

MCSY serves as your industrial automation partner, offering a large selection of reliable and innovative products.

Product Catalogue

MCSYS offers valve-based fluid control solutions to a wide range of industries including the following key industries:

- EPS molding
- Textile dyeing
- Food & beverage
- Industrial laundry
- Environmental
- Air Separation
- Filling operation
- Pneumatic conveying
- Pharmaceutical
- Bio-fermentation
- Sterilization
- Chemical processing
- Rubber processing
- Automobile
- Ultrasonic cleansing



Y-type Angle Seat Valve	Proportional Control Angle Seat Valve	Multi-channel Valve	Filling Valve
• 100 Series Pneumatic Angle Seat Valve • 101 Series Economy Type Angle Seat Valve • 107 Series Manual Angle Seat Valve • 111 Series Balance Type Pneumatic Angle Seat Valve	• 104 Series Two-piece Pneumatic Proportional Control Angle Seat Valve • 105 Series Pneumatic Proportional Control Angle Seat Valve • 106 Series Electrical Proportional Control Angle Seat Valve	• 103 Series Pneumatic Three-way Angle Seat Valve • 109 Series Pneumatic Modular Valve • 110 Series Pneumatic Manifold Valve	• 1AX Series Filling Valve • 1A1 Series Sauce Filling Valve with Internal Sealing



Shuttle Valve	Butterfly Valve	Ball Valve	Check Valve	Strainer
• 200 Series Pneumatic Shuttle Valve • 201 Series Pneumatic Shuttle Valve • 202 Series Two-way Solenoid Coaxial Valve • 203 Series Three-way Solenoid Coaxial Valve • 204 Series Flanged Shuttle Valve	• 300 Series Pneumatic Butterfly Valve	• 4XX Series Manual Ball Valve • 451 Series Pneumatic Ball Valve	• 501 Series Y-Spring Check Valve • 502 Series Swing Check Valve • 503 Series Z-PC Spring Vertical Check Valve • 504 Series 3-PC Spring Vertical Check Valve • 508 Series Wafer Type Disc Check Valve • 509 Series Y-Spring Check Valve	• 601 Series Single Cap Strainer • 602 Series Double Cap Strainer • 603 Series Flanged Strainer • 604 Series Filter Discharge Valve
58-67	68-69	70-83	84-89	90-93

Pressure Reducing Valve	Steam Trap	Other Valves	Diaphragm Valve	Control Accessory
• 700 Series Pressure Reducing Valve • 701 Series Overflow Valve	• 800 Series Thermodynamic Steam Trap • 801 Series Thermodynamic Steam Trap • 802 Series Ball Float Steam Trap	• 900 Series Balancing Valve • 901 Series Float Type Air Eliminator • 902 Series Vacuum valve • 908 Series Drain Valve • 909 Series Exhaust Valve	• A00 Series Pneumatic Diaphragm Valve • A01 Series Manual Diaphragm Valve • A02 Series Proportional Control Angle Seat Valve	• OS0 Series Position Indicator • OP0 Series Intelligent Positioner • OP1 Series Two-piece Intelligent Positioner
94-95	96-100	101-105	106-115	116-118

100 Series
Threaded Angle
Seat Valve



100 Series
Welded Angle
Seat Valve



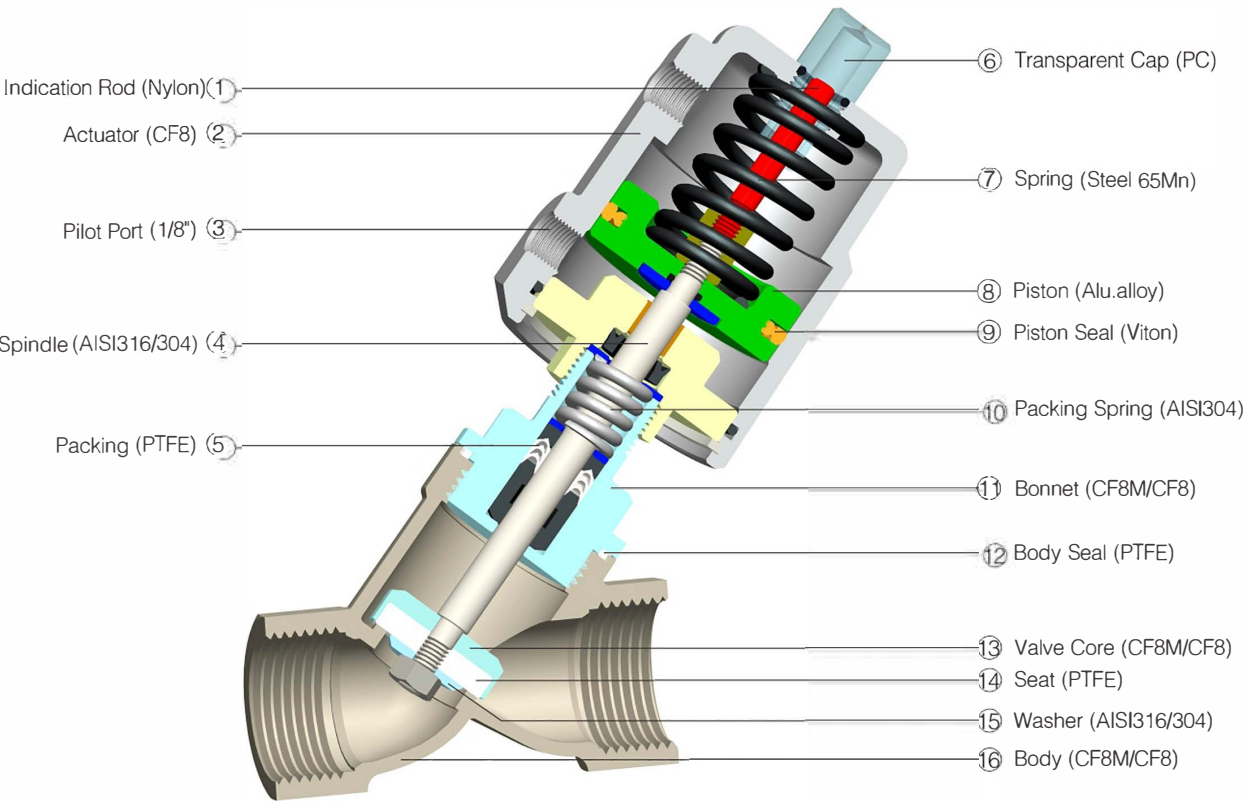
100 Series
Tri-clamp Angle
Seat Valve



100 Series Flanged
Angle Seat Valve
with Round Bonnet



100 Series Flanged
Angle Seat Valve
with Square Bonnet



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.

Advantages

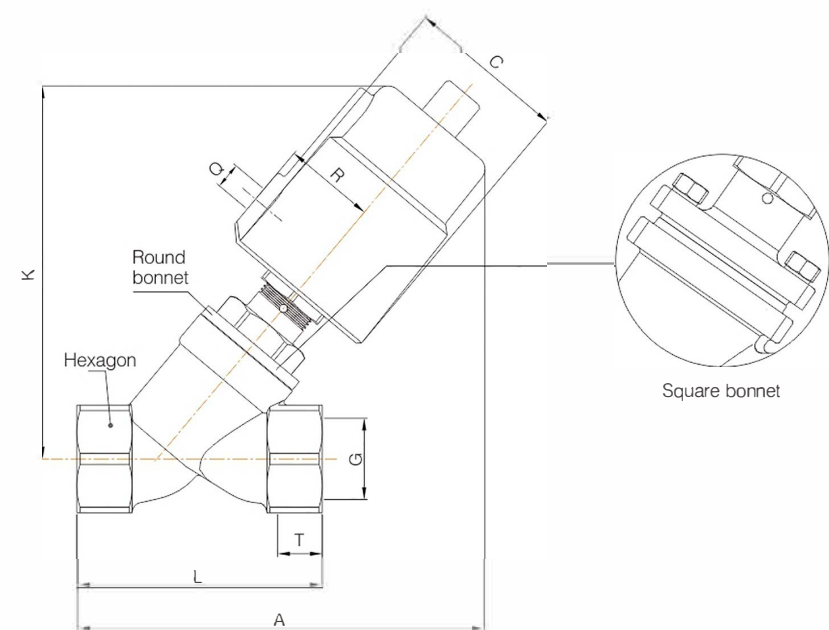
- 1. Large flux, low resistance, no water-hammer
- 2. Y-type shape with enlarged flowing section raises flux by 30% and smoothen the flow
- 3. Superb service life
- 4. The stem adjusts and lubricates itself automatically, minimizing needs for maintenance
- 5. The cylinder can rotate 360° unconstrained, and uses stainless steel material, which enables superior performance

Applications

- Brewery
- Textile dyeing
- Air separation
- Pharmaceutical
- Filling operation
- Chemical
- Sterilization
- EPS molding
- Environmental
- Other

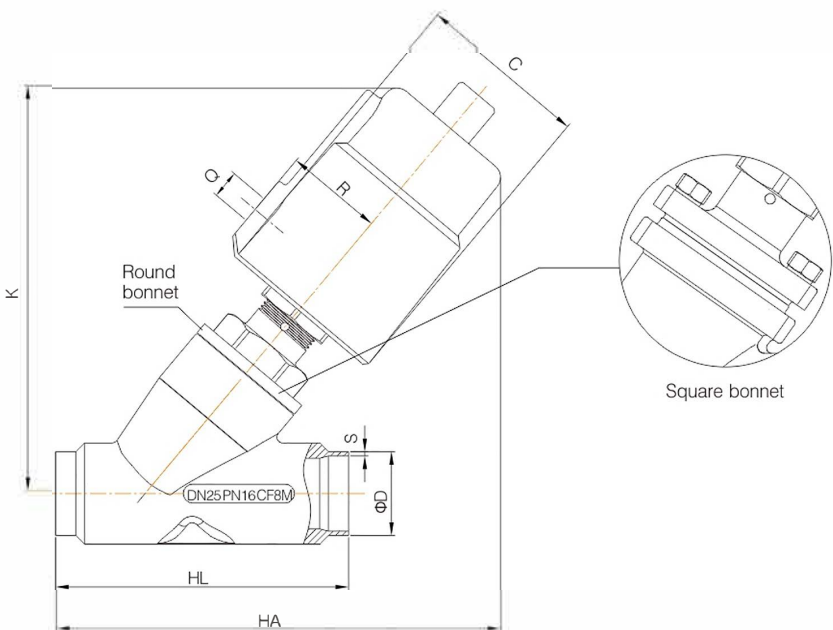
Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Neutral gas, Air
- Body material: CF8M/CF8
- Seal material: PTFE
- Actuator material: CF8 (40mm–90mm Actuator), AL (90mm–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 600mm²/s
- Fluid temperature: –10°C — +180°C (PTFE normal temperature)
+25°C — +220°C (PTFE high temperature)
- Ambient temperature: –10°C — +80°C
- Control type: Normally closed, Normally open, Double acting
- Connection type: Threaded (BSP, BSPT, NPT), Welded, Flanged, Tri-clamp
- Leakage class: EN 12266 Class A



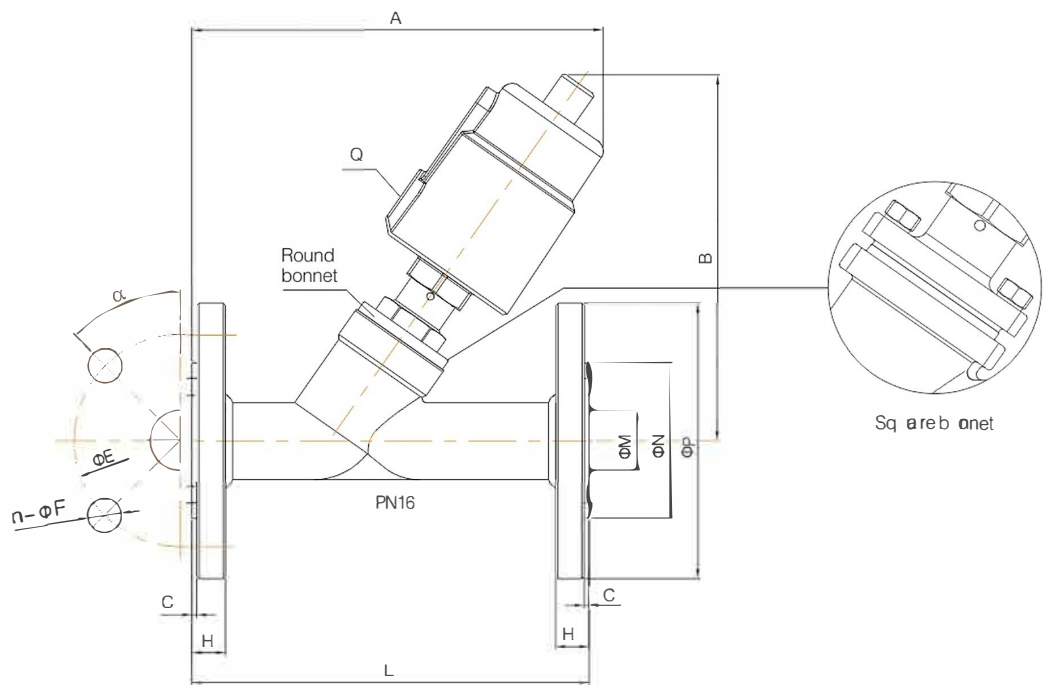
Main Dimension (Threaded Connection)

Size	Actuator (mm)	Q	C	R	K	G	T	A	L	Hexagon
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
	50	1/8"	60	33	136			150		
DN25	63	1/8"	75	41	162	1"	17	172	90	40
	63	1/8"	75	41	174			190		
DN32	90	1/8"	106	55	223	1 1/4"	21	235	116	50
	63	1/8"	75	41	175			190		
DN40	90	1/8"	106	55	223	1 1/2"	21	235	116	56
	63	1/8"	75	41	183			205		
DN50	90	1/8"	106	55	232	2"	22	250	138	69
	125AL	1/4"	170	85	300			305		
DN65	90	1/8"	106	55	265	2 1/2"	26	285	178	85
	125AL	1/4"	170	85	315			327		
DN65 Square bonnet	90	1/8"	106	55	280	3"	27	275	210	100
	125AL	1/4"	170	85	330			320		
DN80 Square bonnet	125AL	1/4"	170	85	327	3"	27	380	210	100
	125AL	1/4"	170	85	355			340		



Main Dimension (Welded Connection)

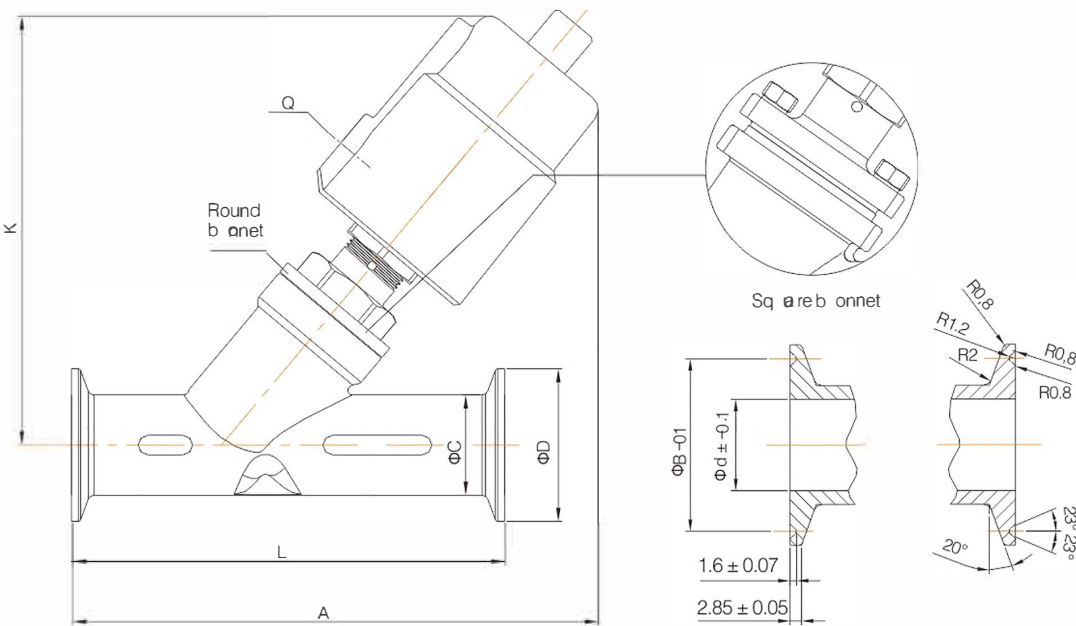
Size	Actuator (mm)	Q	C	R	K	HA	HL	DIN11850-2		DIN11850-3	
								Φ D	S	Φ D	S
DN15	40	1/8"	50.5	27	112	118	70	19	1.5	20	2
	50	1/8"	60	33	125	128					
DN20	50	1/8"	60	33	132	135	82	23	1.5	24	2
DN25	50	1/8"	60	33	136	150	100	29	1.5	30	2
	63	1/8"	75	41	162	175					
DN32	63	1/8"	75	41	174	186	125	35	1.5	36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



Flange specification: DIN2543; customization available, ISO/ANSI/DIN/JIS is also available

Main Dimension (Flange Connection)

Size	Actuator (mm)	Q	A	B	L	C	H	ΦE	n-ΦF	ΦM	ΦN	ΦP	α
DN 15	40	1/8"	135	125	130	2	14	65	4-14	16	45	95	45°
	50		145	140									
DN 20	50	1/8"	165	140	150	2	14	75	4-14	19	56	105	45°
DN 25	50	1/8"	170	145	160	2	14	85	4-14	26	65	115	45°
	63		190	175									
DN 32	63	1/8"	190	188	180	2	16	100	4-18	31	78	140	45°
	90		230	235									
DN 40	63	1/8"	206	190	200	3	16	110	4-18	38	84	150	45°
	90		250	240									
DN 50	63	1/8"	235	195	230	3	16	125	4-18	49	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	66	120	185	45°
	125AL	1/4"	375	330									
DN65 Square bonnet	125AL	1/4"	380	355	310	3	20	160	8-18	78	135	200	22.5°
DN 100	125AL	1/4"	420	395	350	3	20	180	8-18	96	155	215	22.5°



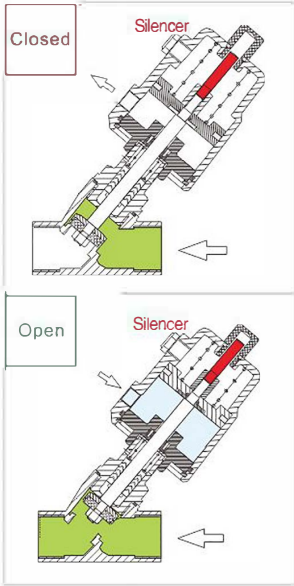
Clamp Specification: ISO 2852; customization available.

Main Dimension (Tri-clamp Connection)

Size	Actuator (mm)	Q	A	K	L	ΦC	ΦB	Φd	ΦD
DN 15	40	1/8"	130	115	80	19	27.5	15	34
	50	1/8"	140	126					
DN 20	50	1/8"	158	148	130	25	43.5	19	50.5
DN 25	50	1/8"	165	140	130	32	43.5	27	50.5
	63	1/8"	188	166					
DN 32	63	1/8"	200	174	146	37	43.5	31	50.5
	90	1/8"	245	223					
DN 40	63	1/8"	210	175	160	40	56.5	33	64
	90	1/8"	255	223					
DN 50	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	66	91
	125AL	1/4"	360	330					
DN65 Square bonnet	125AL	1/4"	360	352	290	89	97	78	106

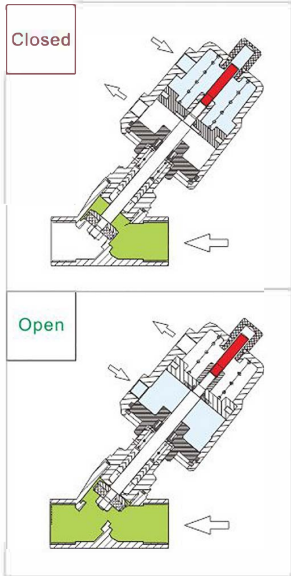
Single Acting, Normally Closed (NC)–Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m³/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
				50	0–1.6	0.3–0.45
DN25	G1"	24	15.8	63	0–1.6	0.3–0.35
				63	0–1.6	0.3–0.55
DN32	G1 1/4"	31	26.0	90	0–1.6	0.2–0.35
				63	0–1.6	0.3–0.65
DN40	G1 1/2"	35	32.0	90	0–1.6	0.3–0.4
				63	0–0.9	0.3–0.7
DN50	G2"	45	52.0	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



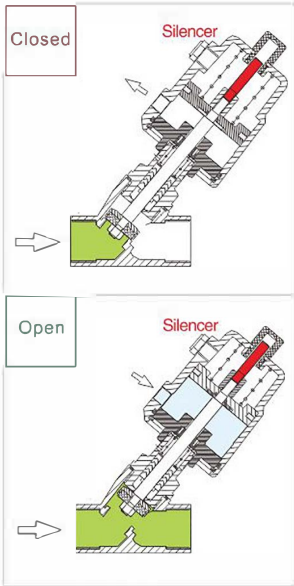
Double Acting, Normally Closed (NC)–Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m³/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
				50	0–1.6	0.3–0.45
DN25	G1"	24	15.8	63	0–1.6	0.3–0.35
				63	0–1.6	0.3–0.55
DN32	G1 1/4"	31	26.0	90	0–1.6	0.2–0.35
				63	0–1.6	0.3–0.65
DN40	G1 1/2"	35	32.0	90	0–1.6	0.2–0.4
				63	0–0.9	0.3–0.7
DN50	G2"	45	52.0	90	0–1.6	0.2–0.45
				125	0–1.6	0.2–0.3
DN65	G2 1/2"	61	83.2	90	0–1.0	0.2–0.6
				125	0–1.6	0.2–0.4
DN80	G3"	80	119	125	0–1.2	0.2–0.7



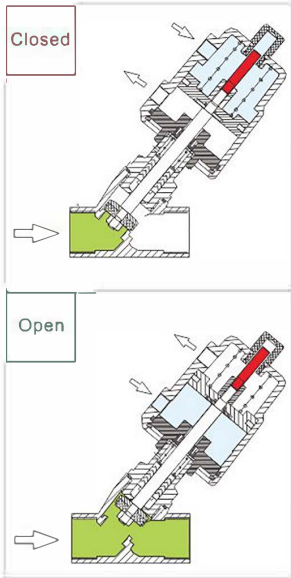
Single Acting, Normally Closed (NC)–Enter Below Seat (Minimize water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m³/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40–A	0–1.3	≥0.4
				50–A	0–1.4	≥0.45
DN10	G3/8"	13	3.9	40–A	0–1.3	≥0.4
				50–A	0–1.4	≥0.45
DN15	G1/2"	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
				50–A	0–0.8	≥0.45
DN25	G1"	24	15.8	63–A	0–1.3	≥0.5
				63–A	0–0.6	≥0.5
DN32	G1 1/4"	31	26.0	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
DN50	G2"	45	52.0	90–B	0–1.1	≥0.45
				63–A	0–0.2	≥0.5
DN65	G2 1/2"	61	83.2	90–A	0–1.0	≥0.6
				90–B	0–0.7	≥0.45
DN80	G3"	80	119	125–A	0–1.6	≥0.55
				125–B	0–1.1	≥0.45
DN100	G4"	90	132	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
				125–A	0–0.5	≥0.55
				125–B	0–0.3	≥0.45
				125–C	0–0.2	≥0.35
				125–A	0–0.25	≥0.55



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

Size	Thread end	Orifice (mm)	Flow value Kv(m³/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	0–1.6	≥0.3
				50	0–1.3	0.3–0.6
DN25	G1"	24	15.8	63	0–1.6	0.3–0.4
				63	0–1.6	0.3–0.6
DN32	G1 1/4"	31	26.0	90	0–1.6	0.3–0.4
				63	0–1.6	0.3–0.7
DN40	G1 1/2"	35	32.0	90	0–1.6	0.3–0.5
				63	0–0.8	0.3–0.75
DN50	G2"	45	52.0	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	0.3–0.65
				125	0–1.2	0.4–0.5



Angle Seat Valve
with Proximity Switch



Angle Seat Valve
with Solenoid Valve



Angle Seat Valve
with Manual Override



Angle Seat Valve
with Position Indicator



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°C — +70°C
- Enclosure material: brass nickel plating
- Probe material: ABS
- Leakage class: DIN EN 12266 Class A

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°C — +50°C
- Leakage class: DIN EN 12266 Class A

Manual Override

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

Technical Specification

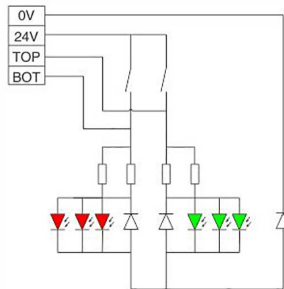
- Handwheel material: die-casted Aluminum
- Control type: Normally closed
- Leakage class: DIN EN 12266 Class A

Position Indicator

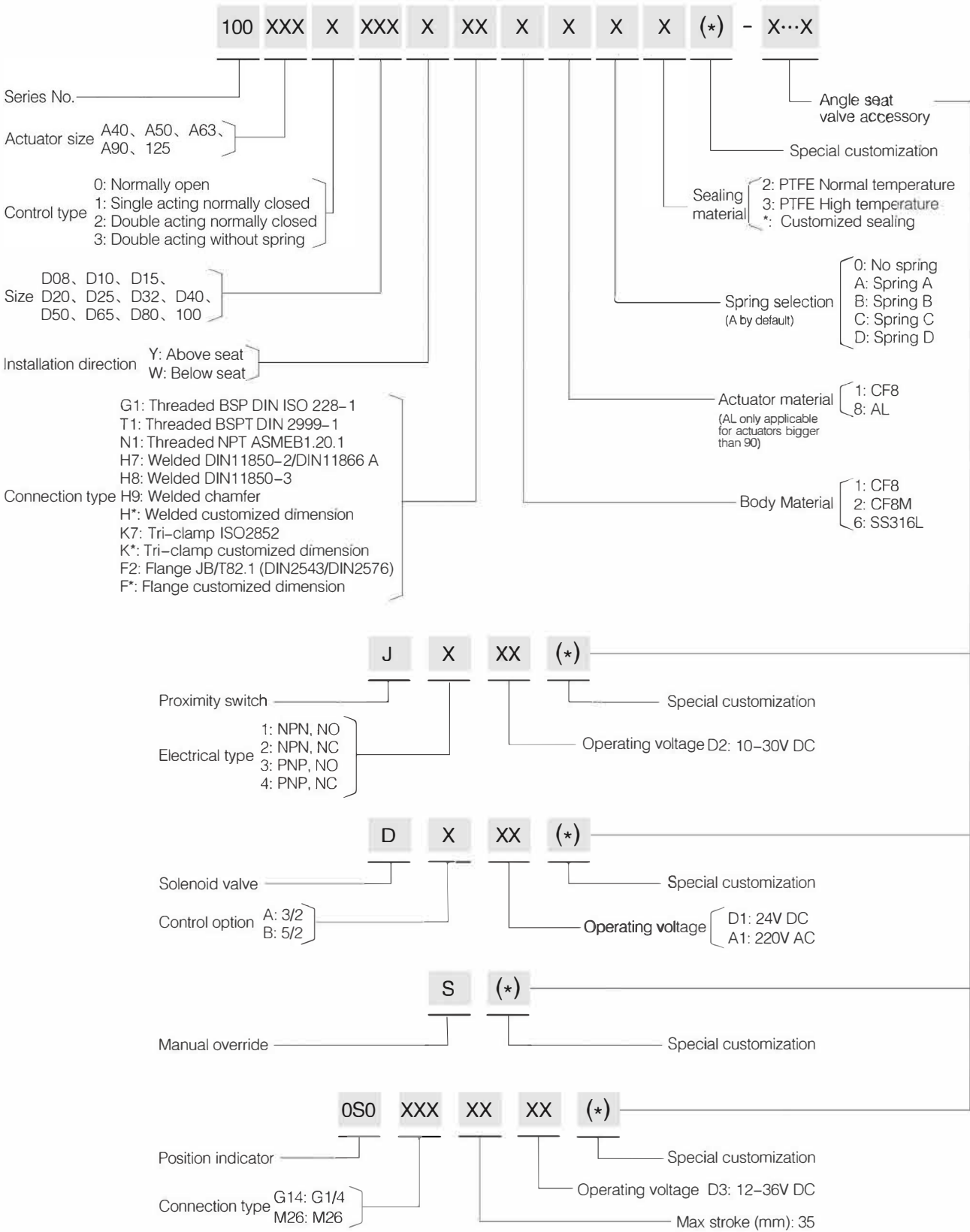
Position Indicator can be mounted on angle seat valves of all sizes to monitor and feedback both open and close states of the valve.

Technical Specification

- Operating pressure: 12V DC — 36V DC
- Current: 25mA/24V DC
- Indicator: visually signal valve open/close state
- Temperature range: –10°C — +80°C
- Protection level: IP65
- Shell material: PA6+PC
- Wiring instruction: open clear lid, thread the cord through Opening and connect to desired ports.
- Leakage class: DIN EN 12266 Class A



Order Instruction



101 Series
Economy Type 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
- Actuator material: AL
- Body material: CF8
- Seal material: PTFE
- Applicable fluid: Water, oil, gas, pulp and neutral liquid
- Fluid temperature: -10°C — +80°C
- Ambient temperature: -10°C — +80°C
- Control type: Double acting normally closed, Double acting without spring
- Connection type: Threaded connection, Welded connection
- Leakage class: DIN EN 12266 Class A

Advantages

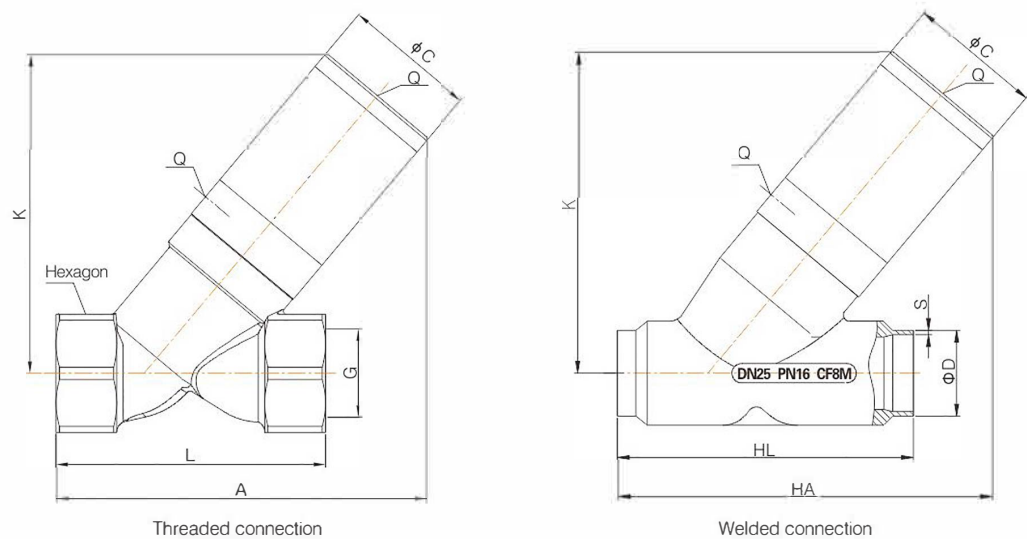
Actuator has lightweight design, fine aesthetics, tight structure and excellent performance

Double Acting, Normally Closed (NC) Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m³/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	1.8	32	0-1.0	0.3-0.6
DN10	G3/8"	13	3.2	32	0-1.0	0.3-0.6
DN15	G1/2"	13	3.5	32	0-1.0	0.3-0.6
DN20	G3/4"	18	6.2	32	0-1.0	0.3-0.6
DN25	G1"	24	9.9	40	0-1.0	0.3-0.6
DN32	G1 1/4"	31	17.9	50	0-1.0	0.3-0.6
DN40	G1 1/2"	35	22.7	50	0-1.0	0.3-0.7
DN50	G2"	45	47.2	63	0-1.0	0.3-0.7

Double Acting, Normally Closed (NC) Enter Below Seat (No Water-hammer)

Size	Thread end	Orifice (mm)	Flow value Kv(m³/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	1.8	32	0-1.0	0.3-0.7
DN10	G3/8"	13	3.2	32	0-1.0	0.3-0.7
DN15	G1/2"	13	3.5	32	0-1.0	0.3-0.7
DN20	G3/4"	18	6.2	32	0-1.0	0.3-0.7
DN25	G1"	24	9.9	40	0-1.0	0.3-0.7
DN32	G1 1/4"	31	17.9	50	0-0.8	0.3-0.7
DN40	G1 1/2"	35	22.7	50	0-0.6	0.3-0.7
DN50	G2"	45	47.2	63	0-0.3	0.3-0.7



107 Series
Threaded Manual
Angle Seat Valve



107 Series
Welded Manual
Angle Seat Valve

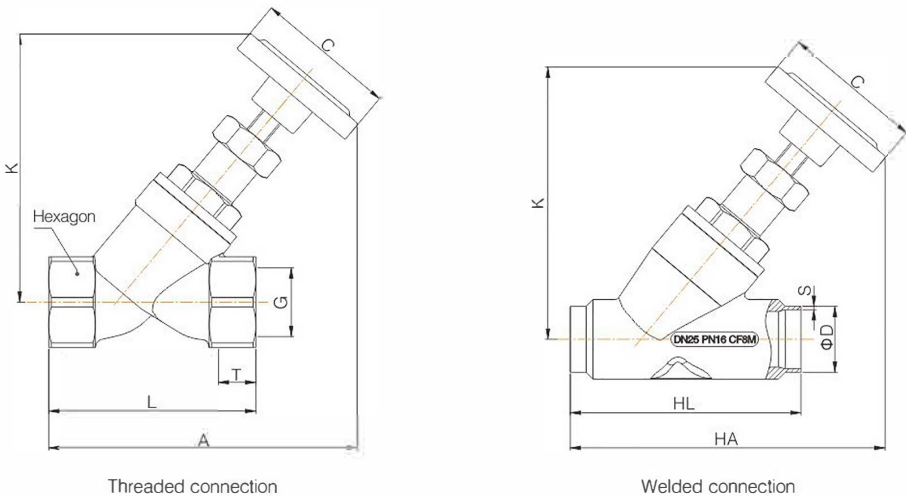
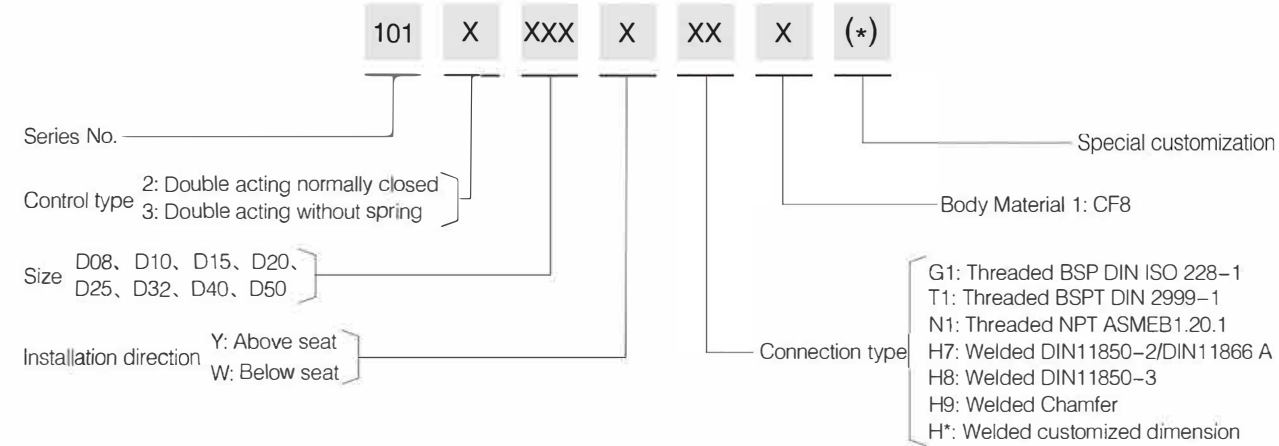


Main Dimension

Size	Actuator	Q	ΦC	K	Threaded connection				Welded connection					
					G	A	L	Hexagon	HA	HL	DIN11850-2		DIN11850-3	
											ΦD	S	ΦD	S
DN8	32	1/8"	38	99	1/4	112	68	27	-	-	-	-	-	-
DN10	32	1/8"	38	99	3/8"	112	68	27	-	-	-	-	-	-
DN15	32	1/8"	38	99	1/2"	112	68	27	109	70	19	1.5	20	2
DN20	32	1/8"	38	105	3/4"	118	75	32	117	82	23	1.5	24	2
DN25	40	1/8"	45	110	1"	125	90	40	133	100	29	1.5	30	2
DN32	50	1/8"	55	135	1 1/4"	156	116	50	158	125	35	1.5	36	2
DN40	50	1/8"	55	138	1 1/2"	158	116	56	161	130	41	1.5	42	2
DN50	63	1/8"	69	160	2"	190	138	69	191	155	53	1.5	54	2

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

Order Instruction



Main Dimension

Size	C	K	Threaded connection					Welded connection					
			G	T	A	L	Hexagon	HA	HL	DIN11850-2		DIN11850-3	
										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	19	1.5	20	2
DN20	62	120	3/4"	16	133	75	32	128	82	23	1.5	24	2
DN25	62	125	1"	17	142	90	40	144	100	29	1.5	30	2
DN32	62	146	1 1/4"	21	166	116	50	165	125	35	1.5	36	2
DN40	62	148	1 1/2"	21	168	116	56	168	130	41	1.5	42	2
DN50	62	155	2"	22	182	138	69	182	155	53	1.5	54	2
DN65	80	202	2 1/2"	26	233	178	85	-	-	-	-	-	-
DN65 Square bonnet	80	211	2 1/2"	26	226	178	85	270	270	70	2	-	-

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

107 Series
Tri-clamp Manual
Angle Seat Valve

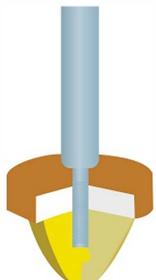


107 Series
Flanged Manual
Angle Seat Valve



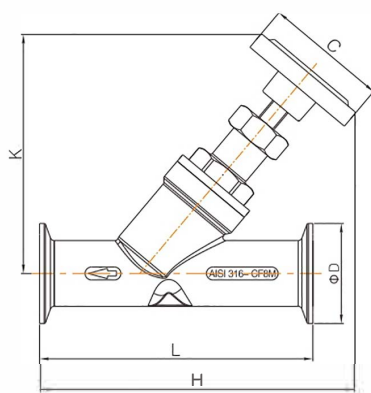
Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Body material: CF8M/CF8
- 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°C — +180°C (PTFE Normal temperature)
+25°C — +220°C (PTFE High temperature)
- Ambient temperature: –10°C — +80°C
- Maximum fluid viscosity: 600m²/s
- Connection type: Threaded, Welded, Tri-clamp, flange
- Leakage class: Class A

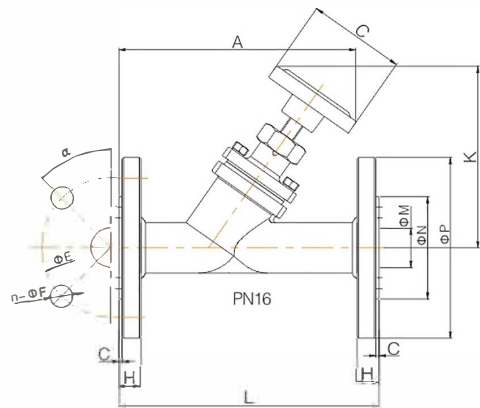


Adjustable seat

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

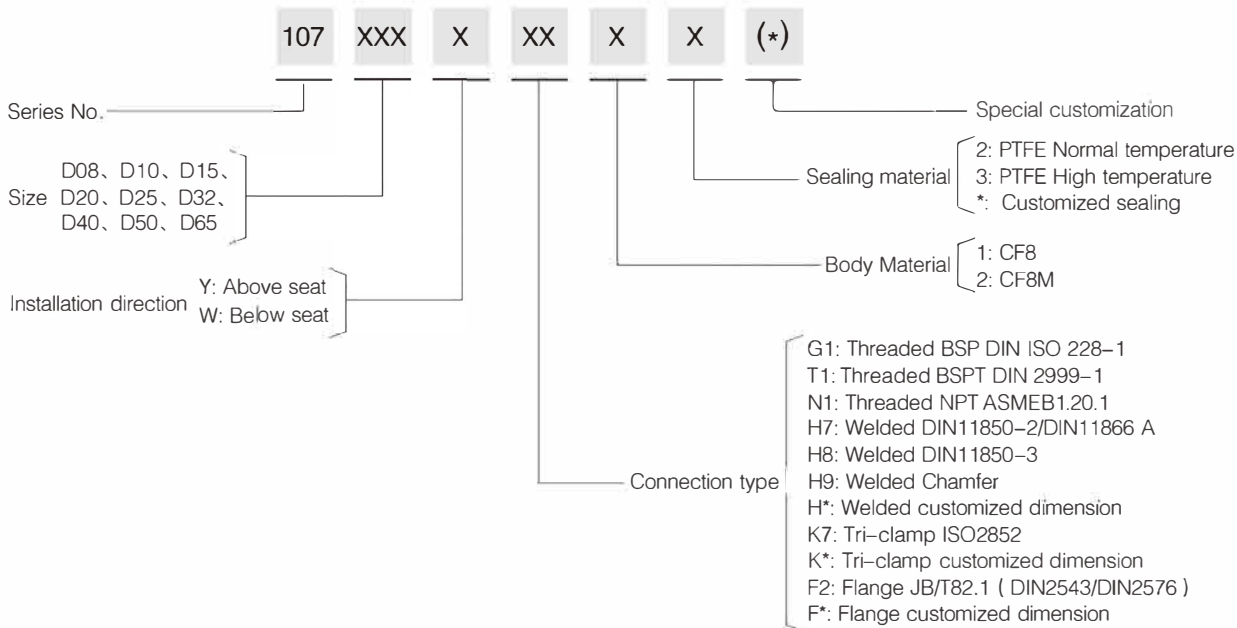


Tri-clamp connection



Flange connection

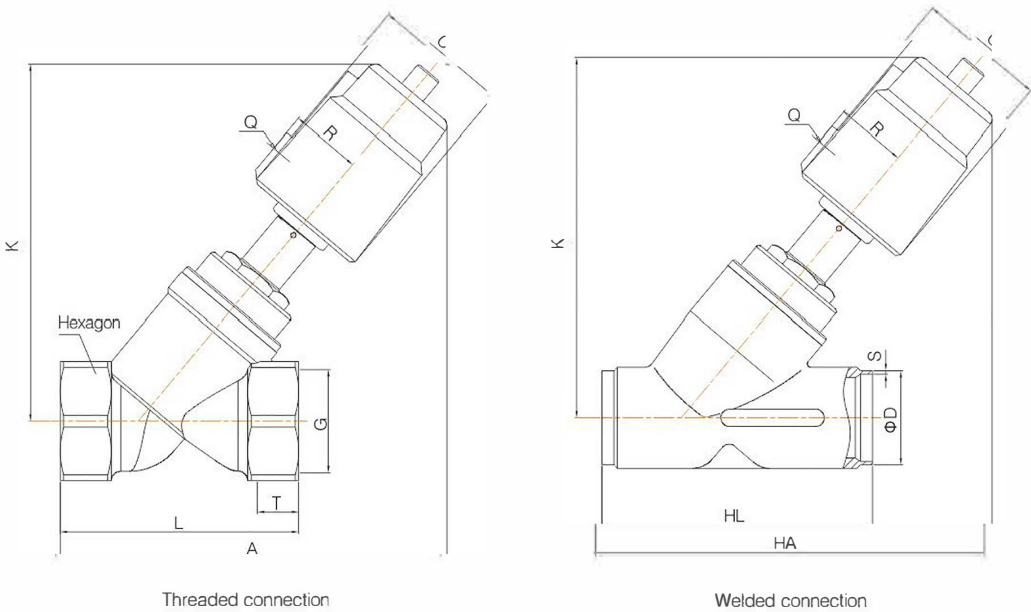
Order Instruction



Main Dimension

Size	C	Tri-clamp connection					Flange connection									
		K	ΦD	L	H	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	178	266	201	272	290	3	18	145	4–18	71	120	185	45°

111 Series
Balance Type Pneumatic
Angle Seat Valve



Function Principle

This product uses a smaller cylinder, but can achieve higher sealing pressure. The principle is that the medium enters the sealing cavity between the valve seat and the connection through the small holes on valve seat, and applies secondary pressure on the valve seat, thereby increasing the valve sealing pressure. Since sealing force of the valve mainly comes from force of the medium, this is an ideal valve for controlling high pressure flow with low control pressure.

Advantages

- 1. Fitting big valve bodies with small actuators saves control air input.
- 2. Less control pressure required to operate the valve.
- 3. Ingenious use of the medium pressure to achieve self-sealing allows the medium pressure to be as high as valve nominal pressure.
- 4. Compact structure takes up less space and lowers material costs.

Technical Specification

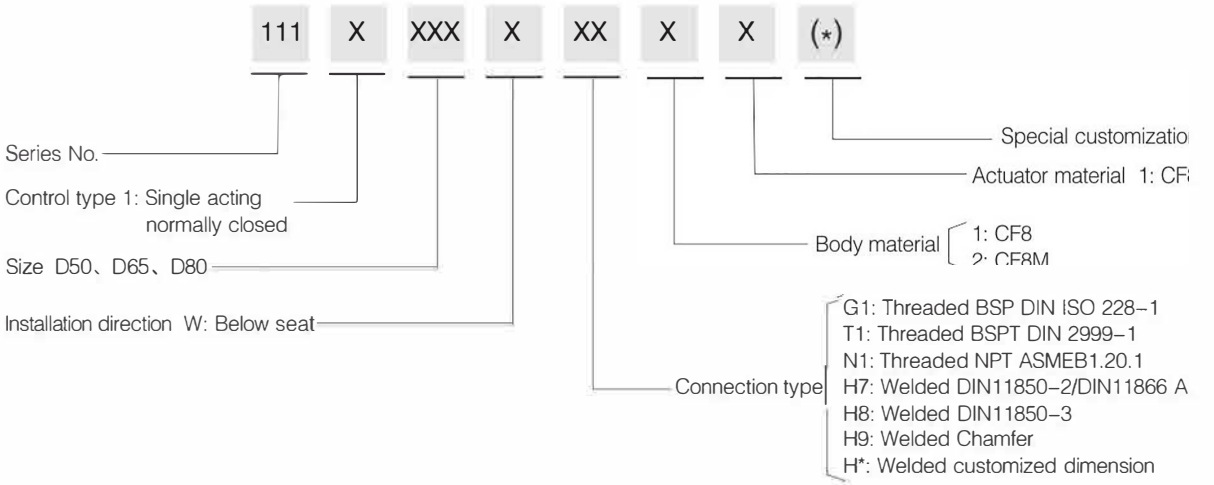
- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 4bar (58psi)
- Body material: CF8/CF8M
- Seal material: FPM, PTFE
- Medium temperature: –10℃ — +180 ℃
(PTFE Normal temperature)
- Ambient temperature: –10℃ — +80℃
- Control type: Normally closed
- Control medium: Filtered compressed air or neutral gas
- Applicable medium: Non-viscous medium such as water, Alcohol, Oil, Gas or liquid, Organic solvent
- Leakage class: DIN EN 12266 Class A

Main Dimension

Size	Actuator (mm)	Q	C	R	K	Threaded connection					Welded connection					
						G	T	A	L	Hexagon	HA	HL	DIN11850-2		DIN11850-3	
													Φ D	S	Φ D	S
DN50	63	1/8"	75	41	210	2"	22	228	138	69	230	155	53	1.5	54	2
DN65 Square bonnet	63	1/8"	75	41	235	2 1/2"	26	235	178	85	280	270	70	2	—	—
DN80 Square bonnet	90	1/8"	106	55	340	3"	27	329	210	100	346	284	85	2	—	—

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

Order Instruction



104 Series
Two-piece Pneumatic
Proportional Control
Angle Seat Valve



105 Series
Pneumatic Proportional
Control Angle Seat Valve

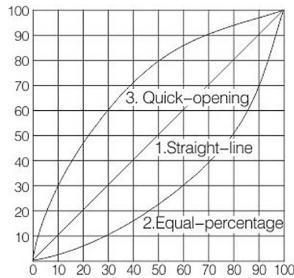


Adjustable seat

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

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

Technical Specification

- Connection type: Threaded, Welded, Tri-clamp, Flange
- Medium temperature: -10°C — +180°C (PTFE Normal temperature)
+25°C — +220°C (PTFE High temperature)
- Medium temperature: 0 — +60°C
- Operating pressure: Refer to Angle Seat Valve Single-acting NC (enter below seat) data sheet
- Control pressure: 4—7bar (58—102psi)
- Control power: 24VDC ± 10%
- Valve set signal: 0/4—20mA or 0—5/10V
- Power consumption: <5W
- Input Signal Impedance: 240Ω at 0/4—20mA,
21KΩ under 0—5/10V
- Simulated Output signal: Max load is 560Ω at 0/4—20mA,
Max current is 10mA under 0—5/10V
- Protection: IP65
- Leakage class: DIN EN 12266 Class A

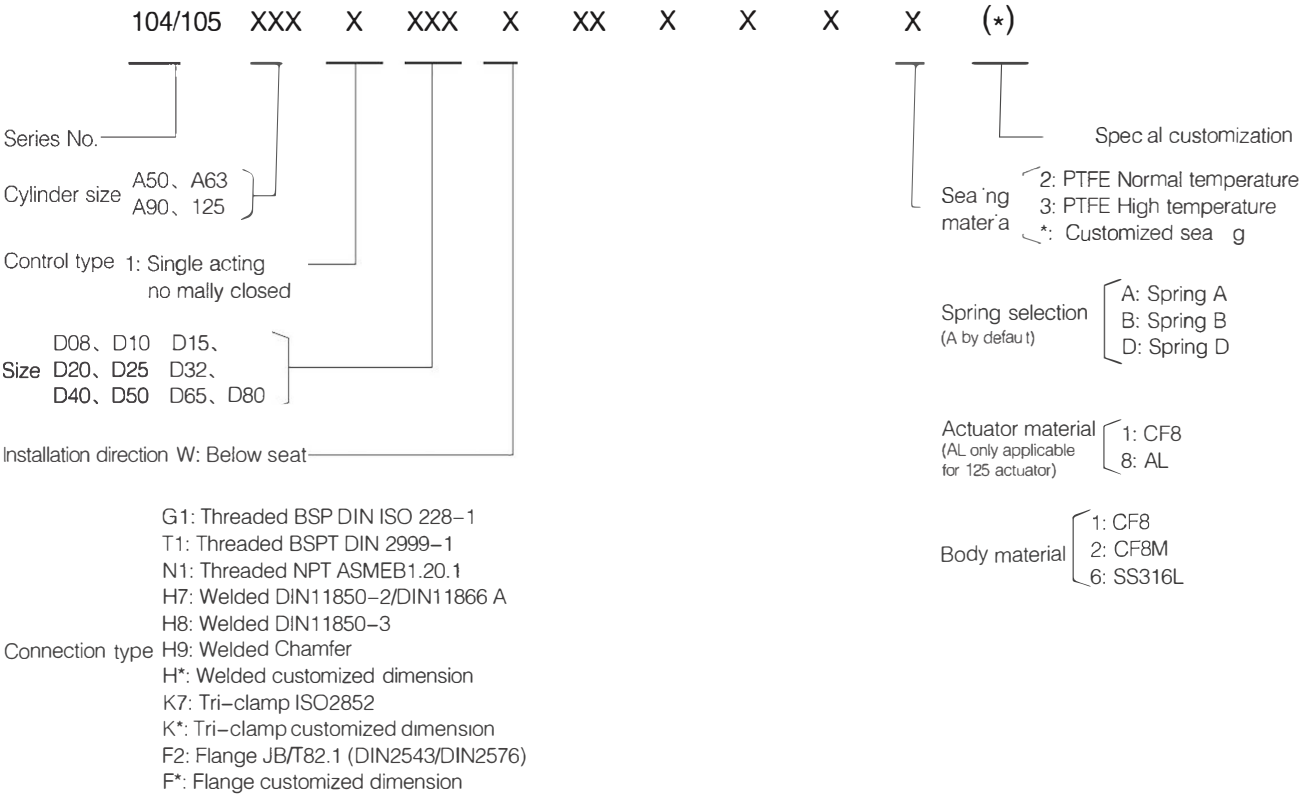
Function Principle

Positioner receives 4—20mA electrical signals from control system and converts them into air signals to control the valve and make precise flow adjustment using the adjustable seat

Attention

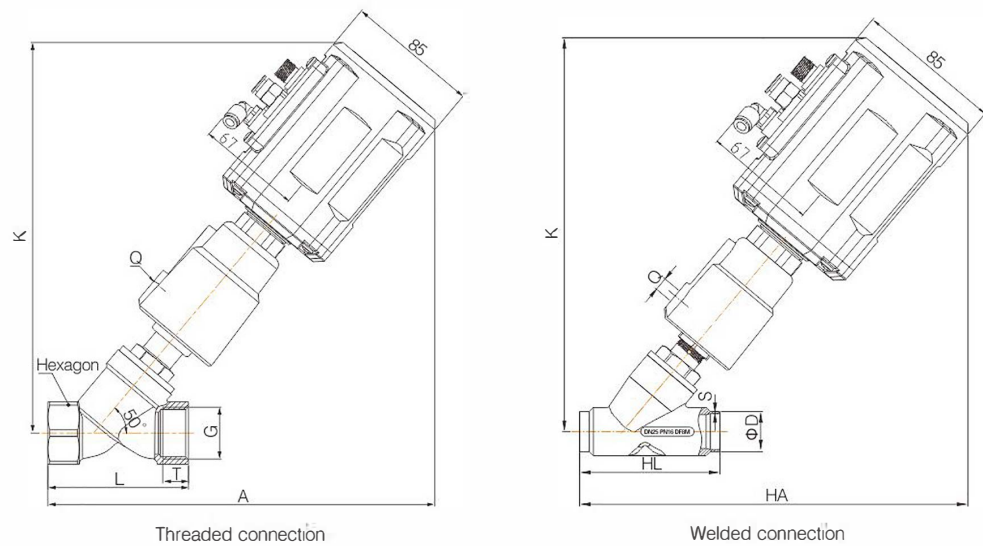
- If the valve body needs to be taken off during installation, please recalibrate the zero-point. Keep the positioner upright at all time
- To ensure the exact adjustment, please install the valve in below seat direction
- Please ensure water proof of the positioner

Order Instruction



Single Acting, Normally Closed (NC) Pressure Data Sheet

Size	Orifice (mm)	Kv (m³/h)	Actuator (mm)	Max. ΔP (MPa)	Max Control Pressure (MPa)
DN8	13	2.2	50A	1.6	0.45
			63A	1.6	0.50
DN10	13	3.2	50A	1.6	0.45
			63A	1.6	0.50
DN15	13	3.2	50A	1.6	0.45
			63A	1.6	0.50
DN20	18	6.6	50A	1.4	0.45
			63A	1.6	0.50
DN25	24	11.4	63A	1.3	0.50
			63A	0.6	0.50
DN32	31	18.3	63A	0.5	0.50
			90B	1.6	0.40
DN40	35	21.3	63A	0.5	0.50
			90A	1.6	0.60
			90B	1.1	0.40
			90A	1.0	0.60
			90B	0.7	0.40
DN50	45	40.4	125A	1.6	0.55
			125B	1.3	0.45
			125D	1.1	0.40
			90A	0.5	0.60
DN65	61	46.8	125A	0.9	0.55
			125B	0.6	0.45
DN80	80	84.0	125A	0.5	0.55



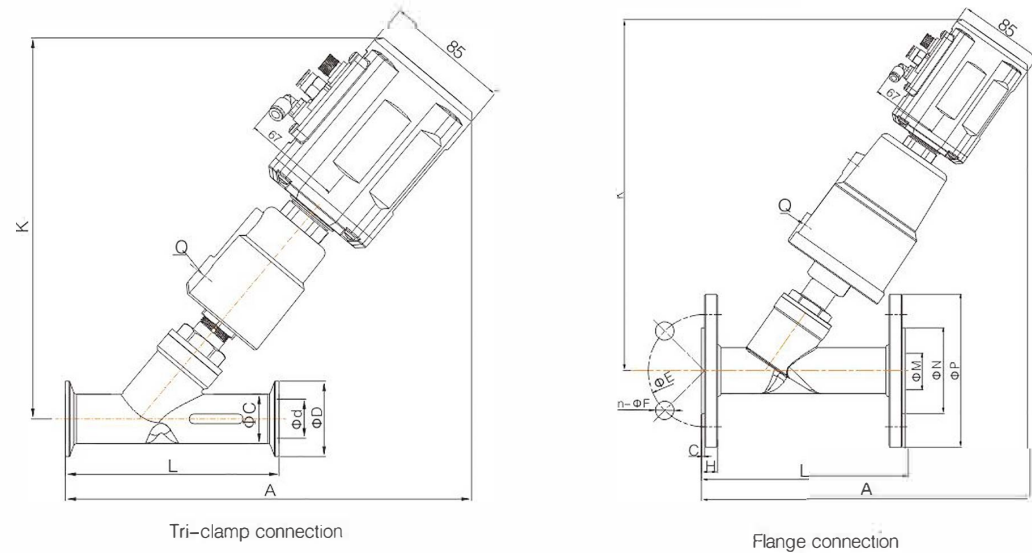
Main Dimension (Threaded connection)

Size	Actuator (mm)	Q	K	A	L	G	Hexagon	T
DN8	50	1/8"	240	235	68	1/4"	27	12
	63	1/8"	253	247				
DN10	50	1/8"	240	235	68	3/8"	27	12
	63	1/8"	253	247				
DN15	50	1/8"	240	235	68	1/2"	27	15
	63	1/8"	253	247				
DN20	50	1/8"	247	240	75	3/4"	32	16
	63	1/8"	260	251				
DN25	50	1/8"	251	250	90	1"	40	17
	63	1/8"	273	267				
DN32	63	1/8"	285	285	116	1 1/4"	50	21
	90	1/8"	335	315				
DN40	90	1/8"	335	315	116	1 1/2"	56	21
	125AL	1/4"	402	373				
DN50	90	1/8"	344	330	138	2"	69	22
	125AL	1/4"	402	373				
DN65 Square bonnet	125AL	1/4"	432	388	178	2 1/2"	85	26
DN80 Square bonnet	125AL	1/4"	457	408	210	3"	100	27

Main Dimension (Welded connection)

Size	Actuator (mm)	Q	K	HA	HL	DIN11850-2		DIN11850-3	
						ΦD	S	ΦD	S
DN15	50	1/8"	240	228	70	19	1.5	20	2
	63	1/8"	253	240					
DN20	50	1/8"	247	235	82	23	1.5	24	2
	63	1/8"	260	246					
DN25	50	1/8"	251	250	100	29	1.5	30	2
	63	1/8"	273	270					
DN32	63	1/8"	285	281	125	35	1.5	36	2
	90	1/8"	335	312					
DN40	90	1/8"	335	315	130	41	1.5	42	2
	125AL	1/4"	402	375					
DN50	125AL	1/4"	402	375	155	53	1.5	54	2
DN65 Square bonnet	125AL	1/4"	432	428	270	70	2	-	-
DN80 Square bonnet	125AL	1/4"	457	428	284	85	2	-	-

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



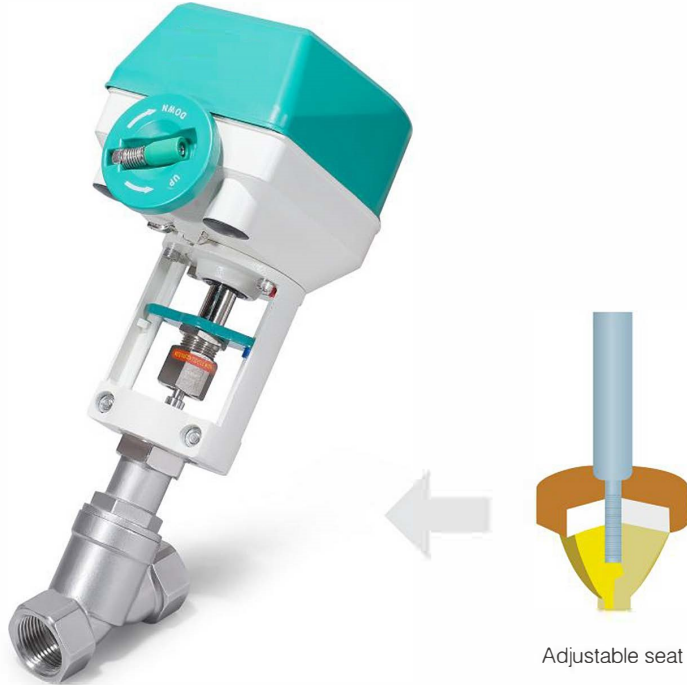
Main Dimension (Tri-clamp connection)

Size	Actuator (mm)	Q	K	A	L	ΦC	ΦD	Φd
DN15	50	1/8"	237	235	80	19	34	15
DN20	50	1/8"	259	253	130	25	50.5	19
	63	1/8"	274	270				
DN25	50	1/8"	255	265	130	32	50.5	27
	63	1/8"	277	283				
DN32	63	1/8"	285	295	146	37	50.5	31
	90	1/8"	335	325				
DN40	90	1/8"	335	335	160	40	64	33
	125AL	1/4"	398	393				
DN50	125AL	1/4"	432	428	175	53	64	45
DN65 Square bonnet	125AL	1/4"	432	428	278	75	91	66
DN80 Square bonnet	125AL	1/4"	454	428	290	89	106	78

Main Dimension (Flange connection)

Size	Actuator (mm)	Q	K	A	L	ΦP	ΦN	ΦM	H	C	ΦE	n- ΦF
DN15	50	1/8"	255	245	130	95	45	16	14	2	65	4-14
DN20	50	1/8"	255	265	150	105	56	19	14	2	75	4-14
DN25	50	1/8"	285	270	160	115	65	26	14	2	85	4-14
	63	1/8"	286	285								
DN32	63	1/8"	299	285	180	140	78	31	16	2	100	4-18
	90	1/8"	347	310								
DN40	90	1/8"	352	330	200	150	84	38	16	3	110	4-18
	125AL	1/4"	412	398								
DN50	90	1/8"	357	357	230	165	100	49	16	3	125	4-18
	125AL	1/4"	432	443								
DN65 Square bonnet	125AL	1/4"	432	443	290	185	120	66	18	3	145	4-18
DN80 Square bonnet	125AL	1/4"	457	448	310	200	135	78	20	3	160	8-18

106 Series
Electrical Proportional
Control Angle Seat Valve



Adjustable seat

Function Principle

Electrical positioner controls the angle seat valve's open/close state through 4–20 mA or 0–10V DC signals. It achieves precise flow adjustment using the adjustable seat within the valve and may allow manual control

Attention

- If the valve body needs to be taken off during installation, please recalibrate the zero-point. Keep the positioner upright at all time.
- To ensure accurate adjustment, please install the valve in below seat direction.
- Please ensure water proof of the positioner.

Advantages

1. Convenient and easy to use
2. Operates steadily under vibration to achieve precise flow control

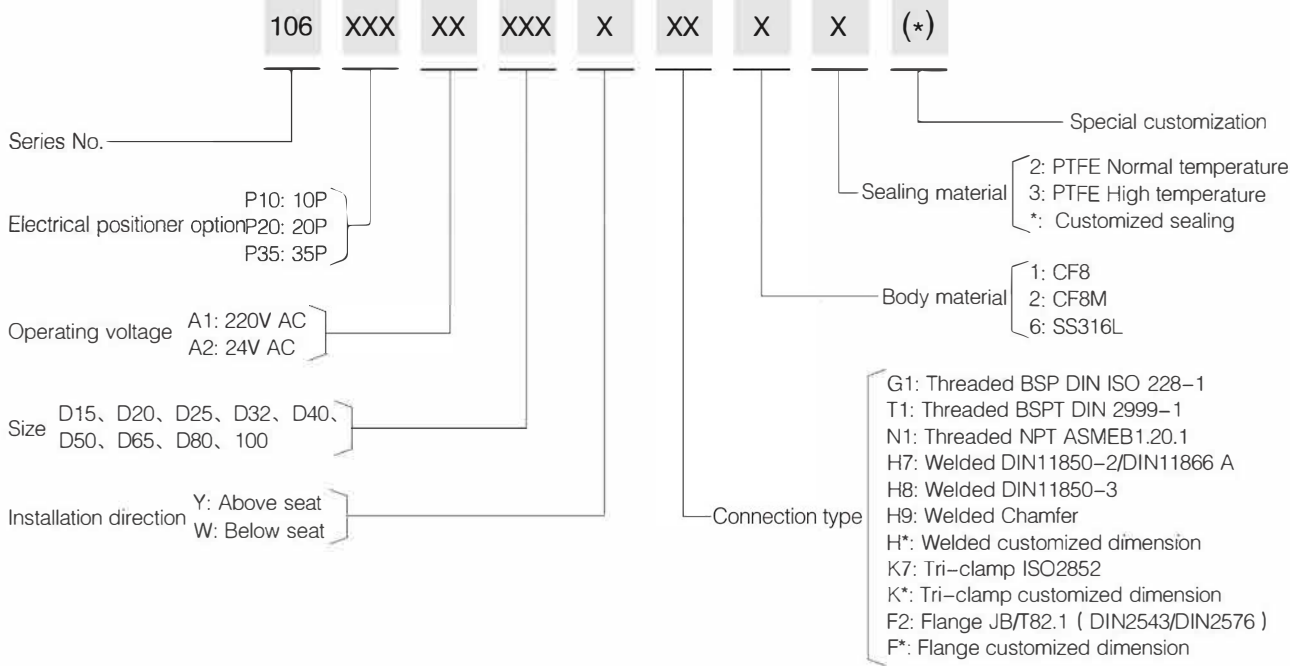
Technical Specification

- Voltage: 220V AC or 24V AC
- Control Power: 4–20mA or 0–10V DC
- Medium Temperature: –15℃ — +50℃
- Connection type: Threaded, Welded, Flange, Tri-clamp
- Positioner: Electrical motor control
- Protection: IP54
- Leakage class: DIN EN 12266 Class A

Pressure Data Sheet

Size	Orifice	Actuator	Pressure range (enter below seat) MPa	Pressure range (enter above seat) MPa
DN15	13	10P	0–1.6	0–1.6
DN20	18	10P	0–1.6	0–1.6
DN25	24	10P	0–1.2	0–1.6
		20P	0–1.6	0–1.6
DN32	31	10P	0–0.5	0–1.2
		20P	0–1.6	0–1.6
		10P	0–0.3	0–0.9
DN40	35	20P	0–1.4	0–1.6
		35P	0–1.6	0–1.6
		10P	–	0–0.5
DN50	45	20P	0–0.6	0–1.1
		35P	0–1.5	0–1.6
		20P	–	0–0.6
DN65	61	35P	0–0.7	0–1.1
		20P	–	0–0.3
DN80	80	35P	0–0.3	0–0.6
		35P	–	0–0.4

Order Instruction



103 Series
Threaded Pneumatic
Three-way Angle
Seat Valve



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

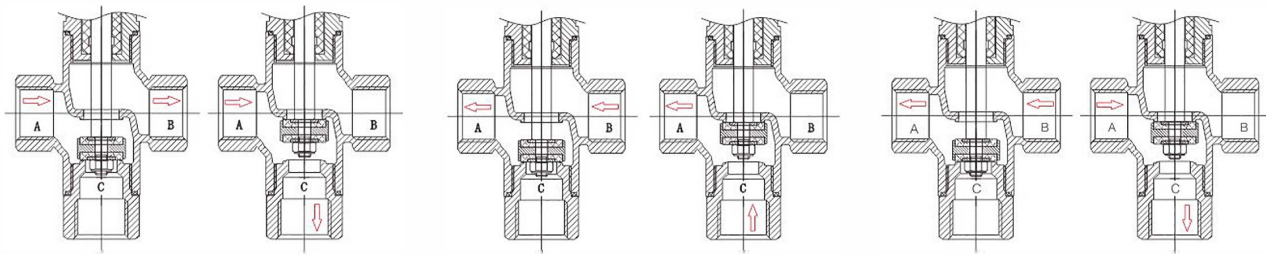


Function Principle

The valve has three ports that enable "split", "blend", and "reversal" functions. 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.

Technical Specification

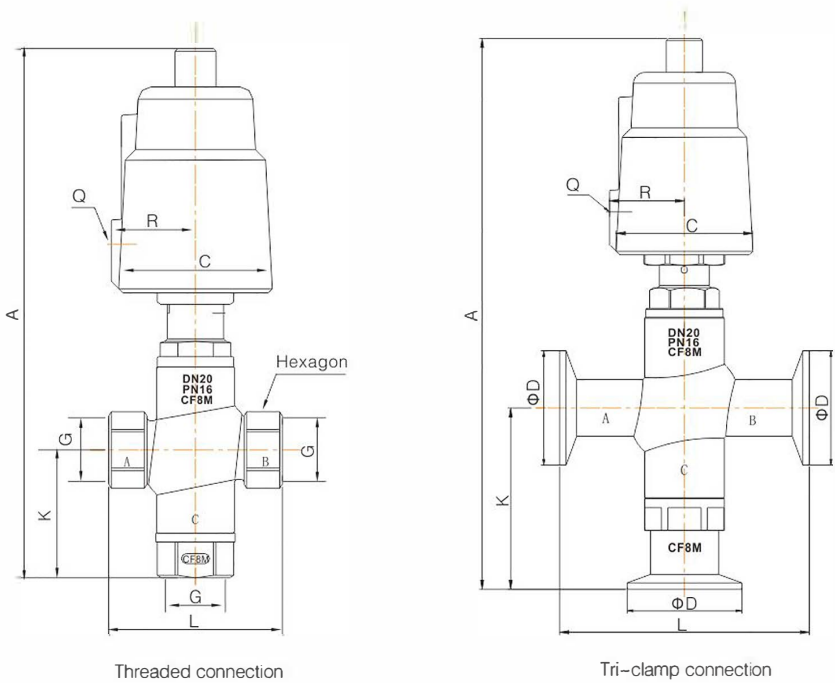
- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8M
- Actuator material: CF8
- Seal material: PTFE
- Fluid temperature: –10°C — +180°C (PTFE Normal temperature)
- Ambient temperature: –10°C — +80°C
- Control type: 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



Split function

Blend function

Reversal function



Main Dimension (Threaded connection)

Size	Actuator	Q	C	R	G	A	K	L	Hexagon	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	90	1/8"	106	55	1 1/4"	355	86	116	50	4.62
DN40	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	A	K	L	Weight (kg)
DN15	40	1/8"	50.5	27	34	223	80	90	0.99
DN20	50	1/8"	60	33	50.5	246	80	90	1.48
DN25	50	1/8"	60	33	50.5	262	90	100	1.78
DN32	90	1/8"	106	55	50.5	373	104	130	4.75
DN40	90	1/8"	106	55	64	381	111	150	5.45
DN50	90	1/8"	106	55	64	408	128	160	6.65

109 Series
Pneumatic
Modular Valve



Single Acting, Normally Closed

Size	Actuator	Interface	Orifice	Flow value Kv(m³/h)		Split function		Blend function		Reversal function	
				A-B	A-C	Differential pressure range(M Pa)	Control pressure (Mpa)	Differential pressure range(M Pa)	Control pressure (Mpa)	Differential pressure range(M Pa)	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

Double Acting, Normally Closed

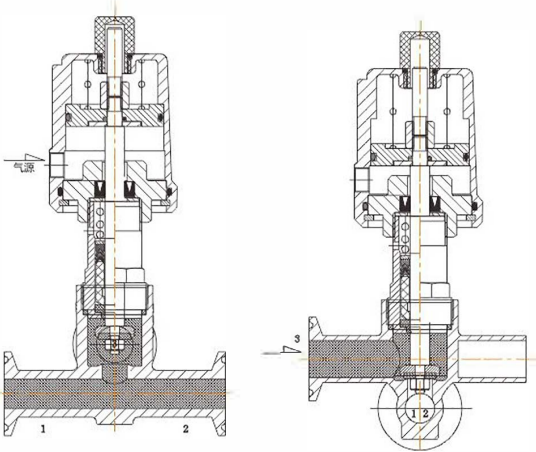
Size	Actuator	Interface	Orifice	Flow value Kv(m³/h)		Split function		Blend function		Reversal function	
				A-B	A-C	Differential pressure range(M Pa)	Control pressure (Mpa)	Differential pressure range(M Pa)	Control pressure (Mpa)	Differential pressure range(M Pa)	Control pressure (Mpa)
DN15-A	40	1/2"	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-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-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

Function Principle

When the valve is in idle state, due to the spring force the valve is Normally Closed (No.3 port), the bottom two ports are Normally Open(No.2 port); When the actuator piston is pressed by air, the valve opens, fluids from NO.3 port goes into No.1 and No.2 ports, When Double Acting, the valve opens/closes by compressed air.

Advantages

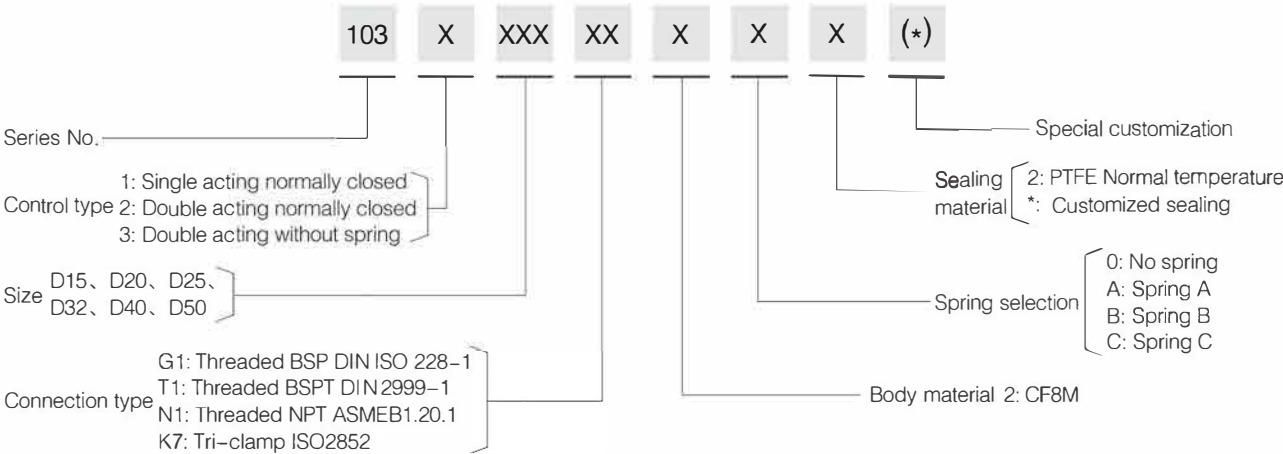
1. Easy to clean
a. Seat is separate from the public ports. Well machined inner wall of the public ports ensures a smooth flow.
b. The valve utilizes bottom seal and seal ring for connection to valve stem in order to avoid fluid residue and allow effortless cleaning.
2. The modular valve system is easy to install and assemble, allowing many different layouts. It is a good choice for mixing, distributing and collecting fluids.

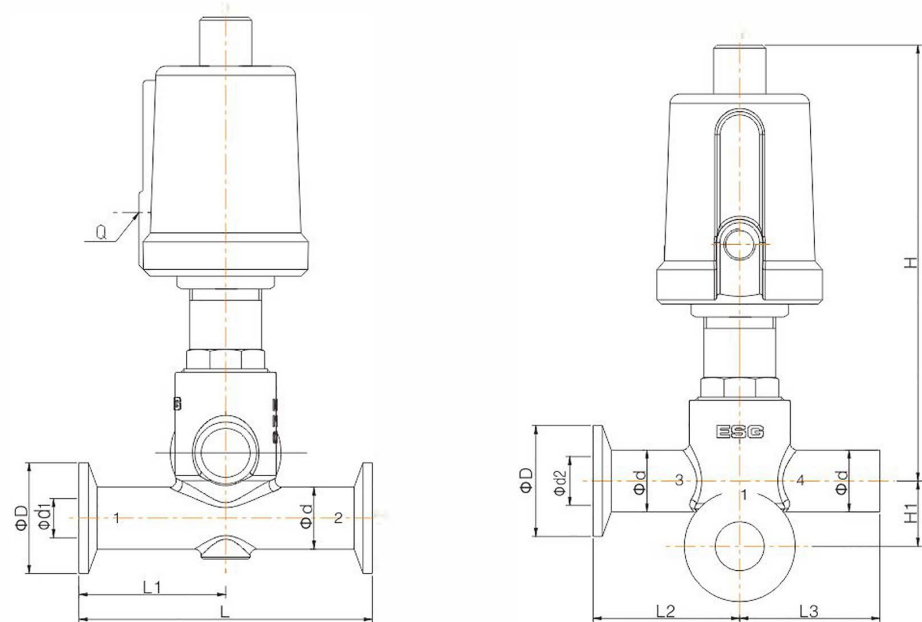


Technical Specification

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

Order Instruction





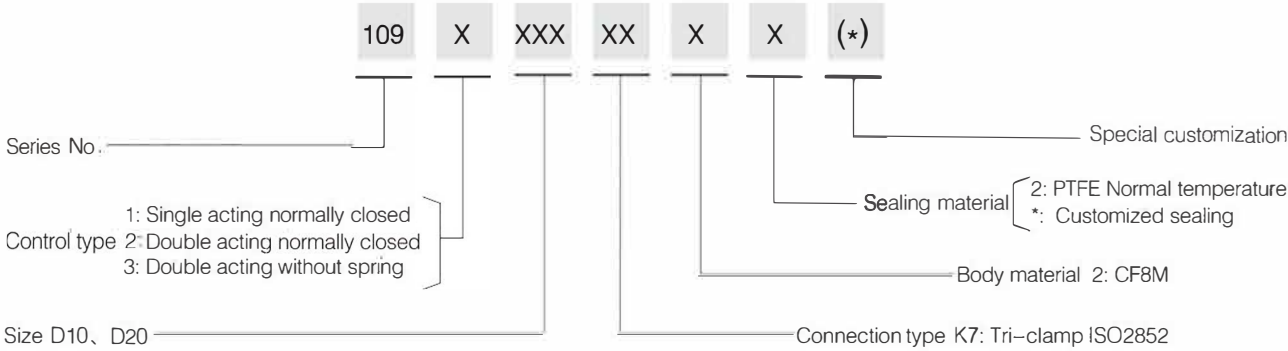
110 Series
Pneumatic
Manifold Valve



Main Dimension

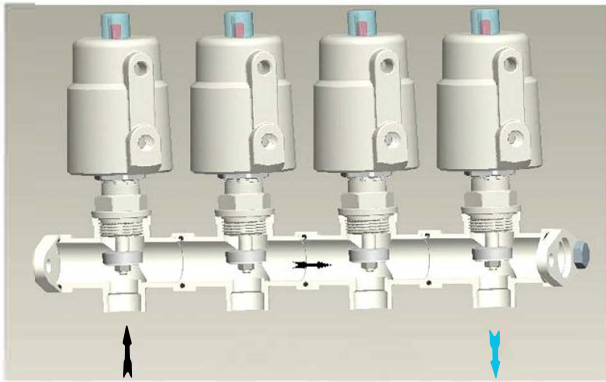
Size	Actuator	Q	ΦD	Φd	$\Phi d1$	$\Phi d2$	H	H1	L1	L2	L3	L
DN10	40	1/8"	34	19	12	15	134	20	45	45	43	90
DN20	50	1/8"	50.5	29.5	24	24	140	30	60	60	43	120

Order Instruction



Technical Specification

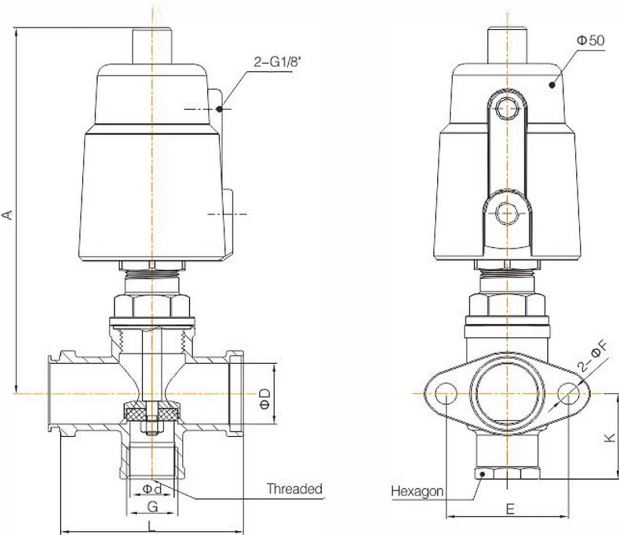
- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control medium: Filtered compressed air or neutral gas
- Seal material: PTFE
- Body material: CF8/CF8M
- Applicable medium: Water, Oil, Ail and other liquid
- Medium temperature: –10°C — +180°C (PTFE Normal temperature)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



Advantages

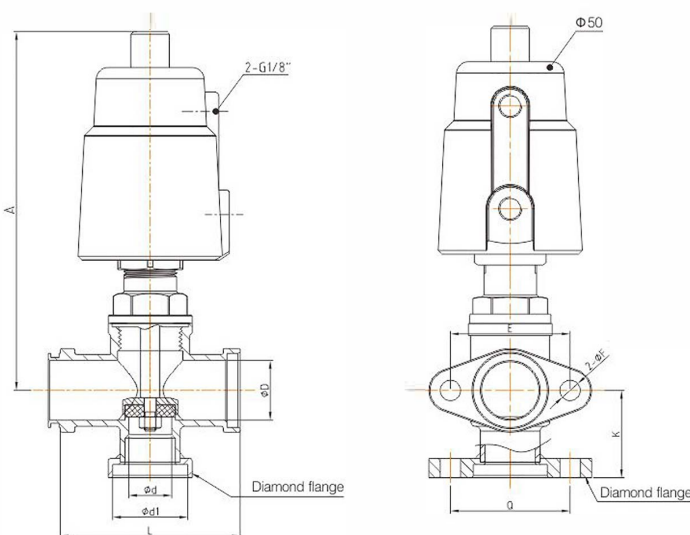
Manifold valve adopts three-way connection design for optimal pipeline layout. It has aesthetic appearance, compact structure, and superb performance. A great choice for material blending.





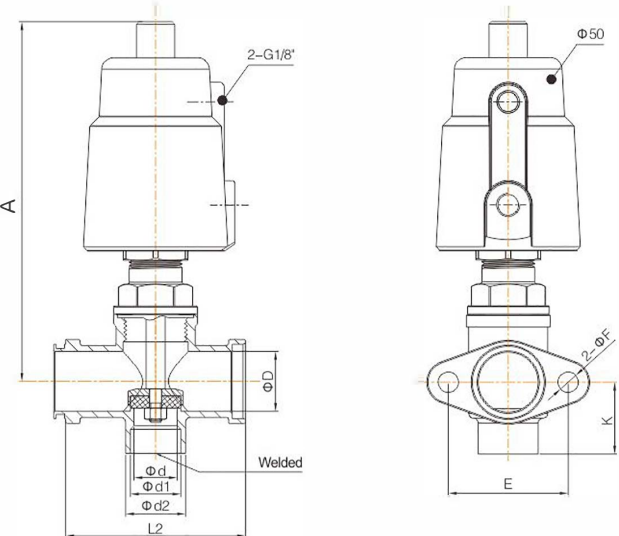
Main Dimension (Threaded connection)

Size	A	K	L	ØD	Ød	G	Hexagon	ØE	2-ØF	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	1.6



Main Dimension (Diamond flange connection)

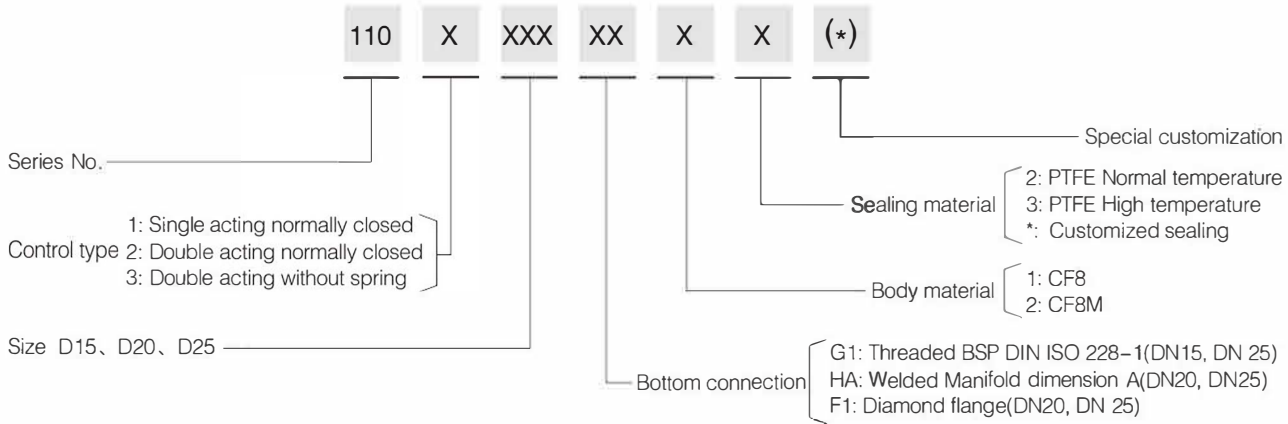
Size	A	K	L	ØD	Ød	Ød1	Ød2	ØE	2-ØF	Flow value Kv(m³/h)	Weight (kg)
DN20	153	36.5	76	25	18	31.3	50	50	8.5	8.1	1.2
DN25	153	43	90	32	24	40	57	57	8.5	14.8	1.6



Main Dimension (Welded connection)

Size	A	K	L	ØD	Ød	Ød1	Ød2	ØE	2-ØF	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	1.6

Order Instruction



1AA Series
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

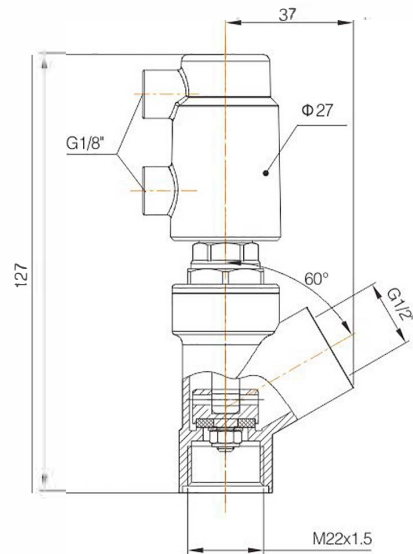
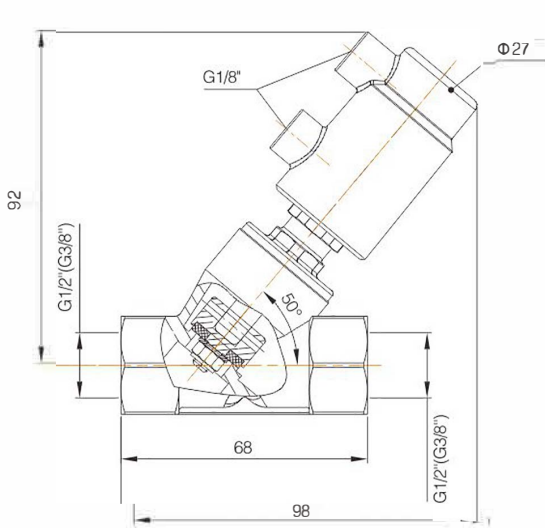


Advantages

valve adopts compact and aesthetic design and is made of stainless steel material. Flexible valve seat design automatically adjusts to tilted surface and thereby improves sealing performance.

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: 3–3.5bar (44–51psi)
- Body material: Cr8 or Cr8M
- Seal material: PTFE
- Medium temperature: –10°C — +120°C
- Ambient temperature: –10°C — +80°C
- Connection type: Threaded connection (BSP, BSPT, NPT)

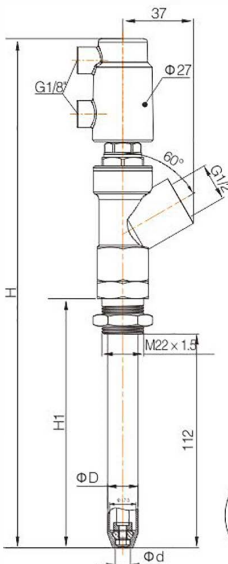


Advantages

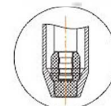
1. It is widely used in tilling machinery, especially for applications with viscous, pasty, and even foamy fluids.
2. Fast, accurate and stable tilling.
3. Delicate and compact, easy to arrange pipeline layout.
4. Special nozzle structure and sealing design ensure no dripping leakage.
5. Bottom chamber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

Technical Specification

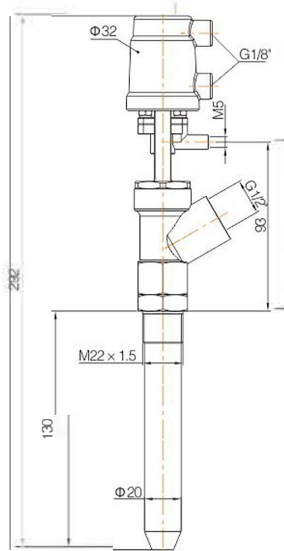
- Control type: Double acting normally closed
Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–4.5bar (44–65psi)
- Body material: CF8M
- Seal material: PTFE
- Medium temperature: –10°C — +120°C
- Ambient temperature: –10°C — +80°C



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
AC	20	10	267	130
AC	18	9	267	30
AF	20	10	267	30
AF	16	8	267	30

1AL/1AM Series
Filling Valve with
Internal Sealing



1AD Series
Filling Valve with
External Sealing



* Accessory can be installed on top of actuator

1AJ/1AE/1AK Series
Filling Valve with External
Sealing and Suction



1AG/1AI/1AH Series
Filling Valve with External
Sealing and Suction

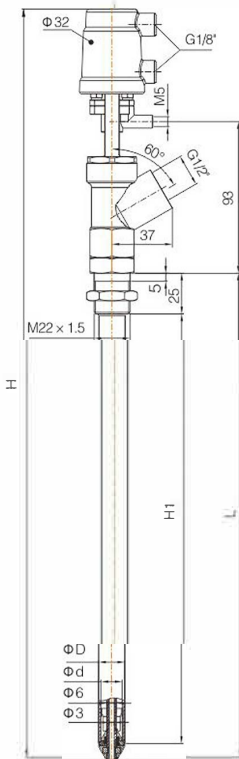
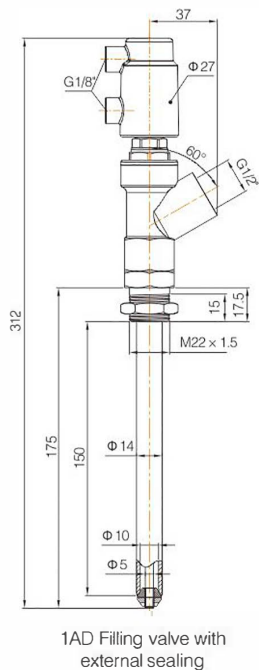
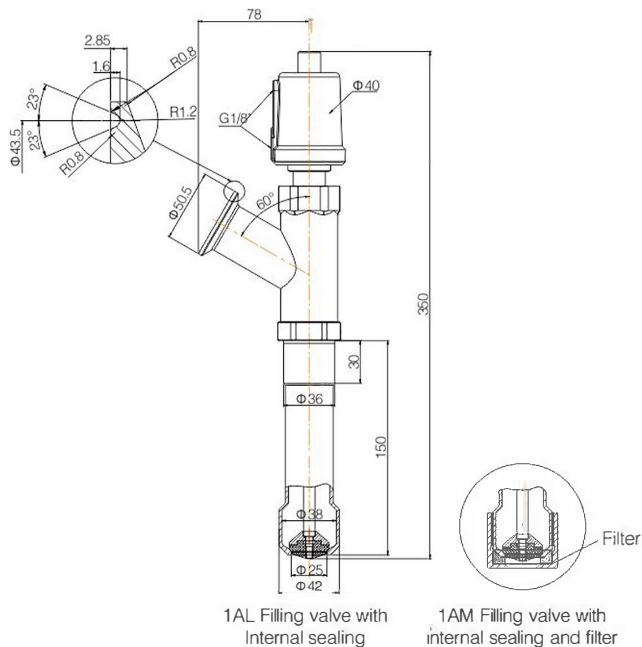


Advantages

- 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.

Technical Specification

- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3.5–4.5bar (44–65psi)
- Body material: CF8M
- Seal material: PTFE
- Medium temperature: –10°C — +120°C
- Ambient temperature: –10°C — +80°C



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 structure recovers dripping liquid along the pipe wall.

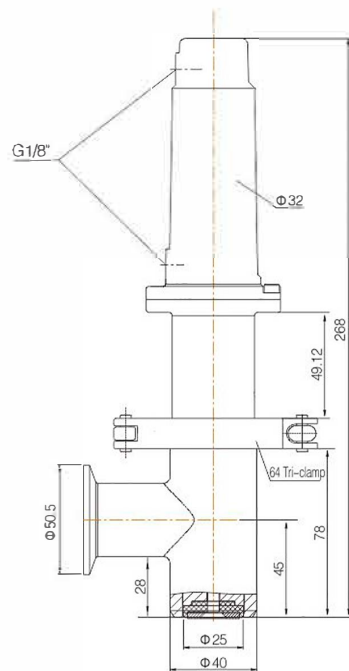
Technical Specification

- Control type: Double acting normally closed, Double acting without spring
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: 3–3.5bar (44–51psi)
- Body material: CF8M
- Seal material: PTFE
- Medium temperature: –10°C — +120°C
- Ambient temperature: –10°C — +80°C

Main Dimension

Size	ΦD	Φd	L	H	H1
1AJ	20	17	300	462	265
1AG	20	17	130	292	95
1AE	16	13	300	462	265
	16	13	220	382	185
1AI	16	13	130	292	95
1AK	12	10	300	462	265
1AH	12	10	130	292	95

1A1 Series
Sauce Filling Valve
with Internal Sealing



Advantages

- 1. Widely used in filling machinery. Suitable for viscous, granular sauce filling. Such as beef sauce, chili sauce, bean paste, etc.;
- 2. Fast, accurate and stable filling;
- 3. The internal structure adopts plunger design, resulting in easy cleaning and minimal residue;
- 4. The filling body and the connection are connected by tri-clamp, so that they can be installed, uninstalled, and adjusted easily
- 5. Long valve stroke enables large-capacity filling;
- 6. Accessories, such as proximity switch and position indicator, can be installed on top of actuator to enable feedback of valve open/close state.

Technical Specification

- Control type: Double acting
- Operating pressure: 0–7bar (0–102psi)
- Control pressure: ≥3bar (44psi)
- Control medium: CF8M
- Seal material: PTFE
- Medium temperature: –10℃ — +120℃

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		
		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	M: Thread securement	2: CF8M			
								N1: Threaded NPT ASMEB1.20.1	D: Pipe securement				
								K7: Tri-clamp ISO2852					

1AA	A27	2/3	D10/D15	00	000	I	0	G1/T1/N1	0	1/2	
1AB	A27	2/3	D15	00	000	I	0	G1/T1/N1	0	1/2	
1AC	A27	2/3	D15	20	130	I	0	G1/T1/N1	M/D	2	
1AC	A27	2/3	D15	18	130	I	0	G1/T1/N1	M/D	2	
1AF	A27	2/3	D15	16	130	I	0	G1/T1/N1	M/D	2	
1AF	A27	2/3	D15	20	130	I	0	G1/T1/N1	M/D	2	
1AP	A32	2/3	D15	20	130	I	1	G1/T1/N1	M/D	2	
1AD	A27	2/3	D15	14	175	E	0	G1/T1/N1	M/D	2	
1AJ	A32	2/3	D15	20	300	E	1	G1/T1/N1	M/D	2	
1AG	A32	2/3	D15	20	130	E	1	G1/T1/N1	M/D	2	
1AE	A32	2/3	D15	16	300	E	1	G1/T1/N1	M/D	2	
1AE	A32	2/3	D15	16	220	E	1	G1/T1/N1	M/D	2	
1AI	A32	2/3	D15	16	130	E	1	G1/T1/N1	M/D	2	
1AK	A32	2/3	D15	12	300	E	1	G1/T1/N1	M/D	2	
1AH	A32	2/3	D15	12	130	E	1	G1/T1/N1	M/D	2	
1AL	A40	2/3	D25	42	150	I	0	K7	D	2	
1AM	A40	2/3	D25	50	150	I	0	K7	D	2	
1A1	A32	3	D25	40	010	I	0	K7	D	2	

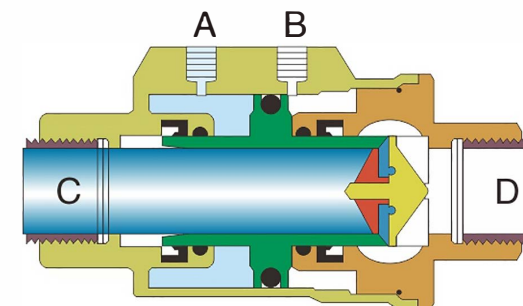
200 Series
Pneumatic
Shuttle Valve



201 Series
Pneumatic
Shuttle Valve



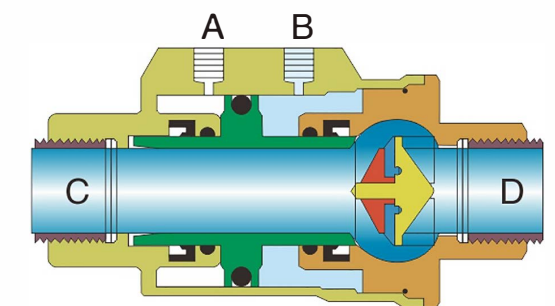
Open/Close



Closing

When hole "A" is supplied with air (hole "B" must be discharging), the piston moves towards and eventually presses onto the seat, thereby closing the valve.

For a single acting N.C. shuttle valve, a spring is installed in "A" chamber, pressing the piston against seat seal and allowing the valve to remain closed in its idle state.



Opening

When hole "B" is supplied with air (hole "A" must be discharging), the piston moves towards "C" and away from seat seal, thereby opening the valve.

For a single acting N.O. shuttle valve, a spring is installed in "B" chamber, forcing the piston away from seat seal and allowing the valve to remain open in its idle state.

Function Principle

This valve opens and closes through piston motion forced by compressed air. As fluid pressure acts onto valve seat, the piston experiences little resistance and thereby enables the valve to quickly open/close. The latest design improvement results in more efficient fluid dynamics and less pressure loss.

Applications

- Food & Beverage
- Air Separation
- Filling Operation
- Ceramic Molding
- Semi-conductor Cleaning
- Automobile
- Others

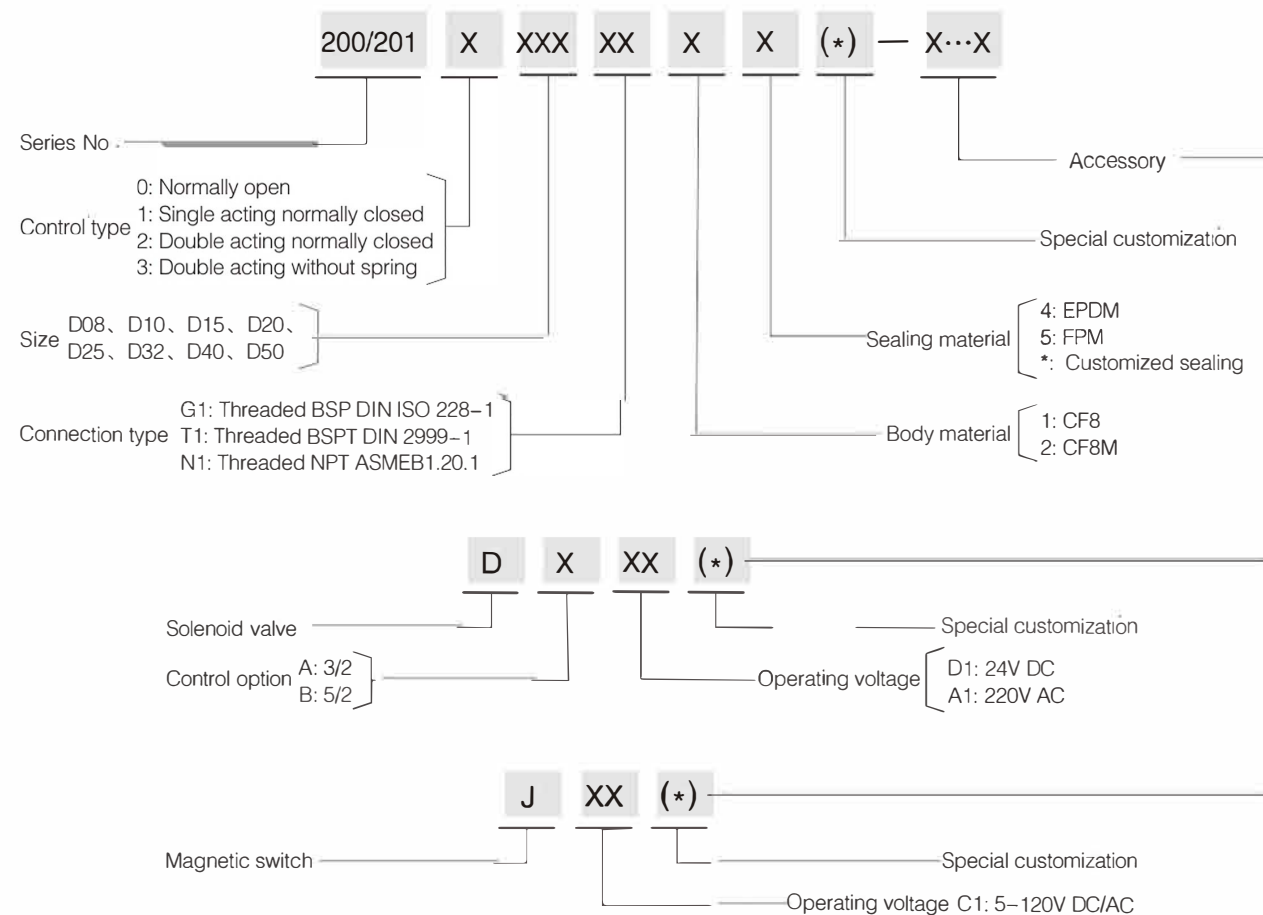
Advantages

- Compact and aesthetic design. Stainless steel body ensures superb durability.
- Easy to use with many possible mounting positions. Valve operates efficiently with minimum pressure loss.
- Excellent sealing, works well with relative vacuum.

Technical Specification

- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control medium: Filtered compressed air or neutral gas
- Body material: CF8M/CF8
- Seal material: EPDM/FPM
- Applicable medium: FKM–Suitable for most fluid, except for steam.
EPDM–Suitable for steam and hot water, unsuitable for oils, greases, fuels etc.
- Medium temperature: –20°C — +150°C (FPM),
–20°C — +130°C (EPDM)
- Ambient temperature: –20°C — +80°C
- Control type: Normally closed, Normally open,
Double acting normally closed, Double acting without spring
- Connection type: Threaded connection (BSP, BSPT, NPT)
- Leakage class: DIN EN 12266 Class A

Order Instruction



200 Series Pressure Data Sheet

Single Acting, Normally Closed-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0–1.6	0.3–0.5
DN15	G1/2"	15	6.4	0–1.6	0.4–0.5
DN20	G3/4"	20	8.9	0–1.6	0.4–0.5
DN25	G1"	25	13.7	0–1.6	0.3–0.5
DN32	G1 1/4"	32	21.6	0–1.6	0.3–0.5
DN40	G1 1/2"	40	36.5	0–1.6	0.3–0.5
DN50	G2"	50	55.0	0–1.6	0.5–0.6

Single Acting, Normally Closed-Below Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0–1.6	0.3
DN15	G1/2"	15	6.4	0–1.6	0.4
DN20	G3/4"	20	8.9	0–1.6	0.4
DN25	G1"	25	13.7	0–0.9	0.3
DN32	G1 1/4"	32	21.6	0–1.4	0.3
DN40	G1 1/2"	40	36.5	0–1.2	0.3
DN50	G2"	50	55.0	0–0.8	0.5

Double Acting, Normally Closed-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0–1.6	0.3–0.5
DN15	G1/2"	15	6.4	0–1.6	0.4–0.5
DN20	G3/4"	20	8.9	0–1.6	0.4–0.5
DN25	G1"	25	13.7	0–1.6	0.3–0.7
DN32	G1 1/4"	32	21.6	0–1.6	0.3–0.7
DN40	G1 1/2"	40	36.5	0–1.6	0.3–0.7
DN50	G2"	50	55.0	0–1.6	0.5–0.7

Double Acting, Normally Closed-Below Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0–1.6	0.3–0.5
DN15	G1/2"	15	6.4	0–1.6	0.4–0.5
DN20	G3/4"	20	8.9	0–1.6	0.4–0.5
DN25	G1"	25	13.7	0–1.6	0.3–0.7
DN32	G1 1/4"	32	21.6	0–1.6	0.3–0.7
DN40	G1 1/2"	40	36.5	0–1.6	0.3–0.7
DN50	G2"	50	55.0	0–1.6	0.5–0.7

Normally Open-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0–1.6	0.5
DN15	G1/2"	15	6.4	0–1.6	0.5
DN20	G3/4"	20	8.9	0–1.6	0.5
DN25	G1"	25	13.7	0–1.6	0.5
DN32	G1 1/4"	32	21.6	0–1.6	0.5
DN40	G1 1/2"	40	36.5	0–1.6	0.5
DN50	G2"	50	55.0	0–1.6	0.6

Normally Open-Below Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN10	G3/8"	10	3.2	0–1.6	0.5
DN15	G1/2"	15	6.4	0–1.6	0.5
DN20	G3/4"	20	8.9	0–1.6	0.5
DN25	G1"	25	13.7	0–1.6	0.7
DN32	G1 1/4"	32	21.6	0–1.6	0.7
DN40	G1 1/2"	40	36.5	0–1.6	0.7
DN50	G2"	50	55.0	0–1.6	0.7

201 Series Pressure Data Sheet

Single Acting, Normally Closed-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN8	G1/4"	10	2.2	0–1.6	0.35–0.5
DN10	G3/8"	10	3.1	0–1.6	0.35–0.5
DN15	G1/2"	15	5.7	0–1.6	0.35–0.5
DN20	G3/4"	20	10.6	0–1.6	0.35–0.5
DN25	G1"	25	17.4	0–1.6	0.35–0.5
DN32	G1 1/4"	32	21.9	0–1.6	0.35–0.5
DN40	G1 1/2"	40	40.5	0–1.6	0.35–0.5
DN50	G2"	50	59.3	0–1.6	0.5–0.6

Single Acting, Normally Closed-Below Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN8	G1/4"	10	2.2	0–1.6	0.35
DN10	G3/8"	10	3.1	0–1.6	0.35
DN15	G1/2"	15	5.7	0–1.2	0.35
DN20	G3/4"	20	10.6	0–1.6	0.35
DN25	G1"	25	17.4	0–1.6	0.35
DN32	G1 1/4"	32	21.9	0–1.2	0.35
DN40	G1 1/2"	40	40.5	0–0.8	0.35
DN50	G2"	50	59.3	0–0.8	0.5

Double Acting, Normally Closed-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN8	G1/4"	10	2.2	0–1.6	0.35–0.5
DN10	G3/8"	10	3.1	0–1.6	0.35–0.5
DN15	G1/2"	15	5.7	0–1.6	0.35–0.5
DN20	G3/4"	20	10.6	0–1.6	0.35–0.5
DN25	G1"	25	17.4	0–1.6	0.35–0.5
DN32	G1 1/4"	32	21.9	0–1.6	0.35–0.5
DN40	G1 1/2"	40	40.5	0–1.6	0.35–0.5
DN50	G2"	50	59.3	0–1.6	0.5–0.6

Double Acting, Normally Closed-Below Seat

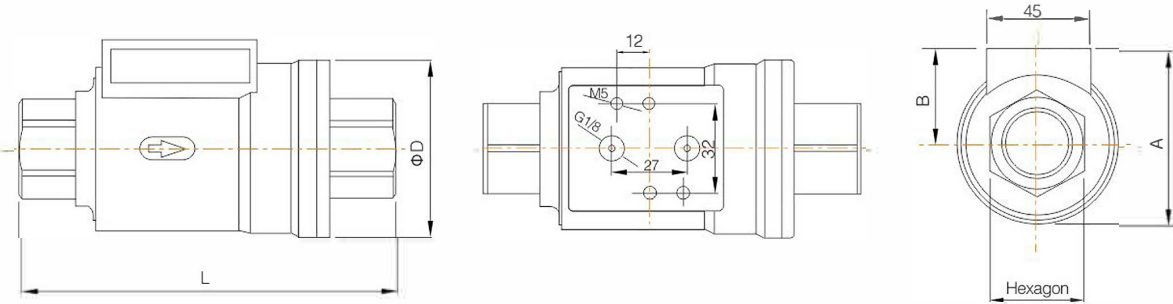
Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN8	G1/4"	10	2.2	0–1.6	0.35–0.5
DN10	G3/8"	10	3.1	0–1.6	0.35–0.5
DN15	G1/2"	15	5.7	0–1.6	0.35–0.7
DN20	G3/4"	20	10.6	0–1.6	0.35–0.5
DN25	G1"	25	17.4	0–1.6	0.35–0.5
DN32	G1 1/4"	32	21.9	0–1.6	0.35–0.7
DN40	G1 1/2"	40	40.5	0–1.6	0.35–0.7
DN50	G2"	50	59.3	0–1.6	0.5–0.7

Normally Open-Above Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN8	G1/4"	10	2.2	0–1.6	0.5
DN10	G3/8"	10	3.1	0–1.6	0.5
DN15	G1/2"	15	5.7	0–1.6	0.5
DN20	G3/4"	20	10.6	0–1.6	0.5
DN25	G1"	25	17.4	0–1.6	0.5
DN32	G1 1/4"	32	21.9	0–1.6	0.5
DN40	G1 1/2"	40	40.5	0–1.6	0.5
DN50	G2"	50	59.3	0–1.6	0.6

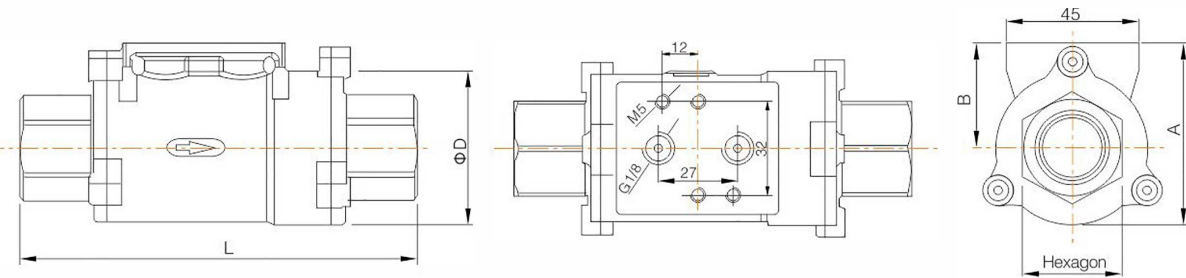
Normally Open-Below Seat

Size	Interface	Orifice mm	Flow value Kv(m³/h)	Differential pressure range MPa	Control Pressure Mpa
DN8	G1/4"	10	2.2	0–1.6	0.5
DN10	G3/8"	10	3.1	0–1.6	0.5
DN15	G1/2"	15	5.7	0–1.6	0.7
DN20	G3/4"	20	10.6	0–1.6	0.5
DN25	G1"	25	17.4	0–1.6	0.5
DN32	G1 1/4"	32	21.9	0–1.6	0.7
DN40	G1 1/2"	40	40.5	0–1.6	0.7
DN50	G2"	50	59.3	0–1.6	0.7



Main Dimension (200 Series)

Size	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Thread end	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A (mm)	56	61	72	78	94	104	116
Ø D (mm)	46	52	64	69	86	96	108
Hexagon (mm)	22	26.5	32	41	50	56	70
B (mm)	33	35	40	43	51	56	62
L (mm)	98	112	135	143	165	180	207
Weight (Kg)	0.76	0.94	1.43	1.85	2.98	3.66	5.64



Main Dimension (201 Series)

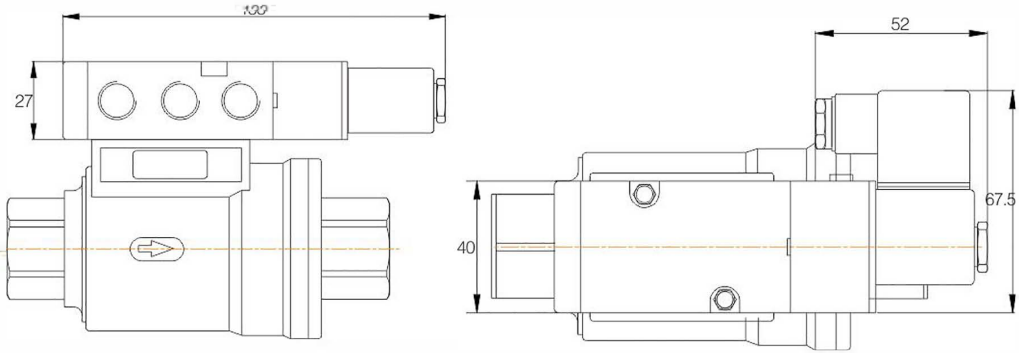
Size	DN8	DN10	DN15	DN20	DN25	DN32	DN40	DN50
Thread end	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A (mm)	49.5	49.5	53.3	63.5	70	85.5	95	109
Ø D (mm)	37	37	42.5	52	60	75	84	97
Hexagon (mm)	22	22	26	32	40	49	53	68
B (mm)	31	31	32	37.5	40	48	53	60
L (mm)	98	98	112	135	143	165	180	207
Weight (Kg)	0.54	0.54	0.67	1.05	1.45	2.32	2.82	4.38

Shuttle Valve
with Solenoid Valve



Solenoid Valve

2/5 way NAMUR solenoid valve is suitable for 200 and 201 series .



Technical Specification

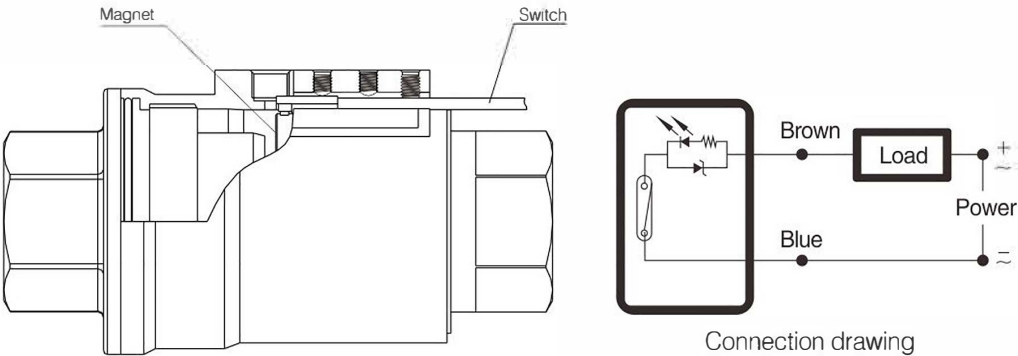
- Connection type: G1/4"
- Air pressure: 3–8bar (43.5–116psi)
- Power: 220V AC 24V DC
- Voltage range: ± 10%
- Power consumption: AC 4.5W DC 3W
- Ambient temperature: 5°C — 55°C
- Max frequency: 3 times/second
- Protection level: IP65
- Leakage class: DIN EN 12266 Class A

Shuttle Valve with
Magnetic Switch



Magnetic Switch

Magnetic switch mounted on 200 series shuttle valve can indicate the valve operating state and feedback open/close status signal.

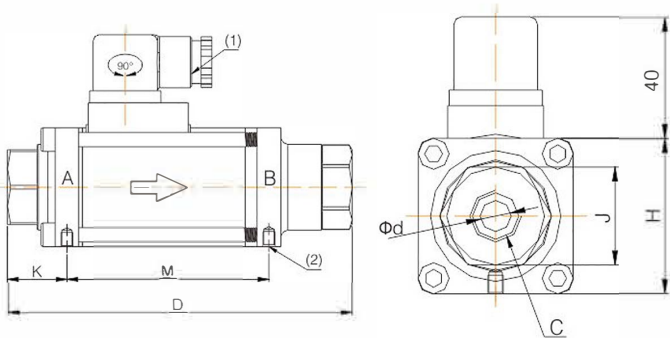


Technical Specification

- Size: DN10–DN50
- Indication: Red LED
- Power: 5–120V DC/AC
- Max.current: 100mA
- Cable: 2PVC cables
- Working temperature: -10°C — +70°C
- Protection: IP67
- Leakage class: DIN EN 12266 Class A

Note: Since the magnets must be assembled inside the valve, the limit switches must be requested when ordering the valve.

202 Series
Two-way Solenoid
Coaxial Valve



Technical Specification

- Control type: Direct acting
- Connection type: Thread (BSP, NPT, BSPT)
- Operating pressure: A→B: 40bar (580psi), B→A: 12bar (174psi)
- Applicable fluid: Neutral gas or liquid
- Medium viscosity: 500cst (mm²/s)
- Medium temperature : -20°C to — +130°C
- Ambient temperature: -30°C — +60°C
- Body material: CF8/CF8M
- Seal materials: FPM
- Power: DC, 24V
- Protection: IP65
- Leakage class: DIN EN 12266 Class A

Function Principle

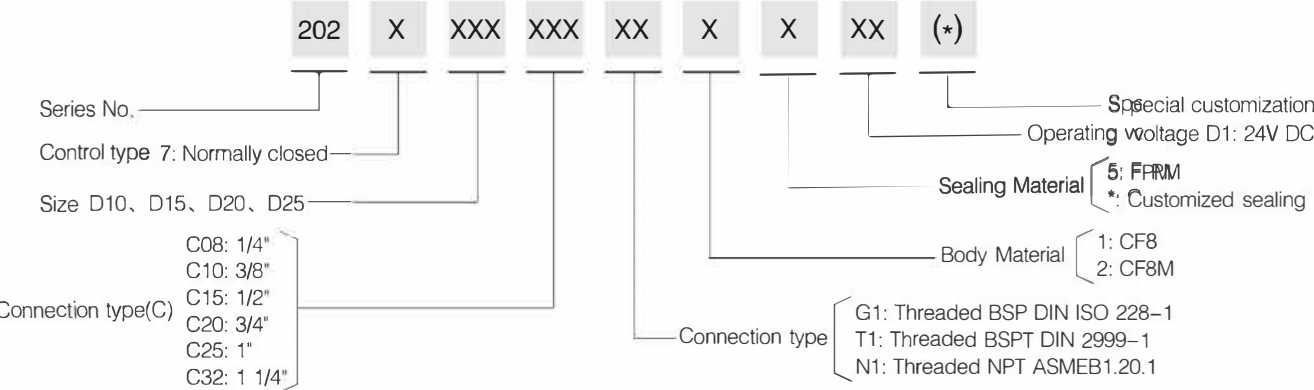
Normally Closed (closed when turned off)
When turned on, electromagnetic force opens the valve; When turned off, spring force closes the valve.

Main Dimension

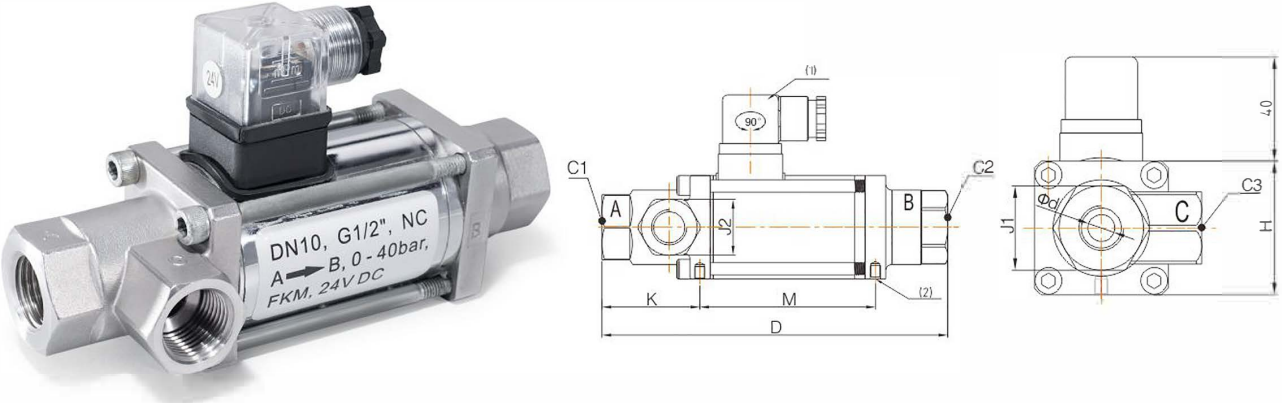
Size	C	Ød	D	K	M	J	H	KV (m³/h)	Voltage parameter		Opening and closing time (Pressure 4bar)	
									Nominal voltage	Nominal current	Open(ms)	Close(ms)
DN10	G 1/4"	10	145	25	85	32	50	1.8	DC 24V	DC 1.2A	45	70
	G 3/8"											
	G 1/2"											
	G 3/4"											
DN15	G 1/2"	15	173	31	103	41	70	5.1	DC 24V	DC1.6A	60	130
	G 3/4"											
DN20	G 3/4"	20	193	35	111	46	80	7.2	DC 24V	DC 2.0A	105	150
	G 1"											
DN25	G 1"	25	212	36	121	50	90	10.7	DC 24V	DC 2.2A	150	190
	G1 1/4"											

Note: (1) Connector rectifier for (2) 2 mounting holes M5

DC Order Instruction



203 Series
Three-way Solenoid
Coaxial Valve



Technical Specification

- Control type: Direct acting
- Connection type: Thread (BSP,NPT,BSPT)
- Operating pressure: 7bar (102psi)
- Control medium: Gas
- Medium temperature: -20°C — +130°C
- Ambient temperature: -30°C — +60°C
- Body material: CF8
- Seal material: FPM
- Control type: NC
- Control power: 24V DC
- Protection: IP65
- Leakage class: DIN EN 12266 Class A

Function Principle

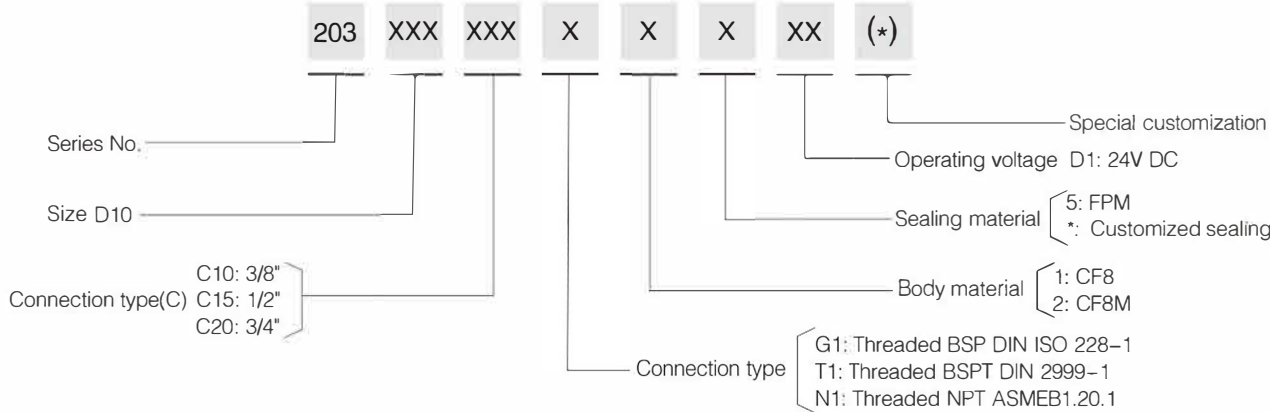
Power off: A&B port are NC, A&C port are NO.
Power on: A&B port are NO, A&C part are NC.

Main Dimension

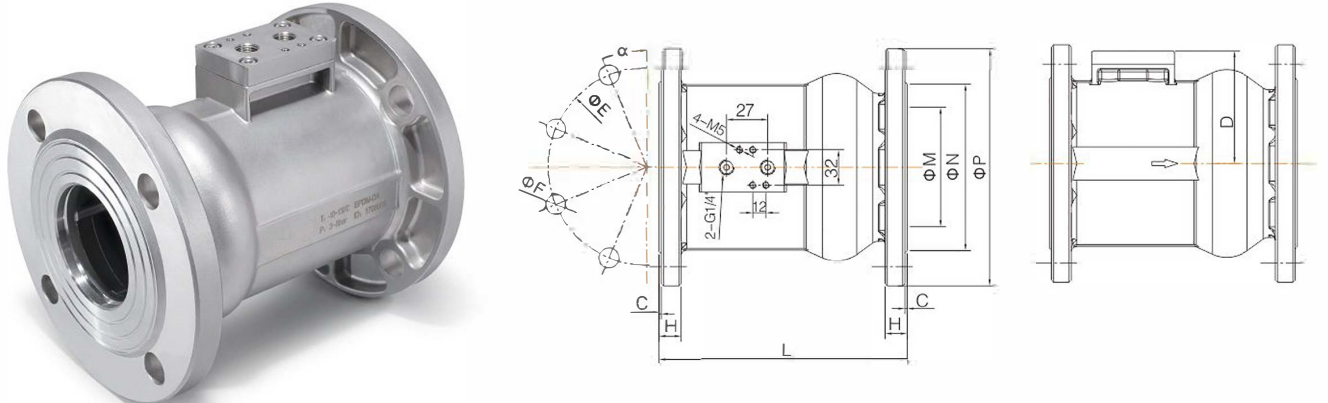
Size	Φd	C1	C2	C3	D	K	M	J1	J2	H	Nominal voltage	Nominal current
DN10	10	G 3/8"	G 3/8"	G 3/8"	166	46.5	84.5	32	27	50	24V DC	DC 1.2A
		G 1/2"	G 1/2"	G 1/2"								
		G 3/4"	G 3/4"	G 1/2"								

Note: (1) Connector rectifier for DC (2) 2 mounting holes M5

Order Instruction



204 Series
Flanged
Shuttle Valve



Technical Specification

- Operating pressure: Above seat 0-16bar (0-232psi)
Below seat 0-12bar (0-174psi)
- Control pressure: 3-5bar (43.5-72.5psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8
- Seal material: EPDM(FKM can be customized)
- Applicable medium: EPDM-Suitable for steam and hot water, unsuitable for oils, greases, fuels, etc.
FKM-Suitable for most fluid, except for steam.
- Fluid temperature: -20°C — +130°C (EPDM)
- Ambient temperature: -20°C — +80°C
- Control type: Double acting
- Connection type: Flange
(JB/T82.1-1994; DIN2543-2000)
- Leakage class: DIN EN 12266 Class A

Main Dimension

Size	D	L	ΦE	ΦF	H	C	ΦM	ΦN	ΦP	α	Flow value Kv(m³/h)	Weight (kg)
DN65	85	192	145	4-φ18	20	2	66	120	180	45°	139.3	10.0
DN80	92	212	160	8-φ18	22	2	75	135	195	22.5°	202.6	13.32
DN100	102	227	180	8-φ18	22	2	94	155	215	22.5°	288	16.30

Order Instruction

