ESG®

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.

Angle Seat Valve with Multiple Configurations Available

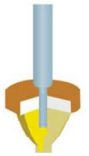
Control Accessory

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

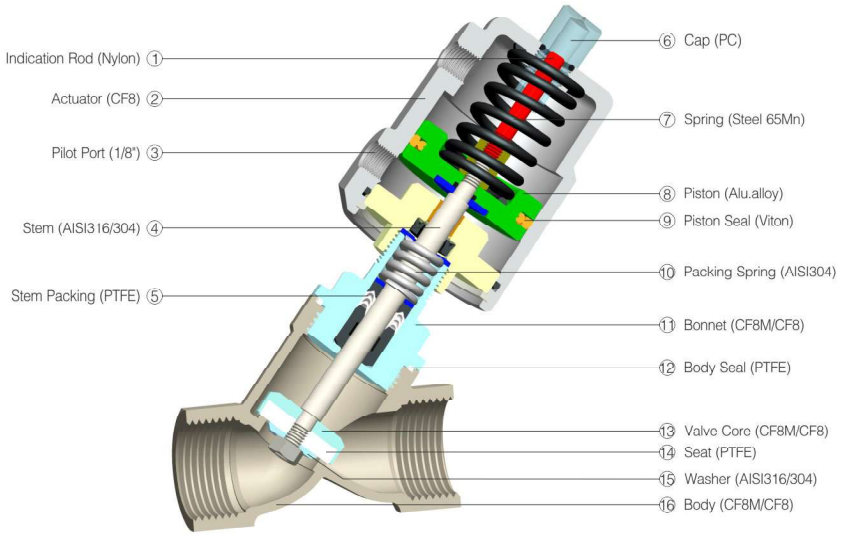
ESG®

Y-type Angle Seat Valve

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

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 600mm²/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.

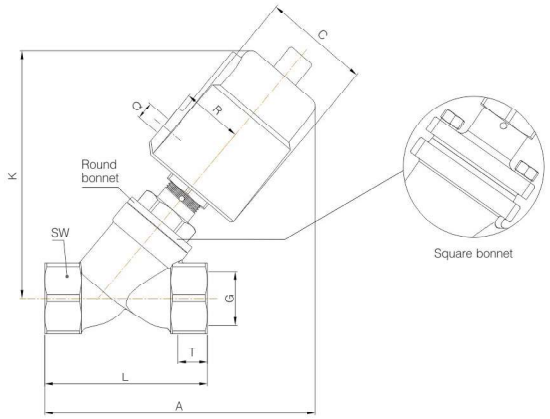
Function Principle

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.

Angle seat valve

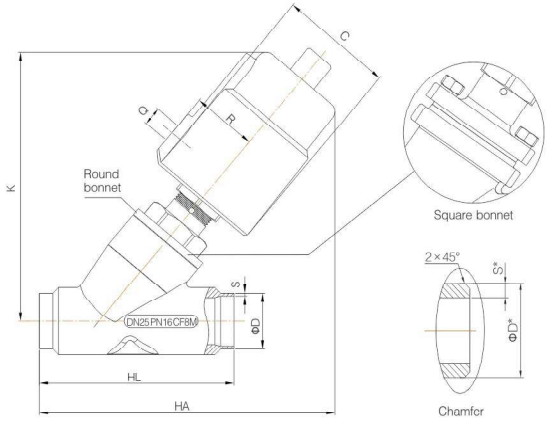
ESG®

Y-type Angle Seat Valve



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		
	90	1/8"	106	55	223			235	116	50
DN40	63	1/8"	75	41	175	1 1/2"	21	190	116	56
	90	1/8"	106	55	223			235		
DN50	63	1/0"	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



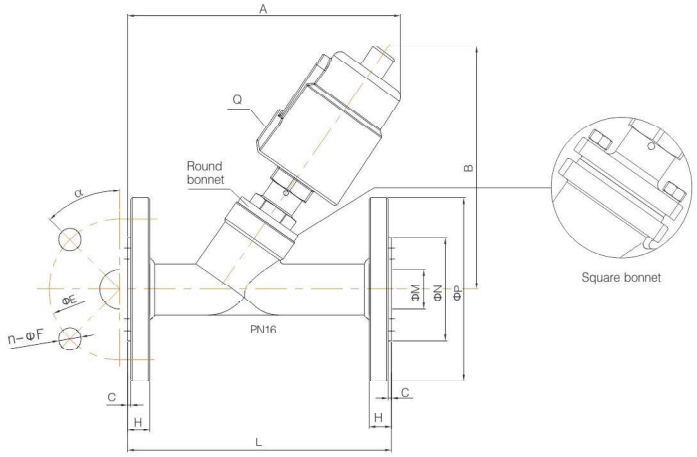
Main Dimension (Welded Connection)

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)

ESG®

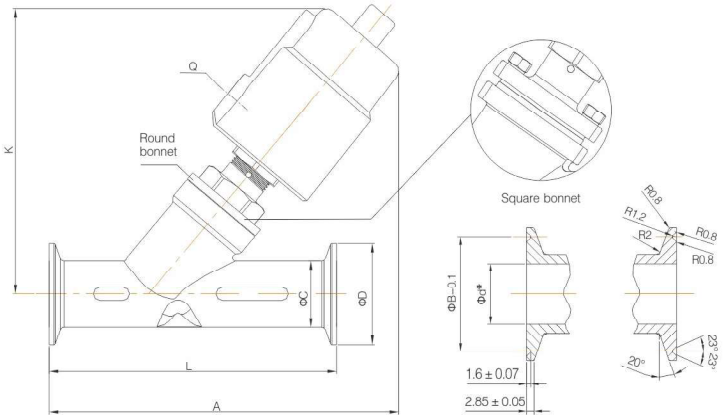
Y-type Angle Seat Valve



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	16	45	95	45°
	50		145	140									
DN20	50	1/8"	165	140	150	2	14	75	4-14	19	56	105	45°
DN25	50	1/8"	170	145	160	2	14	85	4-14	26	65	115	45°
	63		190	175									
DN32	63	1/8"	190	188	180	2	16	100	4-18	31	78	140	45°
	90		230	235									
DN40	63	1/8"	206	190	200	3	16	110	4-18	38	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°



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

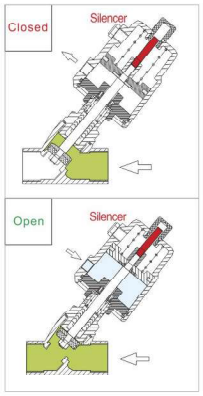
Note: * designates design dimension (the actual dimension may vary)

ESG®

Y-type Angle Seat Valve

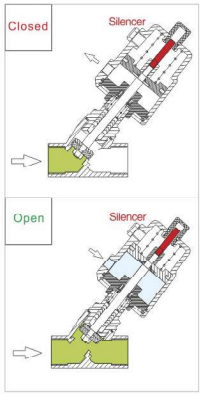
Single Acting, Normally Closed (NC)–Enter Above Seat

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



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

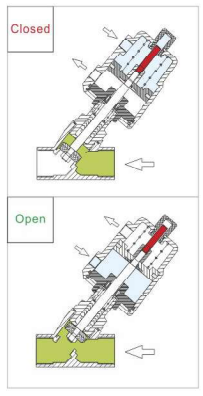
Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	9.5	1.8	28–A	0–1.0	≥0.5
		13	2.2	40–A	0–1.3	≥0.4
				50–A	0–1.4	≥0.45
DN10	G3/8"	9.5	2.2	28–A	0–1.0	≥0.5
		13	3.9	40–A	0–1.3	≥0.4
				50–A	0–1.4	≥0.45
DN15	G1/2"	9.5	2.2	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

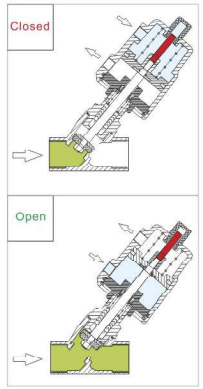
Double Acting, Normally Closed (NC)–Enter Above Seat

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



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



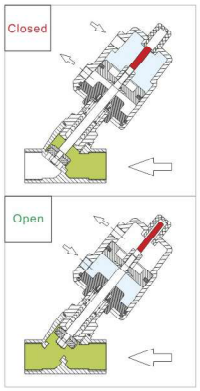
Note: In order to ensure product performance, it is recommended to select product according to the highest value in the <= 90% pressure range

ESG®

Y-type Angle Seat Valve

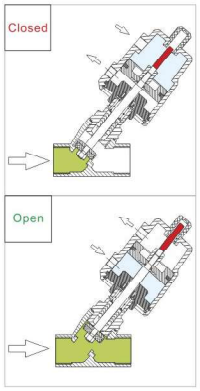
Double Acting Without Spring–Enter Above Seat

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
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



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

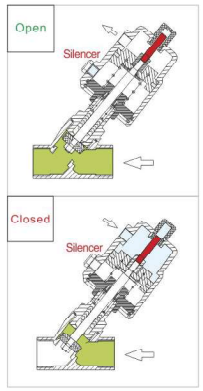
Size	Thread end	Orifice (mm)	Flow value Kv(m³/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.3–0.4
				50	0–1.6	0.3–0.4
DN10	G3/8"	13	3.9	40	0–1.6	0.3–0.4
				50	0–1.6	0.3–0.4
DN15	G1/2"	13	4.3	40	0–1.6	0.3–0.4
				50	0–1.6	0.3–0.4
DN20	G3/4"	18	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

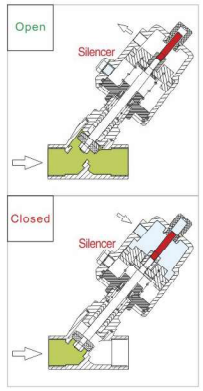
Normally Open(NO)–Enter Above Seat

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
				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(m³/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.3–0.5
				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

ESG®

Y-type Angle Seat Valve

Angle Seat Valve with Proximity Switch

Angle Seat Valve with Solenoid Valve

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

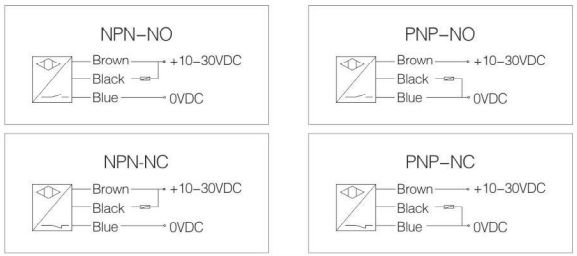
Solenoid Valve

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



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

ESG®

Y-type Angle Seat Valve

Order Instruction

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

- Series No. 100
- Actuator size XXX: A40、A50、A63、A90、125
- Control type X: 0: Normally open; 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size XXX: D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- 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
- Actuator material X: (AL only applicable for actuators bigger than 125) 1: CF8; 8: AL
- Spring selection X: (A by default) 0: No spring; A: Spring A; B: Spring B; C: Spring C; D: Spring D
- Sealing material X: 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 X···X

Proximity switch: J X XX (*)

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

Solenoid valve: D X XX (*)

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

Manual override: S (*)

(Except the 125 cylinder)

- (*): *: Special customization

Position indicator: 0S0 XXX XX XX (*)

- 0S0: 0S2: Mechanical type multiple output 4-wire PNP / 4-wire NPN / 3-wire PNP; 0S3: Contactless type/multiple output
- Connection type XXX: G14: G1/4; M26: M26
- Max stroke (mm) XX: 35: 35mm; 30: 30mm
- Operating voltage XX: D3: 12–36V DC; D4: 12–30V DC
- (*): *: Special customization

101 Series Pneumatic Angle Seat Valve

Technical Specification

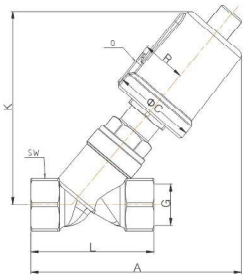
- Operating pressure: 0–10bar (0–145psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Cylinder material: CF8
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Applicable medium: Water, Oil, Air, Liquid, Organic solvent, Acid and lye
- Medium temperature: −10℃ — +180℃
- Ambient temperature: −10℃ — +80℃
- Control type: Single acting normally closed, Double acting normally closed, Double acting without spring
- Connection type: Threaded, Welded, Tri-clamp, Flanged
- Leakage class: DIN EN 12266 Class A

Advantages

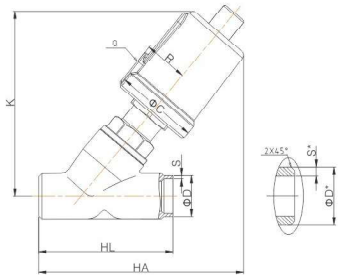
1. Lightweight appearance, compact structure, and excellent performance.
2. Y-shaped structure design of the valve body features high flow rate, low flow resistance, and rapid action response.
3. Stainless steel actuator, better performance for harsh environments and can rotate 360° .

ESG®

Y-type Angle Seat Valve



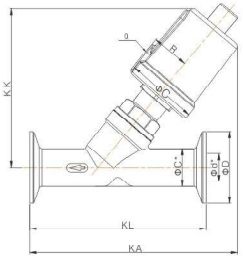
Threaded connection



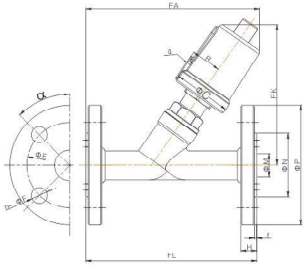
Welded connection

Main Dimension

Size	Actuator (mm)	Q	ΦC	R	K	Threaded connection				Welded connection							
												Chamfer		DIN11850–2		DIN11850–3	
						G	A	L	SW	HA	HL	ΦD*	S*	ΦD	S	ΦD	S
DN8	28	1/8"	42	21	105	1/4"	115	68	27	–	–	–	–	–	–	–	–
DN10	28	1/8"	42	21	105	3/8"	115	68	27	–	–	–	–	–	–	–	–
DN15	28	1/8"	42	21	105	1/2"	115	68	27	105	70	22	3.5	19	1.5	20	2
DN20	40	1/8"	50.5	27	130	3/4"	135	75	32	135	82	29	5	23	1.5	24	2
DN25	40	1/8"	50.5	27	135	1"	145	90	40	145	100	35	5	29	1.5	30	2
DN32	50	1/8"	60	33	165	1 1/4"	180	116	50	175	125	39	4	35	1.5	36	2
DN40	50	1/8"	60	33	170	1 1/2"	180	116	56	180	130	45	4.5	41	1.5	42	2
DN50	50	1/8"	60	33	175	2"	195	138	69	195	155	57	4	53	1.5	54	2



Tri–clamp connection



Flange connection

Main Dimension

Size	Tri–clamp connection (Chuck standard ISO 2852)						Flange connection (Flange standard JB/T 82.1)										
	KK	KA	KL	ΦC*	Φd*	D	FK	FA	FL	f	H	E	N–F	M	N	P	α
DN15	105	120	80	20.5	15	34	110	130	130	2	14	65	4–14	16	45	95	45°
DN20	135	145	130	25	19	50.5	135	155	150	2	14	75	4–14	19	56	105	45°
DN25	135	155	130	33	27	50.5	140	160	160	2	14	85	4–14	26	65	115	45°
DN32	160	185	146	37	31	50.5	175	180	180	2	16	100	4–18	31	78	140	45°
DN40	165	200	160	40	34	64	180	200	200	3	16	110	4–18	38	84	150	45°
DN50	180	210	175	53	45	64	185	230	230	3	16	125	4–18	54	100	165	45°

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

101 Series Pressure Parameter

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"	13	1.7	28	0–1.0	0.5–0.7
DN10	G3/8"	13	3.6	28	0–1.0	0.5–0.7
DN15	G1/2"	13	4.1	28	0–1.0	0.5–0.7
DN20	G3/4"	18	7.1	40	0–1.0	0.4–0.6
DN25	G1"	24	11.9	40	0–1.0	0.4–0.65
DN32	G1 1/4"	31	24.8	50	0–1.0	0.35–0.7
DN40	G1 1/2"	35	28.7	50	0–0.7	0.35–0.7
DN50	G2"	45	44.3	50	0–0.45	0.35–0.7

Single Acting, Normally Closed (NC) –Enter Below 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	1.7	28	0–1.0	⩾0.5
DN10	G3/8"	13	3.6	28	0–1.0	⩾0.5
DN15	G1/2"	13	4.1	28	0–1.0	⩾0.5
DN20	G3/4"	18	7.1	40	0–0.8	⩾0.4
DN25	G1"	24	11.9	40	0–0.3	⩾0.4
DN32	G1 1/4"	31	24.8	50	0–0.5	⩾0.5
DN40	G1 1/2"	35	28.7	50	0–0.4	⩾0.5
DN50	G2"	45	44.3	50	0–0.15	⩾0.5

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	1.7	28	0–1.0	0.5–0.7
DN10	G3/8"	13	3.6	28	0–1.0	0.5–0.7
DN15	G1/2"	13	4.1	28	0–1.0	0.5–0.7
DN20	G3/4"	18	7.1	40	0–1.0	0.4–0.6
DN25	G1"	24	11.9	40	0–1.0	0.4–0.65
DN32	G1 1/4"	31	24.8	50	0–1.0	0.35–0.7
DN40	G1 1/2"	35	28.7	50	0–0.7	0.35–0.7
DN50	G2"	45	44.3	50	0–0.45	0.35–0.7

Double Acting, Normally Closed (NC) –Enter Below 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	1.7	28	0–1.0	0.5–0.7
DN10	G3/8"	13	3.6	28	0–1.0	0.5–0.7
DN15	G1/2"	13	4.1	28	0–1.0	0.5–0.7
DN20	G3/4"	18	7.1	40	0–1.0	0.4–0.5
DN25	G1"	24	11.9	40	0–1.0	0.4–0.5
DN32	G1 1/4"	31	24.8	50	0–1.0	0.35–0.6
DN40	G1 1/2"	35	28.7	50	0–1.0	0.35–0.6
DN50	G2"	45	44.3	50	0–0.45	0.35–0.7

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	1.7	28	0–1.0	0.3–0.6
DN10	G3/8"	13	3.6	28	0–1.0	0.3–0.6
DN15	G1/2"	13	4.1	28	0–1.0	0.3–0.6
DN20	G3/4"	18	7.1	40	0–1.0	0.3–0.4
DN25	G1"	24	11.9	40	0–1.0	0.3–0.5
DN32	G1 1/4"	31	24.8	50	0–1.0	0.3–0.5
DN40	G1 1/2"	35	28.7	50	0–1.0	0.3–0.6
DN50	G2"	45	44.3	50	0–0.65	0.3–0.7

Double Acting Without Spring –Enter Below 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	1.7	28	0–1.0	0.3–0.6
DN10	G3/8"	13	3.6	28	0–1.0	0.3–0.6
DN15	G1/2"	13	4.1	28	0–1.0	0.3–0.6
DN20	G3/4"	18	7.1	40	0–1.0	0.3–0.5
DN25	G1"	24	11.9	40	0–1.0	0.3–0.7
DN32	G1 1/4"	31	24.8	50	0–1.0	0.3–0.6
DN40	G1 1/2"	35	28.7	50	0–1.0	0.3–0.7
DN50	G2"	45	44.3	50	0–0.35	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

ESG®

Y-type Angle Seat Valve

Order Instruction

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

- Series No.: 101
- Actuator size: A28、A40、A50、
- Control type: 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size: D08、D10、D15、D20、D25、D32、D40、D50
- 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; I17: Welded DIN11850-2/DIN11866 A; I18: Welded DIN11850-3; I19: Welded chamfer; I1*: Welded customized dimension; K7: Tri-clamp ISO2852; K*: Tri-clamp customized dimension; F2: Flange JB/T82 (DIN2543/DIN2576/EN1092-1/I IG20592)
- Body Material: 1: CF8; 2. CF8M; 6. CF3M
- Actuator material 1: CF8
- Spring selection: 0: No spring; A: Spring A; *: Customized spring
- Sealing material: 2: PTFE Normal temperature; 4: Graphite Normal temperature
- Customization: E: Complying with EC1935; *: Special customization
- Angle seat valve accessory: X···X

J X XX (*)

- Proximity switch: J
- 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: D
- Control option: A: 3/2; B: 5/2
- Operating voltage: D1: 24V DC; A1: 220V AC
- *: Special customization

S (*)

- Manual override: S
- *: Special customization

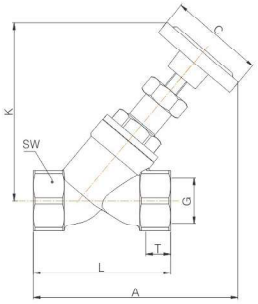
0S0 XXX XX XX (*)

- 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

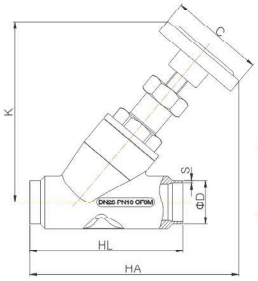
All the actuators except 28mm can be customized with accessary.

107 Series Threaded Manual Angle Seat Valve

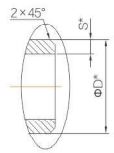
107 Series Welded Manual Angle Seat Valve



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		

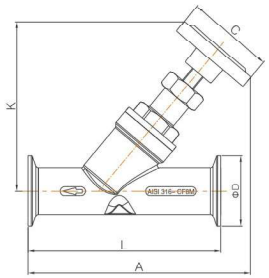
Note: * designates design dimension (the actual dimension may vary)

ESG®

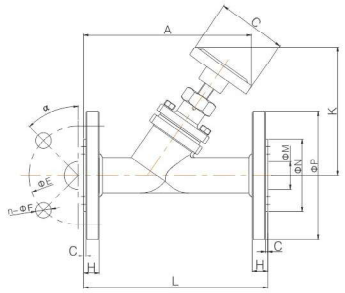
Y-type Angle Seat Valve

107 Series
Tri-clamp Manual
Angle Seat Valve

107 Series
Flanged Manual
Angle Seat Valve



Tri-clamp connection



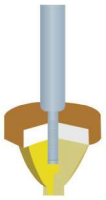
Flange connection

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°

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
- 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
- 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

Angle seat valve

ESG®

Y-type Angle Seat Valve

120 Series Threaded Pneumatic Angle Seat Valve

120 Series Welded Pneumatic Angle Seat Valve

120 Series Tri-clamp Pneumatic Angle Seat Valve

120 Series Flanged 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° .

Order Instruction

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

- Series No
- 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; F2: Flange JB/T82 (DIN2543/DIN2576/EN1092–1/HG20592)
- Angle seat valve accessory
- Customization: E: Complying with EC1935; *: Special customization
- Sealing material: 2: PTFE Normal temperature; 3: PTFE High temperature; *: Customized sealing
- Spring selection (A by default): 0: No spring; A: Spring A; B: Spring B; C: Spring C; D: Spring D; *: Customized spring
- Actuator material (AL only applicable for actuators bigger than 125): 1: CF8; 8: AL
- Body Material: 1: CF8; 2: CF8M; 6: CF3M

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	(*)

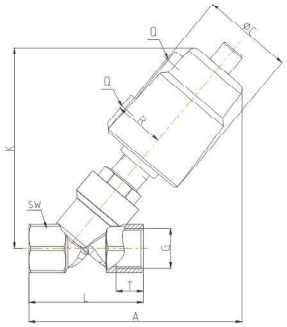
- Position indicator: 0S2: Mechanical type multiple output 4–wire PNP / 4–wire NPN / 3–wire PNP; 0S3: Contactless type/multiple output
- Connection type: G14: G1/4; M26: M26
- Max stroke (mm): 35: 35mm; 30: 30mm
- Operating voltage: D3: 12–36V DC; D4: 12–30V DC
- *: Special customization

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

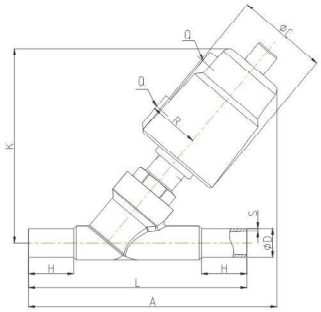
Angle seat valve

ESG®

Y-type Angle Seat Valve



Threaded Connection



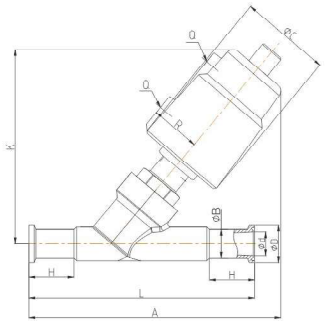
Welded Connection

Main Dimension (Threaded Connection)

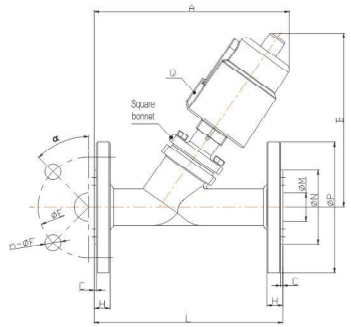
Size	Actuator (mm)	Q	ΦC	R	K	A	Kv (m^3/h)	G	T	L	SW
DN8	28	1/8"	42	21	110	117	1.8	1/4"	12	65	27
	40	1/8"	50.5	27	125	131	2.2				
	50	1/8"	60	33	139	143					
DN10	28	1/8"	42	20	110	117	2	3/8"	14	65	27
	40	1/8"	50.5	27	125	131	3.9				
	50	1/8"	60	33	139	143					
DN15	28	1/8"	42	20	110	117	2.2	1/2"	16	65	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					

Main Dimension (Welded Connection)

Size	Actuator (mm)	Q	ΦC	R	K	A	Kv (m^3/h)	L	H	ASME BPE ΦD	ASME BPE S
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



Tri-clamp Connection



Flange connection

Main Dimension (Tri-clamp Connection)

Size	Actuator (mm)	Q	ΦC	R	K	A	Kv (m^3/h)	L	ASME BPE ΦD	ASME BPE ΦB	ASME BPE Φd	ASME BPE 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

Main Dimension (Flange Connection)

Size	Actuator (mm)	Q	A	B	Kv (m^3/h)	L	C	H	ΦE	n-ΦF	ΦM	ΦN	ΦP	α
DN15 Square bonnet	40	1/8"	135	125	4.3	130	2	14	65	4-14	16	45	95	45°
	50		145	140										
DN20 Square bonnet	50	1/8"	165	140	7.6	150	2	14	75	4-14	19	58	105	45°
DN25 Square bonnet	50	1/8"	170	145	15.8	160	2	14	85	4-14	26	65	115	45°
	63		190	175										
DN32 Square bonnet	63	1/8"	190	188	26.0	180	2	16	100	4-18	31	78	140	45°
	90		230	235										
DN40 Square bonnet	63	1/8"	206	190	32.0	200	3	16	110	4-18	38	84	150	45°
	90		250	240										
DN50 Square bonnet	63	1/8"	235	195	52.0	230	3	16	125	4-18	54	100	165	45°
	90		277	245										
	125AL	1/4"	330	210										

Flange specification: JB/T82.1(DIN2543/DIN2576/EN1092-1/HG20592); ISO/DIN/JIS customization available

ESG®

Y-type Angle Seat Valve

121 Series
Angle Diaphragm Valve

Technical Specification

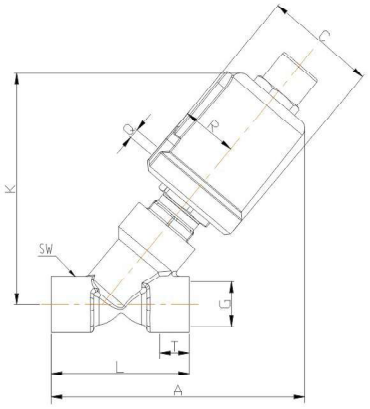
- Operating pressure: 0–10bar (0–145psi)
- Control pressure: 4–8bar (58–116psi)
- Control fluid: Filtered compressed air or neutral gas
- Body material: CF8/CF8M/CF3M and other special materials
- Seal material: PTFE
- Actuator material: CF8
- Actuator size: 40mm, 50mm, 63mm, 90mm
- Applicable fluid: 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

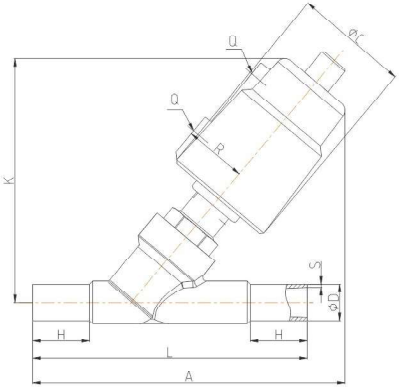
1. Diaphragm is used to isolate the medium, avoiding valve stem from seizing due to medium crystallization or being viscous with particles.
2. Stainless steel actuator, better performance for harsh environments and can rotate 360° .

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.



Threaded Connection



Welded Connection

Main Dimension (Threaded Connection)

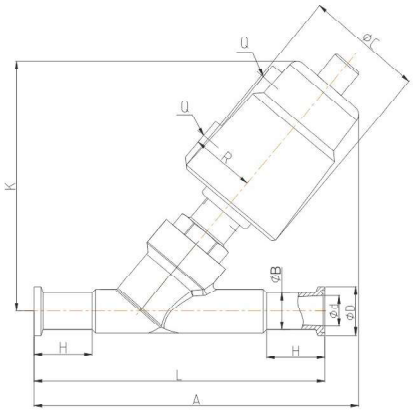
Size	Actuator (mm)	Q	C	R	K	A	G	T	L	SW
DN15	40	1/8"	50.5	27	115	125	1/2"	16	65	27
DN20	50	1/8"	60	33	130	140	3/4"	18	75	32
DN25	50	1/8"	60	33	140	150	1"	20	90	40
	63	1/8"	75	41	155	165				
DN32	63	1/8"	75	41	170	185	1 1/4"	22	110	50
	90	1/8"	106	55	215	225				
DN40	63	1/8"	75	41	180	195	1 1/2"	24	120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

ESG®

Y-type Angle Seat Valve



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

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

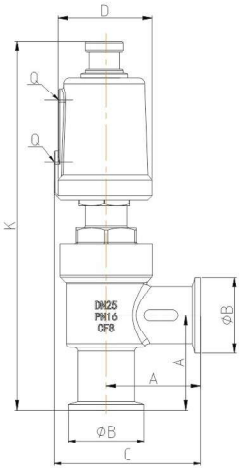
S (*)

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

ESG®

Y-type 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 (I le): 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

Order Instruction

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

- Series No. 122
- Actuator size XXX: A40、A50、A90、125
- Control type X: 1: Single acting normally closed; 2: Double acting normally closed; 3: Double acting without spring
- Size XXX: D16、D25、D40、D50、D63、D80
- Installation direction X: Y: Above seat; W: Below seat
- Connection type XX: KF: KF vacuum flange DIN28403
- Body Material X: 1: CF8; 2: CF8M; 6: CF3M
- Actuator material (AL only applicable for actuators bigger than 125) X: 1: CF8; 8: AL
- Spring selection X: 0: No spring; A: Spring A; *: Customized spring
- Sealing material X: 4: EPDM; 5: FPM
- (*): *: Special customization
- X...X: Angle seat valve accessory

J X XX (*)

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

D X XX (*)

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

S (*)

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

0SX XXX XX XX (*)

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

ESG®

Y-type Angle Seat Valve

127 Series
Threaded Manual
Angle Seat Valve

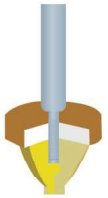
127 Series
Welded Manual
Angle Seat Valve

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

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

127 Series
Tri-clamp Manual
Angle Seat Valve

127 Series
Flanged Manual
Angle Seat Valve

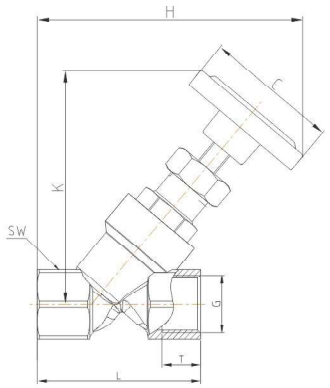
Order Instruction

127	XXX	X	XX	X	X	(*)

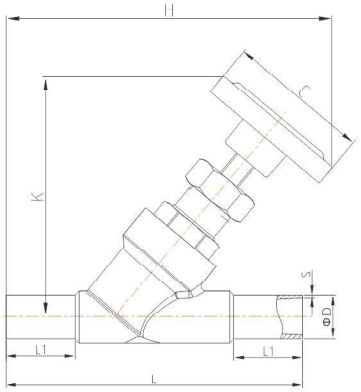
- Series No.: 127
- Series: D08、D10、D15、D20、D25、D32、D40、D50、D65
- Installation direction: Y: Above seat; W: Below seat
- Connection type:
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 2999–1/ISO7–1
  - N1: Threaded NPT ASME B1.20.1
  - H1: Welded ASME–BPE
  - K1: Tri–clamp ASME–BPE
  -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

ESG®

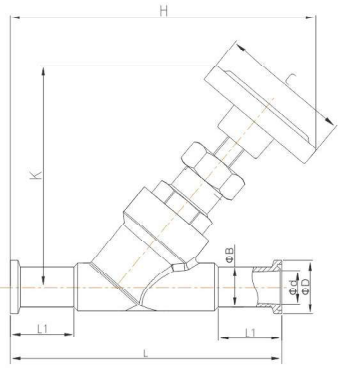
Y-type Angle Seat Valve



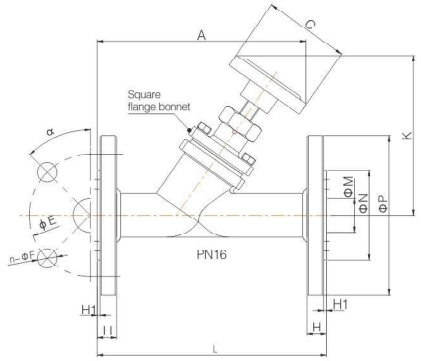
Threaded Connection



Welded Connection



Tri-clamp Connection



Flange 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
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

Main Dimension (Flanged Connection)

Size	C	K	A	L	H1	H	ΦE	n-ΦF	ΦM	ΦN	ΦP	α
DN15 Square bonnet	62	116	136	130	2	14	65	4-14	16	45	95	45°
DN20 Square bonnet	62	122	157	150	2	14	75	4-14	19	56	105	45°
DN25 Square bonnet	62	127	157	160	2	14	85	4-14	26	65	115	45°
DN32 Square bonnet	62	147	162	180	2	16	100	4-18	31	78	140	45°
DN40 Square bonnet	62	149	181	200	3	16	110	4-18	38	84	150	45°
DN50 Square bonnet	62	156	210	230	3	16	125	4-18	54	100	165	45°

Angle seat valve

ESG®

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: DIN EN 12266 Class A

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.

Order Instruction

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

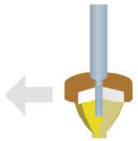
- Series No.
- Actuator: A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D04、D06、D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- Installation direction: Y: Above seat; W: Below seat
- Connection type:
  G1: Threaded BSP DIN ISO 228-1
  T1: Threaded BSPT DIN 2999-1/ISO7-1
  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
- 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; 4: Graphite Normal temperature; 5: Graphite 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

Angle seat valve

ESG®

Proportional Control Angle Seat Valve

105 Series
Pneumatic Proportional
Control Angle Seat Valve

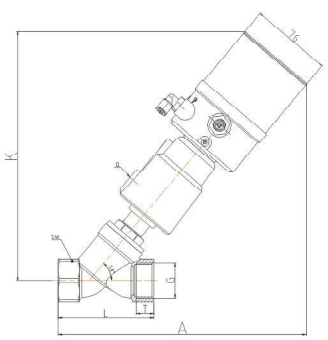


Adjustable seat

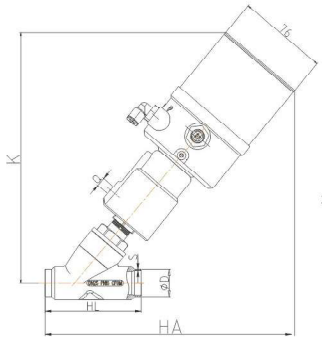
Order Instruction

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

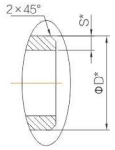
- Series No.
- Actuator: A50、A63、A90、125
- Control type: 0: Normally open; 1: Single acting normally closed
- Size: D04、D06、D08、D10、D15、D20、D25、D32、D40、D50、D65、D80、100
- Installation direction: Y: Above seat; W: Below seat
- Connection type:
  - G1: Threaded BSP DIN ISO 228–1
  - T1: Threaded BSPT DIN 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
- 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; 4: Graphite Normal temperature; 5: Graphite 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



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

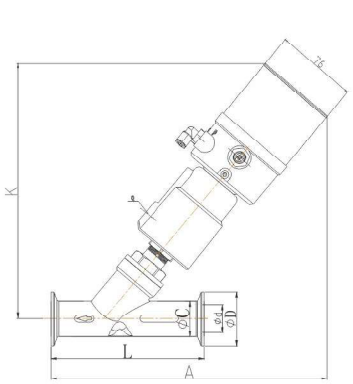
105 Series Main Dimension (Welded Connection)

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	—	—

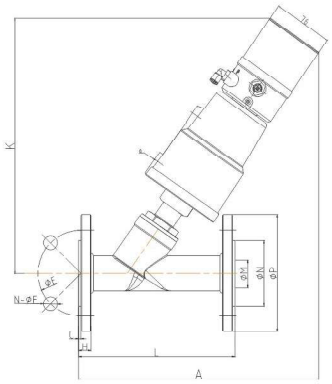
Note: * Designates design dimension (the actual dimension may vary)

ESG®

Proportional Control Angle Seat Valve



Tri-clamp connection



Flange connection

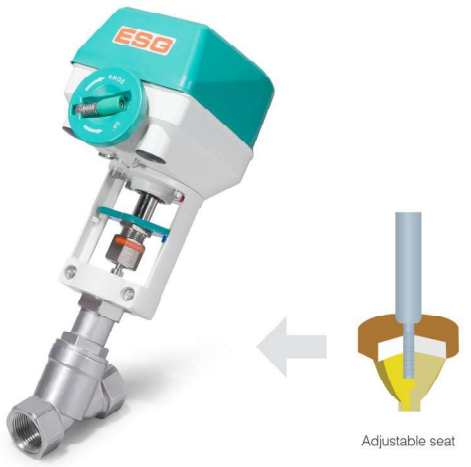
105 Series Main Dimension (Tri-clamp Connection)

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

106 Series
Electrical Proportional
Control Angle Seat Valve



Adjustable seat

Technical Specification

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

Advantages

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

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.

ESG®

Proportional Control Angle Seat Valve

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
DN40	35	10P	0–0.3	0–0.9
		20P	0–1.4	0–1.6
		35P	0–1.6	0–1.6
DN50	45	10P	–	0–0.5
		20P	0–0.6	0–1.1
		35P	0–1.5	0–1.6
DN65	61	20P	–	0–0.6
		35P	0–0.7	0–1.1
DN80	80	20P	–	0–0.3
		35P	0–0.3	0–0.6
DN100	90	35P	–	0–0.4

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

Order Instruction

106 XXX XX XXX X XX X X (*)

- Series No.: 106
- Electrical positioner option: P10: 10P; P20: 20P; P35: 35P
- Operating voltage: A1: 220V AC; A2: 24V AC
- Size: 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
- 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

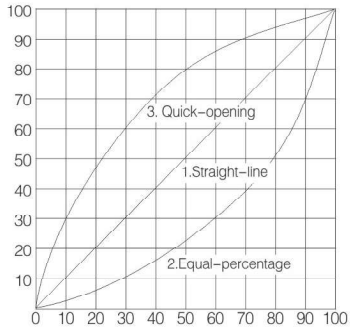
124 Series
Two-piece Pneumatic
Proportional Control
Angle Seat Valve

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.



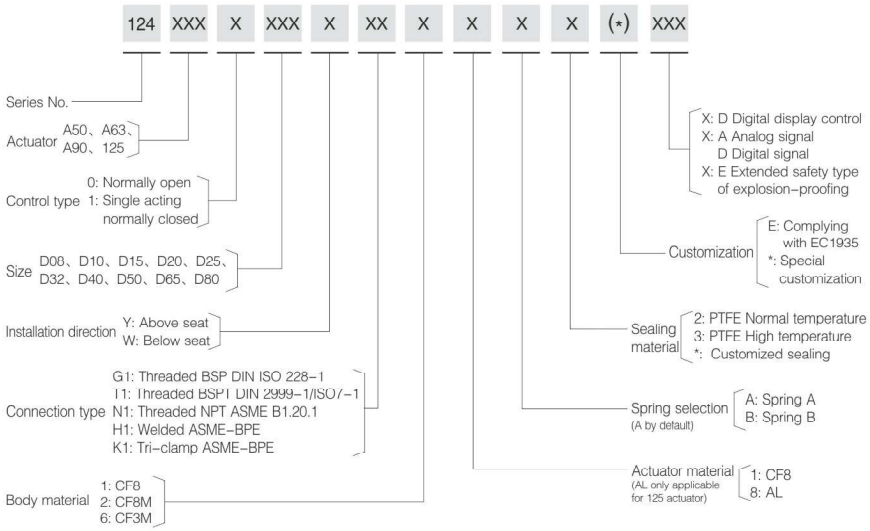
Attention

- 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.

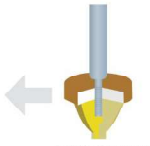
ESG®

Proportional Control Angle Seat Valve

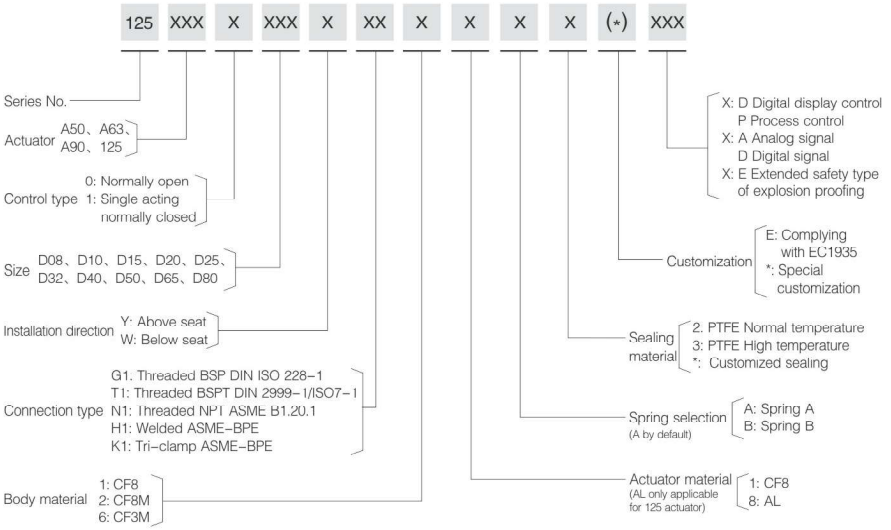
Order Instruction



125 Series Pneumatic Proportional Control Angle Seat Valve

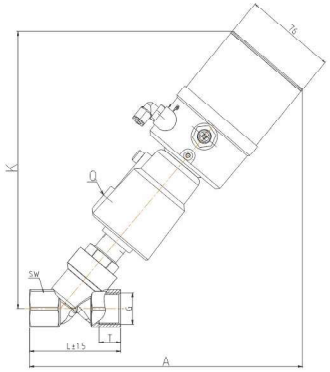


Order Instruction

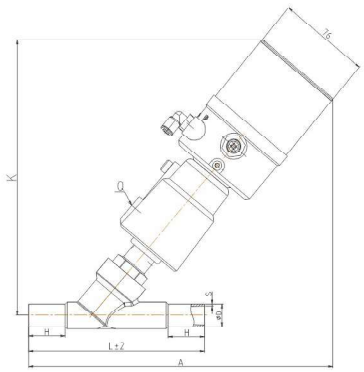


ESG®

Proportional Control Angle Seat Valve



125 Series Threaded connection



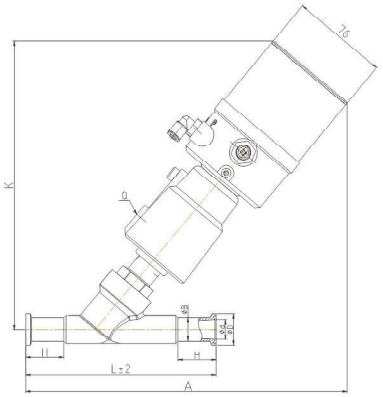
125 Series Welded connection

125 Series Main Dimension (Threaded connection)

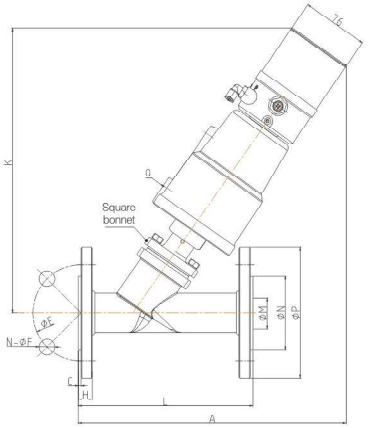
Size	Actuator (mm)	Q	K	A	L	G	SW	T
DN8	50	1/8"	229	224	65	1/4"	27	12
	63	1/8"	244	236				
DN10	50	1/8"	229	224	65	3/8"	27	14
	63	1/8"	244	236				
DN15	50	1/8"	229	224	65	1/2"	27	16
	63	1/8"	244	236				
DN20	50	1/8"	232	229	75	3/4"	32	18
	63	1/8"	246	239				
DN25	50	1/8"	235	235	90	1"	40	20
	63	1/8"	259	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 Tri-clamp connection



125 Series Flanged connection

125 Series Main Dimension (Tri-clamp connection)

Size	Actuator (mm)	Q	K	A	L	ASME BPE			
						D	B	d	H
DN15	50	1/0"	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

125 Series Main Dimension (Flanged 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"	327	307	200	150	84	38	16	3	110	4-18
DN50	90	1/8"	334	336	230	165	100	54	16	3	125	4-18
	125AL	1/4"	394	385								

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	3.3	50A	0–1.4	≥0.45
			63A	0–1.6	≥0.50
			63B	0–1.6	≥0.30
DN15	13	3.3	50A	0–1.4	≥0.45
			63A	0–1.6	≥0.50
			63B	0–1.6	≥0.30
DN20	18	6.7	50A	0–1.4	≥0.45
			63A	0–1.6	≥0.50
			63B	0–1.6	≥0.30
DN25	24	11.4	50A	0–0.8	≥0.45
			63A	0–1.3	≥0.50
			63B	0–0.7	≥0.30
DN32	31	18.3	63A	0–0.6	≥0.50
			90B	0–1.3	≥0.45
DN40	35	24.5	63A	0–0.5	≥0.50
			90A	0–1.6	≥0.60
			90B	0–1.1	≥0.45
DN50	45	40.4	90A	0–1.0	≥0.60
			90B	0–0.7	≥0.45
			125A	0–1.6	≥0.55
			125B	0–1.1	≥0.45
DN65	61	46.8	90A	0–0.5	≥0.60
			125A	0–0.9	≥0.55
			125B	0–0.6	≥0.45
DN80	80	84.0	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	3.3	50A	0–1.6	≥0.45
			63B	0–1.6	≥0.30
DN20	18	6.7	50A	0–1.6	0.45–0.55
			63B	0–1.6	0.30–0.40
DN25	24	11.4	63B	0–1.6	0.30–0.45
DN32	31	18.3	63B	0–1.6	0.30–0.60
			90B	0–1.6	≥0.45
DN40	35	24.5	63B	0–1.6	0.30–0.70
			90B	0–1.6	0.45–0.50
DN50	45	40.4	90B	0–1.6	0.45–0.70
			125A	0–1.6	0.30–0.35
DN65	61	46.8	90B	0–0.9	0.45–0.70
			125A	0–1.6	0.30–0.55
DN80	80	84.0	125A	0–1.2	0.30–0.70
DN100	90	95.0	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

Angle seat valve

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 proportional angle seat valve

Size	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
DN4	0.02	0.04	0.07	0.11	0.14	0.19	0.26	0.35	0.43	0.52
DN6	0.04	0.08	0.14	0.22	0.33	0.43	0.57	0.75	0.93	1.1
DN8	0.53	0.83	1.14	1.53	1.91	2.2	2.2	2.2	2.2	2.2
DN10	0.53	0.83	1.14	1.53	1.91	2.26	2.58	2.84	3.05	3.3
DN15	0.53	0.83	1.14	1.53	1.91	2.26	2.58	2.84	3.05	3.3
DN20	1.48	2	2.57	3.27	4.16	5.06	5.65	6.08	6.43	6.7
DN25	1.37	2.98	4.39	5.94	7.14	8.27	9.03	9.98	10.82	11.4
DN32	3.79	6.74	9.07	11.17	12.12	13.36	15.35	16.37	17.63	18.3
DN40	3.78	6.85	9.39	12.44	15.4	17.46	20.55	22.02	23.54	24.5
DN50	8.64	15.49	21.67	27.02	29.98	32.93	35.45	37.38	39.52	40.4
DN65	7.53	11.34	15.31	17.83	19.4	21.84	27.3	33.4	40.54	46.8
DN80	9.84	11.18	16.53	22.66	29.82	35.73	48.37	60.21	70.69	84
DN100	12.54	14.56	25.32	36.75	45.6	54.38	62.5	72.8	84.23	95

ESG®

Proportional Control Angle Seat Valve

135 Series
Micro Flow Control Valve

Technical Specification

- Operating pressure: 0–10bar (0–145psi)
- Control pressure: 3–7bar (43.5–102psi)
- 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).

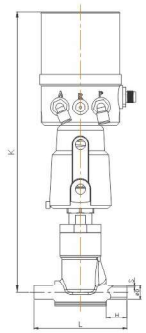
Advantages

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

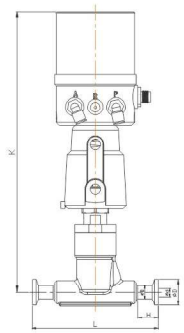
Order Instruction

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

- Series No: 135
- 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; 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	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
BPE–DN1.5	0.011	0.021	0.032	0.043	0.054	0.064	0.073	0.082	0.085	0.09
BPE–DN3	0.025	0.059	0.1	0.13	0.16	0.19	0.21	0.23	0.24	0.26
BPE–DN6	0.03	0.075	0.156	0.247	0.332	0.442	0.53	0.63	0.726	0.8
BPE–DN8	0.05	0.15	0.26	0.39	0.53	0.73	0.98	1.27	1.42	1.43
BPE–DN10	0.1	0.26	0.42	0.61	0.82	1.08	1.45	1.8	2.03	2.16