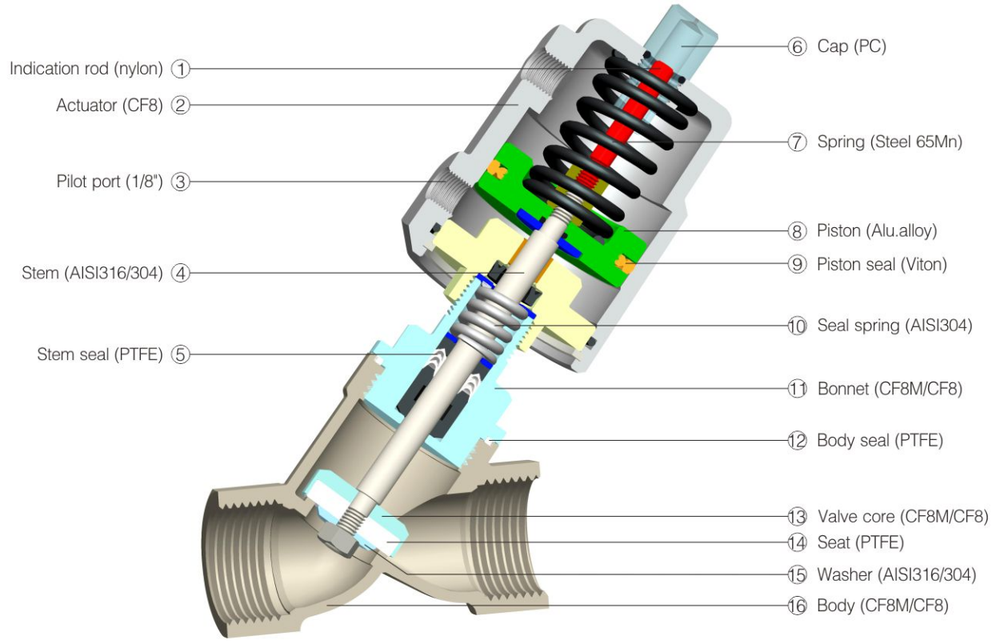
Y-type Angle Seat Valve

100 Series
Threaded Angle
Seat Valve

100 Series
Welded Angle
Seat Valve

100 Series
Tri-clamp Angle
Seat Valve



Angle seat valve

ESG®

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.

Applications

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

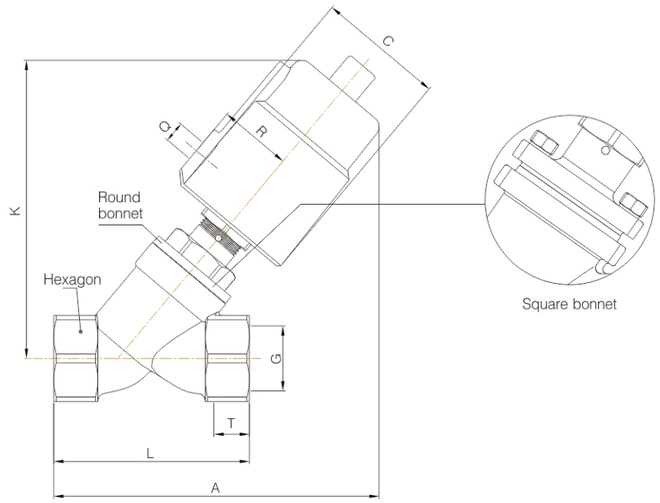
Advantages

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

Technical Specification

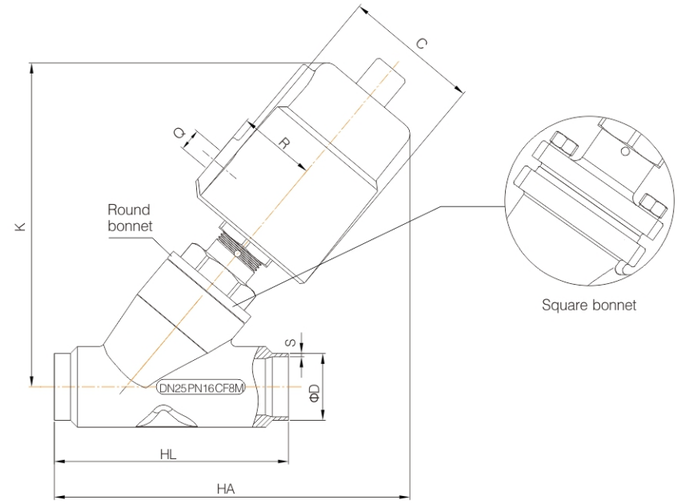
- Operating pressure: 0–16bar (0–232psi)
- Control pressure: 3–8bar (43.5–116psi)
- Control fluid: Neutral gas, Air
- Body material: CF8M/CF8
- Seal material: PTFE
- Actuator material: CF8 (40mm–90mm Actuator)、
  AL (90mm–125mm Actuator)
- Actuator size: 40mm, 50mm, 63mm, 90mm, 125mm
- Applicable fluid: Water, Alcohol, Oil, Fuel, Steam, Neutral gas or Liquid, Organic solvent, Acid and lye
- Fluid viscosity: Max 600mm^2/s
- Fluid temperature: –10℃ — +180℃ (PTFE normal temperature)
  +25℃ — +220℃ (PTFE high temperature)
- Ambient temperature: –10℃ — +80℃
- Control type: Normally closed, Normally open, Double acting
- Connection type: Threaded (BSP, BSPT, NPT),
  Welded, Flanged, Tri–clamp
- Leakage class: EN 12266 Class A

Y-type Angle Seat Valve



Main Dimension (Threaded Connection)

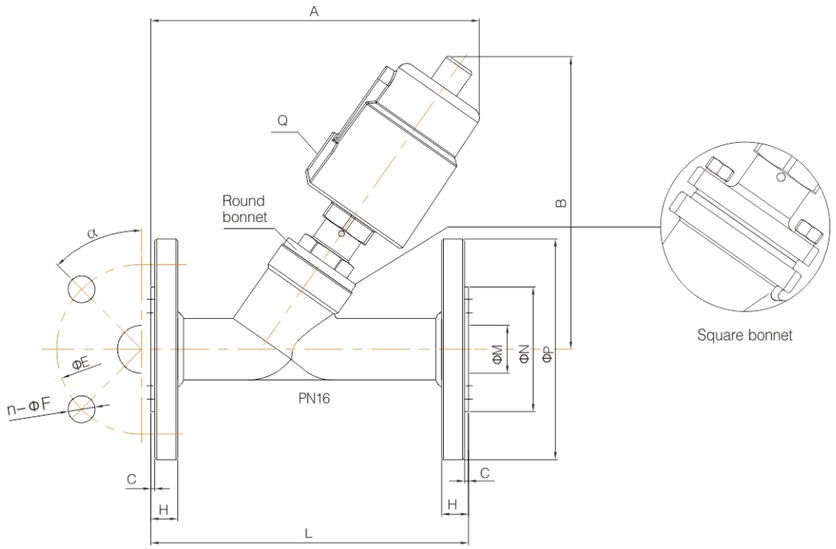
Size	Actuator (mm)	Q	C	R	K	G	T	A	L	Hexagon
DN8	40	1/8"	50.5	27	112	1/4"	12	124	68	27
	50	1/8"	60	33	125			135		
DN10	40	1/8"	50.5	27	112	3/8"	12	124	68	27
	50	1/8"	60	33	125			135		
DN15	40	1/8"	50.5	27	112	1/2"	15	124	68	27
	50	1/8"	60	33	125			135		
DN20	50	1/8"	60	33	132	3/4"	16	140	75	32
DN25	50	1/8"	60	33	136	1"	17	150	90	40
	63	1/8"	75	41	162			172		
DN32	63	1/8"	75	41	174	1 1/4"	21	190	116	50
	90	1/8"	106	55	223			235		
DN40	63	1/8"	75	41	175	1 1/2"	21	190	116	56
	90	1/8"	106	55	223			235		
DN50	63	1/8"	75	41	183	2"	22	205	138	69
	90	1/8"	106	55	232			250		
	125AL	1/4"	170	85	300			305		
DN65	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			275		
	125AL	1/4"	170	85	330			320		
DN80	125AL	1/4"	170	85	327	3"	27	380	210	100
DN80 Square bonnet	125AL	1/4"	170	85	355			340		



Main Dimension (Welded Connection)

Size	Actuator (mm)	Q	C	R	K	HA	HL	DIN11850–2		DIN11850–3	
								ΦD	S	ΦD	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					
	90	1/8"	106	55	223	232	125	35	1.5	36	2
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					
	125AL	1/4"	170	85	300	307					
DN65 Square bonnet	90	1/8"	106	55	280	320	270	70	2	–	–
	125AL	1/4"	170	85	330	360				–	–
DN80 Square bonnet	125AL	1/4"	170	85	355	360	284	85	2	–	–

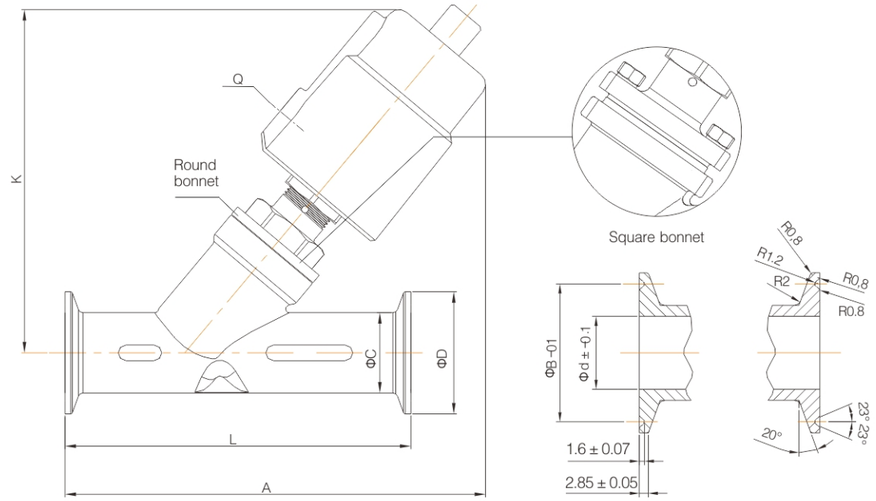
Y-type Angle Seat Valve



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
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	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									
DN80 Square bonnet	125AL	1/4"	380	355	310	3	20	160	8–18	78	135	200	22.5°
DN100	125AL	1/4"	420	395	350	3	20	180	8–18	96	155	215	22.5°



Clamp Specification: ISO 2852; customization available.

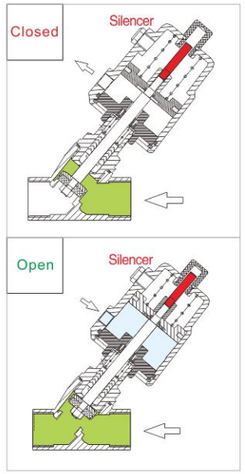
Main Dimension (Tri–clamp Connection)

Size	Actuator (mm)	Q	A	K	L	ΦC	ΦB	Φd	ΦD
DN15	40	1/8"	130	115	80	19	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	33	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	66	91
	125AL	1/4"	360	330					
DN80 Square bonnet	125AL	1/4"	360	352	290	89	97	78	106

Y-type Angle Seat Valve

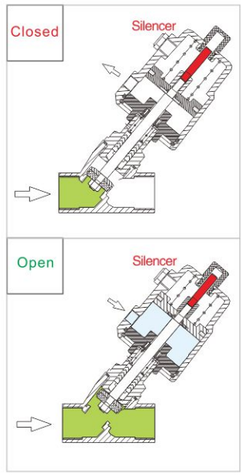
Single Acting, Normally Closed (NC)–Enter Above Seat

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	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	0.2–0.35
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	0–0.9	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)

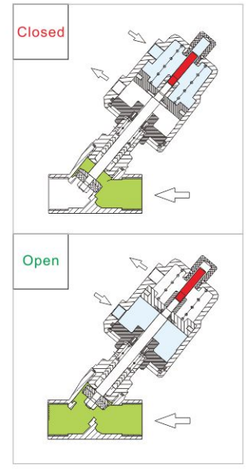
Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40–A	0–1.3	⩾0.4
				50–A	0–1.4	⩾0.45
DN10	G3/8"	13	3.9	40–A	0–1.3	⩾0.4
				50–A	0–1.4	⩾0.45
DN15	G1/2"	13	4.3	40–A	0–1.3	⩾0.4
				50–A	0–1.4	⩾0.45
DN20	G3/4"	18	7.6	50–A	0–1.4	⩾0.45
DN25	G1"	24	15.8	50–A	0–0.8	⩾0.45
				63–A	0–1.3	⩾0.5
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	⩾0.35
DN100	G4"	90	132	125–A	0–0.25	⩾0.55



ESG®

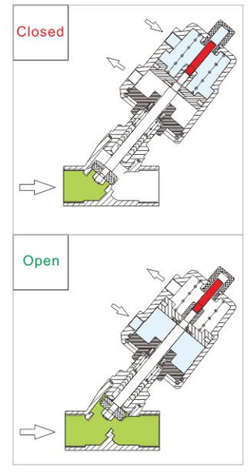
Double Acting, Normally Closed (NC)–Enter Above Seat

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	0.3–0.45
				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	0.2–0.35
DN40	G1 1/2"	35	32.0	63	0–1.6	0.3–0.65
				90	0–1.6	0.2–0.4
DN50	G2"	45	52.0	63	0–0.9	0.3–0.7
				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



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

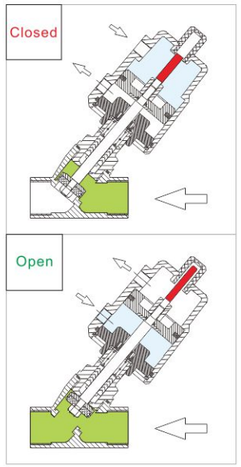
Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	⩾0.3
				50	0–1.6	⩾0.3
DN10	G3/8"	13	3.9	40	0–1.6	⩾0.3
				50	0–1.6	⩾0.3
DN15	G1/2"	13	4.3	40	0–1.6	⩾0.3
				50	0–1.6	⩾0.3
DN20	G3/4"	18	7.6	50	0–1.6	⩾0.3
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	0.3–0.65
DN100	G4"	90	132	125	0–1.2	0.4–0.5



Y-type Angle Seat Valve

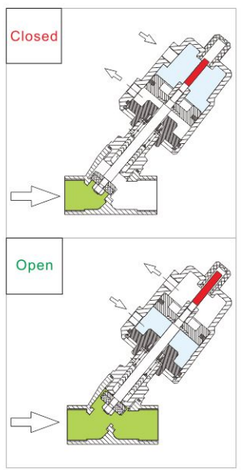
Double Acting Without Spring–Enter Above Seat

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



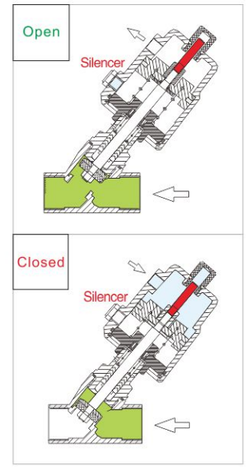
Double Acting Without Spring–Enter Below Seat (Minimize water-hammer)

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



Normally Open(NO)–Enter Above Seat

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



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

Size	Thread end	Orifice (mm)	Flow value Kv(m^3/h)	Actuator (mm)	Differential pressure range P(MPa)	Control pressure (MPa)
DN8	G1/4"	13	2.2	40	0–1.6	0.3–0.5
				50	0–1.6	0.3–0.4
DN10	G3/8"	13	3.9	40	0–1.6	0.3–0.5
				50	0–1.6	0.3–0.4
DN15	G1/2"	13	4.3	40	0–1.6	0.3–0.5
				50	0–1.6	0.3–0.4
DN20	G3/4"	18	7.6	50	0–1.6	0.3–0.6
DN25	G1"	24	15.8	50	0–1.3	0.3–0.6
				63	0–1.6	0.3–0.5
DN32	G1 1/4"	31	26.0	63	0–1.3	0.3–0.6
DN40	G1 1/2"	35	32.0	63	0–0.7	0.3–0.6
				90	0–1.6	0.3–0.35
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	0.3–0.5
				125	0–1.4	0.3–0.7
DN80	G3"	80	119	125	0–1.2	0.3–0.7