



## 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:  $-10^{\circ}\text{C}$  —  $+150^{\circ}\text{C}$
- Ambient temperature:  $-10^{\circ}\text{C}$  —  $+80^{\circ}\text{C}$
- Control type: Single acting normally closed, Double acting normally closed
- Connection type: Threaded, Welded, Tri-clamp
- Leakage class: EN 12266 Class A

### Advantages

- Diaphragm is used to isolate the medium, avoiding valve stem from seizing due to medium crystallization or being viscous with particles.
- Stainless steel actuator, better performance for harsh environments and can rotate  $360^{\circ}$ .

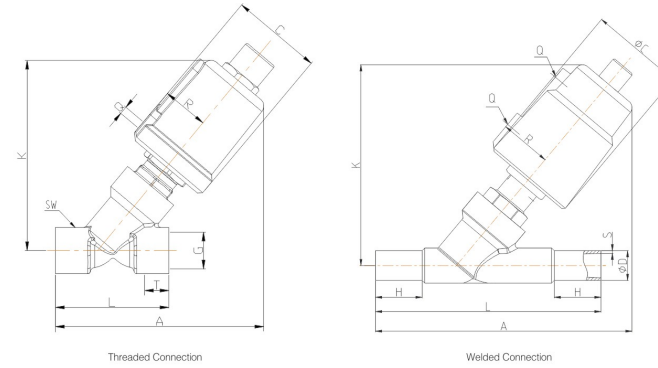
### Function Principle

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.



### Main Dimension (Threaded Connection)

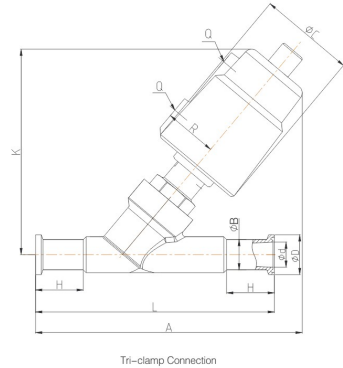
Size	Actuator (mm)	Q	C	R	K	A	G	T	L	SW
DN15	40	1/8"	50.5	27	115	125	1/2"	16	65	27
DN20	50	1/8"	60	33	130	140	3/4"	18	75	32
	63	1/8"	75	41	155	165	1"	20	90	40
DN32	63	1/8"	75	41	170	185	1 1/4"	22	110	50
	90	1/8"	106	55	215	225				
DN40	63	1/8"	75	41	180	195	1 1/2"	24	120	56
	90	1/8"	106	55	220	230				
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
	63	1/8"	75	41	155	190	152	30	25.4	1.65
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				



## 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 valve Kv(m <sup>3</sup> /h)	Actuator (mm)	Differential pressure range (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 valve Kv(m <sup>3</sup> /h)	Actuator (mm)	Differential pressure range (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

### Order Instruction

