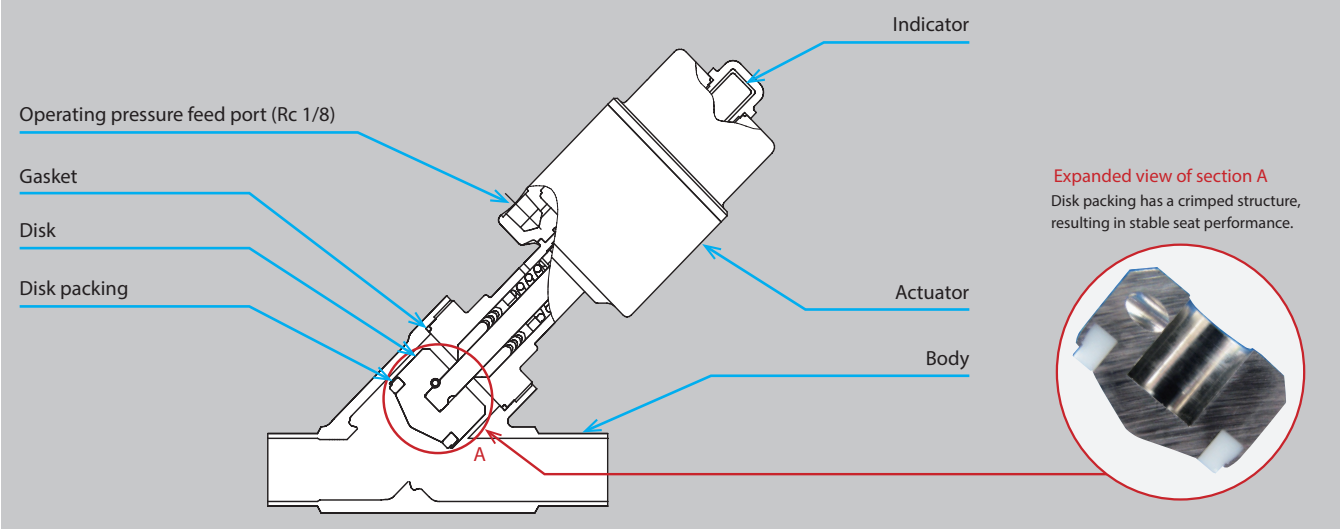
Achieving high durability, long life, and smooth fluid flow

BY SERIES

ANGLE SEAT VALVES

Features

Outline of basic structure

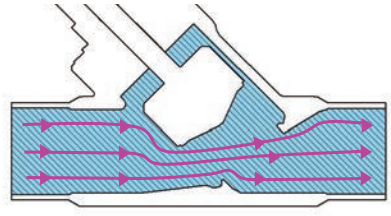


Actuator can turn 360°, allowing adjustment of orientation of operating pressure feed port.
No surface crack for attaching a spanner is provided (in order prevent scratching), so please hold the actuator in both hands to rotate it.

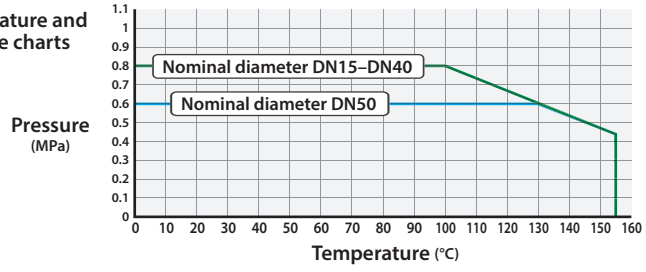
Selection of valve type

Type "FO"

For steam and gases only
(reverse flow direction)



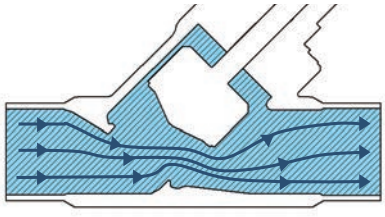
Temperature and pressure charts



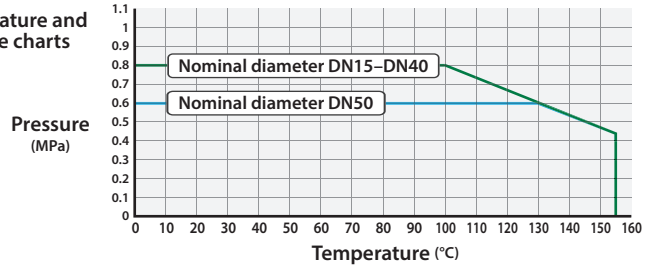
Select when the fluid is steam or gas. Actuator size is kept compact, allowing cost to be reduced.
If the fluid is a liquid, water hammer may occur when the valve is closed, damaging surrounding devices, so please be cautious.

Type "FU"

For liquids, steam, and gases
(forward flow direction)



Temperature and pressure charts



Please select when the fluid is a liquid. Can also be used when the fluid is steam or a gas.

Part number format

BY C FO-25 P-C 7 F A-LC-HT-

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

①	Valve series name
BY	BY series angle seat valves

②	Actuator operation type
C	Spring-back (normal close type) (N.C.)
O	Spring-back (normal open type) (N.O.)

③	Flow rate adjustment
None	On/off valve
C	Control valve

④	Flow direction
FO	Reverse flow (flow over the seat)
FU	Forward flow (flow under the seat)
None	Control valve

⑤	Disk seat size
15	15A
20	20A
25	25A
40	40A
50	50A

⑥	Disk packing wetted surface material
P	PTFE

⑦	Body material
C	ASTM A351 CF8M

⑧	Connection
1	Threaded type
2	Flange type
5	Butt weld type (BW)
7	Ferrule type

⑨	Connection piping size			
Connection	Ferrule type	butt weld type	Threaded type	Flange type
D	15A	1/2″	1/2B	15A
E		3/4″	3/4B	20A
F	25A (1S)	1″	1B	25A
H	40A (1.5S)	1-1/2″	1 1/2B	40A
I	50A (2S)	2″	2B	50A

⑩	Piping standards
None	ISO/IDF
A	ASME

⑪	Options
None	No options
H	With open-side opening adjustment
HC	With closed-side closing adjustment
LC	With closed-side limit switch
LO	With open-side limit switch
LD	With open/closed dual limit switches
KC	With closed-side proximity switch
KO	With open-side proximity switch
KD	With open/closed dual proximity switches
EP1	Electropneumatic positioner

⑫	Compatible with high-temperature environments
None	Standard type
HT	Type compatible with high-temperature environments

⑬	Other
	Abbreviations are inserted for special products.

*: Normal open (O) is only compatible with FU (forward flow)
*: Flange connection: JIS10KFF flange
*: Butt weld (BW) connection: ASME standard

Product specifications (standard)

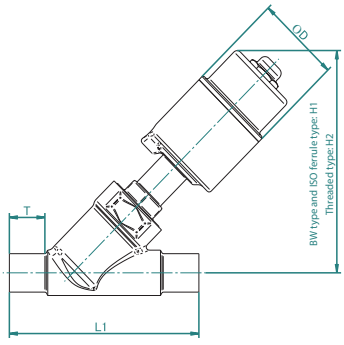
Nominal diameter (DN)		DN15	DN20	DN25	DN40	DN50
Material	Body	ASTM A351 CF8M (cast 316 stainless steel)				
	Bonnet					
	Disk packing	PTFE (Food Sanitation Act conformant material)				
	Gland packing	PTFE + graphite (Food Sanitation Act conformant material)				
	Actuator	ADC12 (aluminum + nylon coating)				
Maximum working pressure (MPa)		0.8				0.6
Temperature range of working fluid (°C)		0–155 (low-temperature type can be produced for as low as –40)				
Body internal surface finishing		Casting surface*				
Working environment (°C)		Indoors, environment temperature 0–80				
Actuator	type	N.C., N.O.				
	Feed port size	Rc 1/8				
	Operating pressure (MPa)	0.5–0.8 (for N.C. type)				
Body connection		ISO ferrule type, butt weld type (ASME-BPE welding end), threaded type				
Stroke (mm)		9	12	18	26	30
Accessory mounting thread size		M16 × 1				
Oil free		Not oil free (H1 grease applied to wetted surfaces)				

*: ISO ferrule type has residual welding beads on both internal and external surfaces. Body is electropolished after welding.

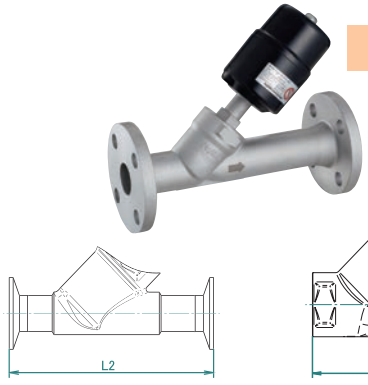
Primary product dimensions

Nominal diameter				type	H	H1	H2	D	T	L			Part No.		
Orifice	BW type	ISO Ferrule type	Threaded type							L1	L2	L3	BW type	ISO ferrule type*	Threaded type
DN15	1/2″	-	Rc 1/2	FO	119	119	122	46	23	100	-	65	BYCFO-15P-C5DA	-	BYCFO-15P-C1D
				FU	119	119	122	46					BYCFU-15P-C5DA	-	BYCFU-15P-C1D
DN20	3/4″	15A	Rc 3/4	FO	124	124	127	46	25	115	130	75	BYCFO-20P-C5EA	BYCFO-20P-C7D	BYCFO-20P-C1E
				FU	133	133	136	58					BYCFU-20P-C5EA	BYCFU-20P-C7D	BYCFU-20P-C1E
DN25	1″	1S	Rc1	FO	146	146	149	58	25	130	150	90	BYCFO-25P-C5FA	BYCFO-25P-C7F	BYCFO-25P-C1F
				FU	158	158	161	74					BYCFU-25P-C5FA	BYCFU-25P-C7F	BYCFU-25P-C1F
DN40	1-1/2″	1.5S	Rc 1-1/2	FO	174	174	179	74	25	160	180	120	BYCFO-40P-C5HA	BYCFO-40P-C7H	BYCFO-40P-C1H
				FU	198	198	203	92					BYCFU-40P-C5HA	BYCFU-40P-C7H	BYCFU-40P-C1H
DN50	2″	2S	Rc2	FO	188	188	193	74	25	175	200	150	BYCFO-50P-C5IA	BYCFO-50P-C7I	BYCFO-50P-C1I
				FU	223	223	228	112					BYCFU-50P-C5IA	BYCFU-50P-C7I	BYCFU-50P-C1I

*: ISO ferrule type has residual welding beads on both internal and external surfaces. Electropolished after welding.



BW type



Flange type

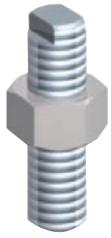
ISO ferrule type

Threaded type

List of options

Options (accessories)

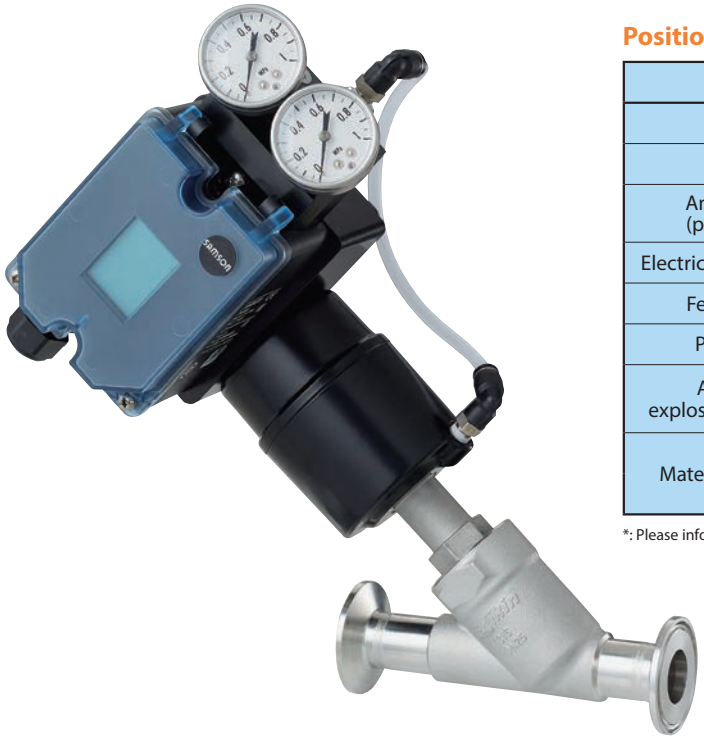
Smart positioner



Opening limitation mechanism

Proximity sensor

Automatic valve smart positioner assembly



Positioner specifications

		Positioner specifications
Model No.		3725 (manufactured by Samson)
Input signal (WA)		DC 4–20 mA (split range can be set)
Ambient temperature (positioner main unit)		–25°C to +80°C
Electrical wiring connection (°C)		Cable ground M20 × 1.5
Feed connection port		Rc 1/4
Protective structure		IP66
Accommodation of explosion-proof standards L1*		II2G Ex ia IIC T4 acc. ATEX (optional)
Material	Main unit	Polyphthalamide
	Cover	Polycarbonate (transparent)

*: Please inform Fujikin if accommodation of explosion-proof standards is desired.