

# Fluid control valve(2/2way)



## 2S Series (Direct-acting and normally closed)



### Symbol

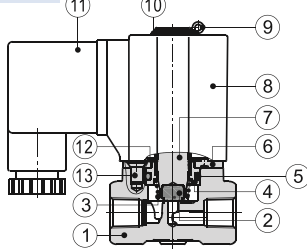


### Product feature

1. Direct acting and normally closed type 2/2 way solenoid valve. Its high sensibility allows it to change direction quickly;
2. It has wide pressure range, including extra high pressure (X), high pressure (H), standard , large volume(L) and extra large volume (T) to choose from;
3. It is compact, small size and light weight. It is easy to install and dismantle.
4. The valve body is made of SUS304 . Its coil has a Heat resistance classification of Class B. The standard seal material is FPM-F. Please contact us if other material are required.
5. The protection class of the coil is IP65 and there is a choice for grommet or terminal electrical entry .

### Inner structure

#### 2S030(Terminal)



No.	Item	No.	Item
1	Body	8	Coil assembly
2	Airtight ring	9	E Clip
3	Spring	10	Gasket
4	Fixed cap	11	Connector
5	O-ring	12	Washer
6	Fixed plate	13	Screw
7	Movable core		

### Specification

Model\Item	Port size [Note1]	Orifice size (Φmm)	Cv	Valid area or section (mm <sup>2</sup> )	Weight [Note2](g)	Max. operating pressure differentia		Proof pressure	
						MPa	psi	MPa	psi
2SX030	-06 1/8"	1.5	0.10	1.8	300	3.0	450	5.0	750
	-08 1/4"				295				
2SH030	-06 1/8"	2.0	0.18	3.0	300	2.0	300		
	-08 1/4"				290				
2S030	-06 1/8"	3.0	0.33	6.0	300	1.0	150		
	-08 1/4"				290				
2SL030	-06 1/8"	4.0	0.55	10.0	300	0.5	75		
	-08 1/4"				290				
2ST030	-06 1/8"	6.0	1.10	12.0	300	0.1	15		
	-08 1/4"				290				
2SX050	-10 3/8"	3.0	0.34	6.1	600	3.0	450		
	-15 1/2"				590				
2SH050	-10 3/8"	4.0	0.55	10.0	600	2.0	300		
	-15 1/2"				590				
2S050	-10 3/8"	5.0	0.83	15.0	600	1.0	150		
	-15 1/2"				590				
2SL050	-10 3/8"	7.0	1.40	25.0	600	0.5	75		
	-15 1/2"				590				
2ST050	-10 3/8"	10.0	2.20	40.0	600	0.1	15		
	-15 1/2"				590				

[Note1] PT thread, G thread and NPT thread are available.

[Note2] The weight in the table is the terminal valve's weight, 2S030 series grommet valve's weight is 10g less than terminal's. 2S050series grommet valve's weight is 20g less than terminal's.

### Specification of coil

Valve type	Coil type	Power type	Frequency (Hz)	Voltage range	Electrical entry	Power Consumption (VA/W)	Insulation	Temp. rise(°C)		
2S□030	CDA116 CLA116	AC	50	± 15%	Terminal (CDA)	10.0VA	Class B	35		
			60			8.0VA		30		
		DC	-	± 10%		6.5W		30		
2S□050	CDA170 CLA170	AC	50	± 15%		Grommet (CLA)		25.0VA	Class B	60
			60					22.0VA		55
		DC	-	± 10%				10.5W		40

### Valve's specification

Acting		Direct acting			
Initial state		Normally closed			
Adaptable fluid [Note1]		Air, Water, Oil			
Viscosity limit		Under 20CST			
Ambient and fluid temperature (°C)		Water	Air	Oil	Ambient
		Max. 80	90	80	70
		Min. 1	-20 [Note2]	-10 [Note3]	-20

[Note1] Please refer to P145 for detail of other's fluid;

[Note2] Dew point: -20(°C) or less; [Note3] 50CST or less.

### Ordering code

#### Ordering code of valves

2S L 030 08 A □ □

① ② ③ ④ ⑤ ⑥ ⑦

① Model	② Pressure condition	③ Size series	④ Port size	⑤ Voltage	⑥ Electrical entry	⑦ Thread type
2S: 2/2 way direct-acting and normally closed	X: Extra high pressure H: High pressure Blank: Standard L: Large volume T: Extra large volume	030: 030 Series  050: 050 Series	06: 1/8" 08: 1/4"  10: 3/8" 15: 1/2"	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V	Blank: Terminal I: Grommet	Blank: PT G: G T: NPT

#### Ordering code of accessories

F-2S030 LB

① ② ③

① Accessories code	② Valve type	③ Accessories type
F: Mounting accessories	2S030: 030 Series valve 2S050: 050 Series valve	LB: LB Type

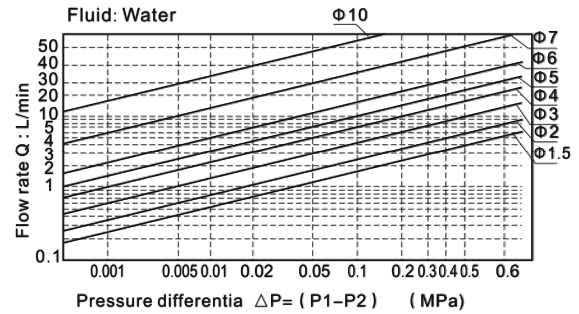
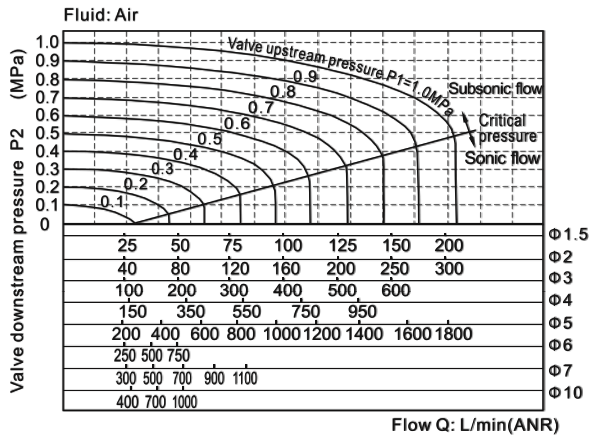


# Fluid control valve(2/2way)

## 2S Series (Direct-acting and normally closed)

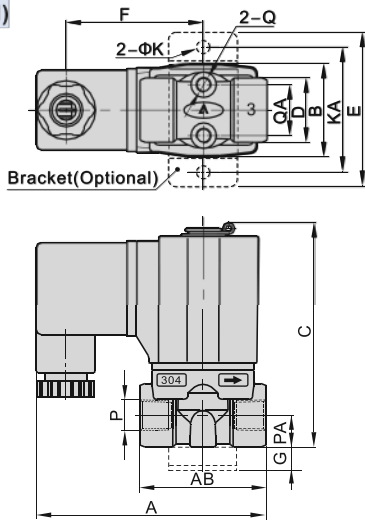


### Flow chart

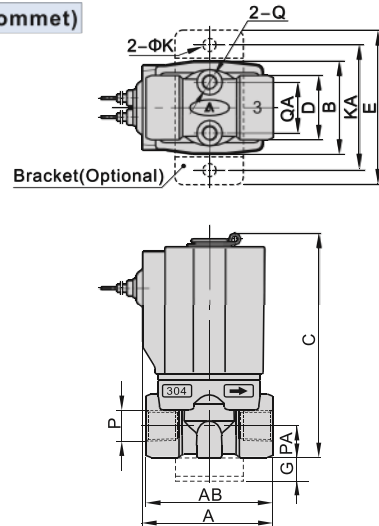


### Dimensions

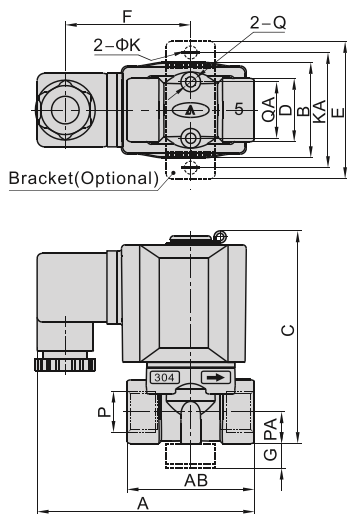
#### 2S□030 (Terminal)



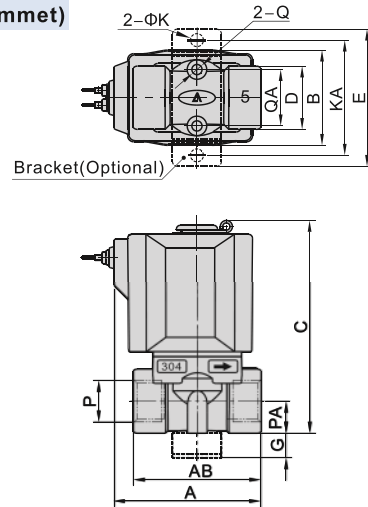
#### 2S□030(Grommet)



#### 2S□050 (Terminal)



#### 2S□050(Grommet)



Model\Item	A	AB	B	C	D	E	F	G	K	KA	P	PA	Q	QA
2S□030-06	72.5	40	29.5	71	20	49	43.5	10	5.3	40	1/8"	10	M5	16
2S□030-08	72.5	40	29.5	71	20	49	43.5	10	5.3	40	1/4"	10	M5	16
2S□050-10	89.5	52	39	87	26	56	51	10	5.3	48	3/8"	13	M5	23
2S□050-15	89.5	52	39	87	26	56	51	10	5.3	48	1/2"	13	M5	23

Model\Item	A	AB	B	C	D	E	G	K	KA	P	PA	Q	QA
2S□030-06	41	40	29.5	71	20	49	10	5.3	40	1/8"	10	M5	16
2S□030-08	41	40	29.5	71	20	49	10	5.3	40	1/4"	10	M5	16
2S□050-10	60	52	39	87	26	56	10	5.3	48	3/8"	13	M5	23
2S□050-15	60	52	39	87	26	56	10	5.3	48	1/2"	13	M5	23



# Fluid control valve(2/2way)



## 2S Series (Internally piloted and normally closed)



### Symbol

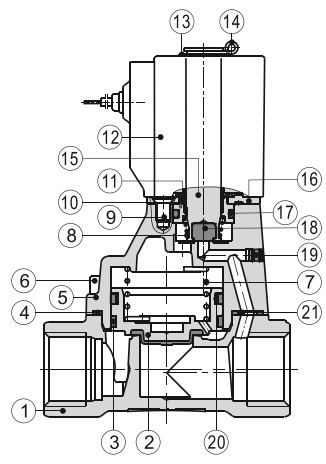


### Product feature

1. Indirect acting (Internal pilot) and normally closed type 2/2 way solenoid valve. Its can change direction quickly and has large flow.
2. It is compact, small and light weight. It is easy to install and dismantle;
3. The valve body is made of SUS304 . The coil has a Heat resistance classification of Class B. The standard seal material is FPM-F. Please contact us if other material are required.
4. The protection class of the coil is IP65 and there is a choice for grommet or terminal electrical entry .

### Inner structure

#### 2S150(Grommet)



No.	Item
1	Body
2	Piston
3	Wear ring
4	O-ring
5	Cover
6	Screw
7	Spring
8	Spring
9	Screw
10	Fixed cap
11	Washer
12	Coil assembly
13	Washer
14	E Clip
15	Movable core
16	Fixed plate
17	O-ring
18	Airtight ring
19	Plug
20	Spring
21	Spacer

### Specification

Model\Item	Port size [Note1]	Orifice size (Φ mm)	Cv	Valid area or section (mm <sup>2</sup> )	Weight [Note2](g)	Operating pressure differential		Proof pressure	
						MPa	psi	MPa	psi
2S150-15	1/2"	15.0	5.50	100.0	675	Max: 1.0 Min: 0.05	Max: 150 Min: 10	1.5	220
2S200-20	3/4"	20.0	9.50	170.0	875				
2S250-25	1"	25.0	12.50	220.0	1120				
2S320-32	1 1/4"	35.0	23.00	420.0	2700				
2S400-40	1 1/2"	40.0	31.00	560.0	3250				
2S500-50	2"	50.0	49.00	880.0	4300				

[Note1] PT thread, G thread and NPT thread are available.

[Note2] The weight in the table is the terminal valve's weight, 2S150~250 series grommet valve's weight is 10g less than terminal's. 2S320~500 series grommet valve's weight is 20g less than terminal's.

### Specification of coil

Valve type	Coil type	Power type	Frequency (Hz)	Voltage range	Electrical entry	Power Consumption	Insulation	Temp. rise(°C)
2S150 2S200 2S250	CDA116 CLA116	AC	50	± 15%	Terminal (CDA)	10.0VA	Class B	35
			60			8.0VA		30
		DC	-	± 10%		6.5W		30
2S320 2S400 2S500	CDA170 CLA170	AC	50	± 15%	Grommet (CLA)	25.0VA		60
			60			22.0VA		55
		DC	-	± 10%		10.5W	40	

### Valve's specification

Acting	Internally piloted				
Initial state	Normally closed				
Adaptable fluid [Note1]	Air, Water, Oil				
Viscosity limit	Under 20CST				
Ambient and fluid temperature (°C)		Water	Air	Oil	Ambient
	Max.	80	90	80	70
	Min.	1	-20 [Note2]	-10 [Note3]	-20

[Note1] Please refer to P145 for detail of other's fluid;

[Note2] Dew point: -20(°C) or less; [Note3] 50CST or less.

### Ordering code

#### Ordering code of valves

2S 150 15 A □ □					
① Model	② Orifice size	③ Port size	④ Voltage	⑤ Electrical entry	⑥ Thread type
2S: 2/2 way internally piloted and normally closed	150: Φ15mm	15: 1/2"	A: AC220V B: DC24V C: AC110V E: AC24V F: DC12V	Blank: Terminal I: Grommet	Blank: PT G: G T: NPT
	200: Φ20mm	20: 3/4"			
	250: Φ25mm	25: 1"			
	320: Φ35mm	32: 1 1/4"			
	400: Φ40mm	40: 1 1/2"			
500: Φ50mm	50: 2"				

#### Ordering code of accessories

F-2S150 LB		
① Accessories code	② Valve type	③ Accessories type
F: Mounting accessories	2S150: 150 Series valve 2S200: 200 Series valve 2S250: 250 Series valve	LB: LB Type

[[Note] 320\400\500 series valves do not have mounting accessories.

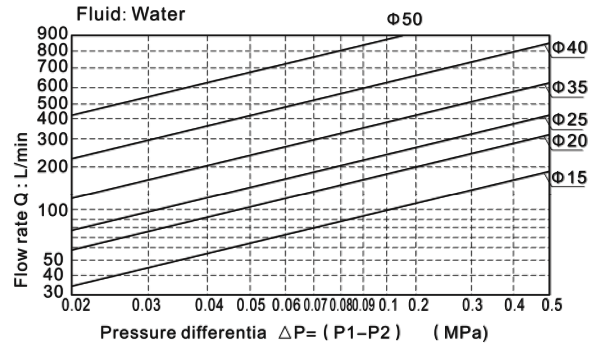
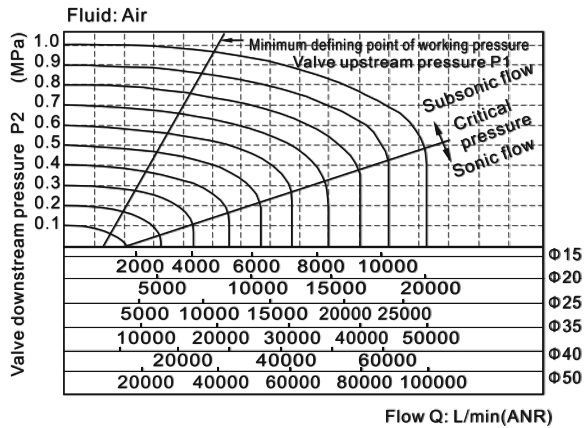


# Fluid control valve(2/2way)

## 2S Series (Internally piloted and normally closed)

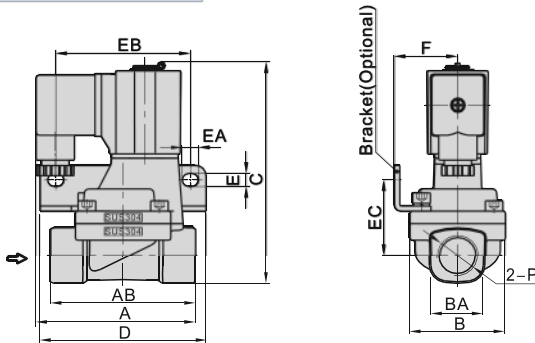


### Flow chart

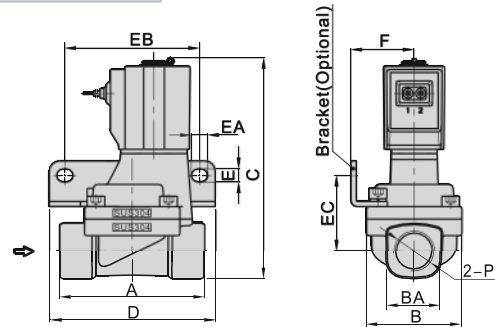


### Dimensions

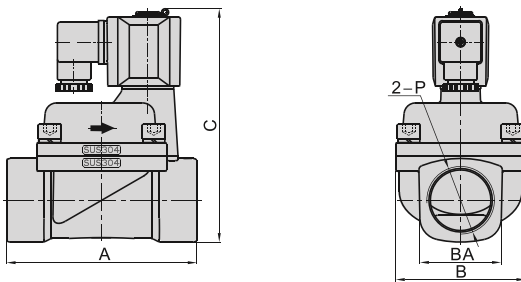
#### 2S150~250 (Terminal)



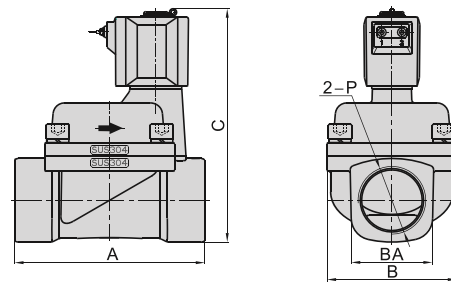
#### 2S150~250(Grommet)



#### 2S320~500 (Terminal)



#### 2S320~500(Grommet)



Model/Item	A	AB	B	BA	C	D	E	EA	EB	EC	F	P
2S150-15	77	70	46	27.5	107	80	6.4	8	65	36.5	30.5	1/2"
2S200-20	78.5	82	53	33.5	115.5	90	6.4	8	75	40	34	3/4"
2S250-25	81	92	59	40.5	124	95	6.4	8	80	44.5	36	1
2S320-32	125	-	80	52	154.5	-	-	-	-	-	-	1 1/4"
2S400-40	132	-	90	58	162	-	-	-	-	-	-	1 1/2"
2S500-50	150	-	100	70	177	-	-	-	-	-	-	2"

Model/Item	A	B	BA	C	D	E	EA	EB	EC	F	P
2S150-15	70	46	27.5	107	80	6.4	8	65	36.5	30.5	1/2"
2S200-20	82	53	33.5	115.5	90	6.4	8	75	40	34	3/4"
2S250-25	92	59	40.5	124	95	6.4	8	80	44.5	36	1
2S320-32	125	80	52	154.5	-	-	-	-	-	-	1 1/4"
2S400-40	132	90	58	162	-	-	-	-	-	-	1 1/2"
2S500-50	150	100	70	177	-	-	-	-	-	-	2"

