

Pulse Valve Valve for Dust Collector



Excludes the air operated type
(For details, refer to pages 7 and 17.)

Solenoid Valve Type

SMARTVENT Type

Air Operated Type



New A SMARTVENT type has been added. **p. 17**

The integrated control board eliminates the need for a control box.



IP67/IP65

For details, refer to page 4.

Air

ATEX Compliant

56-JSXF Series **p. 35**

55-JSXFA Series **p. 37**

10 million cycles*¹ or more

*¹ Based on SMC's specific testing conditions (JSXF□□□-06)

High peak pressure and low air consumption

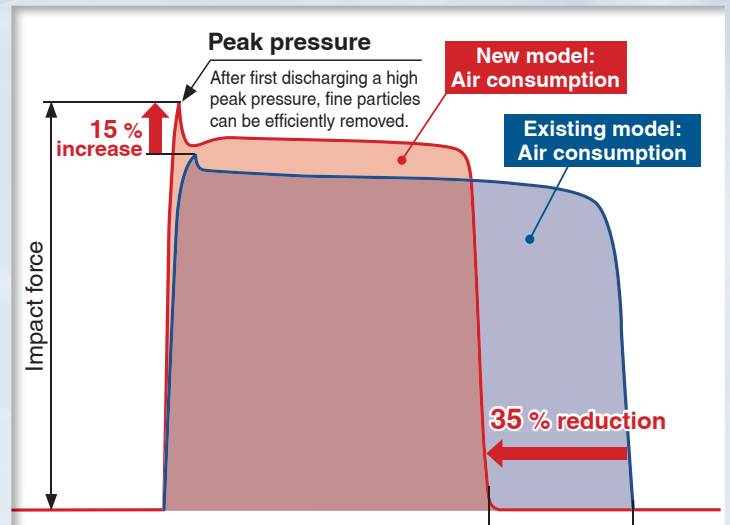
Peak pressure 15%*² increase

Air consumption 35%*² reduction

Fluid temperature:

-40 to 60 °C

Can be used in a wide range of temperatures



*² When the solenoid valve or pilot valve mounted on the JSXF□□□-06 is energised for 100 ms (ON time)

Variations

Type	Port size				Orifice diameter [mm]				
	3/4 (20A)	1 (25A)	1 1/2 (40A)	2 (50A)	Ø 32	Ø 40	Ø 45	Ø 50	Ø 55
Solenoid valve type JSXF Series p. 7	Compression fitting type	●	●	●	●	●	●	●	●
	Direct piping type	●	●	●	●	●	●	●	●
	Immersion type	●	●	●	●	●	●	●	●
New SMARTVENT type JSXF-P□ Series p. 17	Compression fitting type	●	●	●	●	●	●	●	●
	Direct piping type	●	●	●	●	●	●	●	●
	Immersion type	●	●	●	●	●	●	●	●
Air operated type JSXFA Series p. 21	Compression fitting type	●	●	●	●	●	●	●	●
	Direct piping type	●	●	●	●	●	●	●	●
	Immersion type	●	●	●	●	●	●	●	●

JSXF/JSXFA Series

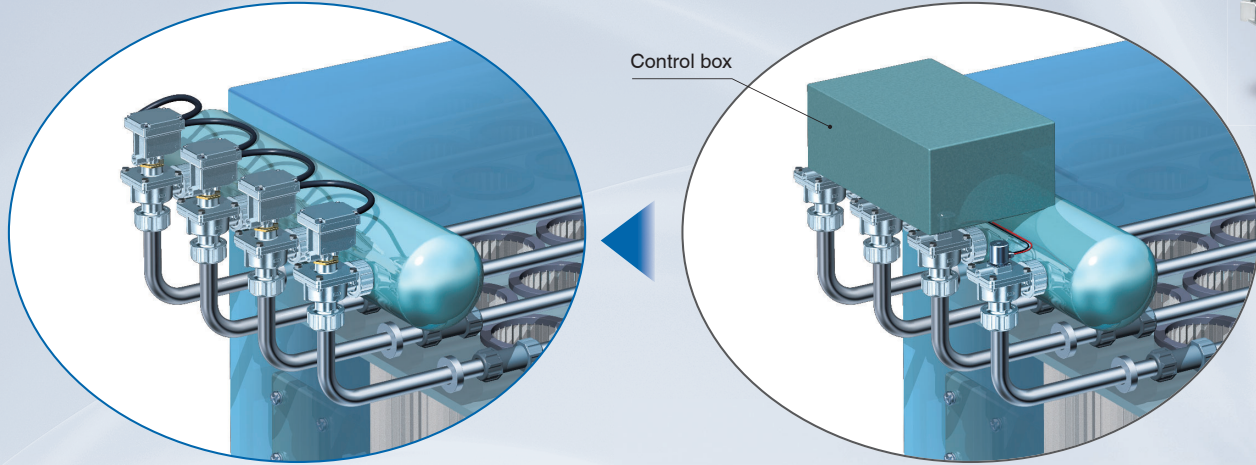
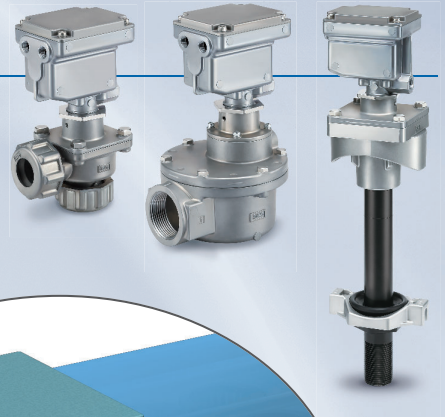


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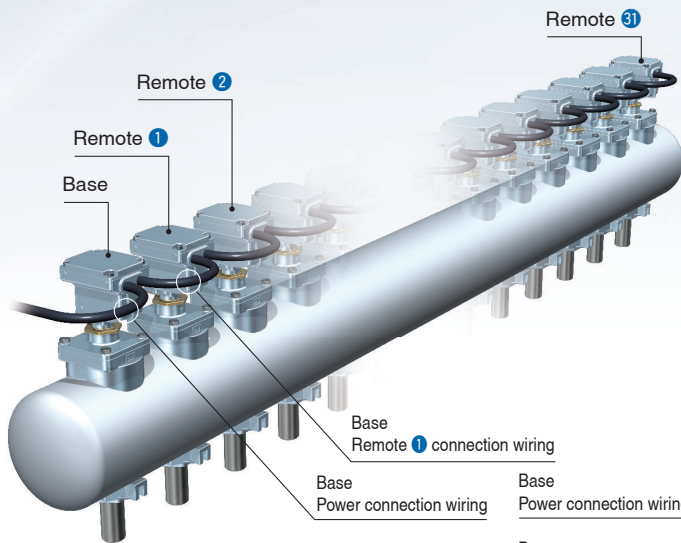
New SMARTVENT Type

No control box required Allows for reduced wiring

The solenoid valve type features a built-in control board.



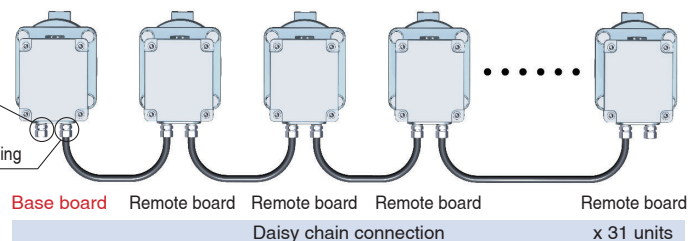
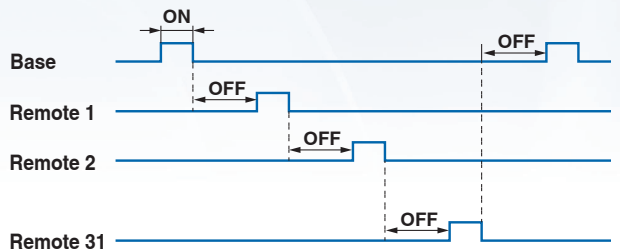
A single base valve can control up to max. 31 remote valves!



The pulse sequence order can be changed.

The base valve collectively controls the response time.
ON time: 10-step setting is possible (Setting range: 100 to 234 ms)
OFF time: 16-step setting is possible (Setting range: 4 to 29 s)

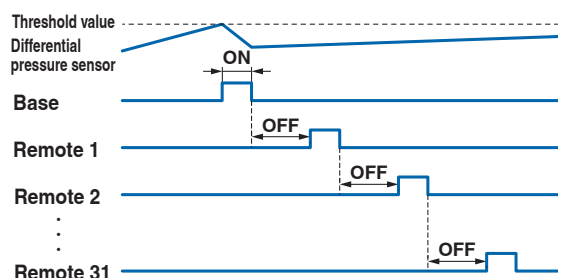
Operating sequence example



Filter clogging can be detected when used in combination with a differential pressure sensor (provided by the customer).

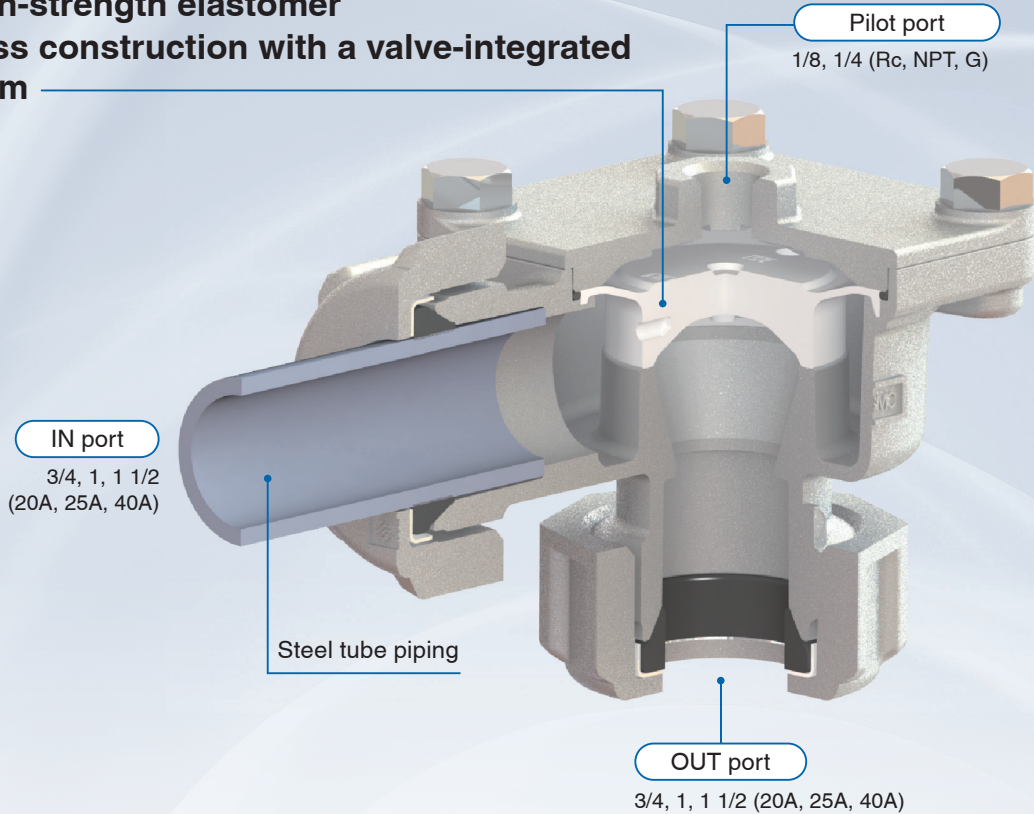
Differential pressure sensor installation

Operation sequence diagram



Long service life: **10 million cycles***¹ or more

Uses high-strength elastomer
Springless construction with a valve-integrated diaphragm



OFF response time:
45 %*¹, *² reduction

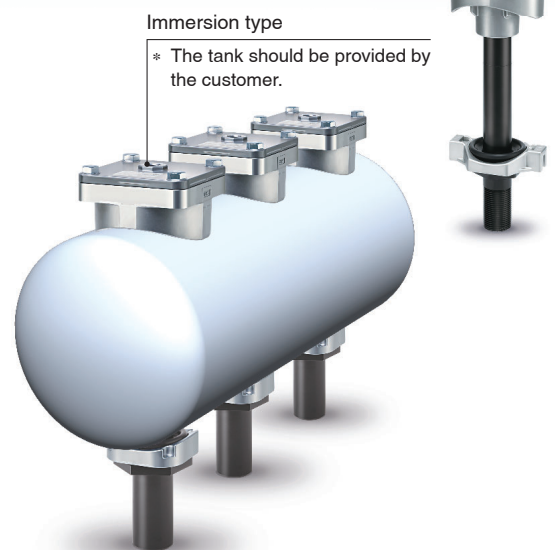
Easier maintenance

The springless diaphragm allows for easy maintenance of the valve. A main valve and sub-valve (for 40A) are included in the maintenance kit.

Flow rate characteristics:
40 %*¹, *² increase

Optimal design for the internal geometry

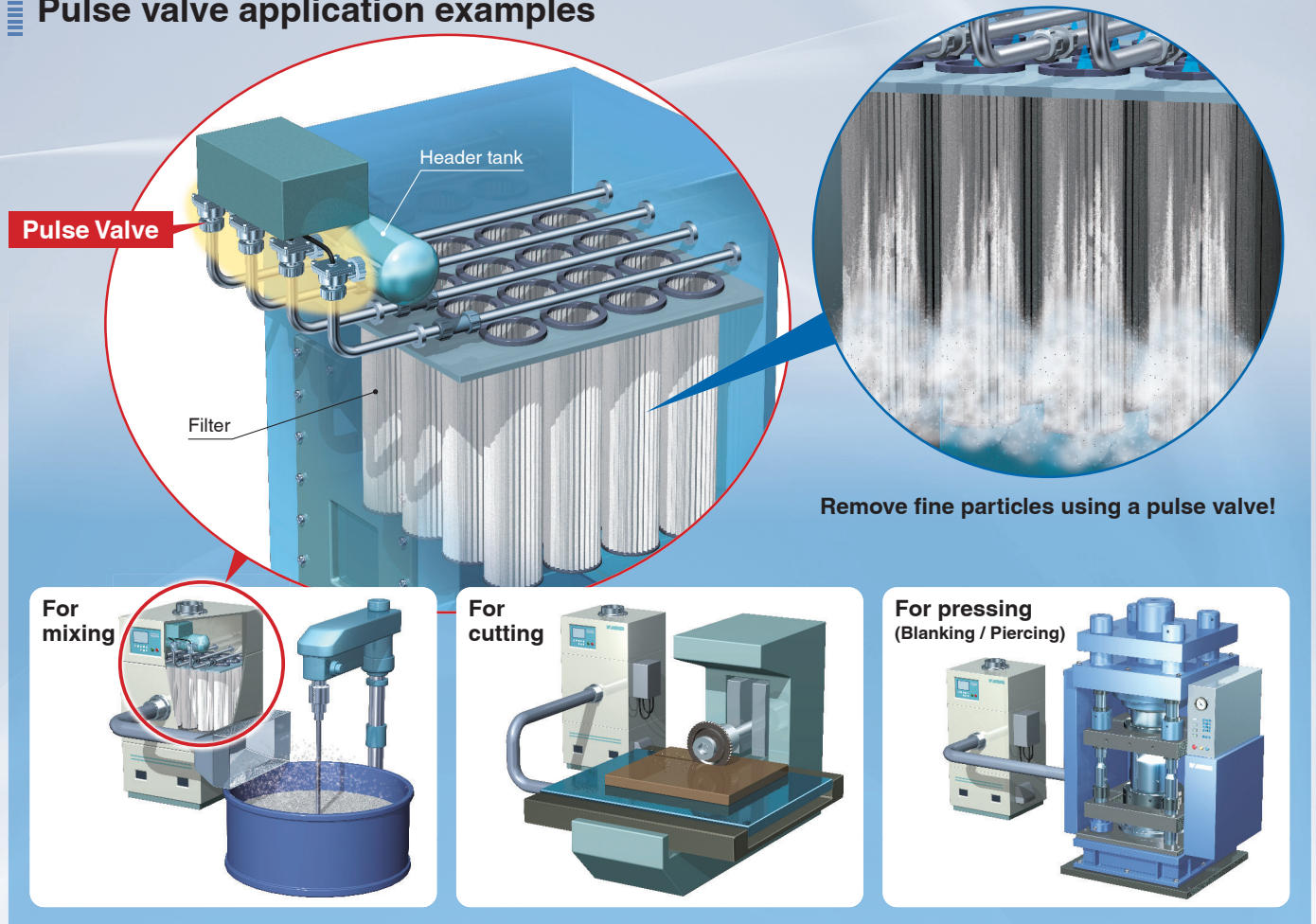
No need to weld
the tank piping



*¹ Based on SMC's specific testing conditions (JSXFA-06, Pilot valve orifice of ϕ 5 mm or larger, Excludes made-to-order option "A")

*² Compared with the existing SMC model

Pulse valve application examples

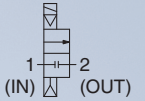



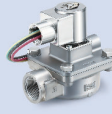

Pulse blow can be used in various industries!



Series Variations

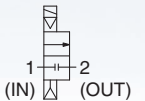
Solenoid Valve Type p. 7






Piping	Port size	Orifice diameter					Thread type	Options/ Made to order	Standards			Enclosure		
		Ø 32	Ø 40	Ø 45	Ø 50	Ø 55			CE*1	UK CA*1	ATEX compliant	IP67	IP65	NEMA4
Compression fitting type  (56-)JSXFE Series	3/4 (20A)	Ø 32					Rc NPT G	Options · Silencer (3/4, 1, 1 1/2, 2) p. 15 · Cable for M12 connector (1000, 2000, 5000 mm) p. 16 Made to order · Tank hole dia.: Ø 76 (1 1/2 6-inch tank) p. 33	●	●	● p. 35	●	●	●*2
	1 (25A)	Ø 40							●	●	● p. 35	●	●	●*2
	1 1/2 (40A)	Ø 50							●	●	● p. 35	●	●	●*2
Direct piping type  (56-)JSXFF Series	3/4 (20A)	Ø 32							●	●	● p. 35	●	●	●*2
	1 (25A)	Ø 40							●	●	● p. 35	●	●	●*2
	1 1/2 (40A)	Ø 50							●	●	● p. 35	●	●	●*2
Immersion type  (56-)JSXFH Series	3/4 (20A) Tank size: 4, 5 inch	Ø 32							●	●	● p. 35	●	●	●*2
	1 (25A) Tank size: 5, 6 inch	Ø 40							●	●	● p. 35	●	●	●*2
	1 1/2 (40A) Tank size: 6, 8 inch	Ø 45							●	●	● p. 35	●	●	●*2
	2 (50A) Tank size: 8, 10 inch	Ø 55							●	●	● p. 35	●	●	●*2

*1 Differs depending on the voltage and electrical entry. For details, refer to page 7. *2 Only the DIN connector

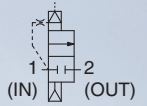
SMARTVENT Type p. 17






Piping	Port size	Orifice diameter					Thread type	Options/ Made to order	Standards			Enclosure		
		Ø 32	Ø 40	Ø 45	Ø 50	Ø 55			CE*1	UK CA*1	ATEX compliant	IP67	IP65	NEMA4
Compression fitting type  JSXFE Series	3/4 (20A)	Ø 32					Rc NPT G	Option · Silencer (3/4, 1, 1 1/2, 2) p. 20 Made to order · Tank hole dia.: Ø 76 (1 1/2 6-inch tank) p. 33	●	●		●	●	
	1 (25A)	Ø 40							●	●		●	●	
	1 1/2 (40A)	Ø 50							●	●		●	●	
Direct piping type  JSXFF Series	3/4 (20A)	Ø 32							●	●		●	●	
	1 (25A)	Ø 40							●	●		●	●	
	1 1/2 (40A)	Ø 50							●	●		●	●	
Immersion type  JSXFH Series	3/4 (20A) Tank size: 4, 5 inch	Ø 32							●	●		●	●	
	1 (25A) Tank size: 5, 6 inch	Ø 40							●	●		●	●	
	1 1/2 (40A) Tank size: 6, 8 inch	Ø 45							●	●		●	●	
	2 (50A) Tank size: 8, 10 inch	Ø 55							●	●		●	●	

Series Variations

Air Operated Type p. 21



Piping	Port size	Orifice diameter					Thread type	Options/ Made to order	Standards			Enclosure		
		Ø 32	Ø 40	Ø 45	Ø 50	Ø 55			CE	UK CA	ATEX compliant	IP67	IP65	NEMA4
Compression fitting type  (55-)JSXFAE Series	3/4 (20A)	Ø 32					Rc NPT G		● p. 37					
	1 (25A)	Ø 40							● p. 37					
	1 1/2 (40A)	Ø 50							● p. 37					
Direct piping type  (55-)JSXFAP Series	3/4 (20A)	Ø 32						Option · Silencer (1 1/2, 2) p. 31	● p. 37					
	1 (25A)	Ø 40						Made to order · Tank hole dia.: Ø 76 (1 1/2 6-inch tank) p. 33	● p. 37					
	1 1/2 (40A)	Ø 50						· Special pilot valve orifice diameter (3/4, 1) p. 21	● p. 37					
Immersion type  (55-)JSXFAH Series	3/4 (20A) Tank size: 4, 5 inch	Ø 32							● p. 37					
	1 (25A) Tank size: 5, 6 inch	Ø 40							● p. 37					
	1 1/2 (40A) Tank size: 6, 8 inch	Ø 45							● p. 37					
	2 (50A) Tank size: 8, 10 inch	Ø 55							● p. 37					

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Pulse Valve **Valve for Dust Collector**



Compression fitting type



Direct piping type



Immersion type



Compression fitting type



Direct piping type



Immersion type



Compression fitting type



Direct piping type



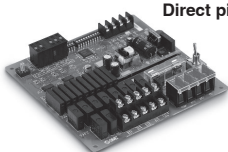
Immersion type



Compression fitting type



Direct piping type



Pulse valve control board

● Solenoid Valve Type JSXF Series

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● SMARTVENT Type JSXF-P□ Series

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● Air Operated Type JSXFA Series

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Pulse Valve Valve for Dust Collector

Solenoid Valve Type

JSXF Series

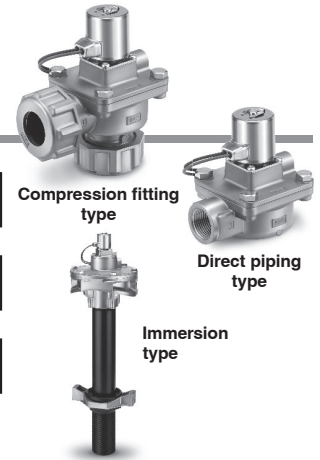
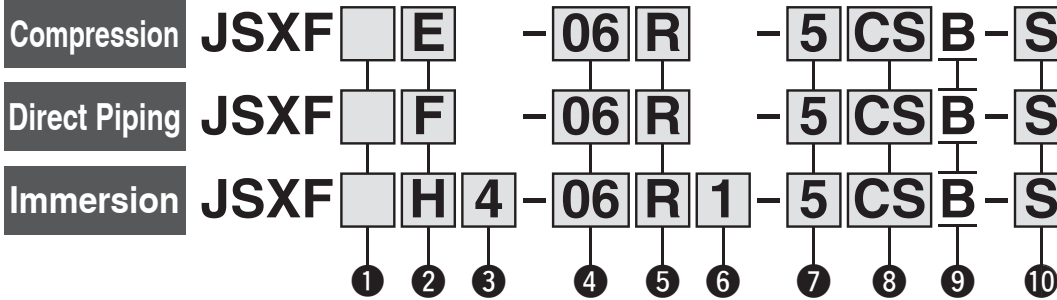
CE UK CA
Differs depending on the voltage and electrical entry

RoHS

SMARTVENT Type ▶ p. 17

Air Operated Type ▶ p. 21




How to Order



1 Valve type

—	Solenoid valve
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2 Piping

E	Compression fitting type*1	
F	Direct piping type	
H	Immersion type*2	

*1 Seals and washers are included.

*2 The valve and pipe do not come assembled.

3 Tank size (JSXFH only)

4	4 inch
5	5 inch
6	6 inch
8	8 inch
10	10 inch

4 Port size*1

06	3/4 (20A)
10	1 (25A)
14	1 1/2 (40A)
20*2	2 (50A)

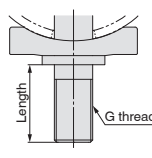
*1 For port size selection, refer to the "Variations for Port Size and Option" table below.

*2 Port size 20 is only available for the JSXFH.

5 Thread type

R	Rc
N	NPT
F	G








6 OUT port piping configuration (JSXFH only)

Symbol	Length	G thread	Appearance
1	Short	None	
2	Long		
3	Short	Yes	
4	Long		

7 Rated voltage

AC		DC	
Symbol	Rated voltage	Symbol	Rated voltage
1	100 VAC	5	24 VDC
2	200 VAC		
3	120 VAC (110 VAC)		
4	220 VAC		
7	240 VAC		
J	230 VAC		

8 Electrical entry

Symbol	Electrical entry	CE/UKCA-compliant
G	Grommet*1	 24 VDC
GS	Grommet with PCB (With surge voltage suppressor)	 100 VAC 24 VDC
CS	Conduit (With surge voltage suppressor)	 All voltages
DS	DIN terminal (With surge voltage suppressor)	 All voltages
DZ	DIN terminal with light (With surge voltage suppressor)	 All voltages
DN	DIN terminal without connector (With surge voltage suppressor)	 All voltages
WN	M12 connector*2 (With surge voltage suppressor)	 All voltages

*1 Only 24 VDC can be selected for the rated voltage.

*2 A cable for the M12 connector is not included with the product. Refer to "Option" on page 16 to order it separately.

9 Fluid and ambient temperatures

B	-40 to 60 °C
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10 Silencer

—	Without
S	With

Shipped together with the product
Refer to "Replacement Parts" on page 15.



Made to Order

Tank hole dia.: Ø 76 (Port size 14, 6-inch tank)	p. 33
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Variations for Port Size and Option

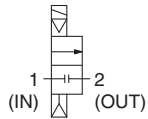
Model	Tank size	Port size			
		06	10	14	20
JSXFE	—	●	●	●	—
JSXFF	—	●	●	●	—
JSXFH	4 inch	●	—	—	—
	5 inch	●	●	—	—
	6 inch	—	●	●	—
	8 inch	—	—	●	●
	10 inch	—	—	—	●
Silencer		●	●	●	●

Specifications

Common Specifications

Valve specifications	Valve construction		Pilot operated diaphragm
	Valve type		Normally closed (N.C.)
	Fluid		Air
	Withstand pressure	[MPa]	1.5
	Min. operating pressure differential	[MPa]	0.1
	Max. operating pressure differential	[MPa]	0.9
	Max. system pressure	[MPa]	0.9
	Fluid temperature	[°C]	-40*1 to 60
	Ambient temperature	[°C]	-40 to 60
	Enclosure		IP67 (IP65 for the DIN connector)*2
Standards*3		CE/UKCA	
Coil specifications	Allowable voltage fluctuation		±10 % of the rated voltage
	Allowable leakage voltage	AC	5 % or less of the rated voltage
		DC	2 % or less of the rated voltage
	Apparent power*4, *5	AC	18 VA
Power consumption*4	DC	12 W	

Symbol



JSXFE Series

*1 No condensation

*2 If water enters the product, it may result in operation failure or breakage.

Therefore, take appropriate measures to prevent water from entering the product when used in an environment where it is constantly exposed to water.

*3 Conformance to standards varies depending on the model. For details, refer to page 7.

*4 Power consumption/Apparent power: The value at an ambient temperature of 20 °C and when the rated voltage is applied (Variation: ±10 %)

*5 There is no difference in the frequency and the inrush and energised apparent power, since a rectifying circuit is used in the AC.

Be sure to read "Specific Product Precautions" before handling.

Individual Specifications: Compression Fitting Type / Direct Piping Type

Series	JSXFE/F		
	06	10	14
Orifice diameter [mm]	Ø 32	Ø 40	Ø 50
Port size	3/4	1	1 1/2
Weight*1 [g]	Compression	740	1,230
	Direct piping	560	820

*1 Indicates case of grommet type

Add 20 g for grommet with PCB, 70 g for conduit, 50 g for DIN terminal, and 15 g for M12 connector.



JSXFF Series

Individual Specifications: Immersion Type

Series	JSXFH									
	06		10		14		20			
Orifice diameter [mm]	Ø 32		Ø 40		Ø 45		Ø 55			
Port size	3/4		1		1 1/2		2			
Tank size	ANSI 4		5		6		8		10	
Weight*1 [g]	Piping configuration	1	1,380	1,390	2,050	2,110	2,960	3,080	4,670	4,840
		2	1,410	1,430	2,100	2,210	3,120	3,310	4,990	5,150
		3	1,380	1,390	2,050	2,110	2,960	3,080	4,670	4,840
		4	1,410	1,430	2,100	2,210	3,120	3,310	4,990	5,150

*1 Indicates case of grommet type

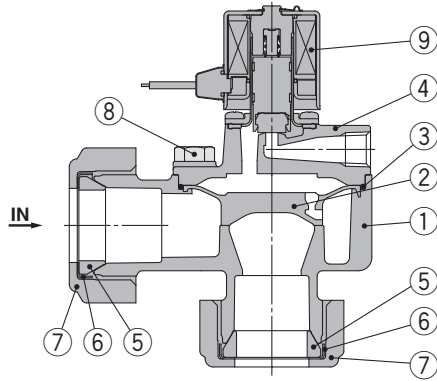
Add 20 g for grommet with PCB, 70 g for conduit, 50 g for DIN terminal, and 15 g for M12 connector.



JSXFH Series

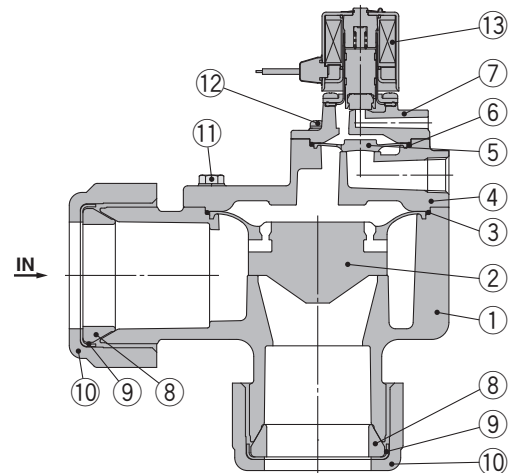
Construction**JSXFE/Compression Fitting Type**

Port sizes 06, 10

**Component Parts**

No.	Description	Material
1	Body	ADC
2	Main valve	Resin
3	O-ring	NBR
4	Bonnet	ADC
5	Seal	NBR
6	Washer	Fe (Chromating)
7	Compression nut	ADC
8	Hexagon bolt	Stainless steel
9	Pilot valve	—

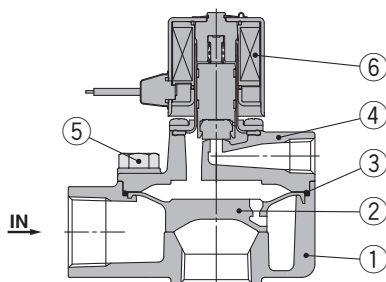
Port size 14

**Component Parts**

No.	Description	Material	No.	Description	Material
1	Body	ADC	8	Seal	NBR
2	Main valve	Resin	9	Washer	Fe (Chromating)
3	O-ring	NBR	10	Compression nut	ADC
4	Bonnet	ADC	11	Hexagon bolt	Stainless steel
5	Sub-valve	Resin	12	Cross recessed round head screw	Stainless steel
6	O-ring	NBR	13	Pilot valve	—
7	Bonnet	ADC			

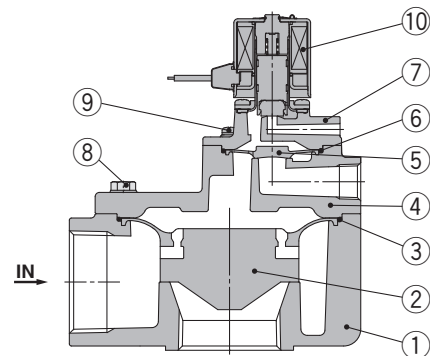
JSXFF/Direct Piping Type

Port sizes 06, 10

**Component Parts**

No.	Description	Material
1	Body	ADC
2	Main valve	Resin
3	O-ring	NBR
4	Bonnet	ADC
5	Hexagon bolt	Stainless steel
6	Pilot valve	—

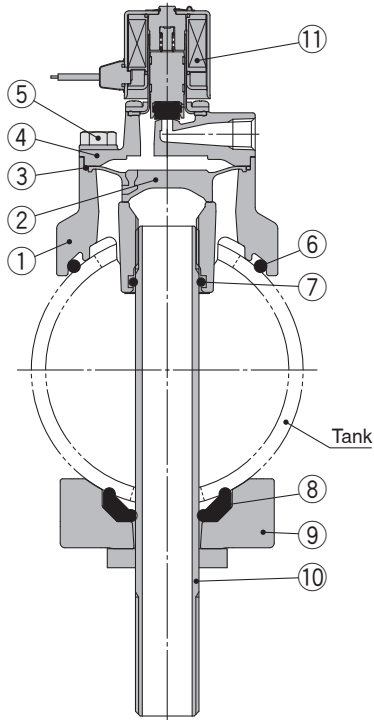
Port size 14

**Component Parts**

No.	Description	Material
1	Body	ADC
2	Main valve	Resin
3	O-ring	NBR
4	Bonnet	ADC
5	Sub-valve	Resin
6	O-ring	NBR
7	Bonnet	ADC
8	Hexagon bolt	Stainless steel
9	Cross recessed round head screw	Stainless steel
10	Pilot valve	—

Construction**JSXFH/Immersion Type**

Port sizes 06, 10

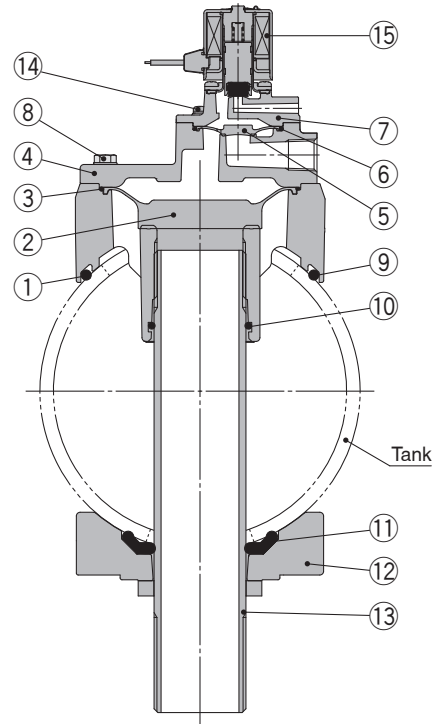


* The tank should be provided by the customer.

Component Parts

No.	Description	Material
1	Body	ADC
2	Main valve	Resin
3	O-ring	NBR
4	Bonnet	ADC
5	Hexagon bolt	Stainless steel
6	O-ring	NBR
7	O-ring	NBR
8	Gasket	NBR
9	Bottom support	ADC
10	Outlet pipe assembly	STKM + SS400
11	Pilot valve	—

Port sizes 14, 20



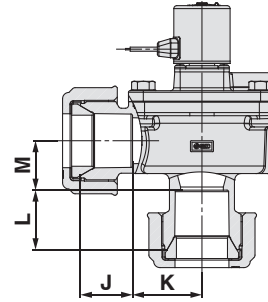
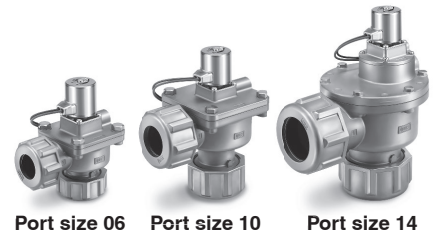
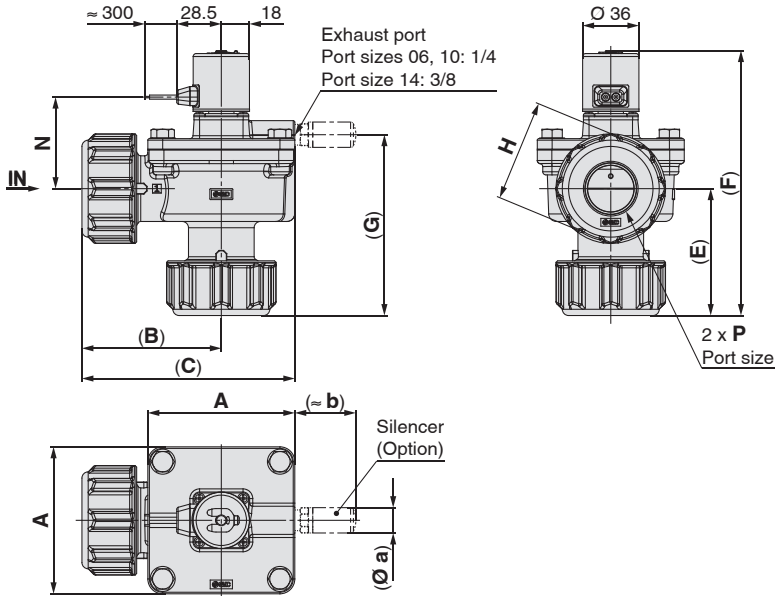
* The tank should be provided by the customer.

Component Parts

No.	Description	Material
1	Body	ADC
2	Main valve	Resin
3	O-ring	NBR
4	Bonnet	ADC
5	Sub-valve	Resin
6	O-ring	NBR
7	Bonnet	ADC
8	Hexagon bolt	Stainless steel
9	O-ring	NBR
10	O-ring	NBR
11	Gasket	NBR
12	Bottom support	ADC
13	Outlet pipe assembly	STKM + SS400
14	Cross recessed round head screw	Stainless steel
15	Pilot valve	—

Dimensions: JSXFE/Compression Fitting Type

G: Grommet

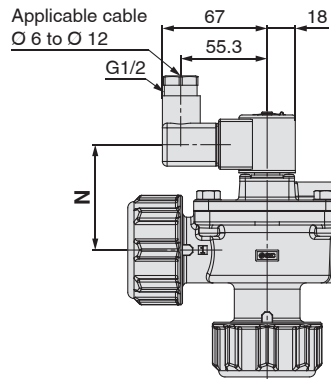
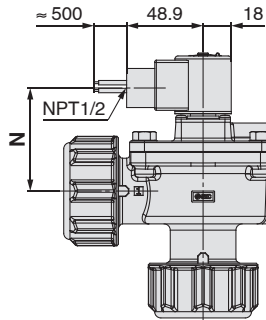
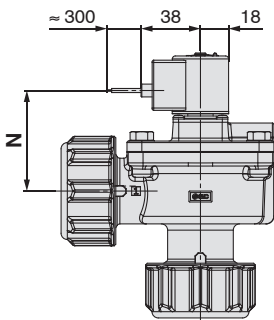


GS: Grommet with PCB

CS: Conduit

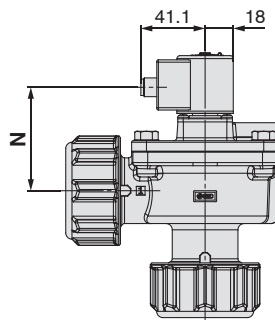
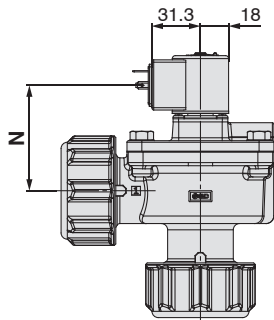
DS: DIN terminal

DZ: DIN terminal with light



DN: Without DIN connector

WN: M12 connector



Dimensions

[mm]

Model	Port size P	A	(B)	(C)	(E)	(F)	(G)	H	J	K	L	M
JSXFE-06	3/4	74	76	113	54	136	82	54	25.4	41.3	25.4	18.8
JSXFE-10	1	94	90	137	82	170	116	65	33.3	44.4	38.1	31.6
JSXFE-14	1 1/2	Ø 126	117	178	92	217	139	80	51.3	50.7	45	33

The dimensions in () show the dimensions after tightening.

Model	Port size P	N						With silencer	
		Grommet	Grommet with PCB	Conduit	DIN terminal	Without DIN connector	M12 connector	a	b
JSXFE-06	3/4	52.6	58.3	59.9	61.4	61.4	60.2	16.5	39
JSXFE-10	1	58.6	64.3	65.9	67.4	67.4	66.2		
JSXFE-14	1 1/2	95.6	101.3	102.9	104.4	104.4	103.2		