

SUS316 Flow Controller - 1 way restricted

# Flow Controller SUS316

New Product



Applications



Food



Pharma



Chemical



Medical



Semi-conductor



Battery

- All parts used are **Free from Oil**
- External parts are **Food Sanitation Law compliant** (Refer to our website for details)
- External parts are made of **SUS316 stainless steel**
- The material of rubber seal is **FKM** (HNBR as to diaphragm)

## Distinguish



Flow controller SUS316 can be distinguished from Needle (Throttle) valve by the marking on the back.



### Flow controller



Marking on back

### Needle valve



No marking

# SUS316 Flow Controller

## Model designation (Example)



### ⑦. Packaging

Code	No entry	-C
Specification	Normal packaging	Clean-room packaging

### ⑥. Sealing tape on thread (tapered thread only)

Code	No entry	-TP
Specification	Standard (※1)	Seal tape (※2)

※1) No sealing on the thread  
 ※2) Applying seal tape on the thread (tapered thread).  
 Not for the metric thread type.



### ⑤. Grease specification

Code	No entry	-X
Specification	Oil-free (※1)	Fluorochemical grease (※2)

※1) Fluorine coating on rubber seals  
 ※2) Fluorochemical grease is applied on rubber seals

### ④. Restricted direction

Code	A	B
Control	Meter-out (Exhaust)	Meter-in (Supply)
	Air from thread side is restricted and exhausted. Air from tubing side is not and goes through thread side.	Air supplied from tubing side is restricted. Air from thread side is not restricted and exhausted.
How to distinguish	Marking on the back of body A	Marking on the back of body B

### ③. Thread size

	Metric	Tapered pipe thread			
Code	M5	01	02	03	04
Size	M5×0.8	R1/8	R1/4	R3/8	R1/2

### ②. Tubing size

	Metric size					
Code	4	6	8	10	12	16
Tubing O.D. (mm)	ø4	ø6	ø8	ø10	ø12	ø16

### ①. Type

Code	C
Type	Elbow

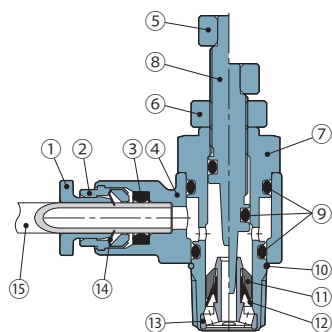
Flow controller SUS316

## Specification

Fluid medium	Air
Operating pressure range	14.5 ~ 130 psi ( 0.1 ~ 0.9MPa)
Operating temperature range	23 ~ 140° F ( -5 ~ 60°C ) (No freezing)
Valve seat cracking pressure	7.25 psi ( 0.05MPa)

Structure

Elbow type : SSJSC4-01A model

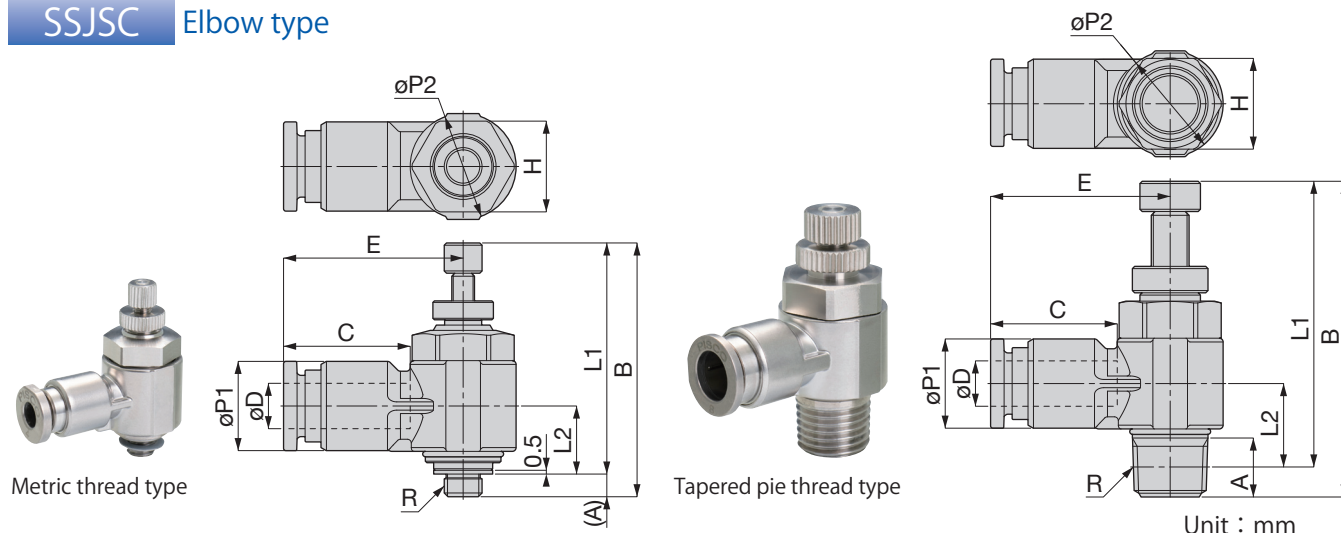


No.	Part	Material (Treatment)
①	Release ring	SUS316 (※1)
②	Guide ring	SUS316
③	Elastic sleeve	FKM (※1)
④	Fitting	SUS316
⑤	Knob	SUS316
⑥	Locking nut	SUS316
⑦	Main body	SUS316 (※2)
⑧	Needle	SUS316
⑨	O-ring	FKM (※1)
⑩	C-ring	SUS316
⑪	Retainer	PBT
⑫	Diaphragm	HNBR
⑬	Core cylinder	Special stainless steel (Austenitic or Ferritic) (※3)
⑭	Lock craws	SUS316
⑮	Tubing	Any applicable tubing

- ※1) Fluorine coating
- ※2) Metric thread type comes with a gasket (SUS316+FKM) but there is no sealing tape nor sealock on the tapered pipe thread.
- ※3) Anti-corrosivity is equivalent to SUS303

Dimensions

SSJSC Elbow type



Model	Tubing O.D. øD	R	A	B		L1		L2	øP1	øP2	Tube End C	E	Hex H	Weight (g)
				(max.)	(min.)	(max.)	(min.)							
SSJSC4-M5(4)(5)(7)	4	M5×0.8	3	33.6	30.9	30.6	27.9	9	9.9	14	14.9	22.4	12	24
SSJSC4-01(4)(5)(6)(7)		R1/8	7.8	41.8	35.2	37.8	31.2	11						28
SSJSC6-M5(4)(5)(7)	6	M5×0.8	3	33.6	30.9	30.6	27.9	9	11.8	14	16.8	23.8	12	26
SSJSC6-01(4)(5)(6)(7)		R1/8	7.8	41.8	35.2	37.8	31.2	11						29
SSJSC8-01(4)(5)(6)(7)	8	R1/8	7.8	41.8	35.2	37.8	31.2	11.9	13.8	14	17.8	24.4	12	31
SSJSC8-02(4)(5)(6)(7)		R1/4	10.6	49.2	42.5	43.2	36.5	13.1						57
SSJSC10-02(4)(5)(6)(7)	10	R1/4	10.6	49.2	42.5	43.2	36.5	14.6	16.8	19	19.7	30.7	17	65
SSJSC10-03(4)(5)(6)(7)		R3/8	13.2	56.5	47.9	50.2	41.6	16.9						96
SSJSC12-03(4)(5)(6)(7)	12	R3/8	13.2	56.5	47.9	50.2	41.6	18.4	19.8	23	23.3	36	21	107
SSJSC12-04(4)(5)(6)(7)		R1/2	15.4	62.3	54.2	54.1	46	18.7						151
SSJSC16-04(4)(5)(6)(7)	16	R1/2	15.4	62.3	54.2	54.1	46	20.7	23.7	28	24	40.4	24	161

※) L1 and L2 dimensions of tapered thread type are the ones after it is installed.

## Flow characteristics

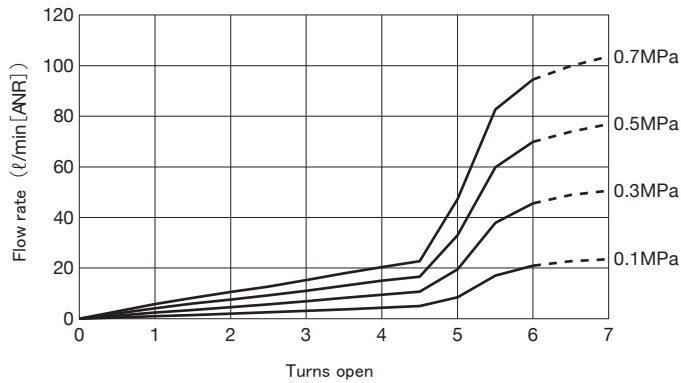
SSJSC4-M5④  
SSJSC6-M5④

Cylinder  
Tube I.D.

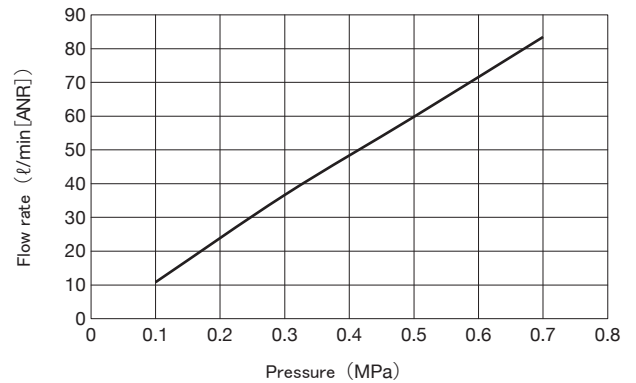
ø20mm

※) Supply air pressure : 0.5MPa, Cylinder speed : at 500mm/sec

Restricted flow



Free flow



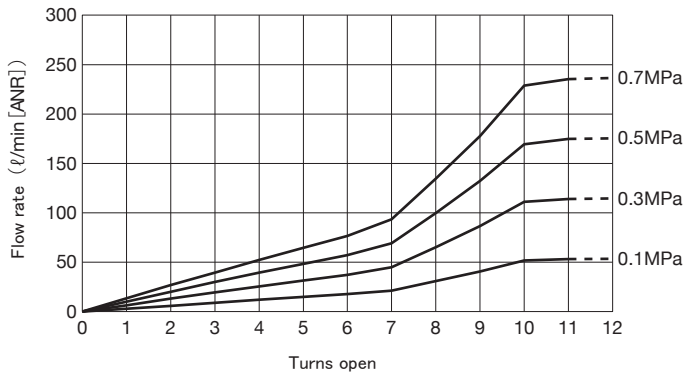
SSJSC4-01④  
SSJSC6-01④  
SSJSC8-01④

Cylinder  
Tube I.D.

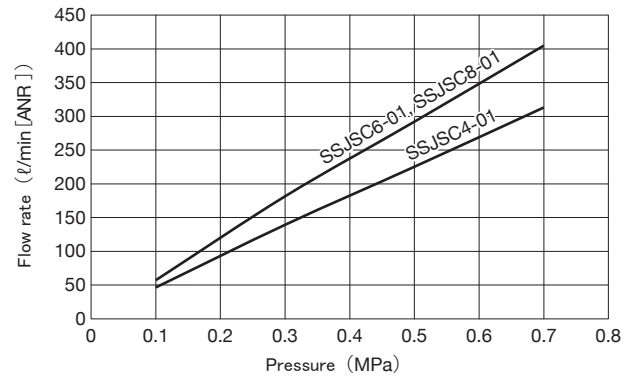
ø32mm

※) Supply air pressure : 0.5MPa, Cylinder speed : at 500mm/sec

Restricted flow



Free flow



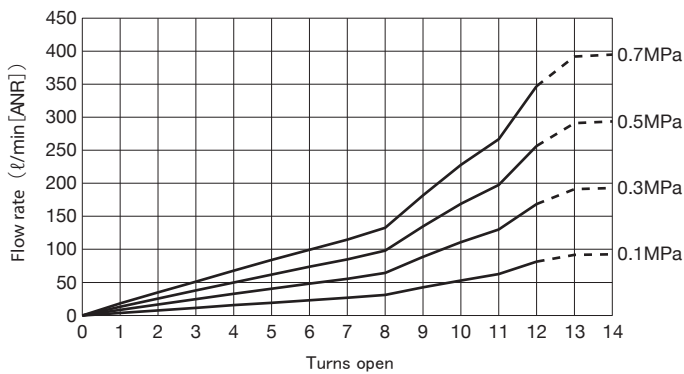
SSJSC8-02④  
SSJSC10-02④

Cylinder  
Tube I.D.

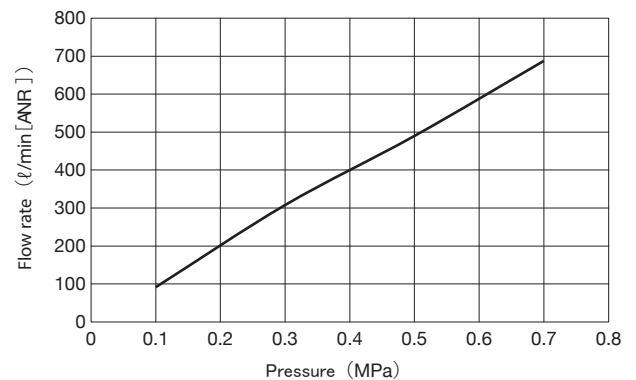
ø40mm

※) Supply air pressure : 0.5MPa, Cylinder speed : at 500mm/sec

Restricted flow



Free flow

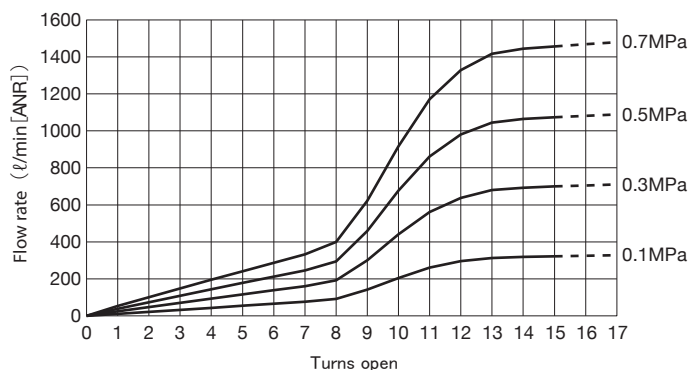


Flow control valve SUS316

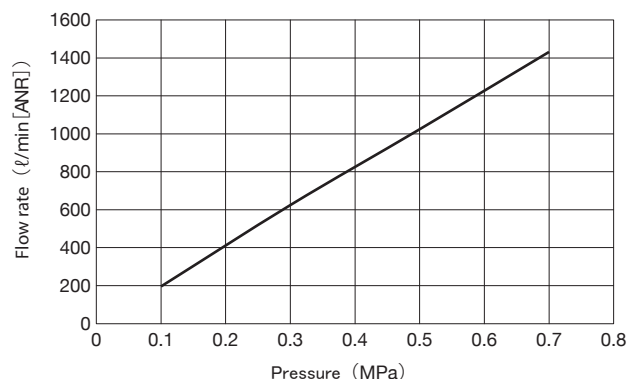
SSJSC10-03④  
SSJSC12-03④

Cylinder Tube I.D.  $\varnothing 80\text{mm}$  ※) Supply air pressure : 0.5MPa, Cylinder speed : at 500mm/sec

Restricted flow



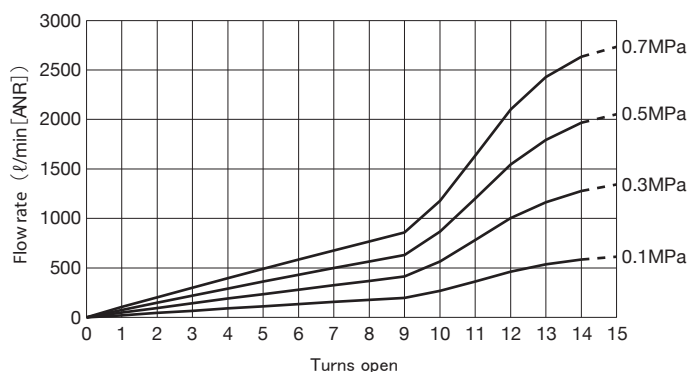
Free flow



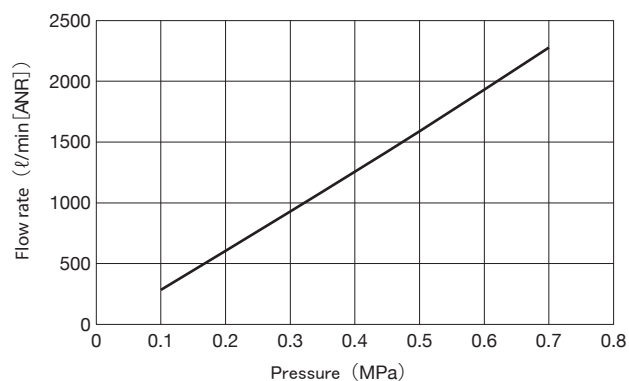
SSJSC12-04④  
SSJSC16-04④

Cylinder Tube I.D.  $\varnothing 100\text{mm}$  ※) Supply air pressure : 0.5MPa, Cylinder speed : at 500mm/sec

Restricted flow



Free flow



Safety instruction

⚠ Warning

1. When adjusting the speed of actuators, gradually open the air by turning the adjusting needle from a fully closed position. In case the needle is open, an actuator can move suddenly. Turn the needle clockwise to close, and counter-clockwise to open.
2. When adjusting the flow rate, turn the adjusting needle gradually from its fully closed position. In case the needle is in open position, the impact of pressure may cause damages to the product.

⚠ Caution

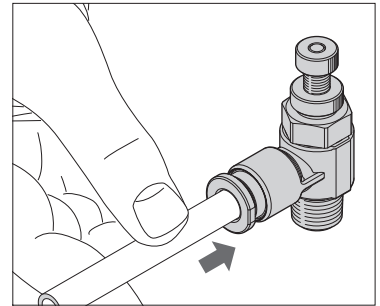
1. Flow controller permits some air leakage. Do not use the product for the application which requires no leakage.
2. Tapered thread is not coated with Sealock. When applying seal tape or sealant on the thread, 1.5 to 2 screw ridges from the edge of the thread should be left unapplied.
3. Corrosion resistance and dust emission varies depending on operating environment. When any negative effect is expected on machines or apparatuses, please carry out a prior evaluation taking the operating environment into consideration.
4. The material of the retainer is PBT, the diaphragm is HNBR and the core cylinder is Special stainless steel (Austenitic or Ferritic). Do not use the product in case there is a possibility that the material will cause a problem.

## Installation

### 1. How to connect/disconnect a tubing to Push-in Fitting

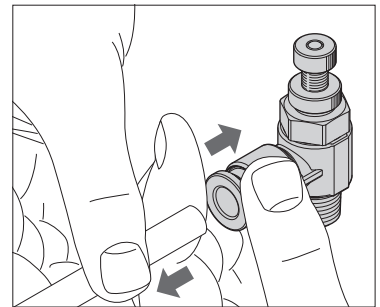
#### ①. Connecting tubings

Insert a tubing into Push-in fitting up to the tube end. Lock-claws bite and hold the tubing spontaneously. The Elastic Sleeve seals the tubing at the same time. Refer to "8-1. Instruction for Tube Insertion" under "Common Safety Instruction for Fittings" in the general catalog of PISCO



#### ②. Tubing disconnection

The tubing is disconnected by pushing down the Release-ring to unlock the Lock-claws. Make sure to shut-off the air supply when disconnecting the tubing.



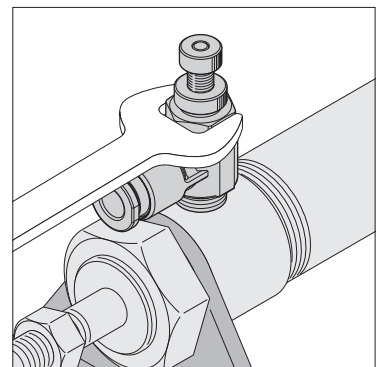
### 2. How to install

#### ①. Tightening the thread

The product should be installed by a wrench. Regarding to models with tapered pipe threads, there is no Sealock applied on the threads. Seal tape or sealant may be applied when it is needed. Refer to the following chart 'Tightening torque and Gasket material' for installation.

#### ● Tightening torque and Gasket material

Thread	Size	Tightening torque (N·m)	Gasket material
Metric thread	M5×0.8	1 ~1.5	SUS316 + FKM
	R1/8	4.5 ~ 6.5	
Taper pipe thread	R1/4	7 ~ 9	—
	R3/8	12.5 ~ 14.5	
	R1/2	20 ~ 22	

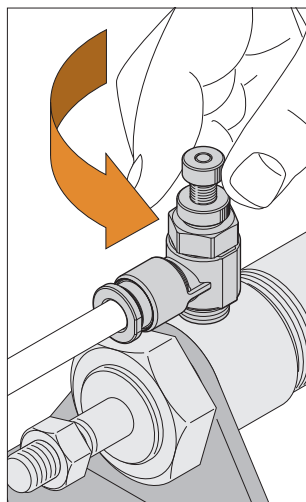


## How to adjust

### 1. Speed adjustment of actuators

#### ①. Increase speed

Turn the needle counterclockwise from a fully closed state. The more the needle is opened, the faster the actuator moves. Make sure to fasten the locknut at the desired speed. The speed set can be changed without fastening the locknut.



#### ②. Reducing speed

Turn the needle clockwise when the speed of actuator is faster than expected. Make sure to fasten the locknut at the desired speed. The speed set can be changed without fastening the locknut.

