

# Quick Fitting Type Speed Control Valve

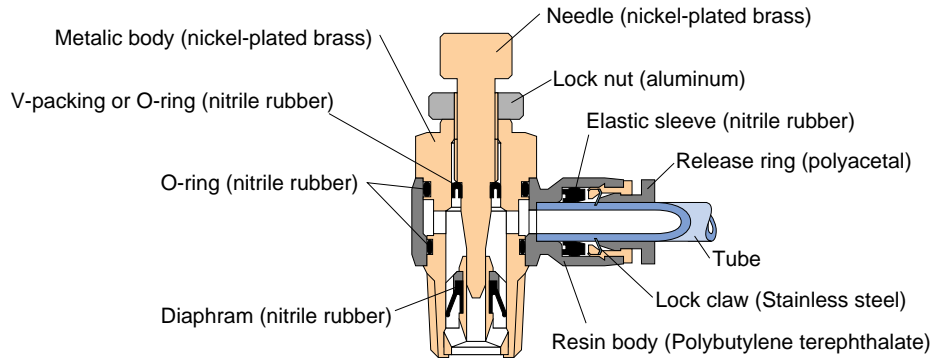
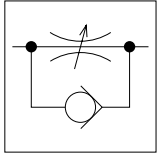
## Speed Controller Standard Type

### Features

■ The Speed Controller controls the operation speed of a driving device.

### Construction

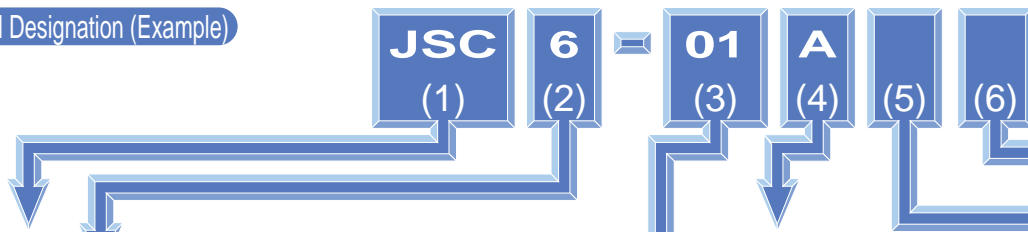
Graphical representation



### Specification

Fluid admitted	Air	
Service pressure range	0 ~ 150psi	0 ~0.9MPa
Check valve operating pressure	7.25psi	0.05Mpa
Service temperature range	32 ~ 140°F	0 ~60°C

### Model Designation (Example)



(1) Type

(2) Tube dia.

Tube dia.	mm size					
Code	4	6	8	10	12	
Size(mm)	φ4	φ6	φ8	φ10	φ12	
Tube dia.	inch size					
Code	5/32	3/16	1/4	5/16	3/8	1/2
Size(mm)	φ5/32	φ3/16	φ1/4	φ5/16	φ3/8	φ1/2

(3) Thread size

Thread size	Metric thread(mm)	Taper pipe thread			
Code	M5	01	02	03	04
Size	M5×0.8	R1/8	R1/4	R3/8	R1/2

Thread size	Unified fine thread	American standard taper pipe thread			
Code	U10	N1	N2	N3	N4
Size	10~32UNF	NPT1/8	NPT1/4	NPT3/8	NPT1/2

(4) Control direction

A : Meter-out control

(Inscription "A" on needle top or silver-color lock nut) (\*1)

B : Meter-in control

(Inscription "B" on needle top or black-color lock nut) (\*2)

\*Do not make this entry for JSU.

(5) Specification

K : Spring return type

Check valve operating pressure→0.02MPa(2.9 psi)

[Service pressure range→0 ~ 0.5MPa(0~73 psi)]

No code : Standard specification

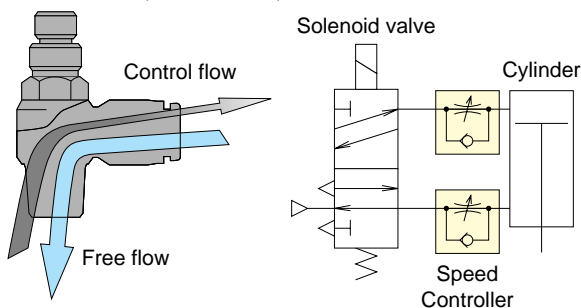
(6) Hexagon flat-to-flat specification

U: Hexagon flat-to-flat inch spec. (NPT)

No code: Hexagon flat-to-flat mm spec.

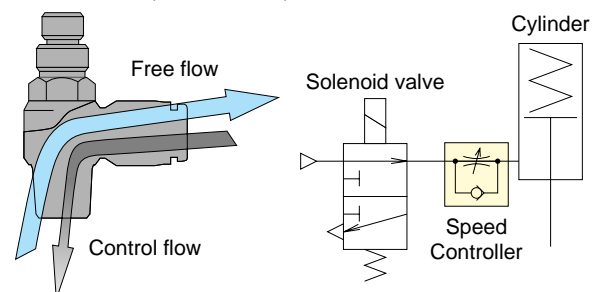
\*1. Meter-out control

■ The flow rate of air entering from the thread side can be controlled, whereas air entering from the joint side comes out from the thread side at the same (not controlled) flow rate.

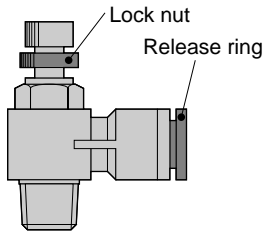


\*2. Meter-in control

■ The flow rate of air entering from the joint side can be controlled, whereas air entering from the thread side comes out from the Joint side at the same (not controlled) flow rate.



## How to identify speed controller types



	Release ring Shape · Color	Plastic body Color	Lock nut color	
			Atype	Btype
Standard type	Circle · Black	Black	Silver	Black
Mini type	Oval · Black	Black	Silver	Black
Large flow type	Circle · Black	Black	Blue	—
SUS303 equiv. anti_corrosive type	Circle · Dark blue	Black	Silver	Black
Clean-room Ready type	Circle · Light blue	Light blue	Silver	Black

### ⚠ Detailed Safety Instructions

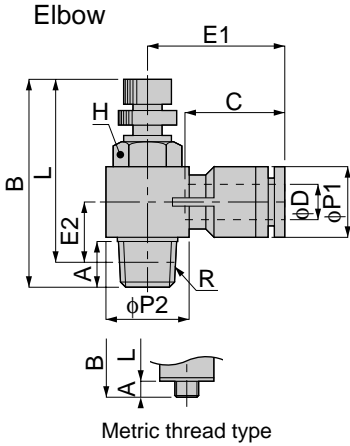
Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 7 and "Common Safety Instructions for Controllers" on pages 43.

#### ⚠ Warning

- Adjust the speed of the actuator by opening the needle gradually from the fully closed position. With the needle open, there are chances of the actuator flying out. Turn the needle clockwise to close or counterclockwise to open.
- Do not subject the product with a rotatable resin to forcible swinging or rotation. Otherwise the body may suffer damage or develop leakage.

#### ⚠ Caution

- The Speed Controller is designed to tolerate some air flow at fully. Therefore do not use it for applications that permits no air flow.

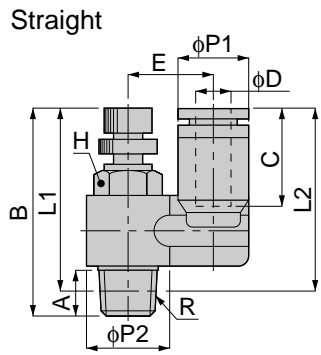


Model	Tube dia. φD	R	A	B		L		φP1	φP2	C	E1	E2	H	Mass (g)
				max	min	max	min							
JSC 4-M5□(K)	4	M5×0.8	3	29.5	27	26.5	24	10	10	15	20	6.5	8	8.5
JSC 4-01□(K)		R1/8	8	40.5	34	36.5	30							
JSC 6-M5□(K)	6	M5×0.8	3	29.5	27	26.5	24	12.5	14.5	17	24	7.5	8	9.5
JSC 6-01□(K)		R1/8	8	40.5	34	36.5	30							
JSC 6-02□(K)		R1/4	11	47.5	41	41.5	35							
JSC 6-03□		R3/8	12	53.5	46.5	47	40							
JSC 8-01□(K)	8	R1/8	8	40.5	34	36.5	30	14.5	18.5	18.5	27	11.5	10	20
JSC 8-02□(K)		R1/4	11	47.5	41	41.5	35							
JSC 8-03□		R3/8	12	53.5	46.5	47	40							
JSC 8-04□		R1/2	15	59	51.5	51	43.5							
JSC 10-02□(K)	10	R1/4	11	47.5	41	41.5	35	18	22	20.5	31	14.5	14	40.5
JSC 10-03□		R3/8	12	53.5	46.5	47	40							
JSC 10-04□		R1/2	15	59	51.5	51	43.5							
JSC 12-03□	12	R3/8	12	53.5	46.5	47	40	21.5	28	23.5	37	18	19	71
JSC 12-04□		R1/2	15	59	51.5	51	43.5							
JSC 1/4-M5□(K)	1/4	M5×0.8	3	29.5	27	26.5	24	12.5	14.5	17	24	7.5	8	9.5
JSC 1/4-01□(K)		R1/8	8	40.5	34	36.5	30							
JSC 1/4-02□(K)		R1/4	11	47.5	41	41.5	35							
JSC 5/16-01□(K)	5/16	R1/8	8	40.5	34	36.5	30	14.5	18.5	18.5	27	11.5	10	20
JSC 5/16-02□(K)		R1/4	11	47.5	41	41.5	35							
JSC 5/16-03□		R3/8	12	53.5	46.5	47	40							
JSC 3/8-02□(K)	3/8	R1/4	11	47.5	41	41.5	35	18	18.5	20.5	31	14.5	14	40.5
JSC 3/8-03□		R3/8	12	53.5	46.5	47	40							



unit:inch

Model	Tube dia.φD inch(mm)	NPT	A	B		L		φP1	φP2	C	E1	E2	H	Weight (oz)
				MAX	MIN	MAX	MIN							
JSC 5/32-U10□(K)U	5/32(3.97)	10-32UNF	0.14	1.16	1.06	1.02	0.93	0.39	0.39	0.59	0.79	0.26	5/16	0.29
JSC 5/32-N1□(K)U	5/32(3.97)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	0.39	0.57	0.59	0.85	0.41	7/16	0.61
JSC 3/16-U10□U	3/16(4.76)	10-32UNF	0.14	1.16	1.06	1.02	0.93	0.49	0.39	0.67	0.94	0.30	5/16	0.34
JSC 3/16-N1□U	3/16(4.76)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	0.49	0.57	0.67	0.93	0.41	7/16	0.70
JSC 3/16-N2□U	3/16(4.76)	NPT 1/4	0.43	1.87	1.61	1.63	1.38	0.49	0.73	0.67	1.00	0.47	9/16	1.28
JSC 3/16-N3□U	3/16(4.76)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	0.49	0.87	0.67	1.14	0.59	3/4	2.29
JSC 1/4-U10□(K)U	1/4(6.35)	10-32UNF	0.14	1.16	1.06	1.02	0.93	0.49	0.39	0.67	0.94	0.30	5/16	0.33
JSC 1/4-N1□(K)U	1/4(6.35)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	0.49	0.57	0.67	0.93	0.41	7/16	0.69
JSC 1/4-N2□(K)U	1/4(6.35)	NPT 1/4	0.43	1.87	1.61	1.63	1.38	0.49	0.73	0.67	1.00	0.47	9/16	1.27
JSC 1/4-N3□U	1/4(6.35)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	0.49	0.87	0.67	1.14	0.59	3/4	2.26
JSC 5/16-N1□U	5/16(7.94)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	0.57	0.57	0.73	1.06	0.45	7/16	0.74
JSC 5/16-N2□U	5/16(7.94)	NPT 1/4	0.43	1.87	1.61	1.63	1.38	0.57	0.73	0.73	1.12	0.51	9/16	1.32
JSC 5/16-N3□U	5/16(7.94)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	0.57	0.87	0.73	1.14	0.59	3/4	2.28
JSC 5/16-N4□U	5/16(7.94)	NPT 1/2	0.59	2.32	2.03	2.01	1.71	0.57	1.10	0.73	1.22	0.71	1	3.61
JSC 3/8-N2□U	3/8(9.53)	NPT 1/2	0.43	1.87	1.61	1.63	1.38	0.71	0.71	0.81	1.22	0.57	9/16	1.43
JSC 3/8-N3□U	3/8(9.53)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	0.71	0.87	0.81	1.24	0.65	3/4	2.39
JSC 3/8-N4□U	3/8(9.53)	NPT 1/2	0.59	2.32	2.03	2.01	1.17	0.71	1.10	0.81	1.34	0.71	1	3.71
JSC 1/2-N3□U	1/2(12.7)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	0.85	0.87	0.93	1.46	0.71	3/4	2.50
JSC 1/2-N4□U	1/2(12.7)	NPT 1/2	0.59	2.32	2.03	2.01	1.71	0.85	1.10	0.93	1.44	0.77	1	3.81



Metric thread type



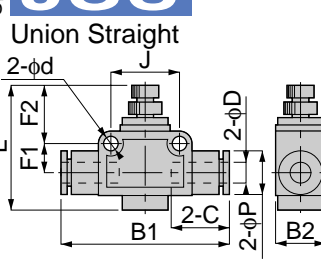
unit:mm

Model	Tube dia. φD	R	A	B		L1		L2	φP1	φP2	C	E	H	Mass (g)	
				max	min	max	min								
JSS 4-M5□(K)	4	M5×0.8	3	29.5	27	26.5	24	24	10	10	15	10.5	8	9	
JSS 4-01□(K)		R1/8	8	40.5	34	36.5	30	29				14.5	13	10	19
JSS 6-M5□(K)	6	M5×0.8	3	29.5	27	26.5	24	26	12.5	14.5	17	12	8	10	
JSS 6-01□(K)		R1/8	8	40.5	34	36.5	30	31				18.5	14	10	20
JSS 6-02□(K)		R1/4	11	47.5	41	41.5	35	32				18.5	17	14	37.5
JSS 8-01□(K)	8	R1/8	8	40.5	34	36.5	30	32.5	14.5	18.5	18.5	15	10	21.5	
JSS 8-02□(K)		R1/4	11	47.5	41	41.5	35	33.5				22	18	14	39
JSS 8-03□		R3/8	12	53.5	46.5	47	40	37.5				22	19	19	67
JSS 10-02□(K)	10	R1/4	11	47.5	41	41.5	35	36	18	18.5	20.5	20	14	42.5	
JSS 10-03□		R3/8	12	53.5	46.5	47	40	40				22	21	19	70.5
JSS 12-03□	12	R3/8	12	53.5	46.5	47	40	42.5	21.5	22	23.5	19	74		
JSS 12-04□		R1/2	15	59	51.5	51	43.5	47				28	24	114	
JSS 1/4-M5□(K)	1/4	M5×0.8	3	29.5	27	26.5	24	26	12.5	14.5	17	12	8	10	
JSS 1/4-01□(K)		R1/8	8	40.5	34	36.5	30	31				18.5	14	10	20
JSS 1/4-02□(K)		R1/4	11	47.5	41	41.5	35	32				18.5	17	14	37.5
JSS 5/16-01□(K)	5/16	R1/8	8	40.5	34	36.5	30	32.5	14.5	18.5	18.5	15	10	21.5	
JSS 5/16-02□(K)		R1/4	11	47.5	41	41.5	35	33.5				22	18	14	39
JSS 5/16-03□		R3/8	12	53.5	46.5	47	40	37.5				22	19	19	68
JSS 3/8-02□(K)	3/8	R1/4	11	47.5	41	41.5	35	36	18	18.5	20.5	22.5	14	42.5	
JSS 3/8-03□		R3/8	12	53.5	46.5	47	40	40				22	19	70.5	



unit:inch

Model	Tube dia. φD inch(mm)	NPT	A	B		L1		L2	φP1	φP2	C	E	H	Weight (oz)
				MAX	MIN	MAX	MIN							
JSS 5/32-U10□(K)U	5/32(3.97)	10-32UNF	0.14	1.16	1.06	1.02	0.93	0.93	0.39	0.39	0.59	0.41	5/16	0.26
JSS 5/32-N1□(K)U	5/32(3.97)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	1.14	0.39	0.57	0.59	0.51	7/16	0.70
JSS 3/16-U10□U	3/16(4.76)	10-32UNF	0.14	1.16	1.06	1.02	0.93	1.00	0.49	0.39	0.67	0.47	5/16	0.36
JSS 3/16-N1□U	3/16(4.76)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	1.22	0.49	0.57	0.67	0.55	7/16	0.74
JSS 3/16-N2□U	3/16(4.76)	NPT 1/4	0.43	1.87	1.64	1.63	1.38	1.26	0.49	0.73	0.67	0.67	9/16	1.32
JSS 1/4-U10□(K)U	1/4(6.35)	10-32UNF	0.14	1.16	1.06	1.02	0.93	1.00	0.49	0.39	0.67	0.47	5/16	0.35
JSS 1/4-N1□(K)U	1/4(6.35)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	1.22	0.49	0.57	0.67	0.55	7/16	0.73
JSS 1/4-N2□(K)U	1/4(6.35)	NPT 1/4	0.43	1.87	1.64	1.63	1.38	1.26	0.49	0.73	0.67	0.67	9/16	1.31
JSS 5/16-N1□U	5/16(7.94)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	1.28	0.57	0.57	0.73	0.59	7/16	0.79
JSS 5/16-N2□U	5/16(7.94)	NPT 1/4	0.43	1.87	1.61	1.63	1.38	1.32	0.57	0.73	0.73	0.71	9/16	1.37
JSS 5/16-N3□U	5/16(7.94)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	1.48	0.57	0.87	0.73	0.75	3/4	2.38
JSS 3/8-N2□U	3/8(9.53)	NPT 1/4	0.43	1.87	1.61	1.63	1.38	1.42	0.71	0.73	0.81	0.79	9/16	1.50
JSS 3/8-N3□U	3/8(9.53)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	1.57	0.71	0.87	0.81	0.83	3/4	2.50
JSS 1/2-N3□U	1/2(12.7)	NPT 3/8	0.47	2.11	1.83	1.85	1.57	1.67	0.85	0.87	0.93	0.89	3/4	2.61
JSS 1/2-N4□U	1/2(12.7)	NPT 1/2	0.59	2.32	2.03	2.01	1.71	1.85	0.85	1.10	0.93	0.89	1	3.98



unit:mm

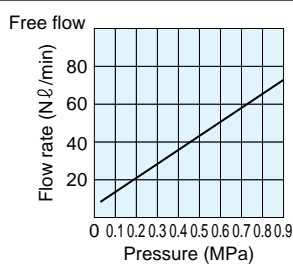
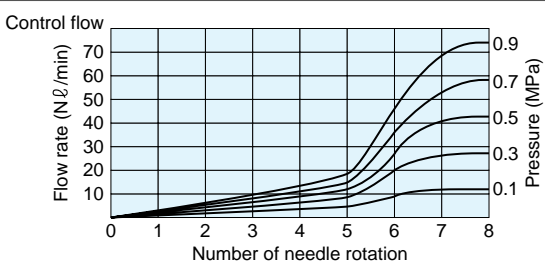
Model	Tube dia. φD	B1	B2	L		φP	C	J	φd	F1	F2	mass (g)
				max	min							
JSU 4(K)	4	41.5	11	29.5	26	10.5	15	14	3.2	6.5	13	12.5
JSU 6(K)	6	50	15	41.5	36	13	17	20	4.3	8.5	16.5	28.5
JSU 8	8	55	18	46	40.5	15	18.5	22	4.3	9.5	19	43
JSU 10	10	64	21	52	45.5	18	20.5	26	4.3	11	23	68.5
JSU 12	12	75	28	56	49	21	23.5	32	4.3	13	20.5	115
JSU 1/4	1/4	50	15	41.5	36	13	17	20	4.3	8.5	17	28.5
JSU 5/16	5/16	55	18	46	40.5	15	18.5	22	4.3	9.5	19	43
JSU 3/8	3/8	64	21	52	45.5	18	20.5	26	4.3	11	23	68.5



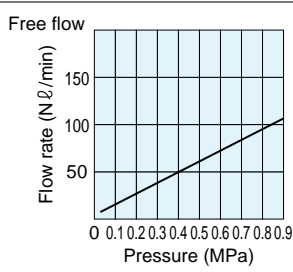
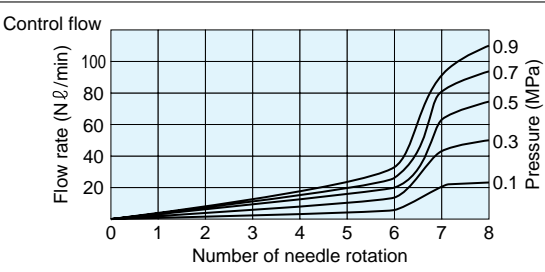
Flow characteristics

Elbow type, Straight type

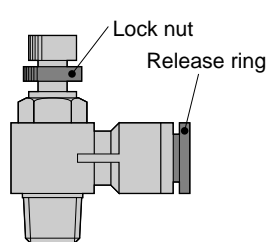
JSC 4-M5K      JSS 4-M5K  
6-M5K          6-M5K  
1/4-M5K        1/4-M5K



JSC 4-M5        JSS 4-M5  
6-M5            6-M5  
1/4-M5         1/4-M5



## How to identify speed controller types



	Release ring Shape · Color	Plastic body Color	Lock nut color	
			Atype	Btype
Standard type	Circle · Black	Black	Silver	Black
Mini type	Oval · Black	Black	Silver	Black
Large flow type	Circle · Black	Black	Blue	—
SUS303 equiv. anti_corrosive type	Circle · Dark blue	Black	Silver	Black
Culean-room Ready type	Circle · Light blue	Light blue	Silver	Black

## ⚠ Detailed Safety Instructions

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 7 and "Common Safety Instructions for Controllers" on pages 43.

### ⚠ Warning

- Adjust the speed of the actuator by opening the needle gradually from the fully closed position. With the needle open, there are chances of the actuator flying out. Turn the needle clockwise to close or counterclockwise to open.
- Do not subject the product with a rotatable resin to forcible swinging or rotation. Otherwise the body may suffer damage or develop leakage.

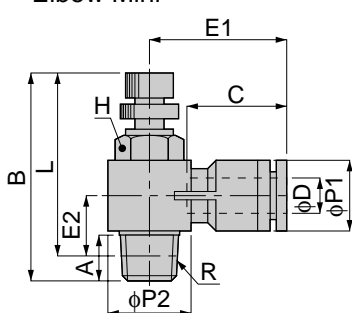
### ⚠ Caution

- The Speed Controller is designed to tolerate some air flow at fully. Therefore do not use it for applications that permits no air flow.



**JSC**  
MINI TYPE

Elbow Mini



Metric thread type



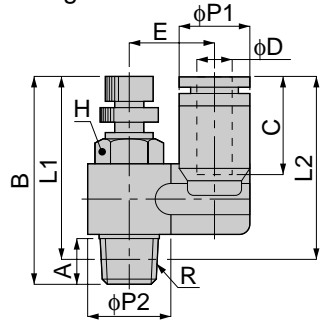
Model	Tube dia. φD	R	A	B		L		φP1	φP2	C	E1	E2	H	Mass (g)	unit:mm		
				max	min	max	min										
				JSC 3-M3M□(K)	3	M3×0.8	2.5									29.5	26.5
JSC 3-M5M□(K)	3	M5×0.8	3	30.5	27	27.5	25	8	10	11	15.5	6	8	7			
JSC 4-M3M□(K)	4	M3×0.8	2.5	29.5	26.5	27	24.5	8	10	11	15.5	6	8	6.5	1		
JSC 4-M5M□(K)		M5×0.8	3	30.5	27	27.5	25							7			
JSC 4-01M□(K)	4	R1/8	8	40	35	36	31	8	14.5	11	18	10.5	10	16.5	1		
JSC 6-M5M□(K)	6	M5×0.8	3	30.5	27	27.5	25	10.5	14.5	12	17.5	7	8	7.5			
JSC 6-01M□(K)		R1/8	8	40.5	35	36	31							18.5	10.5	10	17.5
JSC 6-02M□(K)		R1/4	11	47.5	41.5	41.5	35.5							18.5	12	14	34
JSC 1/8-M3M□(K)	1/8	M3×0.8	2.5	29.5	26.5	27	24.5	8	10	11	15.5	6	8	6.5	1		
JSC 1/8-M5M□(K)		M5×0.8	3	30.5	27	27.5	25							7			

unit:inch

Model	Tube dia.φD inch(mm)	R	A	B		L		φP1	φP2	C	E1	E2	H	Weight (oz)
				MAX	MIN	MAX	MIN							
JSC 1/8-U10M□(K)U	1/8(3.18)	10-32UNF	0.14	1.18	1.06	1.06	0.94	0.31	0.31	0.43	0.61	0.24	5/16	0.25
JSC 5/32-U10M□(K)U	5/32(3.97)	10-33UNF	0.14	1.18	1.06	1.06	0.94	0.31	0.31	0.43	0.61	0.24	5/16	0.25
JSC 5/32-N1M□U	5/32(3.97)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	0.31	0.57	0.43	0.71	0.41	7/16	0.61

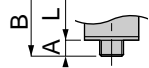
**JSS**  
MINI TYPE

Straight Mini



unit:mm

Model	Tube dia. φD	R	A	B		L1		L2	φP1	φP2	C	E	H	Mass (g)
				max	min	max	min							
JSS 3-M3M□(K)	3	M3×0.8	2.5	29.5	26.5	27	24	21.5	8	10	11	9	8	7
JSS 3-M5M□(K)		M5×0.8	3	30	27									7.5
JSS 4-M3M□(K)	4	M3×0.8	2.5	29.5	26.5	27	24	21.5	8	10	11.5	9	8	7
JSS 4-M5M□(K)		M5×0.8	3	30	27									7.5
JSS 4-01M□(K)	6	R1/8	8	40	34	36	30	25	8	14.5	12.5	10	17	17
JSS 6-M5M□(K)		M5×0.8	3	30	27									27
JSS 6-01M□(K)	1/8	R1/8	8	40	34	36	30	27	10.5	14.5	12	12.5	10	18
JSS 1/8-M3M□(K)		M3×0.8	2.5	29.5	26.5									27
JSS 1/8-M5M□(K)	M5×0.8	3	30	27										7.5



Metric thread type



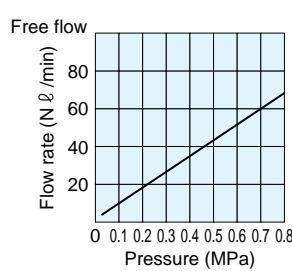
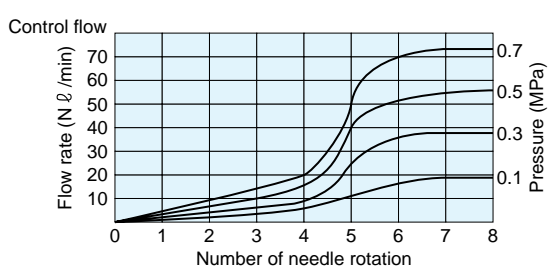
unit:inch

Model	Tube dia.φD inch(mm)	R	A	B		L		L2	φP1	φP2	C	E	H	Weight (oz)
				MAX	MIN	MAX	MIN							
JSS 1/8-U10M□(K)U	1/8(3.18)	10-32UNF	0.14	1.18	1.06	1.06	0.94	0.85	0.31	0.39	0.43	0.35	5/16	0.27
JSS 5/32-U10M□(K)U	5/32(3.97)	10-32UNF	0.14	1.18	1.06	1.06	0.94	0.85	0.31	0.39	0.45	0.35	5/16	0.26
JSS 5/32-N1M□U	5/32(3.97)	NPT 1/8	0.31	1.59	1.34	1.44	1.18	0.98	0.31	0.57	0.45	0.49	7/16	0.66

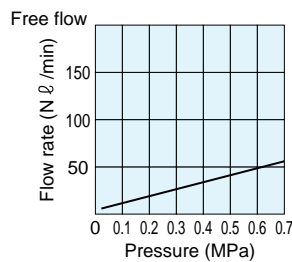
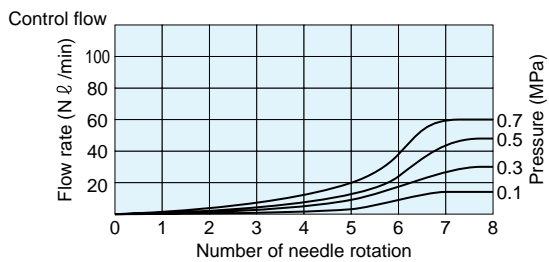
Flow characteristics

Elbow Mini · Straight Mini

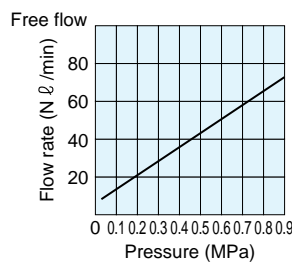
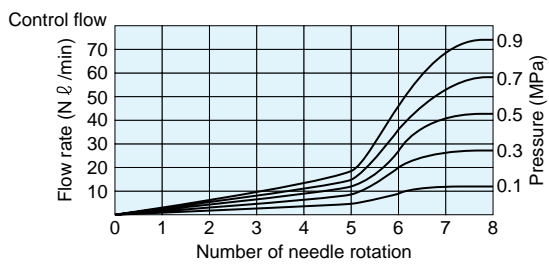
JSC 3-M3MK    JSS 3-M3MK  
3-M3M        3-M3M  
1/8-M3MK    1/8-M3MK  
1/8-M3M      1/8-M3M



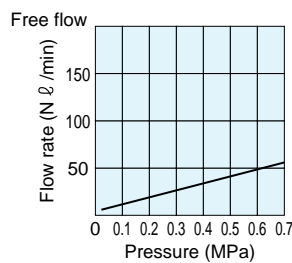
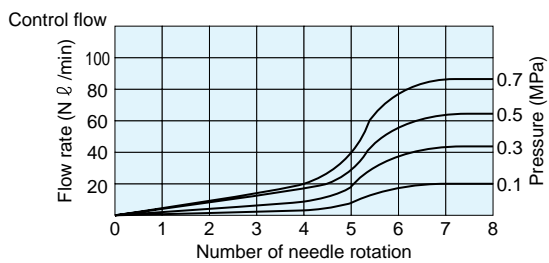
JSC 4-M3MK    JSS 4-M3MK



JSC 3-M5MK    JSS 3-M5MK  
4-M5MK        4-M5MK  
6-M5MK        6-M5MK  
1/8-M5MK      1/8-M5MK



JSC 4-M3M      JSS 4-M3M





# Fixed Type Speed Control Valve (Production upon order)

## Constant Flow Speed Controller

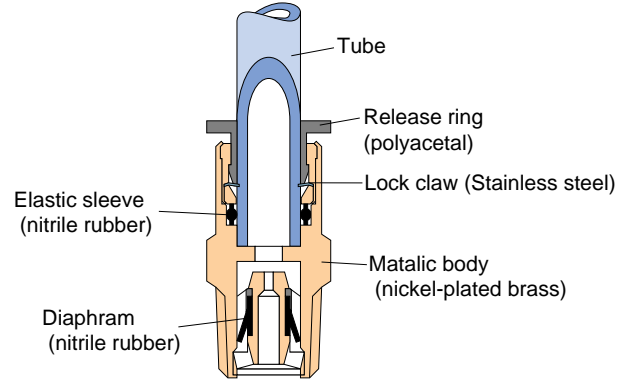
### Features

- This speed controller fixes the operation speed of a driving device.
- The Constant Flow Speed Controller is best suited for use with massproduced dedicated machines.
- Flow is controlled by fixed orifice. Select the optimum I.D. of the orifice from the control flow characteristics on page 203.

### Specification

Fluid admitted	Air	
Service pressure range	0~150psi	0 ~ 0.9MPa
Check valve operating pressure	7.25psi	0.05MPa
Service temperature range	32~140°F	0 ~ 60°C

### Construction



### Model Designation (Example)

JKC (1) 6 (2) = 01 (3) A (4) 0.7 (5)

(1) Type  
(2) Tube dia.

	mm Size		
Code	4	6	8
Size(mm)	φ4	φ6	φ8

(3) Thread size

	Taper pipe thread	
Code	01	02
Size	R1/8	R1/4

(4) Control direction  
A : Meter-out control (Inscription "A" in Matalic body)  
B : Meter-in control (Inscription "B" in Matalic body)

(5) Orifice I.D. (mm)

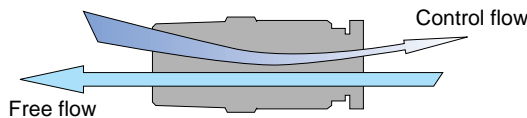
Orifice I.D.(Code)	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
R1/8	○	○	○	○	○	○	○	○	○
R1/4	○	○	○	○	○	○	○	○	○

Orifice I.D.(Code)	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
R1/8	○	○	○	○	-	-	-	-	-
R1/4	○	○	○	○	○	○	○	○	○

\*Production upon order

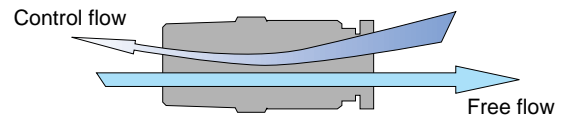
#### \*Meter-out control

- The flow rate of air entering from the thread side can be controlled, whereas air entering from the joint side comes out of the thread side at the same (not controlled) flow rate.



#### \*Meter-in control

- The flow rate of air entering from the joint side can be controlled, whereas air entering from the thread side comes out of the joint side at the same (not controlled) flow rate.



### ⚠ Detailed Safety Instruction

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on pages 23~24 and "Common Safety Instructions for Controllers" on pages 167~168.

### ⚠ Caution

1. Before use, be sure to confirm the orifice inside diameter marked on the hexagon part. A wrong orifice inside diameter may change the speed of the actuator.
2. To achieve accurate speed control, select, by actual measurements, an optimal combination of orifice inside diameter, cylinder type, loading and piping.

## How to select Orifice Inside Diameter

■ When controlling the cylinder speed with a constant flow speed controller, determine the orifice inside diameter as follows:

(1) Using the following formula, obtain the air flow rate necessary for cylinder operation at desired speed.

(Formula for calculation of air flow rate)

$$Q = 4.7 \times 10^{-5} \times \frac{D^2 \times L}{t} \times \frac{P + 1.03}{1.03}$$

Q = air flow rate (Nℓ/min)

D = cylinder I.D. (mm)

L = cylinder stroke (mm)

t = time for one-way stroke (sec)

P = working pressure (kgf/cm<sup>2</sup>)

(2) Using the graph of control flow (flow characteristics) on page 203, locate the intersecting point of flow rate and working pressure. Select 2 or 3 samples whose orifice I.D. provides characteristics closest to the above. Then choose the optimal model from actual measurements.

(Example, 1)

D (Inside diam.) = 25mm

L (Stroke) = 60mm

t (Time) = 0.1 sec

P (Pressure) = 5kgf/cm<sup>2</sup> (A)

Calculate the necessary air flow, using the formula of (1):

Q = 100Nℓ/min (B)

Find the inside diameter of the fixed orifice from Fig.1.

Inside diameter of fixed orifice = φ1.45mm (C)

The range of selection is : φ1.6mm ~ φ1.4mm

\*The formula of (1) does not take load on cylinder and air consumption in piping into consideration.

Fig.2 shows a graphic representation of the calculation formula of (1).

By use of the graph, the air flow rate can be obtained quite easily.

It is necessary, however, to obtain the cylinder speed beforehand.

(Formula for calculation of cylinder speed)

$$V = \frac{L}{t}$$

V = cylinder speed (mm/sec)

L = cylinder stroke (mm)

t = time for one-way stroke (sec)

(Example 2)

How to Use the Graph (Example)

Cylinder I.D. = 25mm (a)

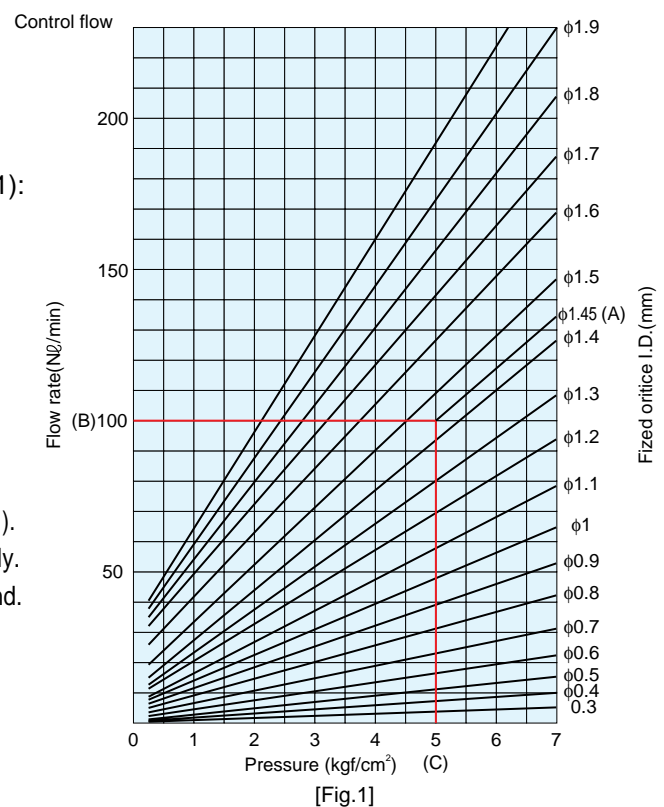
Cylinder stroke = 60mm

Time for one-way stroke = 0.1sec (Cylinder speed: 600mm/sec) (c)

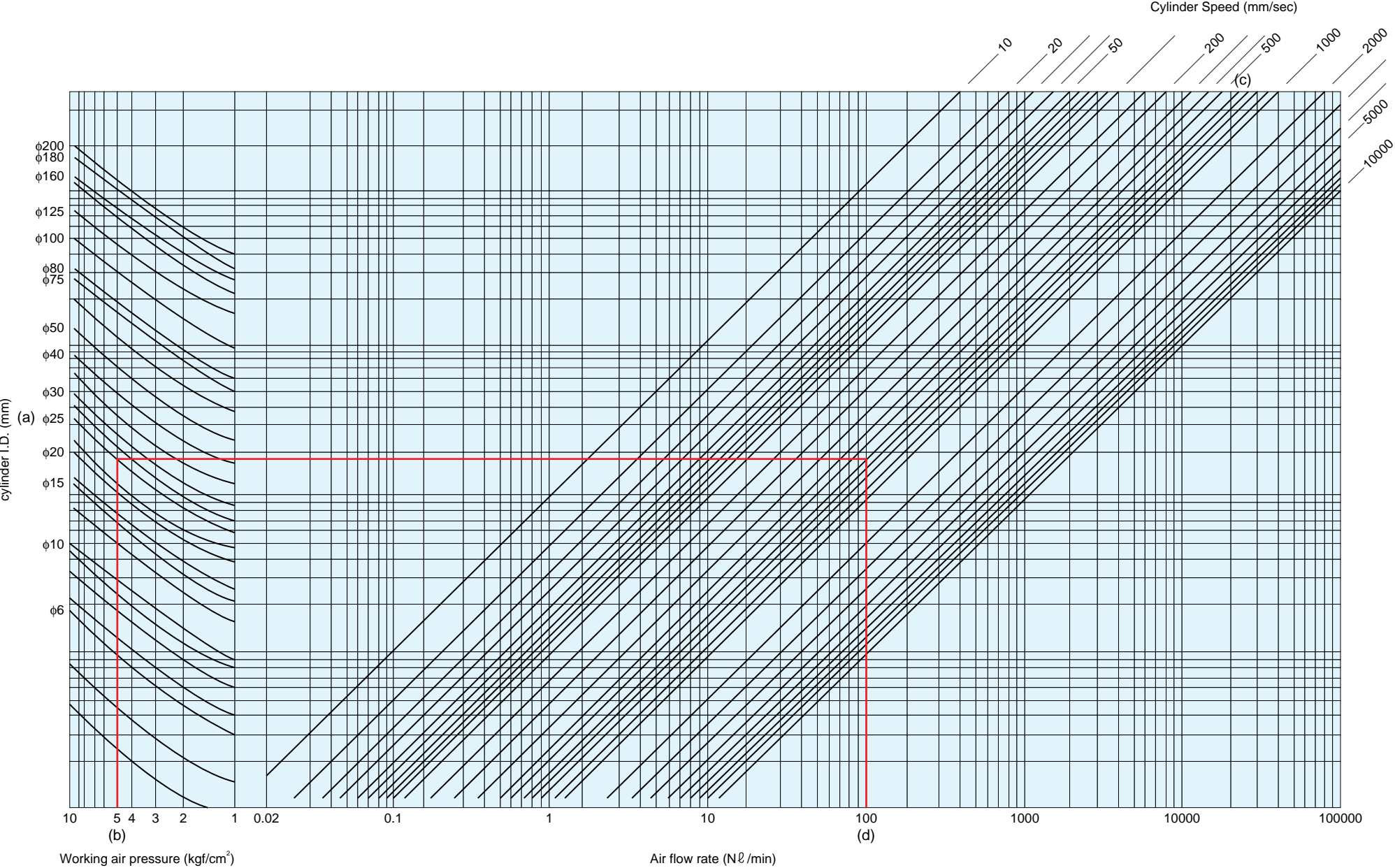
Working pressure = 5kgf/cm<sup>2</sup> (b)

Air flow rate = 100Nℓ/min

Determine the air flow, then the inside diameter of the Constant Flow Controller can be selected.



[Fig.2] Graph for calculation of required air flow of Air Cylinder

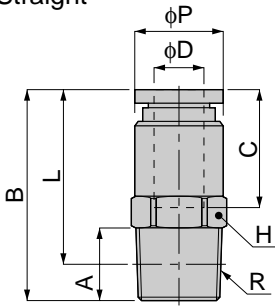




# Control Series Constant Flow Speed Controller



Straight



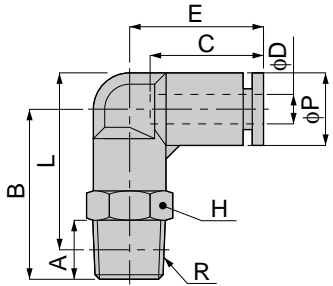
Model	Tube dia. φD	R	A	B	L	φP	C	H	Mass (g)	Free flow Eff. a. (mm <sup>2</sup> )
JKC 4-01	4	R1/8	8	23.5	19.5	10	11	10	9.5	3.1 ~ 3.5
JKC 6-01	6	R1/8	8	24	19.5	10	12	10	8.5	3.9 ~ 4.6
JKC 6-02		R1/4	11	27.5	21.5	11		14	17	6.7 ~ 7.3
JKC 8-01	8	R1/8	8	30	26	14	18.5	14	17	3.4 ~ 4.5
JKC 8-02		R1/4	11	33	27				20.5	6.4 ~ 7

Orifice I.D. (mm)	φ0.3	φ0.4	φ0.5	φ0.6	φ0.7	φ0.8	φ0.9	φ1.0	φ1.1
Control flow Eff. a. (mm <sup>2</sup> )	0.06	0.11	0.16	0.2	0.3	0.4	0.5	0.65	0.8

Orifice I.D. (mm)	φ1.2	φ1.3	φ1.4	φ1.5	φ1.6	φ1.7	φ1.8	φ1.9	φ2.0
Control flow Eff. a. (mm <sup>2</sup> )	0.9	1.1	1.25	1.5	1.8	2	2.3	2.55	2.8



Elbow

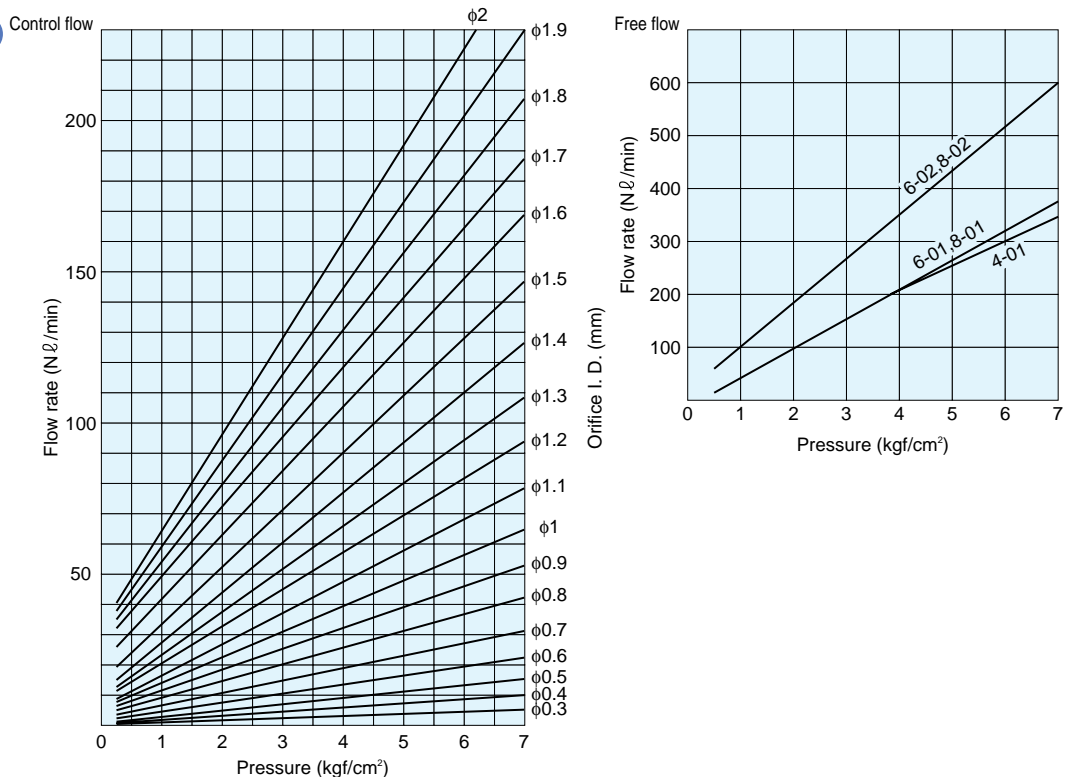


Model	Tube dia. φD	R	A	B	L	φP	C	E	H	Mass (g)	Free flow Eff. a. (mm <sup>2</sup> )
JKL 4-01	4	R1/8	8	26	26.5	10.5	15	17	10	11.5	3.1 ~ 3.5
JKL 6-01	6	R1/8	8	25.5	27.5	13	17	20	12	13.5	3.9 ~ 4.6
JKL 6-02		R1/4	11	28.5	28.5				14	19	6.7 ~ 7.3
JKL 8-01	8	R1/8	8	28.5	31.5	15	18.5	23	14	18.5	3.4 ~ 4.5
JKL 8-02		R1/4	11	31.5	32.5					22.5	6.4 ~ 7

Orifice I.D. (mm)	φ0.3	φ0.4	φ0.5	φ0.6	φ0.7	φ0.8	φ0.9	φ1.0	φ1.1
Control flow Eff. a. (mm <sup>2</sup> )	0.06	0.11	0.16	0.2	0.3	0.4	0.5	0.65	0.8

Orifice I.D. (mm)	φ1.2	φ1.3	φ1.4	φ1.5	φ1.6	φ1.7	φ1.8	φ1.9	φ2.0
Control flow Eff. a. (mm <sup>2</sup> )	0.9	1.1	1.25	1.5	1.8	2	2.3	2.55	2.8

## Flow characteristics



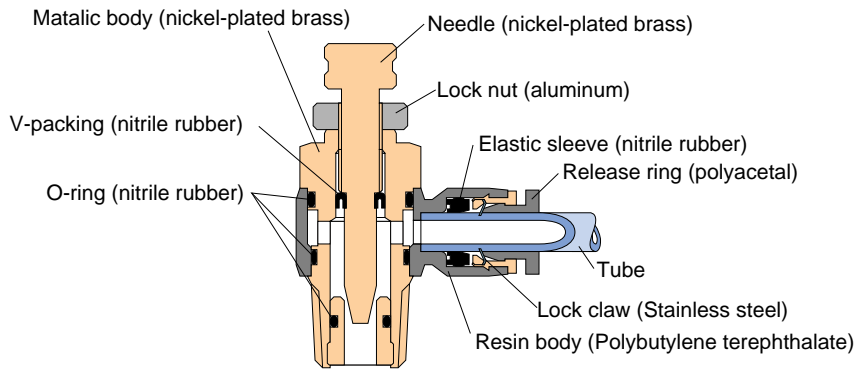
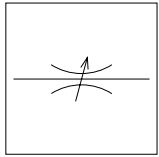
# Quick Fitting Type Needle Throttle Valve

## Features

- The throttle valve controls the operation speed of a pneumatic device and the transmission of air pressure signals.
- The flow rate can be adjusted while the air is flowing.

## Construction

Graphical representation



## Specification

Fluid admitted	Air	
Service pressure range	0~150psi	0~0.9MPa
Working Vacuum	-29.5 in. Hg	-750mmHg
Service temperature range	32~140°F	0~60°C

## Model Designation (Example)

**JNC 6 = 01**

(1) Type      (2) Tube dia.      (3) Thread size      (4) Hexagon flat-to-flat specification

mm Size					
Code	4	6	8	10	12
Size	φ4	φ6	φ8	φ10	φ12

inch size						
Code	5/32	3/16	1/4	5/16	3/8	1/2
Size(mm)	φ5/32	φ3/16	φ6.35	φ7.94	φ9.53	φ12.7

Metric thread(mm)		Taper pipe thread			
Code	M5	01	02	03	04
Size	M5×0.8	R1/8	R1/4	R3/8	R1/2

Unified fine thread		Amwrican standard taper pipe thread			
Code	U10	N1	N2	N3	N4
Size	10-32 UNF	NPT1/8	NPT1/4	NPT3/8	NPT1/2

(4) Hexagon flat-to-flat specification  
 U: Hexagon flat-to-flat inch spec. (NPT)  
 No code: Hexagon flat-to-flat mm spec.

## ⚠ Detailed Safety Instruction

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on pages 23~24 and "Common Safety Instructions for Controllers" on pages 167~168.

## ⚠ Warning

1. Adjust speed of the actuator by opening the needle gradually from the full closed position. With the needle open, there are chances of the actuator flying out. Turn the needle clockwise to close or counterclockwise to open.
2. Do not subject the product with a rotary resin body to forcible swinging or rotation. Otherwise the body may suffer damage or develop leakage.

## ⚠ Caution

1. The throttle valve is designed to tolerate some air flow at fully closed position. Therefore do not use it for applications that permits no air flow.



**New**

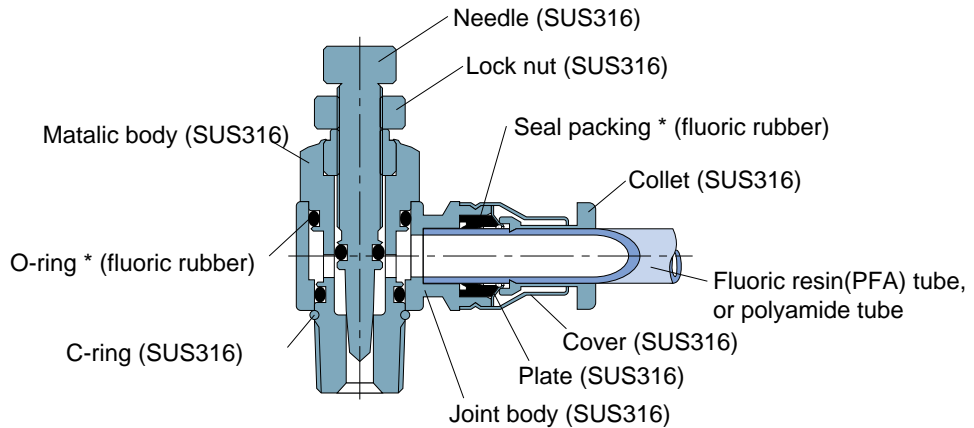
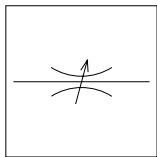
# Quick Fitting Type Needle Throttle Valve Stainless Series SUS316 Throttle (Needle) Valve

## Features

- SUS316 throttle valves are excellent choices for jobs that require the control of air, water, specific chemicals, and or specific gas mixture flows. All components feature highly anticorrosive SUS316 stainless steel. Seals are made of fluoric rubber with excellent chemical-proof properties.
- Materials incorporated in the SUS316 are oil-impervious and meet all Japanese Food Sanitation Act requirements.
- In combination with polyamide tubes (SNT), SUS316 valves are excellent choices for food processing applications. Combined with fluororesin (PFA) tubes, the valves provide outstanding performance in pharmaceutical and medical applications.

## Construction

Graphical representation



\*Seal rubber material can be order-made.

## Specification

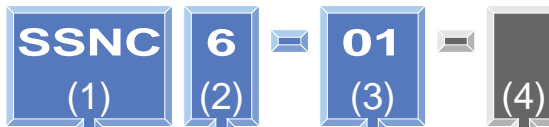
Fluid admitted	Air, Water, Others	
Service pressure range	Gas : 0~150psi	0~1MPa
	Fluid : 0~45psi	0~0.3MPa* <sup>2</sup>
Working pressure	-29.5 in. Hg	-100kPa(-750mmHg)
Service temperature range	5~250°F	-15~120°C

### ⚠ Warning

\*1. Depending on use with chemicals or gas mixtures, there may be causes in which our specifications are not suitable. Be sure to confirm the specification compatibility before using our joint.

\*2. Insert rings are recommended for use with fluid.

## Model Designation (Example)



(1)Type  
(2)Tube dia.

	mm Size					
Code	4	6	8	10	12	16
Size(mm)	φ4	φ6	φ8	φ10	φ12	φ16

(3)Thread size

	Taper pipe thread			
Code	01	02	03	04
Size	R1/8	R1/4	R3/8	R1/2

(4)Specification

X : Non-splash grease specification

(Non-splash grease coating is applied to seal packing)

No code : Oil-free specification (Conventional product)

## ⚠ Detailed Safety Instructions

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on page 7 and "Common Safety Instructions for Controllers" on page 43.

### ⚠ Warning

1. When the fluid admitted is a chemical, be sure to contact PISCO for guidance. Depending on usage, damage may be caused to the joint body, the tube may come off or leakage may result.
2. When the fluid admitted is a liquid, use an insert ring. Without the use of an insert ring, the tube may come off or leakage may occur.
3. After connecting the tube, be sure to pull the tube toward you and make certain that it does not come off. If the tube comes off, pull the collet once (see table below), connect the tube again and check for proper connection by pulling it again.
4. Adjust speed of the actuator by opening the needle gradually from the fully closed position. With the needle open, there are chances of the actuator flying out. Turn the needle clockwise to close or counterclockwise to open.

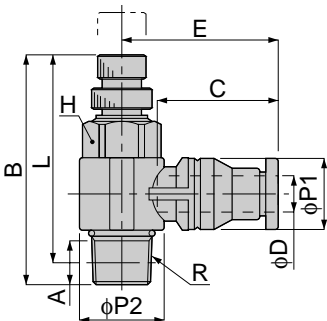
● Table

Table dia.	Tensile force of collet
φ4mm	10 ~ 20N
φ6mm	40 ~ 60N
φ8mm	50 ~ 70N
φ10mm	60 ~ 70N
φ12mm	70 ~ 90N
φ16mm	60 ~ 80N

### ⚠ Caution

1. Note that the taper pipe thread is not Sealock-treated. When you use seal tape or sealant on the thread, apply the tape or sealant about 1.5 or 2 thread ridges away from the thread end.
2. The throttle valve is designed to tolerate some air leakage at fully closed position. Therefore do not use it for applications that permits no air leakage.

**SSNC**  
SUS316  
Throttle (Needle) Valve  
SUS316 TYPE Elbow

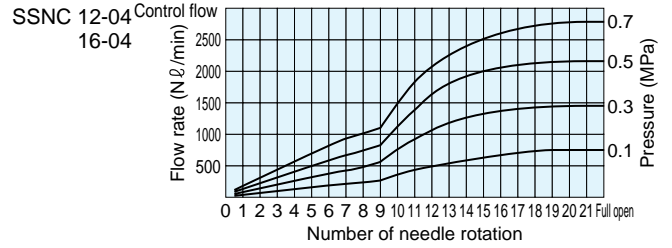
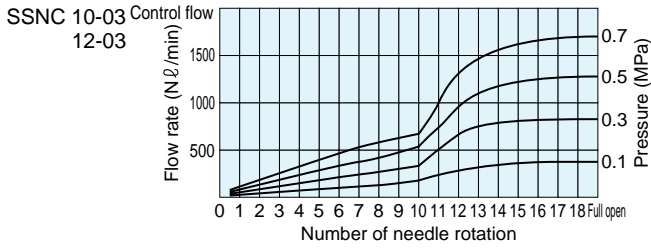
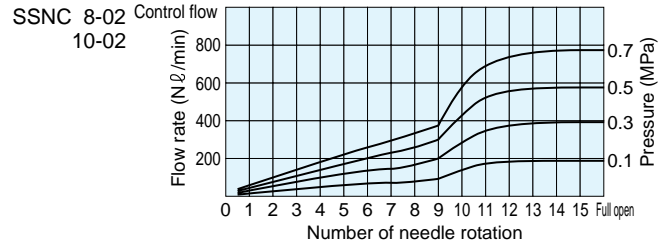
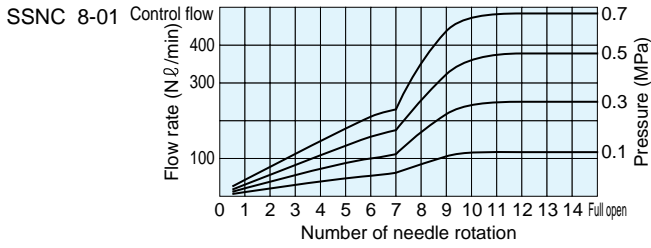
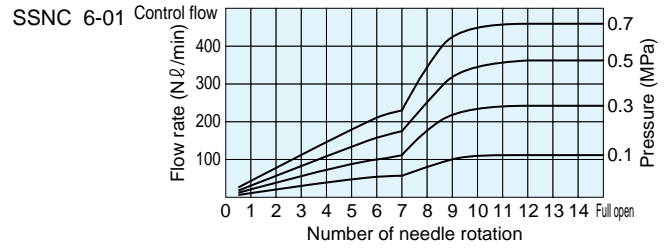
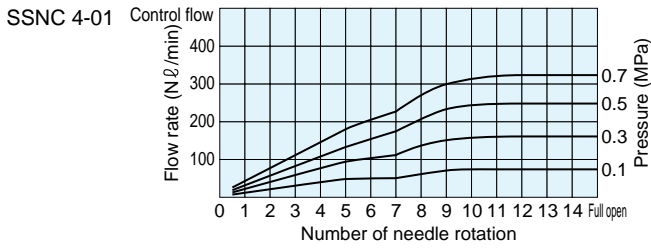


unit:mm

Model	Tube dia. φD	R	A	B		L		φP1	φP2	C		E		H	Mass (g)
				max	min	max	min			max	min	max	min		
SSNC 4-01	4	R1/8	7	46	39	42	35	10	14	18	17.5	25	24.5	12	28
SSNC 6-01	6	R1/8	7	46	39	42	35	12	14	20	18.5	27	25.5	12	30
SSNC 8-01	8	R1/8	7	46	39	42	35	14	14	22	20.5	29	27.5	12	31.5
SSNC 8-02		R1/4	10	53	45	47	39					31.5	30		
SSNC 10-02	10	R1/4	10	53	45	47	39	17	19	25.5	24	36.5	35	17	65.5
SSNC 10-03		R3/8	11	59	49	52.5	42.5					37	35.5		
SSNC 12-03	12	R3/8	11	59	49	52.5	42.5	20	23	27.5	25.5	40.5	38.5	21	105
SSNC 12-04		R1/2	14	66	55	58	47					41.5	39.5		
SSNC 16-04	16	R1/2	14	66	55	58	47	23.5	28	33	31	49.5	47.5	24	170.5



## Flow characteristics



(Production upon order)

# Fixed Orifice Type Joint

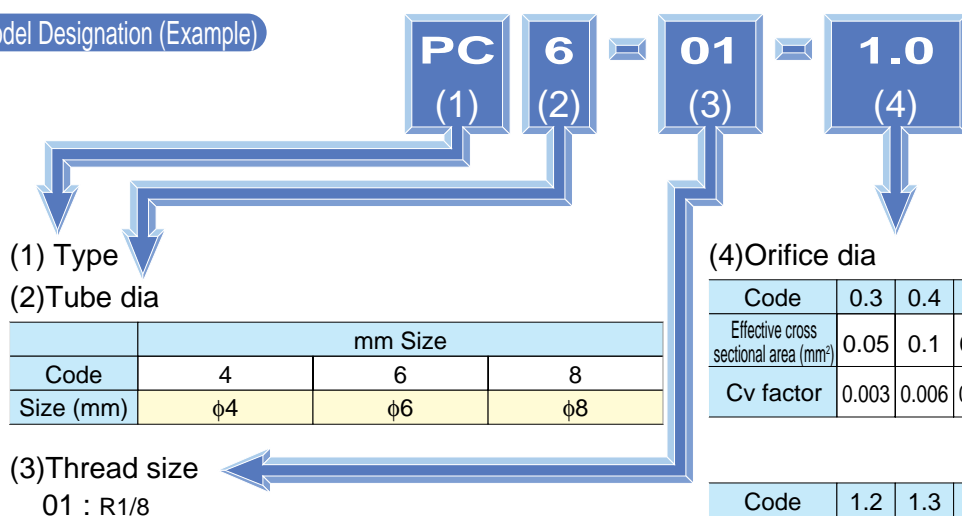
## Features

- The fixed orifice controls air flow.
- Compared with needle valves, this low-cost joint can be installed in a small space.
- The fixed orifice comes with 18 effective cross sectional area.

## Specification

Fluid admitted	Air	
Service pressure range	0~150psi	0 ~ 0.9MPa(0 ~ 9kgf/cm <sup>2</sup> )
Working vacuum	-29.5in. Hg	-750mmHg(10Torr)
Service temperature range	32~140°F	0 ~ 60°C

## Model Designation (Example)



	mm Size		
Code	4	6	8
Size (mm)	φ4	φ6	φ8

Code	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
Effective cross sectional area (mm <sup>2</sup> )	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5	0.7
Cv factor	0.003	0.006	0.008	0.011	0.014	0.020	0.023	0.028	0.040

Code	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Effective cross sectional area (mm <sup>2</sup> )	0.85	1.0	1.15	1.45	1.65	1.85	2.1	2.3	2.5
Cv factor	0.048	0.057	0.065	0.082	0.093	0.105	0.119	0.130	0.141

## ⚠ Detailed safety Instruction

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on pages 23~24 and "Common Safety Instructions for Controllers" on pages 167~168.

## ⚠ Caution

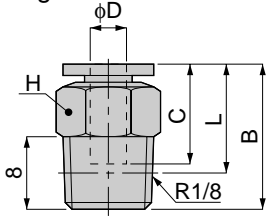
1. Before use, be sure to confirm the orifice inside diameter marked on the hexagon part. A wrong orifice inside diameter may change the flow rate.
2. To achieve accurate flow control, select an optimal orifice inside diameter by actual measurements.

# Control Series Fixed Orifice Type Joint

unit:mm

## PC FIXED ORIFICE

Straight



Model	Tube dia. φD	B	L	C	H	Mass (g)
PC 4-01 □	4	21	17	15	10	8.5
PC 6-01 □	6	22.5	18.5	17	12	9
PC 8-01 □	8	28	24	18.5	14	15

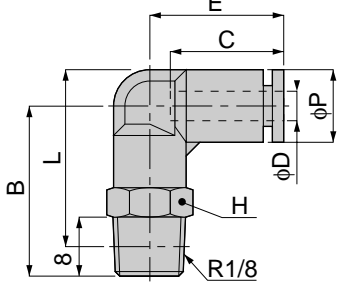
Code	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
Eff. a. (mm <sup>2</sup> )	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5	0.7

Code	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
Eff. a. (mm <sup>2</sup> )	0.85	1.0	1.15	1.45	1.65	1.85	2.1	2.3	2.5

unit:mm

## PL FIXED ORIFICE

Elbow



Model	Tube dia. φD	B	L	φP	C	E	H	Mass (g)
PL 4-01 □	4	23.5	24.5	10	15	18.5	10	12
PL 6-01 □	6	25	27	12.5	17	20	12	14
PL 8-01 □	8	28	31	14.5	18.5	23	14	18

Code	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
Eff. a. (mm <sup>2</sup> )	0.05	0.1	0.15	0.2	0.25	0.35	0.4	0.5	0.7

Code	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2
Eff. a. (mm <sup>2</sup> )	0.85	1.0	1.15	1.45	1.65	1.85	2.1	2.3	2.5

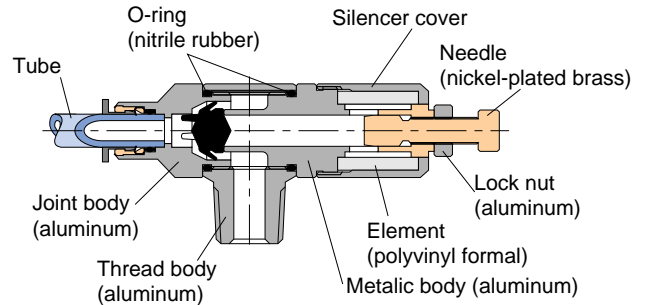
# Quick Fitting Type Quick Exhaust Valve

## Quick Exhaust Valve

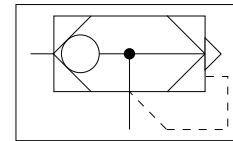
### Features

- In response to high-speed drive cylinder.
- The valve serves also as a shuttle valve.  
[Standard type (EQ□-C, EQ□-P), Mini-type (EQY)]
- Model with exhaust needle valve is capable of high-speed control of the cylinder.  
[Standard type (EQ□-C□E), Mini-type (EQE)]
- Standard type with exhaust needle valve comes with silencer. The silencer element can be replaced without removing the slide valve, so that it is not necessary to readjust the needle.

### Construction



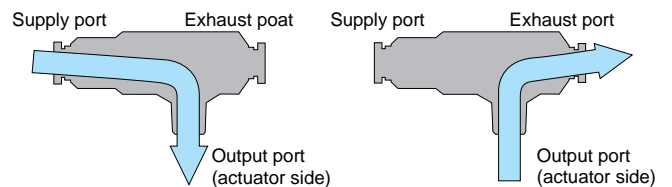
Graphical representation



### Specification

Fluid admitted	Air	
Service pressure range	0~120psi	0.1 ~ 0.7MPa
Proof pressure	196psi	1.35MPa
Service temperature range	41~140°F	5 ~ 60°C
Min. Operating pressure	7.25psi	0.05MPa

### Control direction



### Model Designation (Example)



(1)Type

(2)Size

Code	01	02	03
Eff.A.	8mm <sup>2</sup>	16mm <sup>2</sup>	30mm <sup>2</sup>
Cv factor	0.43	0.87	1.63

(3)Intake-side

C : Quick-fitting joint type

P : Taper pipe thread type

(4)Tube size

■ Intake-side tube, thread size (Standard type)

Code	Tube dia (mm)					Taper pipe thread			
	04	06	08	10	12	01	02	03	04
Size	φ4	φ6	φ8	φ10	φ12	R1/8	R1/4	R3/8	R1/2

■ Tube size (Mini type)

Code	Tube dia	
	Size (mm)	φ4

(5)Output-side type

C : Quick-fitting joint type

P : Taper pipe thread type

(6)Output-side tube, thread size

Code	Tube dia					Taper pipe thread			
	04	06	08	10	12	01	02	03	04
Size	φ4	φ6	φ8	φ10	φ12	R1/8	R1/4	R3/8	R1/2

(7)Exhaust-side type

C : Quick-fitting joint type

E : Exhaust needle valve type

(8)Exhaust-side tube dia

Code	Tube dia		
	Size(mm)	φ8	φ10

\*No code for the type with exhaust needle valve

\* Enter (1) and (4) for mini type.

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**⚠ Detailed Safety Instruction**

Before using the PISCO device, be sure to read the "Safety Instructions", "Common Safety Instructions for Products Listed in This Manual" on pages 23~24 and "Common Safety Instructions for Controllers" on pages 167~168.

**⚠ Warning**

1. With the exhaust needle valve type, adjust the speed of the actuator by opening the needle gradually from the fully closed position. With the needle open, there are chances of the actuator flying out. With the other types, operate after confirming safety.
2. Do not subject the product with a rotatable resin body to forcible swinging or rotation. Otherwise the body may suffer damage or develop leakage.

**⚠ Caution**

1. Clogging of the element of Quick Exhaust Valve raises resistance to exhaust, thus lowering the performance of the system as a whole.
2. When you use the Quick Exhaust Valve as a shuttle valve, be sure to provide a differential pressure. No differential pressure may lead to malfunction.
3. After replacing the element, secure the silencer cover by manually tightening. Note, however, that the element can not be replaced with small Quick Exhaust Valves.
4. Before installing the valve, read ⚠ Caution 3 in the Common Safety Instructions for Controllers and perform the connection using a proper tool applied to the hexagonal or square part.
5. Adjust the lead-out direction of piping from the product with nonrotatable resin body within specified range of tightening torque.

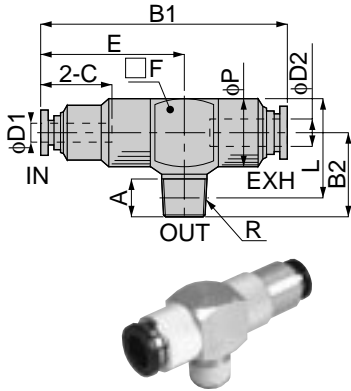


# Control Series Quick Exhaust Valve

unit:mm

## EQ

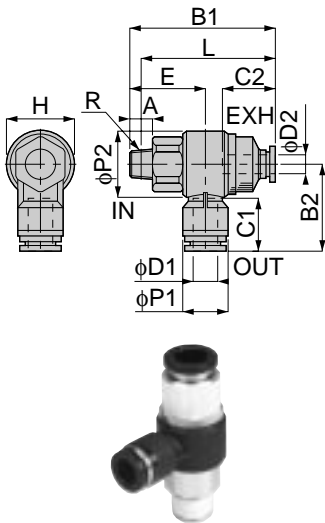
Cylinder Direct Mounting  
Union Straight  
Concentrated Exhaust



Model	Tube dia. φD1	Tube dia. φD2	R	A	B1	B2	L	φP	C	E	□F	Mass (g)	Eff. a. (mm <sup>2</sup> )	
													IN→OUT	OUT→EX
EQ 01-C04P01C08	4	8	R1/8	8	46.5	18	21.5	15	15	24	15	23	4	9
EQ 01-C06P01C08	6				47				17			22	6	
EQ 02-C06P01C10	6	10	R1/8	8	57	20	25	18	17	31	18	31	9	16
EQ 02-C06P02C10			R1/4	11										
EQ 02-C08P01C10	8	10	R1/8	8	59.5	20	25	18	18.5	34	18	34	12	16
EQ 02-C08P02C10			R1/4	11										
EQ 03-C10P02C12	10	12	R1/4	11	74.5	28	34.5	24	21	43	25	70	24	34
EQ 03-C10P03C12			R3/8	12									34	72
EQ 03-C10P04C12	12	12	R1/2	15	76	30	34.5	24	23.5	44.5	25	76	27	37
EQ 03-C12P02C12			R1/4	11									34	25
EQ 03-C12P03C12	12	12	R3/8	12	76	28	34	24	23.5	44.5	25	79	26	35
EQ 03-C12P04C12			R1/2	15									30	82

## EQ

Straight  
Concentrated Exhaust

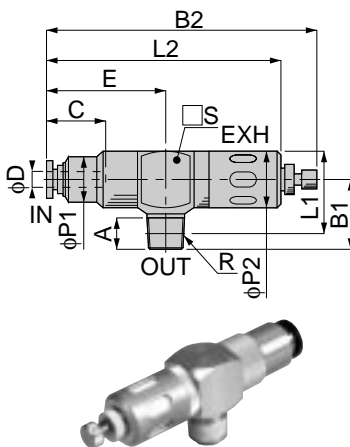


Model	Tube dia. φD1	Tube dia. φD2	R	A	B1	B2	L	φP1	φP2	C1	C2	E	H	Mass (g)
EQ 02-P01C06C10	6	10	R1/8	8	50.5	29	46.5	14.5	22	17	21	22.5	17	33
EQ 02-P01C08C10	8													18.5
EQ 02-P02C06C10	6	10	R1/4	11	53.5	29	47.5	14.5	22	17	21	25.5	17	35
EQ 02-P02C08C10	8													18.5
EQ 03-P03C10C12	10	12	R3/8	12	64.5	34	58	17.5	28	20.5	23.5	29	22	73
EQ 03-P03C12C12	12		36.5	21		23.5		30.5		76				
EQ 03-P04C10C12	10	12	R1/2	15	67.5	34	59.5	17.5	28	20.5	23.5	32	22	79
EQ 03-P04C12C12	12					36.5		21		23.5				33.5

Model	Eff. a. (mm <sup>2</sup> )	
	IN→OUT	OUT→EX
EQ 01-P01C06C08	5.5	6.5
EQ 02-P01C06C10	8	9
EQ 02-P01C08C10	10	12
EQ 02-P02C06C10	8	9
EQ 02-P02C08C10	10	12
EQ 03-P03C10C12	21	24
EQ 03-P03C12C12	22	27
EQ 03-P04C10C12	21	24
EQ 03-P04C12C12	22	27

## EQ

Cylinder Direct Mounting  
Straight Exhaust Throttle  
Open to Atmosphere



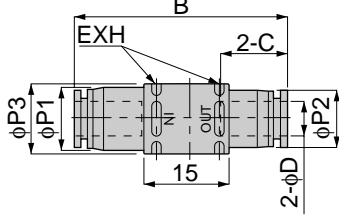
Model	Tube dia. φD	R	A	B2	B1		L1	L2	φP1	φP2	C	E	□F	Mass (g)	Eff. a. (mm <sup>2</sup> )	
					max	min									IN→OUT	OUT→EX
EQ 01-C04P01E	4	R1/8	8	25.5	67	62	21.5	54.5	12	15	15	24	15	25	4	8
EQ 01-C06P01E	6			17	6											
EQ 02-C06P01E	6	R1/8	8	29	81	74.5	25	66	14	18	17	31	18	39	9	15
EQ 02-C06P02E		R1/4	11	31												
EQ 02-C08P01E	8	R1/8	8	29	84	77	25	68.5	16	18	18.5	33.5	18	40	12	15
EQ 02-C08P02E		R1/4	11	31												
EQ 03-C10P02E	10	R1/4	11	40.5	112.5	105.5	34.5	96	18	21	43	25	25	94	24	31
EQ 03-C10P03E		R3/8	12											34	96	
EQ 03-C10P04E	12	R1/2	15	42.5	114.5	107	34.5	97.5	21	23.5	44.5	25	25	100	25	31
EQ 03-C12P02E		R1/4	11											34	103	
EQ 03-C12P03E	12	R3/8	12	40.5	114.5	107	34.5	97.5	21	23.5	44.5	25	25	103	26	31
EQ 03-C12P04E		R1/2	15											34.5	106	

# Control Series Quick Exhaust Valve

unit:mm

## EQU MINI TYPE

Union Straight  
Open to Atmosphere



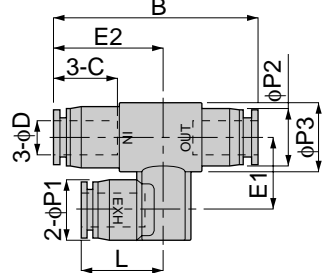
Model	Tube dia. φD	B	φP1	φP2	φP3	C	Mass (g)	Eff. a. (mm <sup>2</sup> )	
								IN→OUT	OUT→EX
EQU-4	4	35	9	8.5	10	11.5	3.5	1.8	1.8
EQU-6	6	37.5	11	10.5	12	12	5	4	4



unit:mm

## EQY MINI TYPE

Union Straight  
Concentrated Exhaust



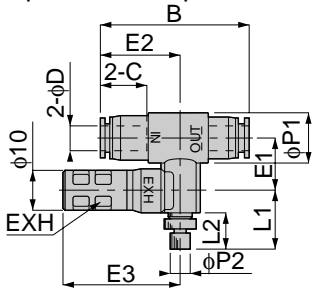
Model	Tube dia. φD	B	L	φP1	φP2	φP3	C	E1	E2	Mass (g)	Eff. a. (mm <sup>2</sup> )	
											IN→OUT	OUT→EX
EQY-4	4	35	14	9	8.5	10	11.5	11	22.5	5	1.8	1.8
EQY-6	6	37.5	15.5	11	10.5	12	12	13	24.5	7.5	4	4



unit:mm

## EQE MINI TYPE

Union Straight  
Exhaust Throttle  
Open to Atmosphere

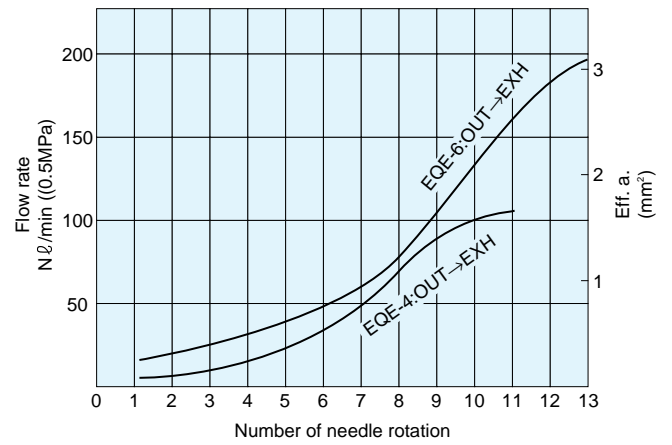
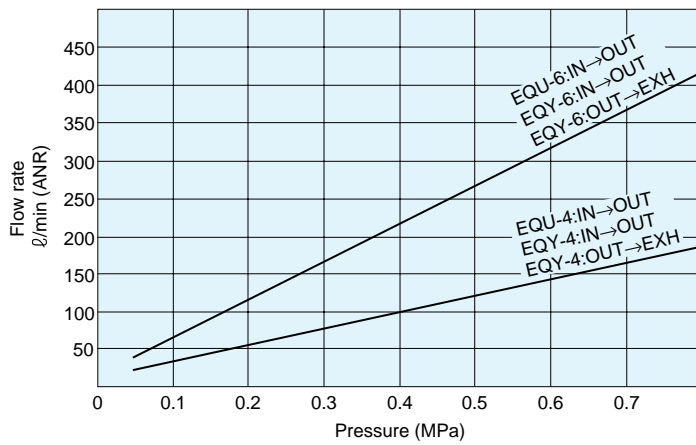


Model	Tube dia. φD	B	L1		L2		φP1	φP2	C	E1	E2	E3	Mass (g)	Eff. a. (mm <sup>2</sup> )	
			max	min	max	min								IN→OUT	OUT→EX
EQE-4	4	35	17.5	13.5	13	9	10	4	11.5	11	22.5	28.5	7	1.8	1.7
EQE-6	6	37.5	19	14.5	13.5	9	12	5	12	13	24.5	29.5	10	4	3.2



## Flow characteristics

Mini type



Standard type

