

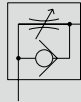


Speed controller with adjusting dial

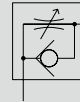
# DSC Series

● Port size: M5, R1/8 to R1/2

JIS symbol



(Meter-out)



(Meter-in)



## Specifications

### ● Compact

Descriptions		DSC-C-M5			DSC-C-6		
Compatible tube O.D.	mm	ø3.2	ø4	ø6	ø4	ø6	ø8
Port size		M5			R1/8		
Working fluid		Compressed air					
Max. working pressure	MPa	1.0					
Min. working pressure	MPa	0.05					
Proof pressure	MPa	1.5					
Fluid temperature	°C	5 to 60 (no freezing *2)					
Ambient temperature	°C	0 to 60 (no freezing)					
Needle control range		1 to 7 rotations					
Weight	g	10.5	11.5	12	22	23	24
Free flow	Flow rate L/min(ANR)	87	100		210	270	
	Effective cross-sectional area mm <sup>2</sup>	1.3	1.5		3.2	4	
Controlled flow (standard flow rate)	Flow rate L/min(ANR)	60			160	200	
	Effective cross-sectional area mm <sup>2</sup>	0.9			2.4	3	
Controlled flow (low flow rate)	Flow rate L/min(ANR)	20			60		
	Effective cross-sectional area mm <sup>2</sup>	0.3			0.9		
Controlled flow (fine flow rate)	Flow rate L/min(ANR)	-	6.7		13	-	
	Effective cross-sectional area mm <sup>2</sup>	-	0.1		0.2	-	

### ● Standard

Descriptions		DSC-6			DSC-8			DSC-10				DSC-15	
Compatible tube O.D.	mm	ø4	ø6	ø8	ø6	ø8	ø10	ø6	ø8	ø10	ø12	ø10	ø12
Port size		R1/8			R1/4			R3/8				R1/2	
Working fluid		Compressed air											
Max. working pressure	MPa	1.0											
Min. working pressure	MPa	0.05											
Proof pressure	MPa	1.5											
Fluid temperature	°C	5 to 60 (no freezing *2)											
Ambient temperature	°C	0 to 60 (no freezing)											
Needle control range		1 to 10 rotations											
Weight	g	33	34	35	45	46	48	60	61	64	65	95	97
Free flow	Flow rate L/min(ANR)	210	270		470	530		670	1000	1070		1470	1600
	Effective cross-sectional area mm <sup>2</sup>	3.2	4		7	8		10	15	16		22	24
Controlled flow (Standard flow rate)	Flow rate L/min(ANR)	160	200		320	400		400	700	800		1120	1200
	Effective cross-sectional area mm <sup>2</sup>	2.4	3		5	6		6	10.5	12		17	17.5
Controlled flow (low flow rate)	Flow rate L/min(ANR)	60			130			270				400	
	Effective cross-sectional area mm <sup>2</sup>	0.9			2			4				6	

\*1: Flow rate is the atmospheric pressure conversion value at pressure 0.5 MPa.

\*2: Freezing could occur by adiabatic expansion depending on air quality (dew point).

### Specifications for rechargeable battery

● Design is applicable to use in general assembly during the rechargeable battery manufacturing process.

DSC - ..... - **P4**

### Clean-room specifications

● Anti-dust generation structure for use in clean rooms.

DSC - ..... - **P70**

## How to order

DSC - C - 6 - 6 - I L

A Product size

B Port size

C Compatible tube O.D.

D Control method

E Flow rate

Code	Descriptions
<b>A Product size</b>	
Blank	Standard
-C	Compact
<b>B Port size</b>	
M5	M5
6	R1/8
8	R1/4
10	R3/8
15	R1/2
<b>C Compatible tube O.D.</b>	
3	ø3.2
4	ø4
6	ø6
8	ø8
10	ø10
12	ø12
<b>D Control method</b>	
Blank	Meter-out
I	Meter-in (Push ring color: black)
<b>E Flow rate</b>	
Blank	Standard flow rate
L	Low flow rate
F	Fine flow rate (compact only)

### Port size - compatible tube O.D. - flow rate combination

A Product size	Compact		Standard			
	B Port size M5	R1/8	R1/8	R1/4	R3/8	R1/2
ø3.2	○					
ø4	⊙	⊙	○			
ø6	⊙	⊙	○	○	○	
ø8		○	○	○	○	
ø10				○	○	○
ø12					○	○

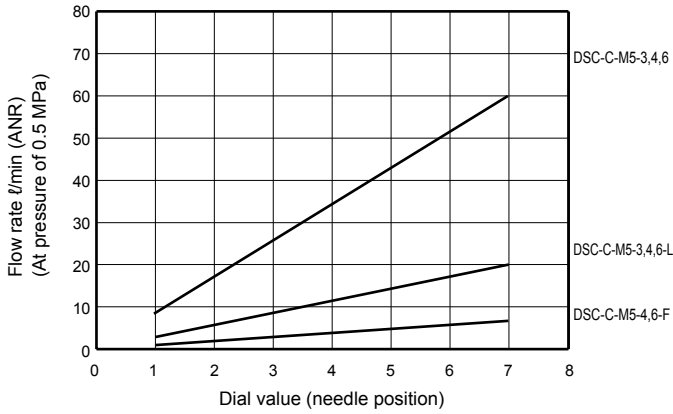
○: Flow rate "F" (fine flow rate) cannot be selected

⊙: Flow rate "F" (fine flow rate) can be selected

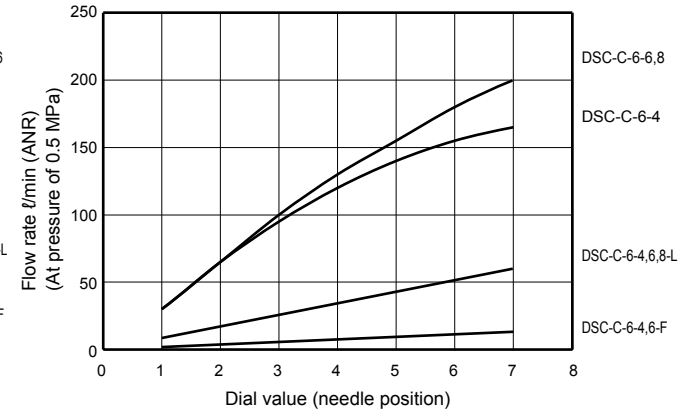
## Flow characteristics

### ● Compact

#### ● DSC-C-M5-\*

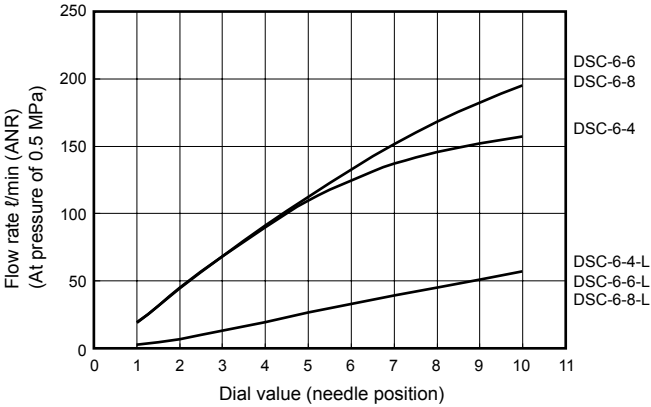


#### ● DSC-C-6-\*

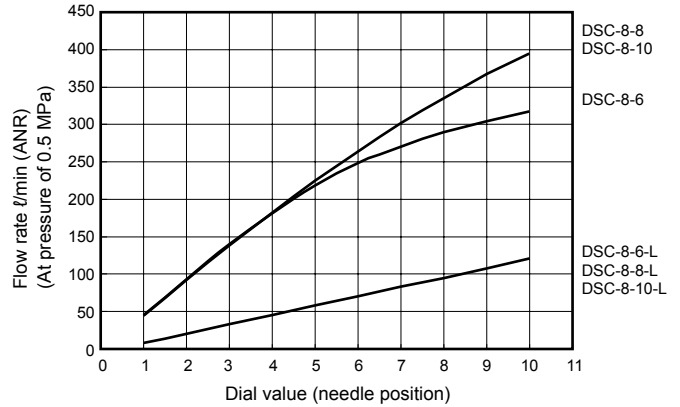


### ● Standard

#### ● DSC-6-\*



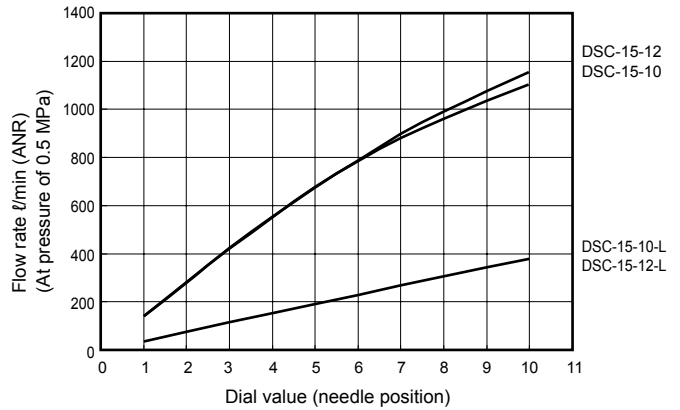
#### ● DSC-8-\*



#### ● DSC-10-\*



#### ● DSC-15-\*

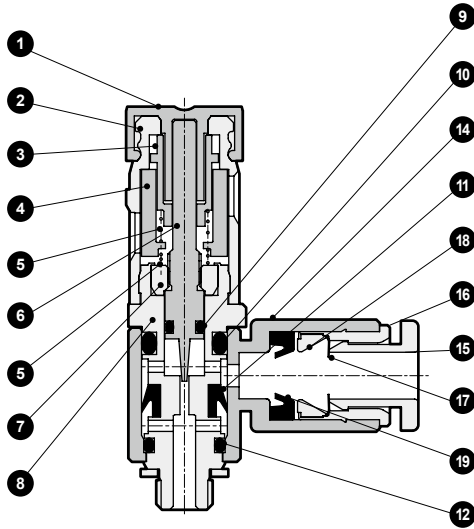


Note: The flow characteristics may differ depending on the piping conditions around the unit and the temperature change.

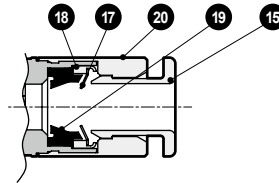
### Internal structure and parts list

● Compact

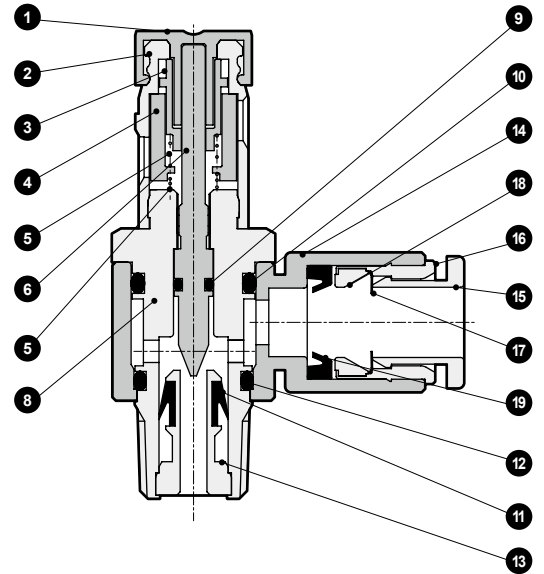
● DSC-C-M5-4,6



● DSC-C-M5-3



● DSC-C-6-\*

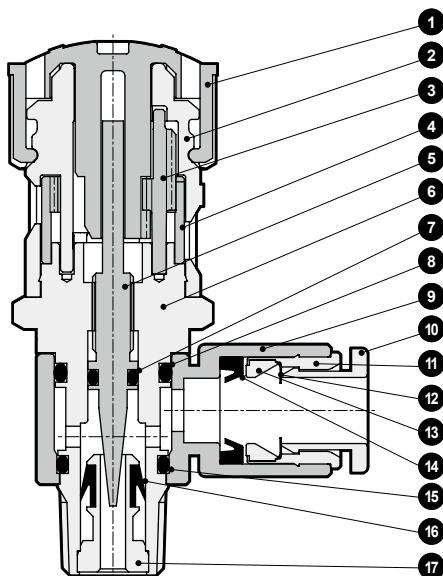


No.	Part name	Material	No.	Part name	Material
1	Knob	Polyacetal	11	Packing	Hydrogenated nitrile rubber
2	Gear cover	Polybutylene terephthalate	12	O-ring	Nitrile rubber
3	Slide gear	Polybutylene terephthalate	13	Check part	Copper alloy
4	Indicator band	Polybutylene terephthalate	14	Rotor	Polybutylene terephthalate
5	Spring	Stainless steel	15	Push ring	Polybutylene terephthalate
6	Needle	Stainless steel	16	Outer ring	Copper alloy
7	Gland nut	Copper alloy	17	Chuck	Stainless steel
8	Rotary shaft	Copper alloy	18	Chuck holder	Polyetherimide (Copper alloy) *1
9	O-ring	Nitrile rubber	19	Packing	Nitrile rubber
10	O-ring	Nitrile rubber	20	Fitting body	Copper alloy

\*1: Values shown in ( ) are when DSC-C-M5-3 is selected.

\*2: All the copper alloy parts have electroless nickel plating.

● Standard



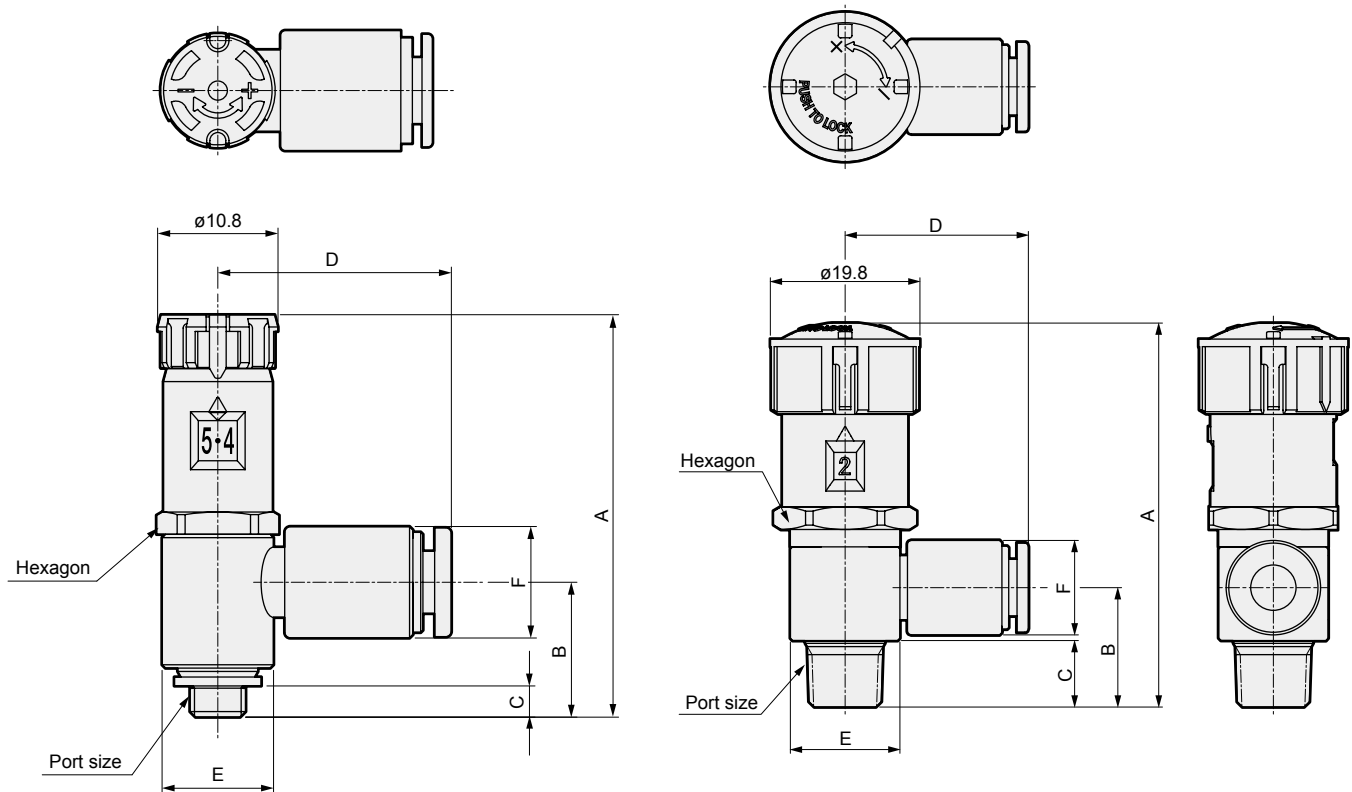
No.	Part name	Material
1	Knob	Polyacetal
2	Gear cover	Polybutylene terephthalate
3	Gear	Stainless steel
4	Indicator band	Polyacetal
5	Needle	Stainless steel
6	Rotary shaft	Copper alloy
7	O-ring	Nitrile rubber
8	O-ring	Nitrile rubber
9	Rotor	Polybutylene terephthalate
10	Push ring	Polybutylene terephthalate
11	Outer ring	Copper alloy
12	Chuck	Stainless steel
13	Chuck holder	Polyetherimide
14	Packing	Nitrile rubber
15	O-ring	Nitrile rubber
16	Packing	Hydrogenated nitrile rubber
17	Check part	Copper alloy

\*1: All the copper alloy parts have electroless nickel plating.

## Dimensions

● Compact

● Standard



Model No.	Product size	Port size	Compatible tube O.D.	A		B	C	D	E	F	Hexagon				
				When locked	During adjustment										
DSC-C-M5-3	Compact	M5 × 0.8	ø3.2	36	37.5	11.9	3	16.5	10	7.5	10				
DSC-C-M5-4			ø4			11.9		21		10					
DSC-C-M5-6			ø6			11.7		22.5		12.5					
DSC-C-6-4		R1/8	ø4	41.9	43.4	16.2	8.7	23.5	14.5	10					
DSC-C-6-6			ø6			15.7		24.5		12.5					
DSC-C-6-8			ø8			15.4		26		14.5					
DSC-6-4	Standard	R1/8	ø4	51	54	16.2	8.7	23.5	14.5	10	17				
DSC-6-6			ø6			15.7		24.5		12.5					
DSC-6-8			ø8			15.4		26		14.5					
DSC-8-6		R1/4	ø6	55.5	58.5	20	11.7	26	18	12.5					
DSC-8-8			ø8			19		27.5		14.5					
DSC-8-10			ø10			19		30.5		17.5					
DSC-10-6	R3/8	ø6	58	61	23.1	12.7	28.5	22.5	12.5	19					
DSC-10-8		ø8			21.3		30		14.5						
DSC-10-10		ø10			21.8		32		17.5						
DSC-10-12		ø12			21.7		33.5		20						
DSC-15-10		R1/2			ø10		63		66		25.2	15.7	34.5	27.5	17.5
DSC-15-12					ø12						25.7		36		20

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MEMO

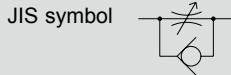
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Inline speed controller with adjusting dial

# DSC-S Series

● Port size:  $\varnothing 4$ ,  $\varnothing 6$ ,  $\varnothing 8$ ,  $\varnothing 10$ ,  $\varnothing 12$



## Specifications

Descriptions		DSC-S□-06		DSC-S□-08		DSC-S□-10		
Compatible tube O.D.	mm	$\varnothing 4$	$\varnothing 6$	$\varnothing 6$	$\varnothing 8$	$\varnothing 8$	$\varnothing 10$	$\varnothing 12$
Working fluid		Compressed air						
Max. working pressure	MPa	1.0						
Min. working pressure	MPa	0.1						
Proof pressure	MPa	1.5						
Fluid temperature	$^{\circ}\text{C}$	5 to 60 (no freezing *2)						
Ambient temperature	$^{\circ}\text{C}$	0 to 60 (no freezing)						
Needle control range		1 to 7 rotations						
Weight	g	24	18	30	31	52	57	60
Free flow	Flow rate L/min(ANR)	170	300	400	550	900	1100	1200
	Effective cross-sectional area $\text{mm}^2$	2.5	4.5	6	8	13.5	16.5	18
Controlled flow (standard flow rate)	Flow rate L/min(ANR)	160	200	360	400	710	780	780
	Effective cross-sectional area $\text{mm}^2$	2.4	3	5	6	10.5	12	12
Controlled flow (low flow rate)	Flow rate L/min(ANR)	60		130		270		
	Effective cross-sectional area $\text{mm}^2$	0.9	0.9	2	2	4	4	4
Controlled flow (fine flow rate)	Flow rate L/min(ANR)	13		-	-	-	-	-
	Effective cross-sectional area $\text{mm}^2$	0.2	0.2	-	-	-	-	-

\*1: Flow rate is the atmospheric pressure conversion at 0.5 MPa.

\*2: Freezing could occur by adiabatic expansion depending on air quality (dew point).

## How to order

**DSC** - **S** **1** - **06** - **H66** - **L**

**A** Product

**B** Dial direction

**C** Body size

**D** Compatible tube O.D.

**E** Flow rate

Code	Content
<b>A Product</b>	
-S	Inline
<b>B Dial direction</b>	
1	Side
2	IN/OUT direction
<b>C Body size</b>	
06	1/8 thread equivalent
08	1/4 thread equivalent
10	3/8 thread equivalent
<b>D Compatible tube O.D.</b>	
H44	$\varnothing 4$
H66	$\varnothing 6$
H88	$\varnothing 8$
H1010	$\varnothing 10$
H1212	$\varnothing 12$
<b>E Flow rate</b>	
Blank	Standard flow rate
L	Low flow rate
F	Fine flow rate

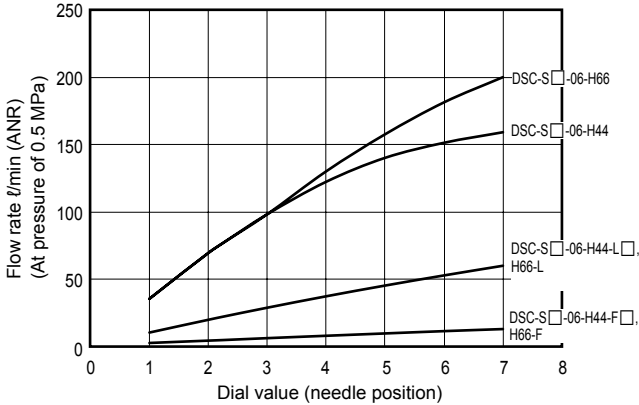
### Body - compatible tube O.D. - flow rate combination

	C Body size						
	06		08		10		
D Compatible tube O.D.	H44	H66	H66	H88	H88	H1010	H1212
E Flow rate							
Blank	●	●	●	●	●	●	●
L	●	●	●	●	●	●	●
F	●	●					

Flow characteristics

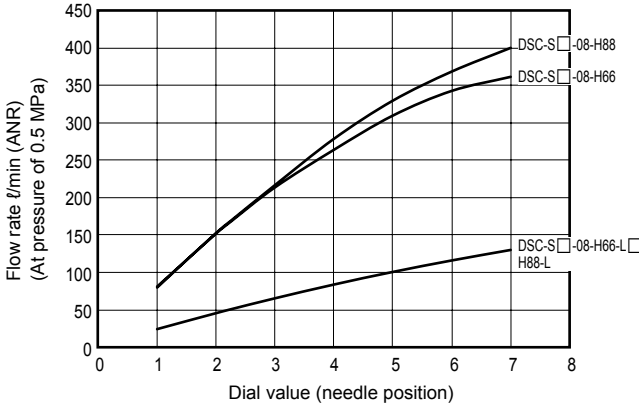
● DSC-S□-06-\*

Standard flow rate, low flow rate, flow rate



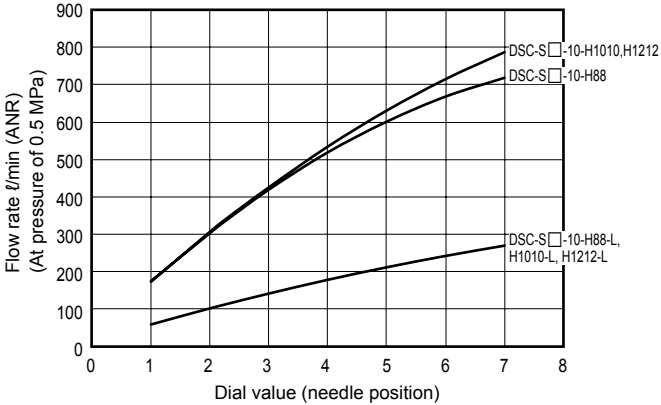
● DSC-S□-08-\*

Standard flow rate, low flow rate



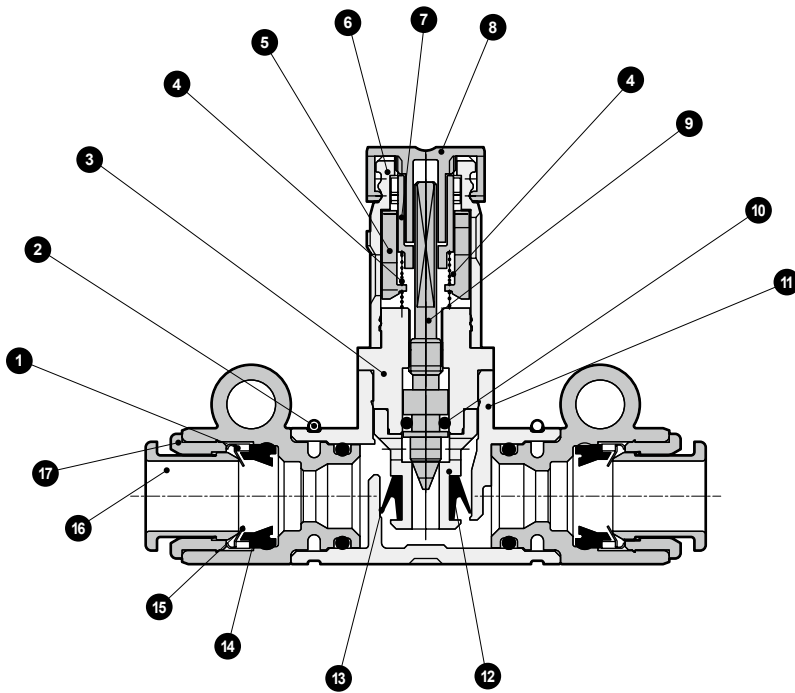
● DSC-S□-10-\*

Standard flow rate, low flow rate





## Internal structure and parts list

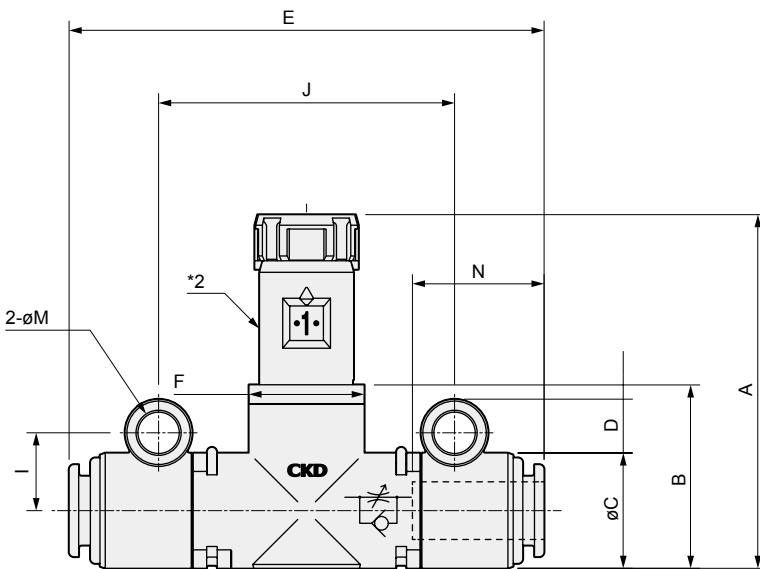


No.	Part name	Material
1	Holder	Copper alloy or polyetherimide
2	Stopper ring	Stainless steel
3	Needle guide	Copper alloy
4	Spring	Stainless steel
5	Indicator band	Polybutylene terephthalate
6	Gear cover	Polybutylene terephthalate
7	Slide gear	Polybutylene terephthalate
8	Knob	Polyacetal
9	Needle	Stainless steel
10	O-ring	Nitrile rubber
11	Body	Polybutylene terephthalate
12	Check bracket	Copper alloy
13	Check packing	Hydrogenated nitrile rubber
14	Packing	Nitrile rubber
15	Chuck	Stainless steel
16	Push ring	Polybutylene terephthalate
17	Outer ring	Copper alloy

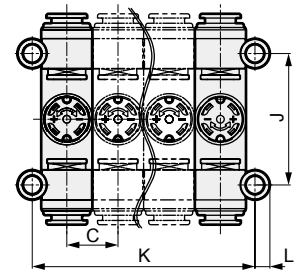
\*1: All the copper alloy parts have electroless nickel plating.

## Dimensions

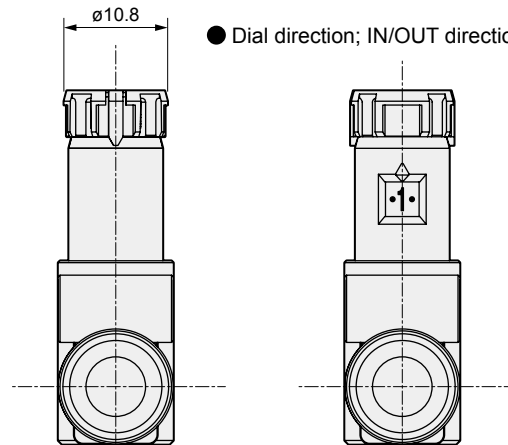
● Dial direction; side (S1)



● Mounting pitch dimension for manifold



● Dial direction; IN/OUT direction (S2)



Model No.	Connection tube O.D	A		B	C	D	E	F	I	J	K	L	M (Mounting hole diameter)	N (tube insert length)
		When locked	During adjustment											
DSC-S□-06-H44	ø4	36.8	38.3	19.1	12	5.6	54.6	12	8.1	30.8	12 × n + 4.2	3.5	4.3	12.9
DSC-S□-06-H66	ø6						49.4							13.7
DSC-S□-08-H66	ø6	41.9	43.4	24.2	15	5.6	63.1	15	9.5	40.8	15 × n + 4	3.6	4.3	18
DSC-S□-08-H88	ø8						66.3							19
DSC-S□-10-H88	ø8	48.4	49.9	30.7	20	5.1	70.8	19.4	11.5	47	20 × n + 3	3.6	4.3	19
DSC-S□-10-H1010	ø10						75.4							21
DSC-S□-10-H1212	ø12						79.6							22