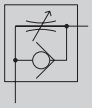
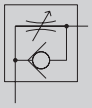


Speed controller with adjusting dial

DSC Series

● Port size: M5, R1/8 to R1/2

JIS symbol  (Meter-out)  (Meter-in)

RoHS

Specifications

● Compact

Item			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 (≈150 psi, 10 bar)					
Min. working pressure		MPa	0.05 (≈7.3 psi, 0.5 bar)					
Proof pressure		MPa	1.5 (≈220 psi, 15 bar)					
Fluid temperature		°C	5 (41°F) to 60 (140°F) (no freezing. *2)					
Ambient temperature		°C	0 (32°F) to 60 (140°F) (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	
	Eff. X-sectional area	mm^2	1.3	1.5		3.2	4	
Controlled flow (Standard flow rate)	Flow rate	ℓ/min(ANR)	60			160	200	
	Eff. X-sectional area	mm^2	0.9			2.4	3	
Controlled flow (Low flow rate)	Flow rate	ℓ/min(ANR)	20			60		
	Eff. X-sectional area	mm^2	0.3			0.9		
Controlled flow (fine flow rate)	Flow rate	ℓ/min(ANR)	-	6.7		13		-
	Eff. X-sectional area	mm^2	-	0.1		0.2		-

● Standard

Item			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 (≈150 psi, 10 bar)											
Min. working pressure		MPa	0.05 (≈7.3 psi, 0.5 bar)											
Proof pressure		MPa	1.5 (≈220 psi, 15 bar)											
Fluid temperature		°C	5 (41°F) to 60 (140°F) (no freezing. *2)											
Ambient temperature		°C	0 (32°F) to 60 (140°F) (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
	Eff. X-sectional area	mm^2	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
	Eff. X-sectional area	mm^2	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	
	Eff. X-sectional area	mm^2	0.9			2			4				6	

*1: Flow rate is the atmospheric pressure conversion value at pressure 0.5 MPa.
*2: Freezing may occur due to adiabatic expansion depending on the air quality (dew point).

Specifications for rechargeable battery

● Structure suitable for 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**

Ⓐ Product size
Ⓑ Port size
Ⓒ Compatible tube O.D.
Ⓓ Control method
Ⓔ Flow rate

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

Port size - Compatible tube O.D. - flow rate combination

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

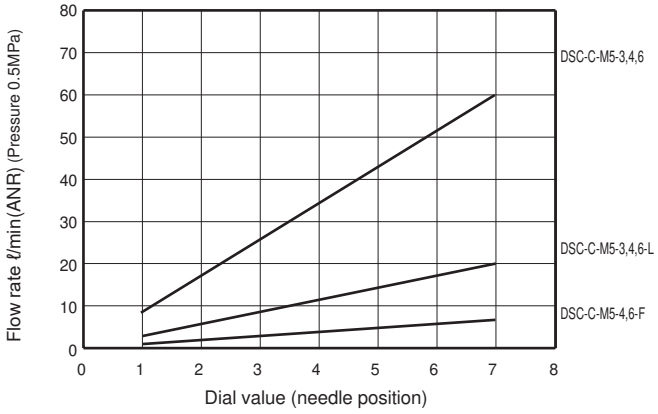
○: Flow rate “F” (fine flow rate) cannot be selected
◎: Flow rate “F” (fine flow rate) can be selected

Flow characteristics

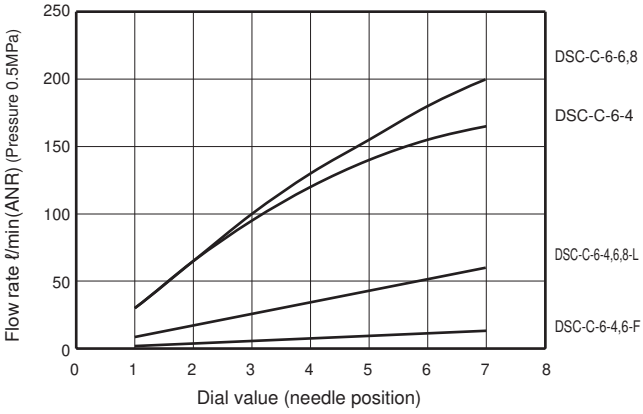
*The flow rate characteristics graph indicates reference values and does not guarantee the values.

●Compact

●DSC-C-M5-*

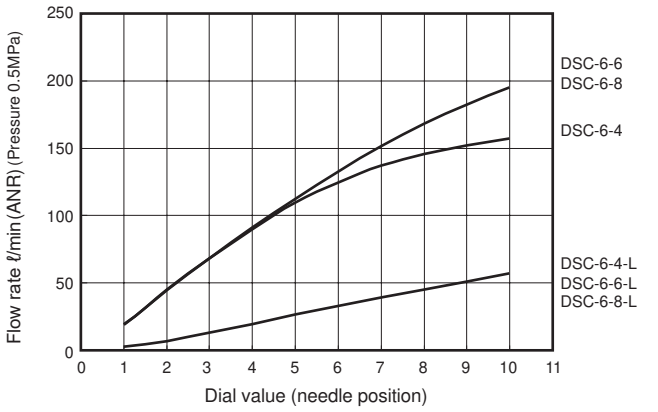


●DSC-C-6-*

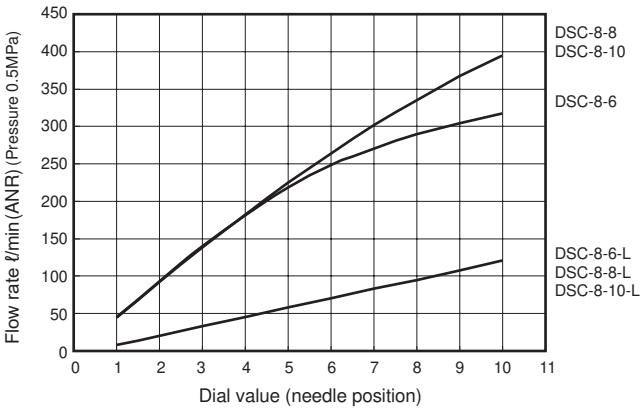


●Standard

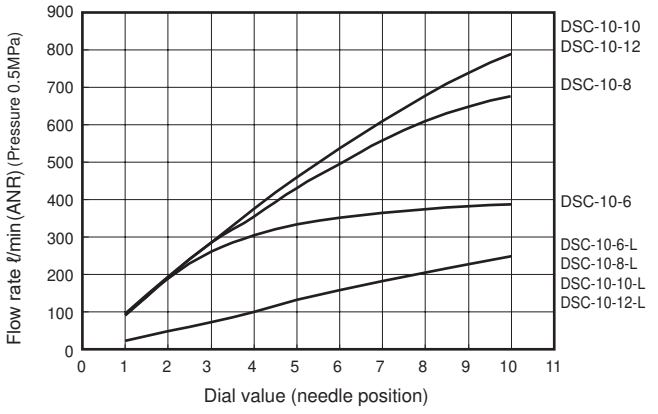
●DSC-6-*



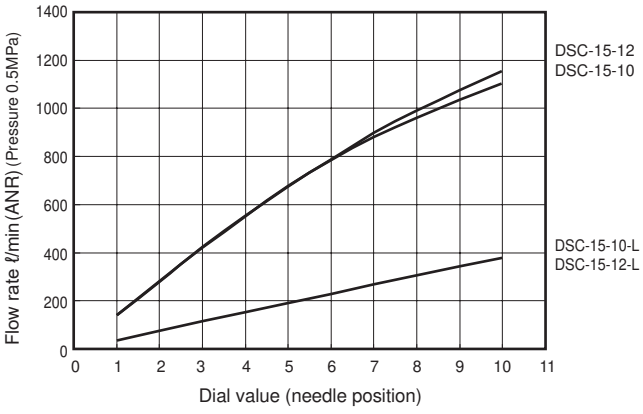
●DSC-8-*



●DSC-10-*



●DSC-15-*

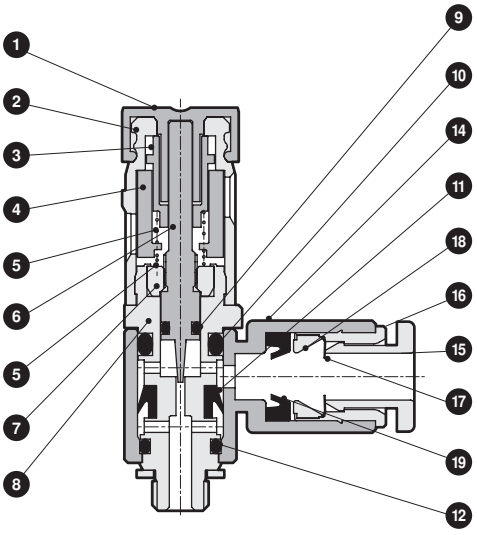


Note: The flow characteristics may differ depending on the piping conditions around the unit and the temperature change.

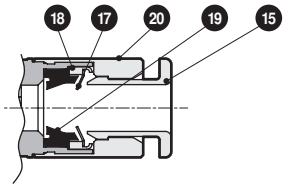
Internal structure and parts list

●Compact

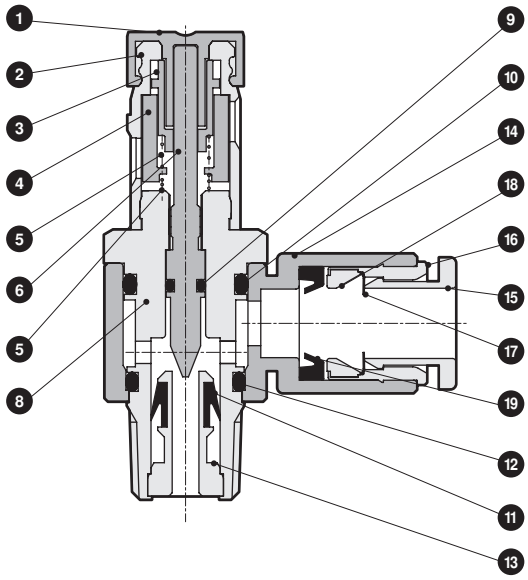
●DSC-C-M5-4,6



●DSC-C-M5-3



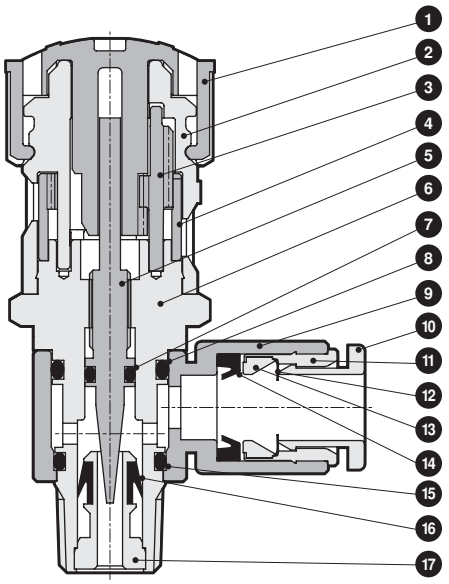
●DSC-C-6-*



Part No.	Part name	Material	Part 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	Brass
4	Indication ring	Polybutylene terephthalate	14	Rotor	Polybutylene terephthalate
5	Spring	Stainless steel	15	Push ring	Polybutylene terephthalate
6	Needle	Stainless steel	16	Outer ring	Brass
7	Gland nut	Brass	17	Chuck	Stainless steel
8	Rotary shaft	Brass	18	Chuck holder	Polyethersulfone (brass) *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 brass parts have electroless nickel plating.

●Standard

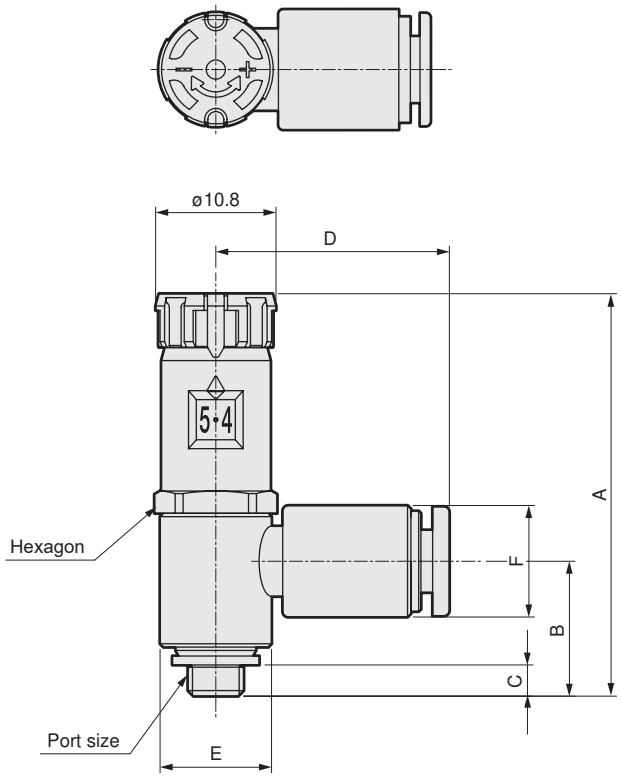


Part No.	Part name	Material
1	Knob	Polyacetal
2	Gear cover	Polybutylene terephthalate
3	Gear	Stainless steel
4	Indication ring	Polyacetal
5	Needle	Stainless steel
6	Rotary shaft	Brass
7	O-ring	Nitrile rubber
8	O-ring	Nitrile rubber
9	Rotor	Polybutylene terephthalate
10	Push ring	Polybutylene terephthalate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

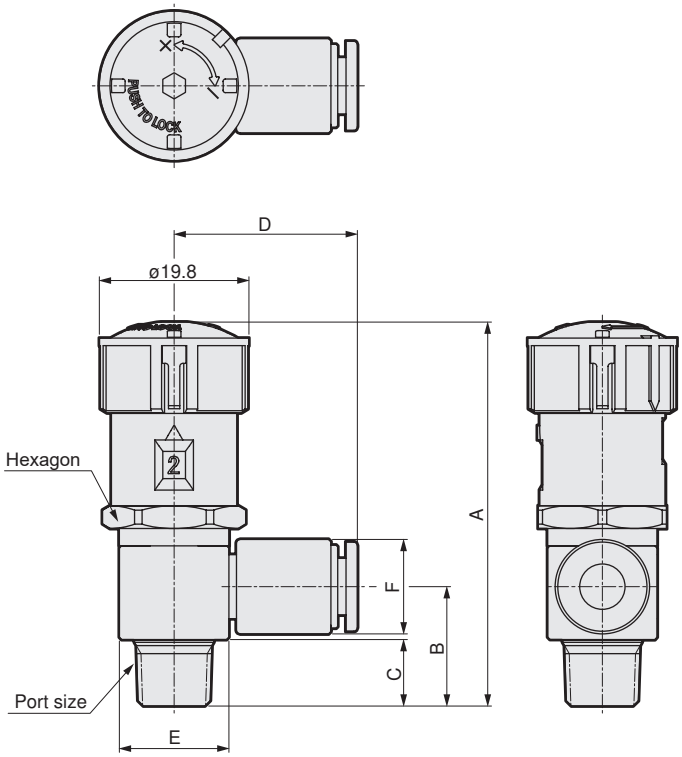
*1: All the brass parts have electroless nickel plating.

Dimensions

● Compact



● Standard



Model No.	Product size	Port size	Compatible tube O.D.	A		B	C	D	E	F	Hexagon
				When locked	At adjustment						
DSC-C-M5-3	Compact Type	M5x0.8	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	13
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 Type	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	17
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	24
DSC-15-12			ø12			25.7		36		20	