

MCRPMS series

MAGNETICALLY COUPLED RODLESS CYLINDER

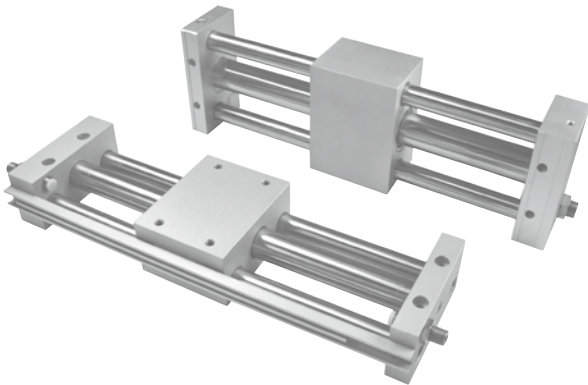


Table for standard stroke

Tube I.D.	Stroke (mm)	Max. stroke
ø10	50, 100, 150, 200, 250, 300	500
ø15	50, 100, 150, 200, 250, 300, 350, 400, 450, 500	750
ø20	100, 150, 200, 250, 300, 350, 400, 450,	1000
ø25	500, 600, 700, 800	

* Minimum stroke unit 1mm.

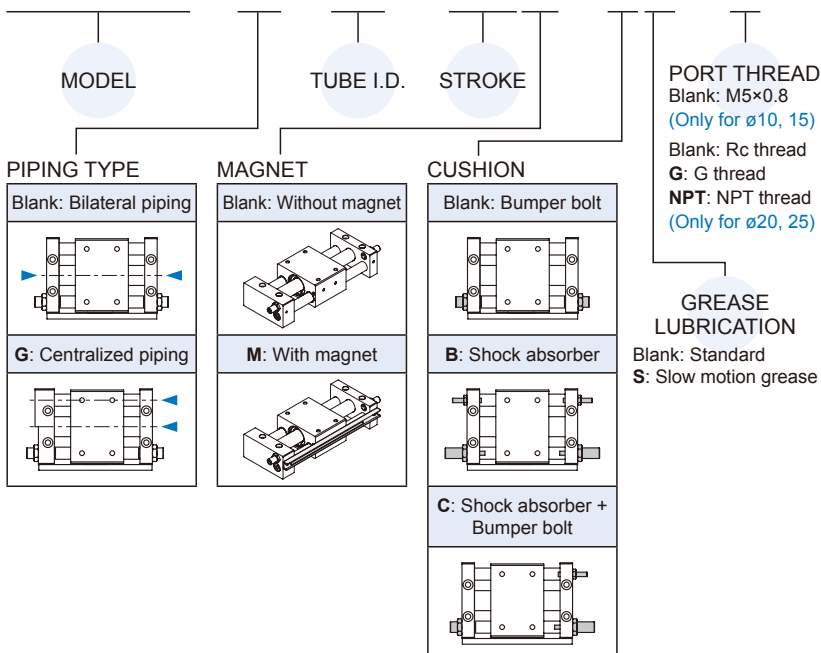
Cylinder weight

Unit: g

Tube I.D.	Basic weight MCRPMS	Stroke 100 mm MCRPMS
ø10	407	168.7
ø15	770	222
ø20	1360	342
ø25	1730	346

Order example

MCRPMS — G — 10 — 100M — B S — G



Features

- 50% space saving, centralized piping ease of mounting.
- Magnetic transit design. Magnetic force transmits the movement with piston side magnet and slider magnet.
- Stainless tube, light weighted and durable.
- The overall design of the cylinder and guide rods, can direct bear loads.

Specification

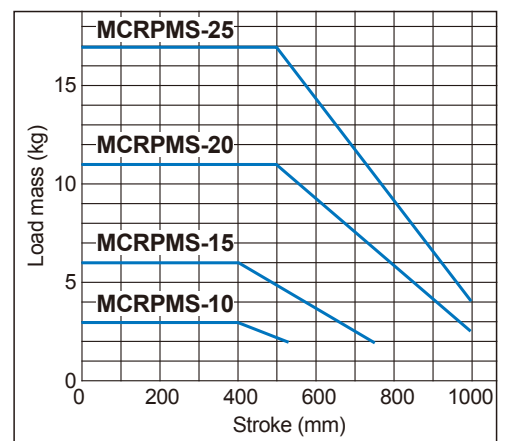
Model	MCRPMS			
Acting type	Double acting			
Tube I.D. (mm)	10	15	20	25
Port size	M5×0.8		Rc1/8	
Medium	Air			
Max. operating pressure	0.7 MPa			
Min. operating pressure	0.2 MPa			
Proof pressure	1 MPa			
Ambient temperature	+5° ~ +60°C			
Lubricator	Without lubrication			
Available speed range	Standard grease: 150~400 mm/sec			
	Slow motion grease: 80~150 mm/sec(*2)			
Holding force	53.9 N	137 N	231 N	363 N
Shock absorbers (*3)	MDSC-0806-3-N	MAC-1007-SN	MAC-1412-SN	
Sensor switch	RCD (Please refer to page 8-9)			

*1. Input air-port needs at speed control valves to control speed.

*2. Between the speed range limit the actuator stroke must not exceed to 2m/minute.

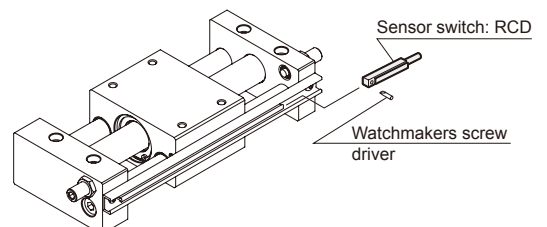
*3. Standard: bumper bolt, Option: shock absorber (speci. please refer to page 8-19.)

Maximum load mass



* Maximum load mass when horizontal mounting.

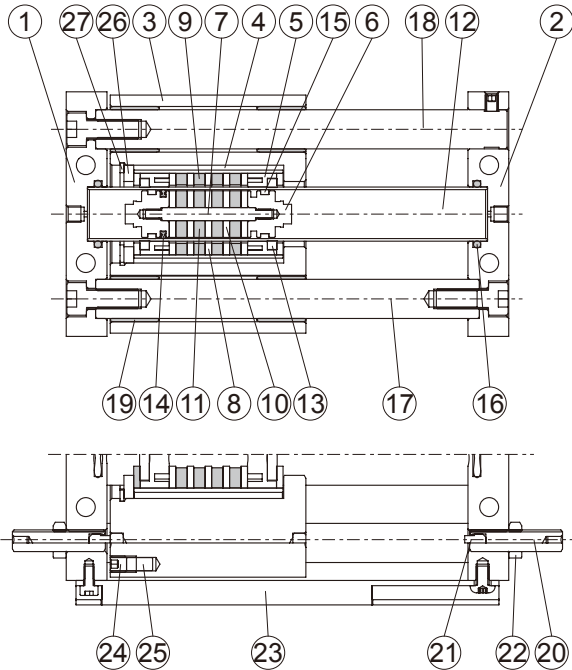
Installation of sensor switch



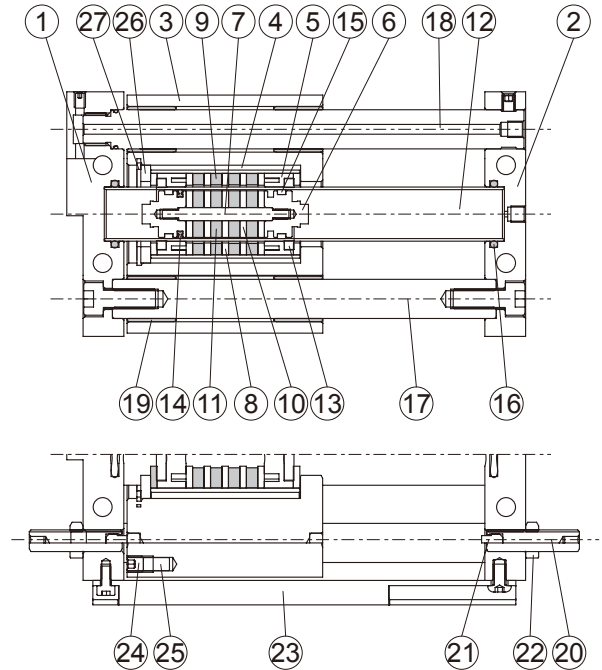
MCRPMS Inside structure & Parts list

MAGNETICALLY COUPLED RODLESS CYLINDER

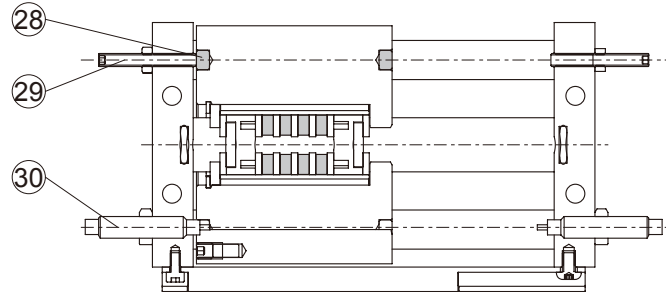
Bilateral piping



Centralized piping



With shock absorber



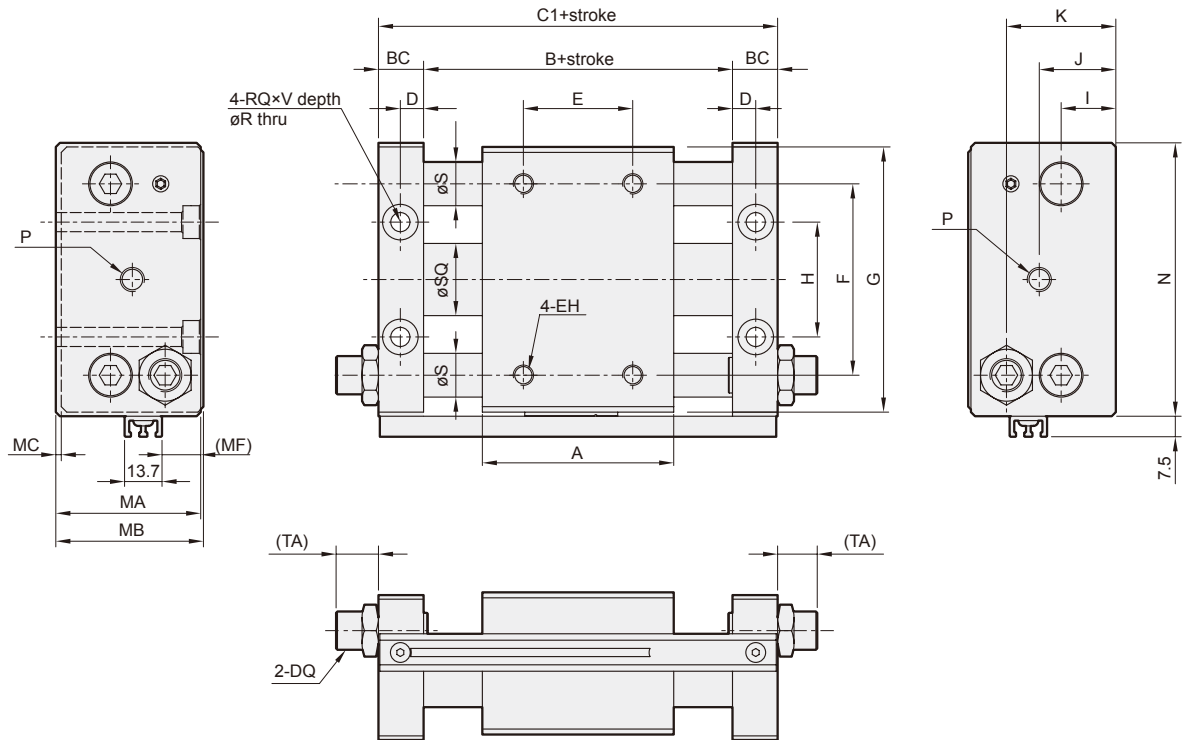
Material

No.	Part name	Material	Note
1	Plate A	Aluminum alloy	Anodized
2	Plate B	Aluminum alloy	Anodized
3	Slider body	Aluminum alloy	Anodized
4	External slider tube	Aluminum alloy	
5	Body wear ring	POM	
6	Piston	Aluminum alloy	
7	Shaft	Stainless steel	
8	Slider side yoke	Carbon steel	
9	Slider side magnet	Magnet material	
10	Piston side yoke	Carbon steel	
11	Piston side magnet	Magnet material	
12	Tube	Stainless steel	
13	Lub-retainer	Special resin	
14	Piston seal	NBR	
15	Wear ring	POM	

No.	Part name	Material	Note
16	O-ring	NBR	
17	Guide shaft A	Carbon steel	
18	Guide shaft B	Carbon steel	
19	Bush	Copper	
20	Adjusting bolt	Carbon steel	
21	Cushion	PU	
22	Bolt	Carbon steel	
23	Switch rail	Aluminum alloy	for with magnet
24	Hex socket screws	Stainless steel	for with magnet
25	Magnet	Magnet material	for with magnet
26	Washer	Aluminum alloy	Anodized
27	Snap ring	Spring steel	
28	Cushion block	PU	for with shock absorber
29	Adjustment bolt	Carbon steel	for with shock absorber
30	Shock absorber	Composite material	for with shock absorber

MCRPMS Dimensions – Bilateral piping type $\varnothing 10\sim\varnothing 25$

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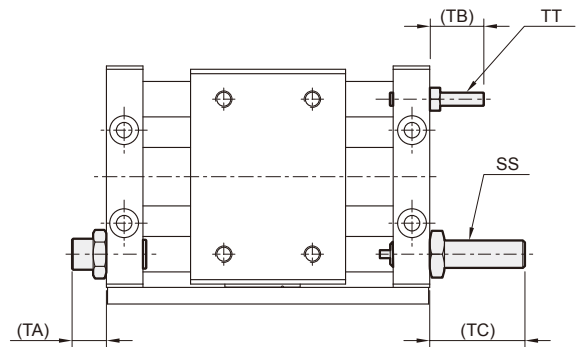
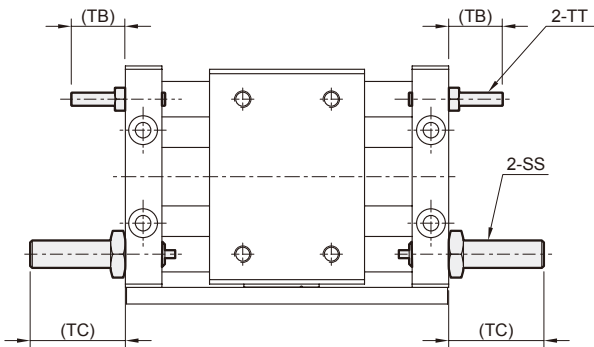


MCRPMS-*-B

With shock absorber

MCRPMS-*-C

With shock absorber +
Adjustment bolt

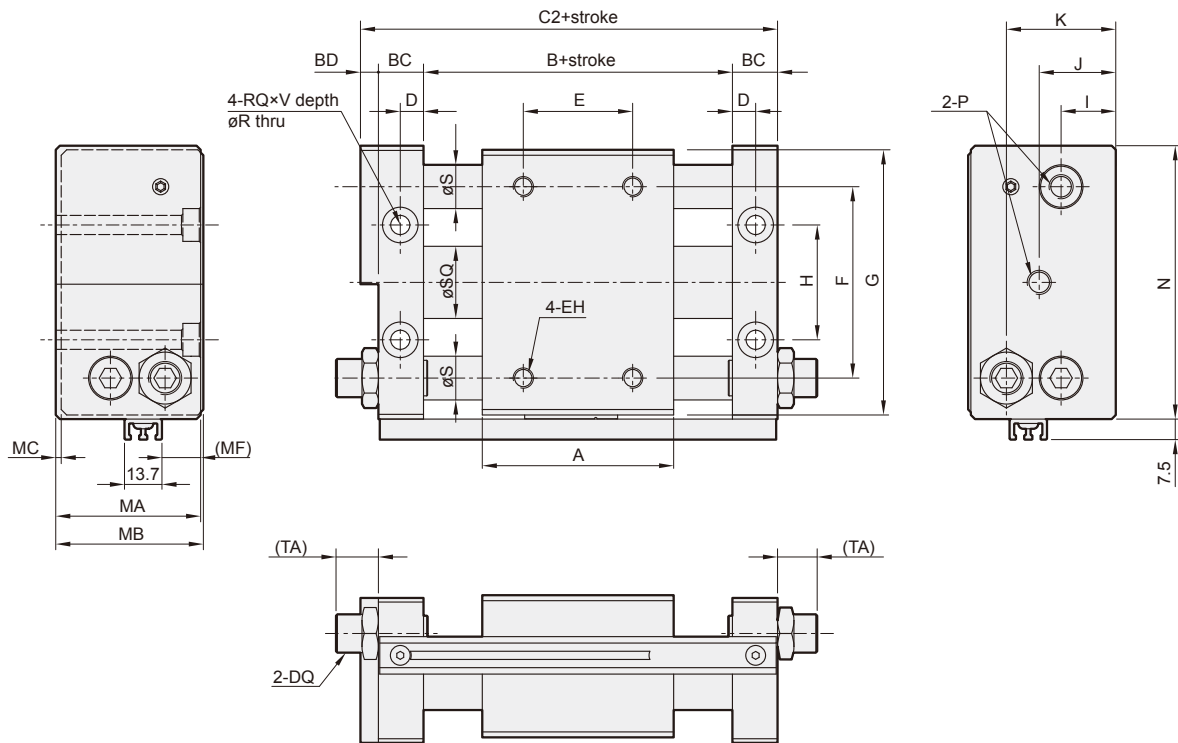


Code Tube I.D.	A	B	BC	C1	D	DQ	E	EH	F	G	H	I	J	K	MA	MB	MC
10	45	47	12.5	72	6.5	M8 \times 1.0	25	M4 \times 0.7 \times 6 depth	41	60	24	13.5	17	26	33	34	2.5
15	60	62	12.5	87	6.5	M8 \times 1.0	30	M5 \times 0.8 \times 8 depth	50	75	30	15	20.5	29	34	40	2
20	70	73	16.5	106	8.5	M14 \times 1.5	40	M6 \times 1.0 \times 10 depth	70	87	38	19	24	36	45	46	2
25	70	73	16.5	106	8.5	M14 \times 1.5	40	M6 \times 1.0 \times 10 depth	70	96	42	21.5	27.5	40.5	53	54	2

Code Tube I.D.	MF	N	P	R	RQ	S	SQ	SS	TA	TB	TC	TT	V
10	4.2	60	M5 \times 0.8	4.5	8	10	12	MDSC-0806-3-N	16.5	16.5	25	M4 \times 0.7	4.4
15	6.1	75	M5 \times 0.8	5.8	9.5	12	16.6	MDSC-0806-3-N	16.5	16.5	25	M4 \times 0.7	5.5
20	8	89	Rc1/8	5.5	9.5	16	21.6	MAC-1007-SN	16.5	22	29	M6 \times 1.0	5.5
25	13	98	Rc1/8	7	12	16	26.4	MAC-1412-SN	14.5	22	49	M6 \times 1.0	6.5

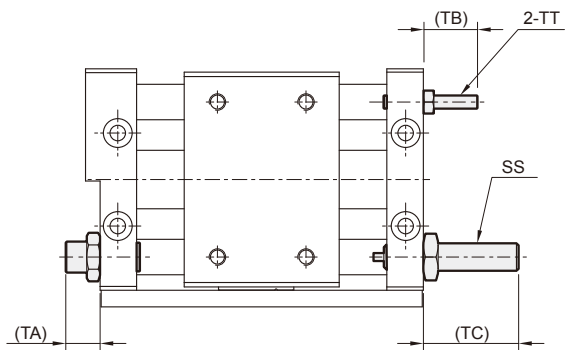
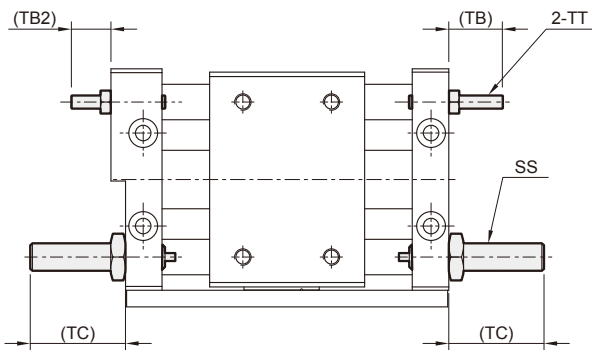
MCRPMS Dimensions – Centralized piping type $\varnothing 10 \sim \varnothing 25$

MAGNETICALLY COUPLED RODLESS CYLINDER



MCRPMS-G-*-B
With shock absorber

MCRPMS-G-*-C
With shock absorber + Adjustment bolt



Code Tube I.D.	A	B	BC	BD	C2	D	DQ	E	EH	F	G	H	I	J	K	MA	MB	MC
10	45	47	12.5	4	76	6.5	M8x1.0	25	M4x0.7x6 depth	41	60	24	13.5	17	26	33	34	2.5
15	60	62	12.5	5	92	6.5	M8x1.0	30	M5x0.8x8 depth	50	75	30	15	20.5	29	34	40	2
20	70	73	16.5	5	111	8.5	M14x1.5	40	M6x1.0x10 depth	70	87	38	19	24	36	45	46	2
25	70	73	16.5	5	111	8.5	M14x1.5	40	M6x1.0x10 depth	70	96	42	21.5	27.5	40.5	53	54	2

Code Tube I.D.	MF	N	P	R	RQ	S	SQ	SS	TA	TB	TB2	TC	TT	V
10	4.2	60	M5x0.8	4.5	8	10	12	MDSC-0806-3-N	16.5	16.5	12.5	25	M4x0.7	4.4
15	6.1	75	M5x0.8	5.8	9.5	12	16.6	MDSC-0806-3-N	16.5	16.5	11.5	25	M4x0.7	5.5
20	8	89	Rc1/8	5.5	9.5	16	21.6	MAC-1007-SN	16.5	22	22	29	M6x1.0	5.5
25	13	98	Rc1/8	7	12	16	26.4	MAC-1412-SN	14.5	22	22	49	M6x1.0	6.5