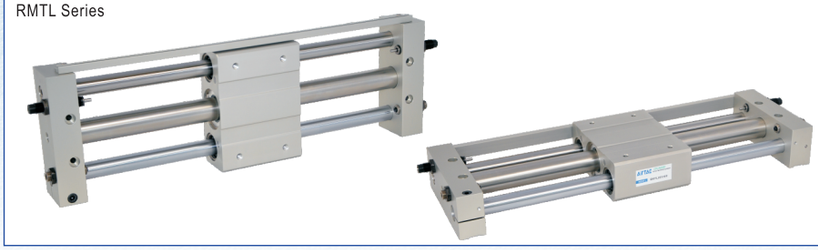
Rodless magnetic cylinder(With exactitude guide)——RMTL Series

Product series

Series name	Acting type	Bore size	Collocation of sensor switch CS1－G DS1－G
RMTL Series 	Double acting	10 16 20 25 32 40	
Page 370			403

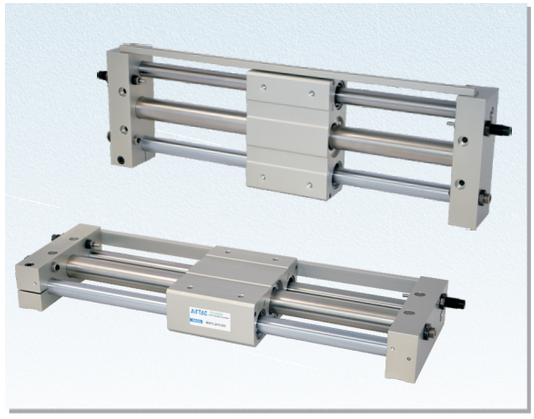
Installation and application

1. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of impurities into the cylinder.
2. The medium used by cylinder shall be filtered to 40 μ m or below.
3. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
4. If the cylinder is dismantled and stored for a long time, pay attention to conduct anti–rust treatment to the surface. Anti–dust caps shall be added in air inlet and outlet ports.

RMTL

Rodless magnetic cylinder(With exactitude guide)

RMTL Series



Specification

Bore size (mm)	10	16	20	25	32	40
Acting type	Double acting					
Fluid	Air(to be filtered by 40 μ m filter element)					
Operating pressure	0.18~0.7MPa(28~100psi(1.8~7bar)					
Proof pressure	1.0MPa(145psi)(10.0bar)					
Temperature (℃)	-10~60					
Speed range (mm/s)	50~500					
Stroke tolerance (mm)	$0\sim250^{+1.0}_{0}$ $251\sim1000^{+1.4}_{0}$ $1001\sim^{+1.8}_{0}$					
Cushion type	Fixed cushion		Shock absorber(Available)			
Safe holding force (N)	60	140	200	320	550	850
Port size ①	M5 × 0.8		1/8"			1/4"

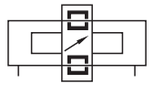
① PT thread、NPT and G thread are available. Add) Refer to P403~426 for detail of sensor switch.

Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke(mm)
10	50 100 150 200 250 300	500
16	50 100 150 200 250 300 350 400 450 500	750
20	50 100 150 200 250 300 350 400 450 500 600 700 750 800	1000
25	50 100 150 200 250 300 350 400 450 500 600 700 750 800	1500
32	50 100 150 200 250 300 350 400 450 500 600 700 750 800	1500
40	50 100 150 200 250 300 350 400 450 500 600 700 750 800 900 1000	1500

Note) Consult us for non–standard stroke.

Symbol



Product feature

1. This magnetic cylinder is basically a pneumatic rodless cylinder featuring a mobile piston fitted with annular magnets. The mobile carriage is also equipped with magnets to provide magnetic coupling (carriage/piston). The carriage slide freely along the main tube.
2. It is dust-proof as the isolation between the carriage and piston.
3. It is compact in space.
4. The non adjustable rubber bumpers and the adjustable pneumatic cushioning on both ends of the cylinder ensure the smooth action. if shock absorber be used, the cushioning effect is more perfection.
5. Double guides ensure high precision and can endure proper side load or prejudicial load.

Explain of model

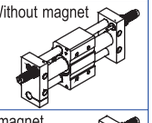
RMTL–20 × 100–□–□–P

Model
RMTL: Rodless magnetic cylinder (With exactitude guide)

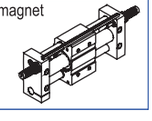
Bore size
10, 16, 20, 25, 32, 40

Stroke
Refer to stroke table for details

Magnet
Blank: Without magnet



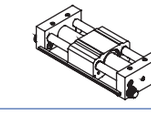
S: With magnet



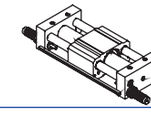
Thread type

Bore size	Thread type
10, 16	Blank: M5
20, 25 32, 40	P: PT
	T: NPT
	G: G

Cushion type
Blank: With two adjustable nuts



A: With two shock absorbers



Note) When **A** type is selected, the two adjustable nuts are added too.

Ordering code

RMTL

Model can to be changed Ordering code. Example:
Production type: RMTL
Bore size: 20mm
Stroke: 100mm
Magnet: With magnet
Cushion type: With two shock absorber
Thread type: NPT
Model: RMTL20 × 100-S-A-T
Ordering code: RMTL 20 S 0100 A T

Model

Bore size
10: Φ10mm
16: Φ16mm
20: Φ20mm
25: Φ25mm
32: Φ32mm
40: Φ40mm

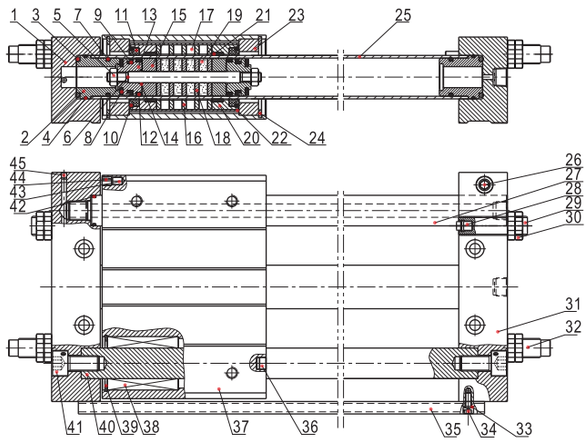
Magnet
Blank: Without magnet
S: With magnet

Stroke
In 4 digits

Cushion type
Blank: With two adjustable nuts
A: With two shock absorbers

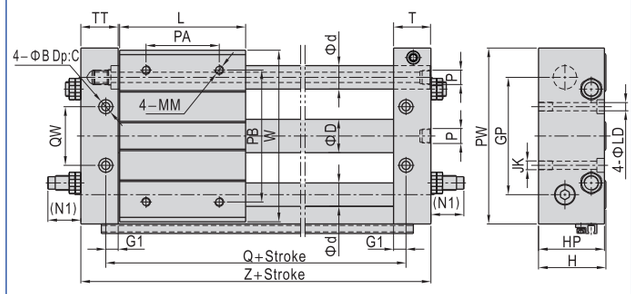
Thread type
P: PT
T: NPT
G: G

Inner structure and material of major parts



NO.	Item	Material	NO.	Item	Material
1	Fixing plate	Aluminum alloy	24	C clip	Spring steel
2	Washer cover	Aluminum alloy	25	Barrel	Stainless steel
3	O−ring	NBR	26	Countersink screw	Carbon steel
4	O−ring	NBR	27	Guide I	Carbon steel
5	Nut	Carbon steel	28	Bumper	TPU
6	Joint pole	Stainless steel	29	Adjustable screw	Carbon steel
7	O−ring	NBR	30	Nut	SS41
8	Bumper	NBR	31	Fixing plate	Aluminum alloy
9	Piston seal	TPU	32	Shock absorber	Combination
10	O−ring	NBR	33	Spring washer	Spring steel
11	Scraping dust ring	Plastics	34	Countersink screw	Carbon steel
12	Wearing ring	Wear resistant material	35	Rail	Aluminum alloy
13	Piston	Aluminum alloy	36	Bumper block	Stainless steel
14	O−ring	NBR	37	Body	Aluminum alloy
15	Piston washer	Aluminum alloy	38	Bushing	
16	Magnet washer	Carbon steel	39	C clip	Spring steel
17	Magnet	Rare-earth material	40	Guide II	Carbon steel
18	Magnet washer	Carbon steel	41	Countersink screw	Carbon steel
19	Magnet	Rare-earth material	42	O−ring	NBR
20	Body cover	Aluminum alloy	43	Magnet	Rare-earth material
21	Wearing ring	Wear resistant material	44	Location washer	NBR
22	Mobility iron	Aluminum alloy	45	Steel ball	Stainless steel
23	Washer	Aluminum alloy			

Dimensions



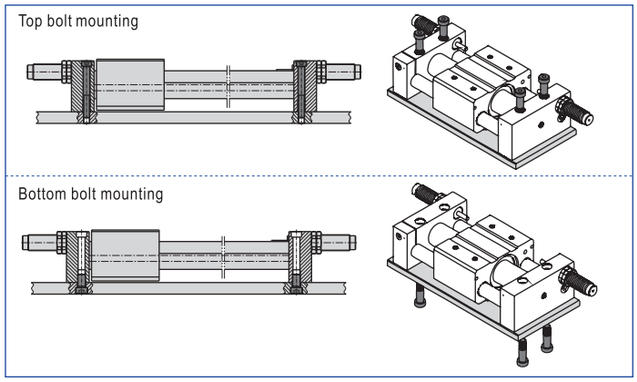
Model	QW	Q	Z	PA	PB	L	W	TT	T	MM	B	C
RMTL10	26	85	111	30	60	68	77	20.5	20.5	M4X0.7Dp:8	8	4
RMTL16	30	90	122	45	70	75	92	22.5	22.5	M5X0.8Dp:10	9.5	5
RMTL20	40	105	139	50	90	86	117	25.5	25.5	M6X1.0Dp:10	9.5	5.2
RMTL25	50	105	139	60	100	86	127	25.5	25.5	M6X1.0Dp:10	11	6.5
RMTL32	60	121	159	70	120	100	157	28.5	28.5	M8X1.25Dp:12	14	8
RMTL40	84	159	209	90	140	136	187	35.5	35.5	M8X1.25Dp:12	14	8

Model	G1	H	HP	PW	GP	LD	D	d	(N1)	JK	P
RMTL10	7.5	34	33	80	52	4.3	11.18	10	16.5	M5X0.8Dp:9.5	M5X0.8
RMTL16	6.5	40	39	95	65	5.3	18	12	14.5	M6X1.0Dp:9.5	M5X0.8
RMTL20	8.5	46	45	120	80	5.3	22.8	16	21.5	M6X1.0Dp:10	1/8"
RMTL25	8.5	54	53	130	90	7	27.8	16	39.5	M8X1.25Dp:10	1/8"
RMTL32	9.5	66	64	160	110	8.7	35	20	57.5	M10X1.5Dp:15	1/8"
RMTL40	10.5	78	74	190	130	8.7	43	25	49.5	M10X1.5Dp:15	1/4"

RMTL

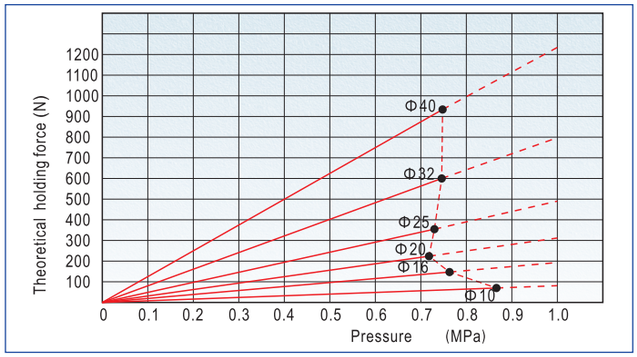
Installation and application

1. Mounting type



2. How to determine load

The maxi load to move must be less than the theoretical holding force.

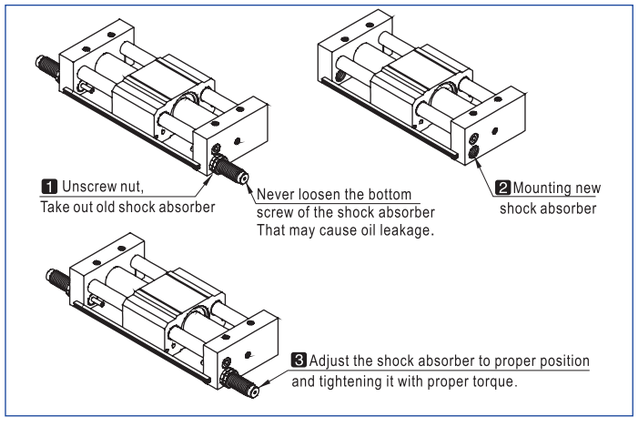


3. About shock absorber

3.1) Shock absorbers are consumable parts. When a decrease in energy absorption capacity is noticed, it must be replaced. Refer to the table below for shock absorber type.

3.2) Never loosen the bottom screw of the shock absorber. (It is not an adjustment screw.) That may cause oil leakage.

3.3) Refer to the table below for tightening torques of the shock absorber setting nut.

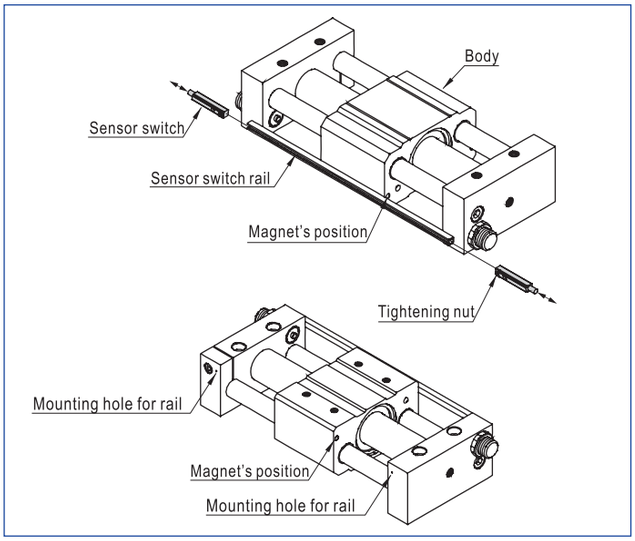


Bore size	10	16	20	25	32, 40
Shock absorber type	ACA0806–1N	ACA1006–A	ACA1007–1N	ACA1412–1N	ACA2020–1N
Tightening torque(Nm)	1.67	1.67	1.67	3.14	10.80

4. About sensor switch

4.1) Sensor switch only can be used for the cylinder with magnet . The magnet located the four corner of body's(refer below) .The cylinder with magnet have both group mounting hole for mounting rail. please refer to below for ordering sensor switch, mounting it into the rail's groove, adjusting it to proper position, tightening it with proper torque.

Cylinder model	RMTL10	RMTL16	RMTL20	RMTL25	RMTL32	RMTL40
Sensor switch	CS1-G, CS1–GX, DS1–G, DS1–GN, DS1–GP					



Add) Refer to Page 420, 430 for detail of sensor switch.

RMTL