

# Rodless magnetic cylinder(With exactitude guide) **BITEBI**<sup>®</sup>

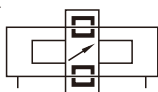
## RMTL Series



### 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.

### Symbol



### Specification

Bore size(mm)	10	16	20	25	32	40
Acting type	Double acting					
Fluid	Air(to be filtered by 40μm filter element)					
Operating pressure	0.2~0.7MPa(30~100psi)(2.0~7bar)					
Proof pressure	1.2MPa(175psi)(12.0bar)					
Temperature °C	-20~70					
Speed range mm/s	50~500					
Stroke tolerance mm	0~250 <sup>+1.0</sup> <sub>0</sub>		251~1000 <sup>+1.5</sup> <sub>0</sub>		1001~ <sup>+2.0</sup> <sub>0</sub>	
Cushion type	Fixed cushion			Shock absorber(Available)		
Safe holding force N	55	140	220	345	560	880
Port size [Note1]	M5×0.8			1/8"		1/4"

[Note1] PT thread, G thread and NPT thread are available.

### Standard Stroke

Bore size (mm)	Standard stroke (mm)	Max.std stroke
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.

# Rodless magnetic cylinder(With exactitude guide) **BITEBI**<sup>®</sup>

## RMTL Series

### Ordering code

**RMTL 20 × 100 S** □ □

① ② ③ ④ ⑤ ⑥

#### ⑤ Cushion type

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

#### ① Model

RMTL: Rodless magnetic cylinder  
(With exactitude guide)

#### ② Bore size

10 16  
20 25 32 40

#### ③ Stroke

Refer to stroke  
table for details

#### ⑥ Thread type

Blank: M5

#### Bore size

10 16

Blank: PT

G: G

20 25 32 40

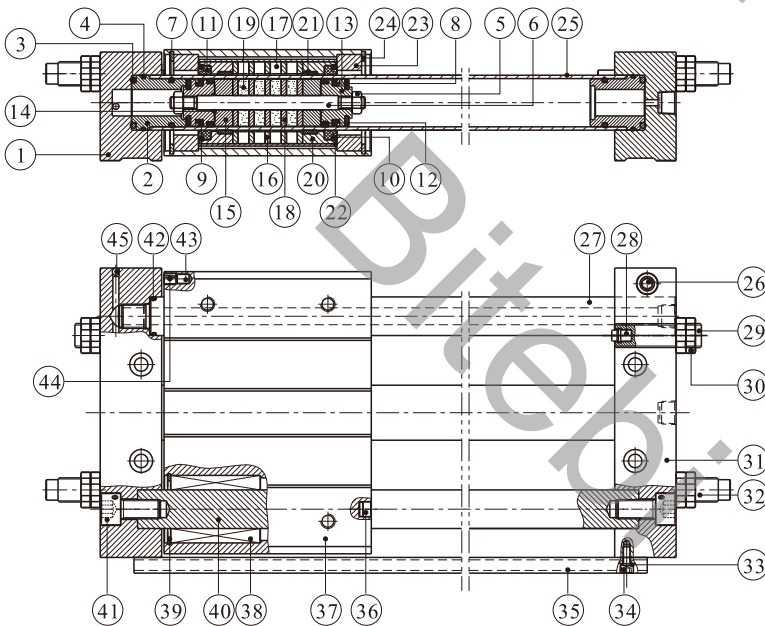
T: NPT

#### ④ Magnet

Blank: Without magnet  
S: With magnet

[Note1] When A type is selected, the two adjustable nuts are added too.

### Inner structure and material of major parts



NO.	Item	Material
1	Fixing plate	Aluminum alloy
2	Washer cover	Aluminum alloy
3	O-ring	NBR
4	O-ring	NBR
5	Nut	Carbon steel
6	Joint pole	Stainless steel
7	O-ring	NBR
8	Bumper	NBR
9	Piston seal	TPU
10	O-ring	NBR
11	Scraping dust ring	Plastics
12	Wearing ring	Wear resistant material
13	Piston	Aluminum alloy
14	O-ring	NBR
15	Piston washer	Aluminum alloy
16	Magnet washer	Carbon steel
17	Magnet	Rare-earth material
18	Magnet washer	Carbon steel
19	Magnet	Rare-earth material
20	Body cover	Aluminum alloy
21	Wearing ring	Wear resistant material
22	Mobility iron	Aluminum alloy
23	Washer	Aluminum alloy

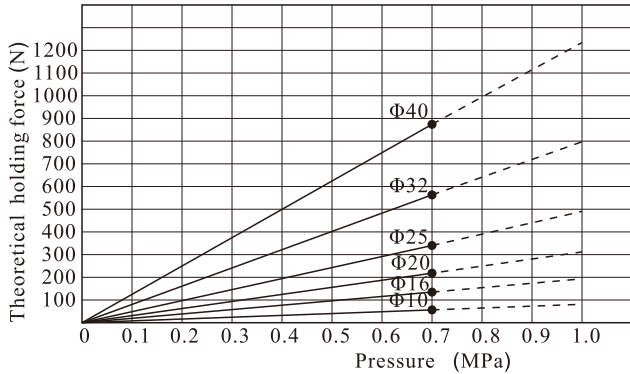
NO.	Item	Material	NO.	Item	Material
24	C clip	Spring steel	35	Rail	Aluminum alloy
25	Barrel	Stainless steel	36	Bumper block	Stainless steel
26	Countersink screw	Carbon steel	37	Body	Aluminum alloy
27	Guide I	Carbon steel	38	Bushing	
28	Bumper	TPU	39	C clip	Spring steel
29	Adjustable screw	Carbon steel	40	Guide II	Carbon steel
30	Nut	Ss41	41	Countersink screw	Carbon steel
31	Fixing plate	Aluminum alloy	42	O-ring	NBR
32	Shock absorber	Combination	43	Magnet	Rare-earth material
33	Spring washer	Spring steel	44	Location washer	NBR
34	Countersink screw	Carbon steel	45	Steel ball	Stainless steel

## RMTL Series

### Installation and application

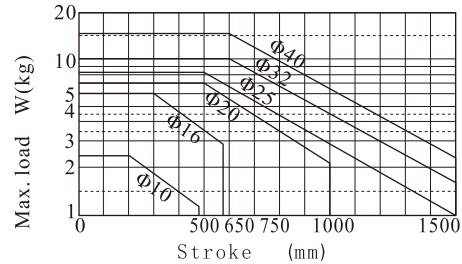
#### 1. How to determine load

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



The relation between loading and stroke as below

(Loading center and slide table center must be superposition)



Bore size	Max.Load W(kg)	Stroke scope
10	2.4	~200mm
16	5	~300mm
20	6	~500mm
25	8	~500mm
32	10	~600mm
40	16	~600mm

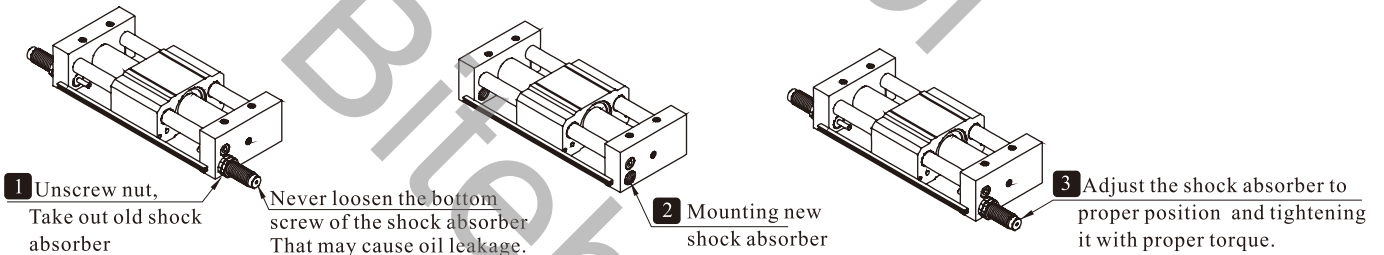
#### 2. About shock absorber

2.1) 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.

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

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

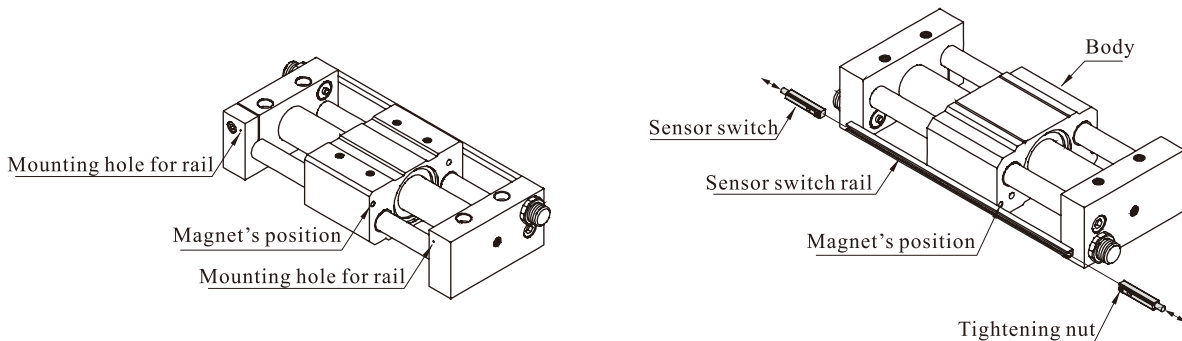


Bore size	10	16	20	25	32	40
Shock absorber type	ACA0806-1N	ACA1006-A	ACA1007-1N	ACA1412-1N	ACA2020-1N	ACA2020-1N
Tightening torque(Nm)	1.67	1.67	1.67	3.14	10.80	10.80

#### 3. About sensor switch

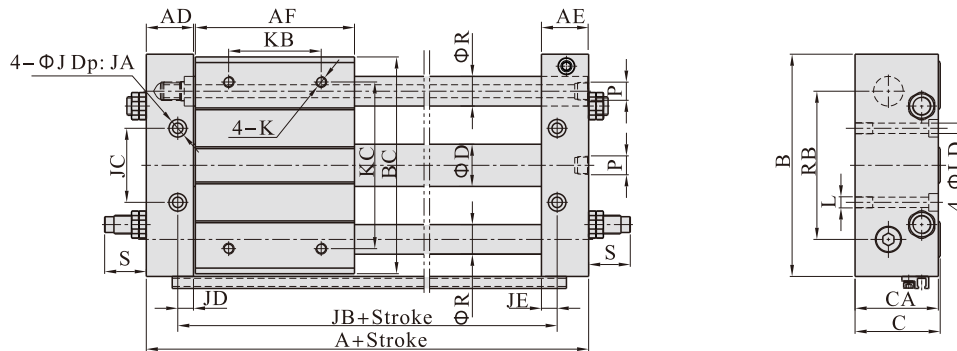
3.1) Sensor switch only can be used for the cylinder with magnet. The magnet located the four corner of body's(refer below).

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.



## RMTL Series

### ■ Dimensions



Model	A	AD	AE	AF	B	BC	C	CA	D	J	JA	JB	JC	JD	JE
RMTL10	111	20.5	20.5	68	80	77	34	33	12	8	4	85	26	7.5	7.5
RMTL16	122	22.5	22.5	75	95	92	40	39	18	9.5	5	90	30	6.5	6.5
RMTL20	139	25.5	25.5	86	120	117	46	45	22.8	9.5	5	105	40	8.5	8.5
RMTL25	139	25.5	25.5	86	130	127	54	53	27.8	11	6.5	105	50	8.5	8.5
RMTL32	159	28.5	28.5	100	160	157	66	64	35	14	8	121	60	9.5	9.5
RMTL40	209	35.5	35.5	136	190	187	78	74	43	14	8	159	84	10.5	10.5

Model	K	KB	KC	L	LD	P	R	RB	S
RMTL10	M4X0.7Dp:8	30	60	M5X0.8Dp:9.5	4.5	M5X0.8	10	52	17.5
RMTL16	M5X0.8Dp:10	45	70	M6X1.0Dp:9.5	5.5	M5X0.8	12	65	18.5
RMTL20	M6X1.0Dp:10	50	90	M6X1.0Dp:10	5.5	1/8"	16	80	22.5
RMTL25	M6X1.0Dp:10	60	100	M8X1.25Dp:10	7	1/8"	16	90	40.5
RMTL32	M8X1.25Dp:12	70	120	M10X1.5Dp:15	8.5	1/8"	20	110	57.5
RMTL40	M8X1.25Dp:12	90	140	M10X1.5Dp:15	8.5	1/4"	25	130	50.5