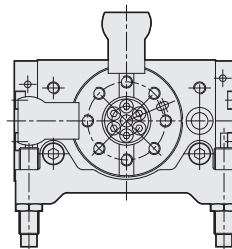
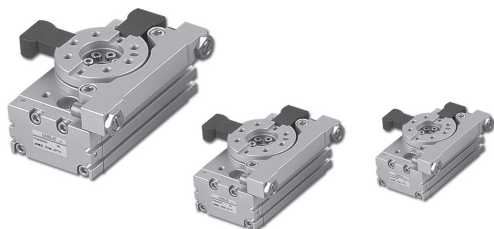


# RTBM series - ROTARY CYLINDER

With external shock absorber

## Operating specification and Ordering expression

### Internal structure



### Specification

Item	Model	RTBM10-□	RTBM20-□	RTBM30-□	RTBM50-□	RTBM70-□	RTBM100-□
Operation		Double acting					
Fluid		Air					
Torque	N·m	1.5	2.2	3.2	5.5	7.5	9.8
Bore Size		Ø15	Ø18	Ø20	Ø25	Ø28	Ø32
Rotation angle		90° , 180°					
Adjustment angle		10°					
Port size		M5X0.8			RC(PT1/8")		
Pressure range	Kgf/cm <sup>2</sup> (Kpa)	1.5~7(150~700)					
Temperature range	℃	0~50					
Allowance of kinetic energy	J	0.16	0.46	0.6	1.2	3	5.1

**RTM**  
Rotary  
Cylinder

**RTB**  
Rotary  
Cylinder

**RTBM**  
Rotary  
Cylinder

**RTZB**  
Rotary  
Cylinder

**RTP**  
Rotary  
Cylinder

**RTH**  
Rotary  
Cylinder

**RTU**  
Hydraulic  
Cylinder

### How to order

**RTBM** (Model) × **10** (Torque) × **90** (Rotation angle) - **SD** (Sensor switch) **2** (Number of sensor) - **A2** (Shock absorber)

RTBM □ x 90  
With fixed stand of shock absorber

10 : 1.5 N·m  
20 : 2.2 N·m  
30 : 3.2 N·m  
50 : 5.5 N·m  
70 : 7.5 N·m  
100 : 9.8 N·m

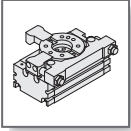
90° - 90°  
180° - 180°

CS-9D [SD]2

A : Shock absorber  
1 = 1 PCS  
2 = 2 PCS (option)

### How to select shock absorber

Model	Shock absorber	Max. absorb ability
RTBM-10	SAT-0806N	3 N.m
RTBM-20	SAT-1007N	6 N.m
RTBM-30	SAT-1007N	6 N.m
RTBM-50	SAT-1412N	20 N.m
RTBM-70	SAT-1412N	20 N.m
RTBM-100	SAT-2015N	59 N.m

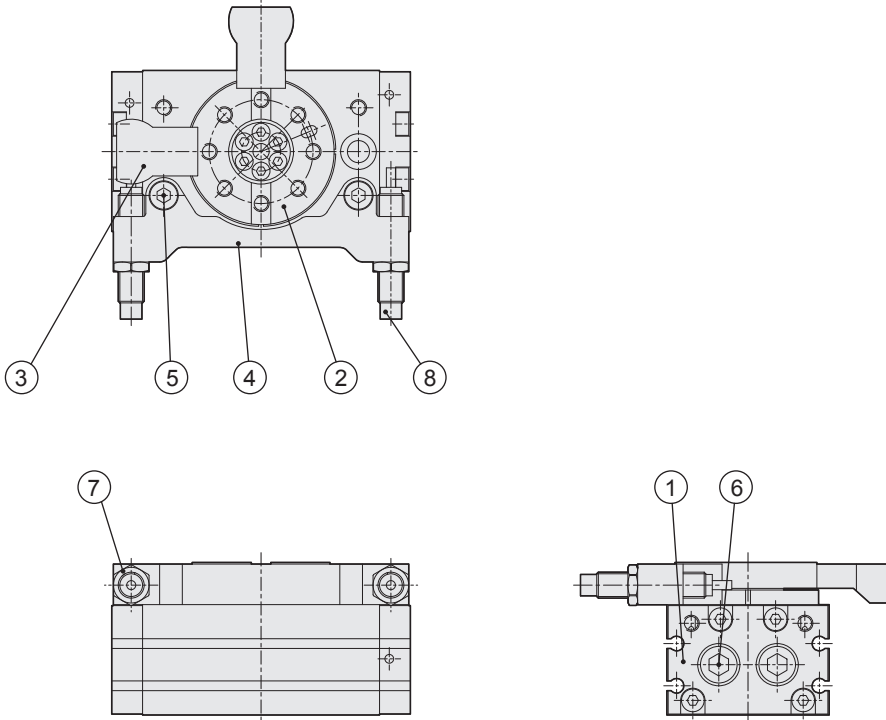


# RTBM series - ROTARY CYLINDER

With external shock absorber

## Component and Material list

### External structure

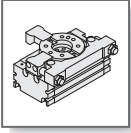


### Components and Material list

No.	Item	Material	No.	Item	Material
01	Front cover	Aluminum alloy	06	Fixed cover	Alloy steel
02	Rotate cover	Aluminum alloy	07	Hexagon nut	Alloy steel
03	Fixed plate	Alloy steel	08	Shock absorber	—
04	Position base	Aluminum alloy			
05	Hexagon bolt	Alloy steel			

### Weight

Item \ Model	RTBM-10	RTBM-20	RTBM-30	RTBM-50	RTBM-90	RTBM-100
90°	630g	1200g	1520g	2480g	3390g	4700g
180°	600g	1140g	1450g	2370g	3210g	4500g

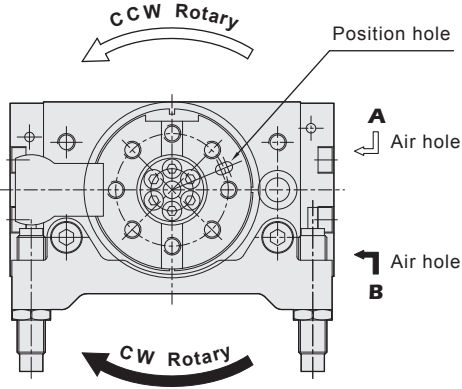


# RTBM series - ROTARY CYLINDER

With external shock absorber

## Application explain

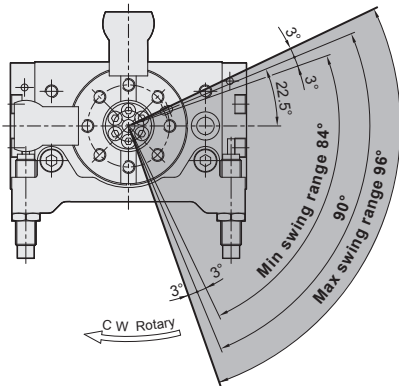
### Rotary direction



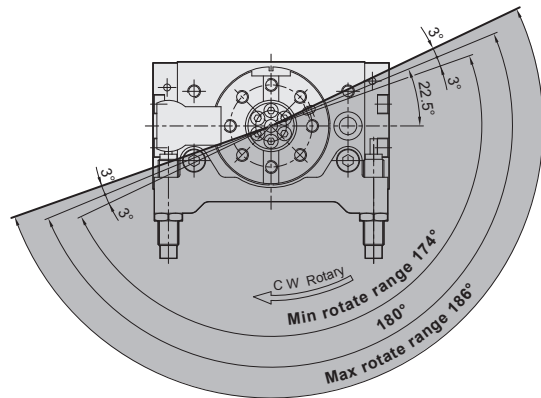
#### Statement

When A hole input pressure and rotary cover rotary to CCW, when stopper plate closed to the end of rotary stroke that will absorb attack power of rotary form shock absorber on outside bracket. This parts that shock absorber can do expedient angle adjustment. On the contrary, when B hole input pressure, the rotary cover rotary to CW. That also can reach to same purpose.

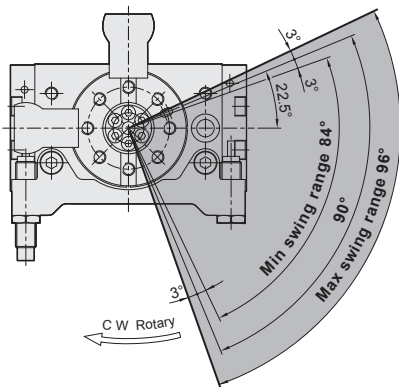
### Set range of Rotary angle



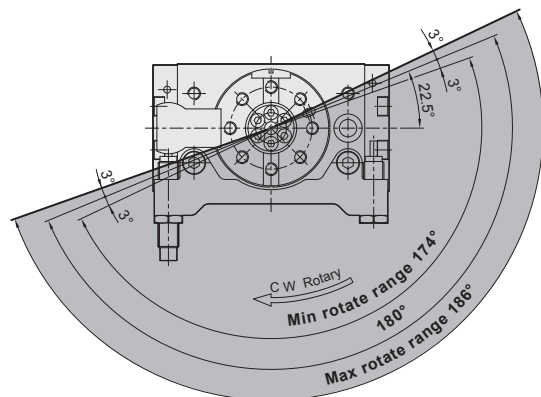
● 90° Swing Rotation



● 180° Swing Rotation



● 90° Swing Rotation



● 180° Swing Rotation

**RTM**  
Rotary  
Cylinder

**RTB**  
Rotary  
Cylinder

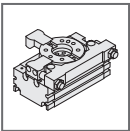
**RTBM**  
Rotary  
Cylinder

**RTZB**  
Rotary  
Cylinder

**RTP**  
Rotary  
Cylinder

**RTH**  
Rotary  
Cylinder

**RTU**  
Hydraulic  
Cylinder

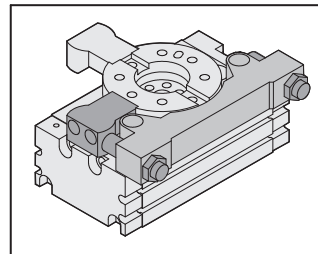
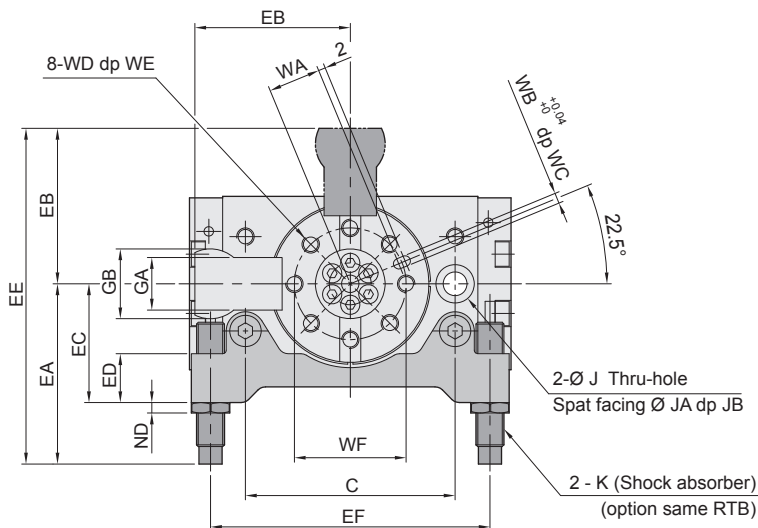


# RTBM series - ROTARY CYLINDER

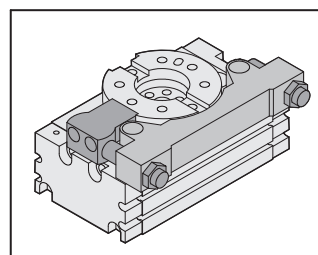
With external shock absorber

## External dimension

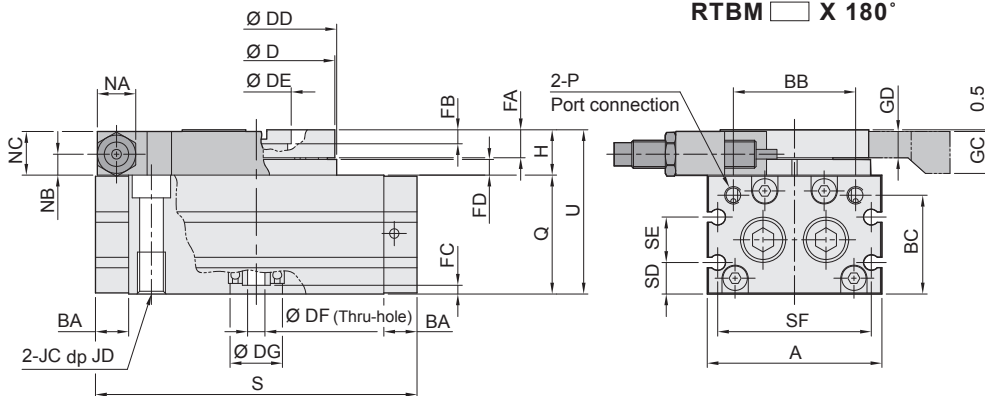
RTBM □ X90°(180°)



RTBM □ X 90°



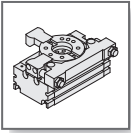
RTBM □ X 180°



## Dimension

Code Model	A	BA	BB	BC	C	D	DD	DE	DF	DG	EA	EB	EC	ED	EE	EF	FA	FB	FC	FD	GA	GB	GC	GD	H
10	50	9.5	35	28.2	60	45	46	20	5	15	51.6	44.5	34	14	96.1	80	8	4	2.5	4.5	15	20	12	7.5	13
20	65	12	50.8	28.6	76	60	61	28	9	17	56	57	43	18	113	101	9.7	6.5	2.5	6.6	19	25	9	15	17
30	70	12	52	33	84	65	67	32	9	22	59	62	46	18	121	110	10	4.5	3	6.5	20	28	16	9	17
50	80	15.5	62	37.5	100	75	77	35	10	26	85	73	55	20	158	131	12	5	2	7.5	25	35	18	11.5	20
70	92	17	70	46.7	110	88	90	46	16	22	86	81	55.5	35	167	141	12.5	5	4	9	28	38	19.5	11.5	22
100	102	14	82	50.3	130	98	100	56	19	24	94	92.5	60	35	186.5	163	14.5	6	4	12	33	42	24.5	13.5	27

Code Model	J	JA	JB	JC	JD	K	NA	NB	NC	ND	P	Q	S	SD	SE	SF	U	WA	WB	WC	WD	WE	WF
10	6.8	11	6.5	M8x1.25	12	M8x1	11	6	12.5	3	M5x0.8	34	92	9	13	44	47	15	3	3.5	M5x0.8	8	32
20	8.6	14	8.5	M10x1.5	15	M10x1	12.7	7.5	16.5	3	M5x0.8	37	117	10	12	59	54	20.5	4	5	M6x1.0	10	43
30	8.6	14	8.5	M10x1.5	15	M10x1	12.7	8.5	16.5	3	RC 1/8	40	127	11.5	14	64	57	23	4	4.5	M6x1.0	10	48
50	10.5	17	10.5	M12x1.75	18	M14x1.5	19	8.5	19.5	5	RC 1/8	46	152	14.5	15	74	66	26.5	5	5.5	M8x1.25	12	55
70	10.5	17	10.5	M12x1.75	18	M14x1.5	19	10	21.5	5	RC 1/8	53	170	14.5	24	78	75	32.5	5	5.5	M8x1.25	12.5	67
100	10.5	17	10.5	M12x1.75	18	M20x1.5	26	11.5	26	7	RC 1/8	59	189	16	27	89	86	37.5	6	6.5	M10x1.5	14.5	77



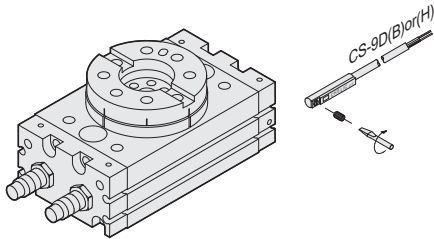
# RTB、RTBM series - ROTARY CYLINDER

## Sensor installation and Setting

### ▶ Sensor switch installation

#### ● RTB series

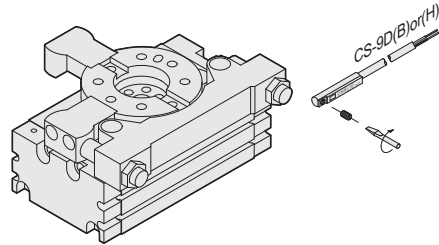
Sensor switch : CS-9D、CS-9B、CS-9H



**CS-9D(B)(H)&CS-9DN(P)**  
(Please refer to P.22-1.15 for sensor switch specification)

#### ● RTBM series

Sensor switch : CS-9D、CS-9B、CS-9H



**CS-9D(B)(H)&CS-9DN(P)**  
(Please refer to P.22-1.15 for sensor switch specification)

### ▶ Sensing range

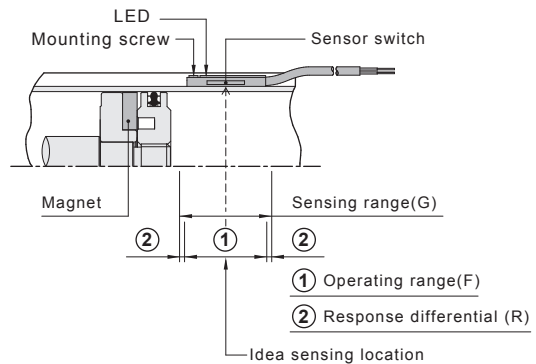
Sensor switch is fixed on the cylinder body.  
The magnetic piston head will activate the sensor switch when it enters the operating range.

### ▶ Operating range

When piston head moves the switch setting And adjustment will be based on the responding range generated by the magnetic field and the switch.  
(Please refer to the below table.)

### ▶ Sensor setting and reposing range

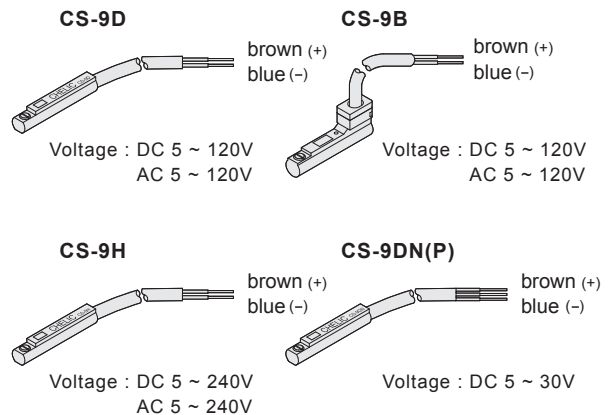
#### ● CS-9D、CS-9B、CS-9H、CS-9DN(P)



Unit : mm

Model	Bore Size	CS-9D(B)(H),CS-9DN(P)	
		Operating range(F)	Response differential (R)
<b>New</b> <b>New</b> 3	Ø10	7 (4)	1
7	Ø12	7 (4)	1
10	Ø15	7 (3)	1
20	Ø18	10 (7)	1
30	Ø20	12 (9)	1
50	Ø25	14 (12)	1
70	Ø28	14 (12)	1
100	Ø32	14 (12)	1
<b>New</b> <b>New</b> 200	Ø40	14 (12)	1
300	Ø50	14 (12)	1
<b>New</b> 500	Ø63	14 (12)	1

### ▶ Connection type



**RTM**  
Rotary  
Cylinder

**RTB**  
Rotary  
Cylinder

**RTBM**  
Rotary  
Cylinder

**RTZB**  
Rotary  
Cylinder

**RTP**  
Rotary  
Cylinder

**RTH**  
Rotary  
Cylinder

**RTU**  
Hydraulic  
Cylinder