

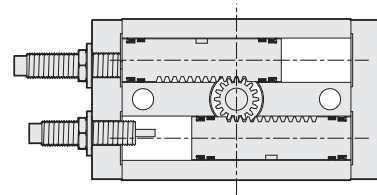
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

Operating specification and Ordering expression

CHELIC PNEUMATIC

Internal structure



Specification

New

New

New

New

New

Item	Model	RTB 3-□	RTB 7-□	RTB10-□	RTB20-□	RTB30-□	RTB50-□	RTB70-□	RTB100-□	RTB200-□	RTB300-□	RTB500-□
Operation		Double acting										
Fluid		Air										
Torque	N·m	0.3	0.6	1.5	2.2	3.2	5.5	7.5	9.8	19	31	45
Bore size		Ø10	Ø12	Ø15	Ø18	Ø20	Ø25	Ø28	Ø32	Ø40	Ø50	Ø63
Rotation angle		180°										
Adjustable angle		0°~ 190°										
Port size		M3x0.5P		M5x0.8P			Rc (PT 1/8")					
Pressure range	kgf/cm ² (kpa)	1.5~7 (150~700)										
Temperature range	°C	0~50										
Action capacity	Adjusting screw	0.002	0.006	0.007	0.025	0.048	0.81	0.24	0.32	0.56	1	1.5
	Shock absorber	—	—	0.039	0.116	0.116	0.294	1.1	1.6	2.9	3.5	5.2

RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

RTBM
Rotary
Cylinder

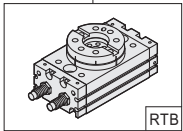
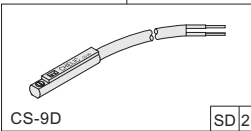
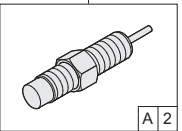
RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder

How to order

RTB	10	SD	2	A	2
Model	Torque	Sensor switch		Shock absorber	
	<p>3 : 0.3 N·m</p> <p>7 : 0.6 N·m</p> <p>10 : 1.5 N·m</p> <p>20 : 2.2 N·m</p> <p>30 : 3.2 N·m</p> <p>50 : 5.5 N·m</p> <p>70 : 7.5 N·m</p> <p>100 : 9.8 N·m</p> <p>200 : 19 N·m</p> <p>300 : 31 N·m</p> <p>500 : 49 N·m</p>				
RTB series Rotary cylinder		<p>SD: Sensor code (CS-9D)</p> <p>SB: Sensor code (CS-9B)</p> <p>SH: Sensor code (CS-9H)</p> <p>SDN: Sensor code (CS-9DNPN)</p> <p>SDP: Sensor code (CS-9DPNP)</p> <p>2: Number of sensor</p> <p>1 = 1 pcs Sensor</p> <p>2 = 2 pcs Sensor (option)</p>		<p>A: Shock absorber</p> <p>1 = 1 pcs</p> <p>2 = 2 pcs (option)</p>	

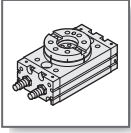
How to select shock absorbers

Model	Shock absorbers	Max. absorb ability
RTB-10	SAT-0806N	3 N·m
RTB-20	SAT-1007N	6 N·m
RTB-30	SAT-1007N	6 N·m
RTB-50	SAT-1412N	20 N·m
RTB-70	SAT-2015N	59 N·m
RTB-100	SAT-2015N	59 N·m
RTB-200	SAT-2725N	147 N·m
RTB-300	SAT-2725N	147 N·m
RTB-500	SAT-2725N	147 N·m

New

New

New



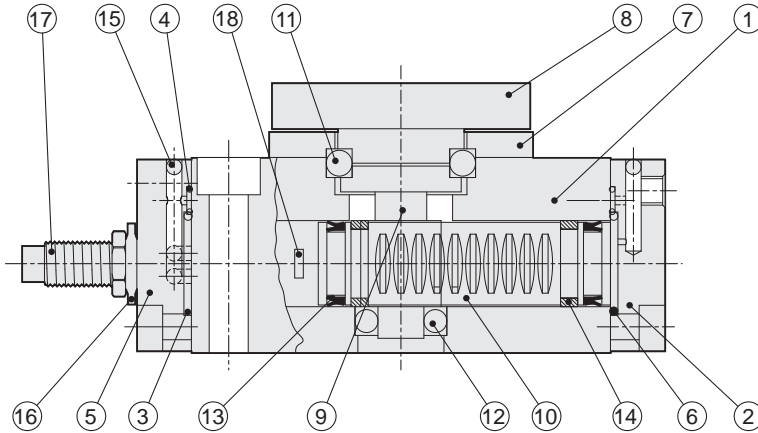
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

Components and Material list

CHELIC PNEUMATIC

Internal structure

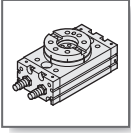


Components and Material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	10	Rack	Stainless steel
02	Front cover	Aluminum alloy	11	Bearing	Bearing steel
03	End cover O-ring	Synthetic rubber(NBR)	12	Bearing	Bearing steel
04	Guide O-ring	Synthetic rubber(NBR)	13	Piston packing	NBR
05	End cover	Aluminum alloy	14	Wear ring	Plastic steel
06	Front cover O-ring	Synthetic rubber(NBR)	15	Steel ball	Alloy steel
07	Bearing cover	Aluminum alloy	16	Screw packing	Rubber
08	Rotate cover	Aluminum alloy	17	Adjustment bolt	Alloy steel
09	Gear axle	Alloy steel	18	Magnet	Rare earth metals

Packing and O-Ring list

Item	Front cover O-Ring	End cover O-Ring	Guide O-Ring	Piston packing
Bore size	2	2	4	4
Number				
RTB-3	Ø8XØ1 (1 PCS)	Ø8XØ1 (1 PCS)	—	DYP-10
RTB-7	Ø10XØ1 (1 PCS)	Ø10XØ1 (1 PCS)	—	DYP-12
RTB-10	Ø15XØ1.45	Ø15XØ1.45	Ø2.9XØ1	DYP-15
RTB-20	Ø20XØ1.2	Ø20XØ1.2	Ø4XØ1	DYP-18
RTB-30	Ø20.8XØ2	Ø20.8XØ2	Ø4XØ1	DYP-20
RTB-50	Ø25.12XØ1.78	Ø25.12XØ1.78	Ø4XØ1	DYP-25
RTB-70	Ø28XØ2	Ø28XØ2	Ø6XØ1	Z8-2822
RTB-100	Ø33XØ1.5	Ø33XØ1.5	Ø6XØ1	Z8-3224
RTB-200	Ø41XØ1.78	Ø41XØ1.78	Ø12XØ1	Z8-4032
RTB-300	Ø50.52XØ1.78	Ø50.52XØ1.78	Ø12XØ1	Z8-5042
RTB-500	Ø63XØ2	Ø63XØ2	Ø12XØ1	Z8-6353



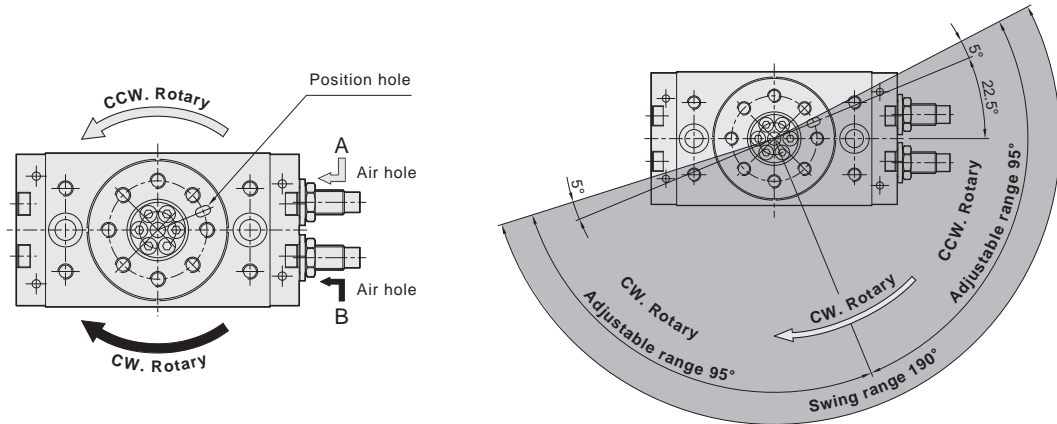
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

Exercise teams explanation

CHELIC PNEUMATIC

Rotary direction and Rotation angle



RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

RTBM
Rotary
Cylinder

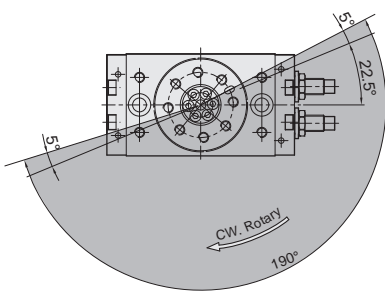
RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

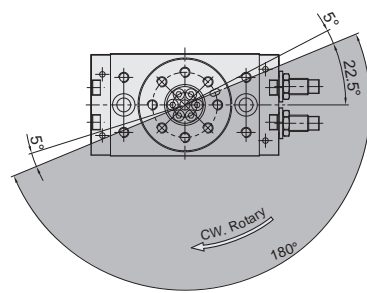
RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder

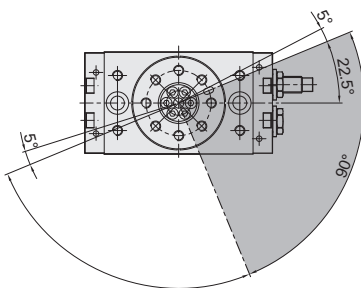
Set of Rotation range



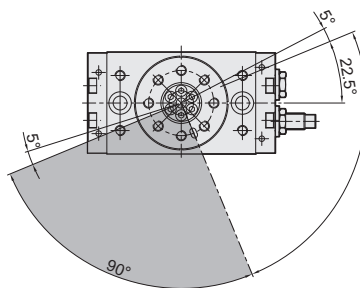
● 190° Swing Rotation



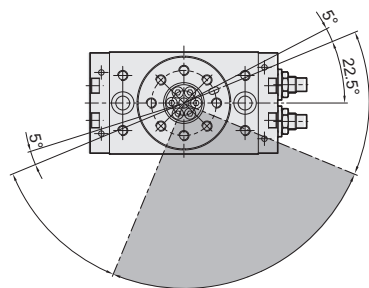
● 180° Swing Rotation



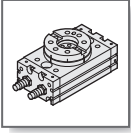
● 90° Swing Rotation



● 90° Swing Rotation



● 90° Swing Rotation



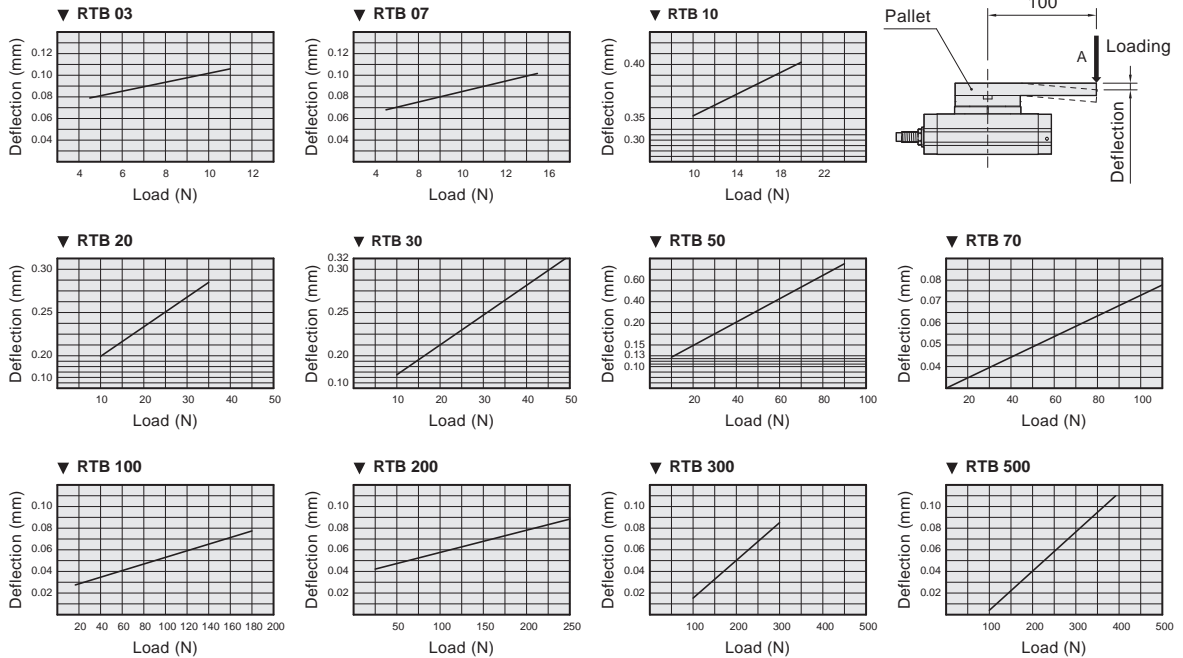
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

Load condition

CHELIC PNEUMATIC

Transverse load and Deflection

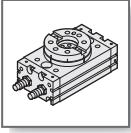


Allow load

Type	Load	Side load (N)	Table load (N)		Allow torque (N.m)
			(a)	(b)	
New	RTB 3	33	48	48	1.1
New	RTB 7	54	71	71	1.5
	RTB 10	70	78	74	2
	RTB 20	140	130	130	3.5
	RTB 30	185	188	358	4.8
	RTB 50	300	285	442	9
New	RTB 70	333	296	476	12
New	RTB 100	390	493	706	18
New	RTB 200	543	740	1009	25
New	RTB 300	850	950	1500	30
	RTB 500	1200	1400	2100	38

Weight

Model	RTB 3	RTB 7	RTB 10	RTB 20	RTB 30	RTB 50	RTB 70	RTB 100	RTB 200	RTB 300	RTB 500
Weight	150g	250g	530g	990g	1290g	2100g	2890g	4100g	7650g	8960g	11170g



RTB series - ROTARY CYLINDER

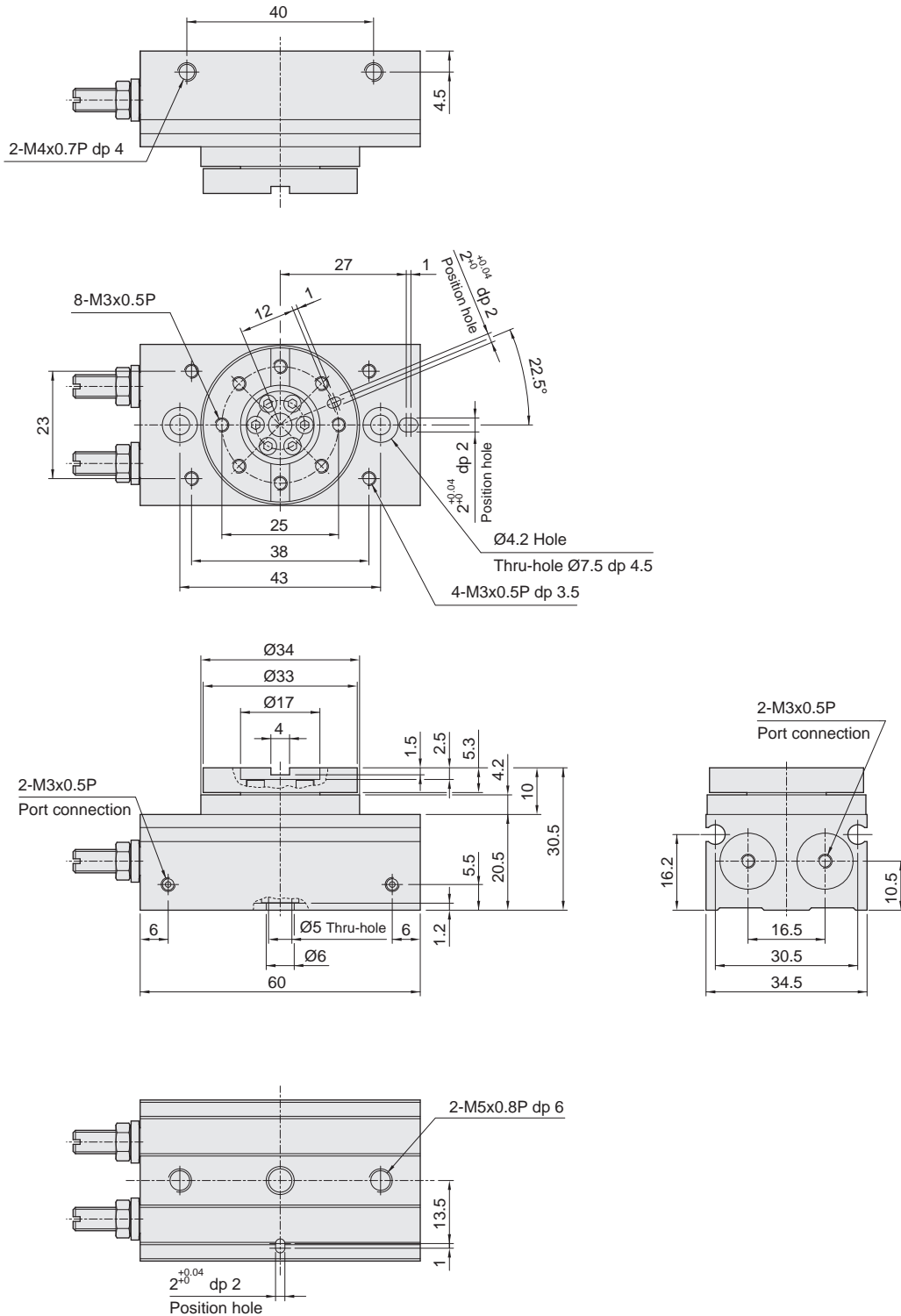
(Basic type) With internal cushion

New

External dimension

CHELIC PNEUMATIC

RTB 3



RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

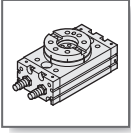
RTBM
Rotary
Cylinder

RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder



RTB series - ROTARY CYLINDER

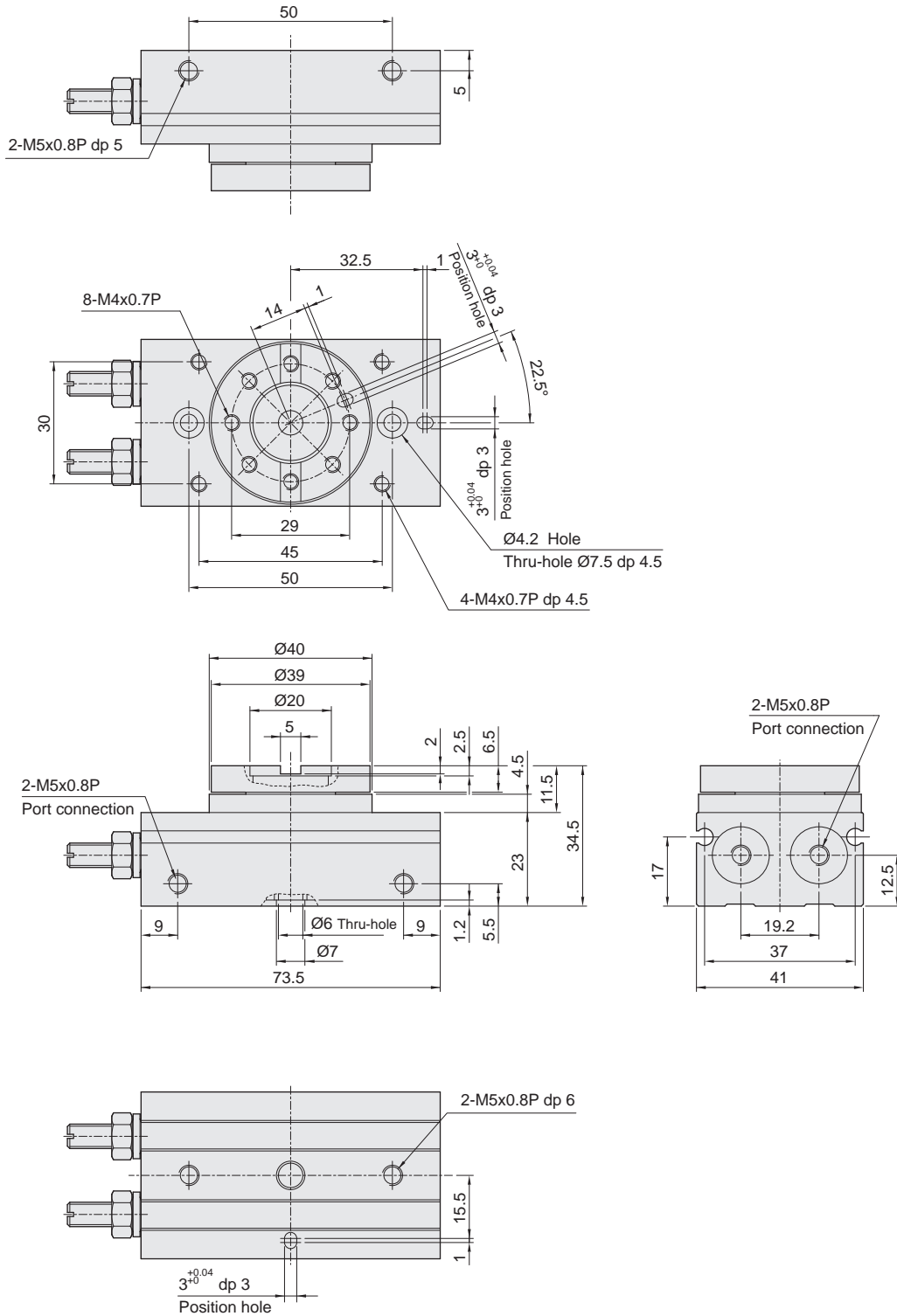
(Basic type) With internal cushion

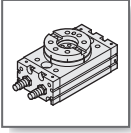
New

External dimension

CHELIC PNEUMATIC

RTB 7





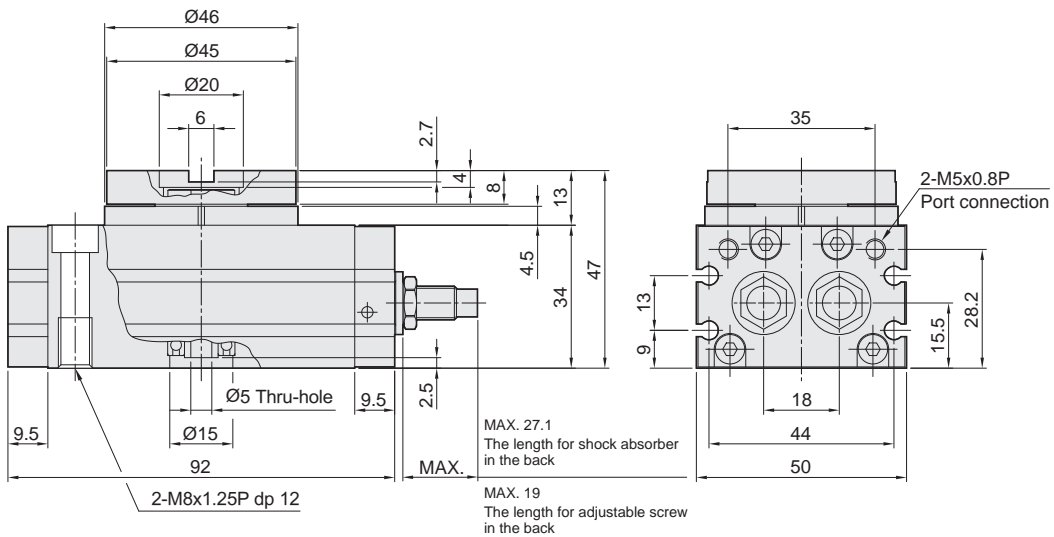
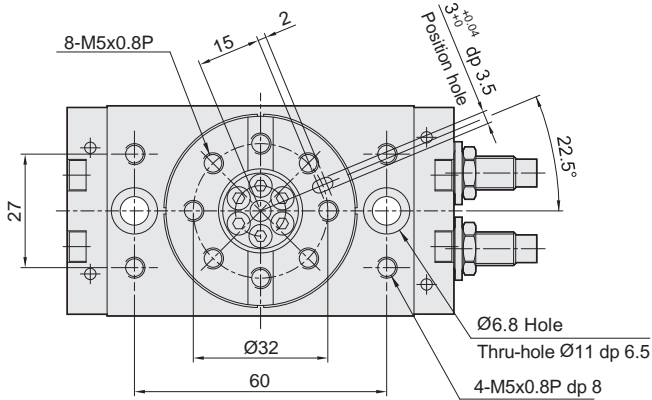
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

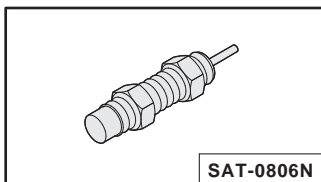
External dimension

CHELIC PNEUMATIC

RTB 10



▼ Option / shock absorber



RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

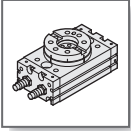
RTBM
Rotary
Cylinder

RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder



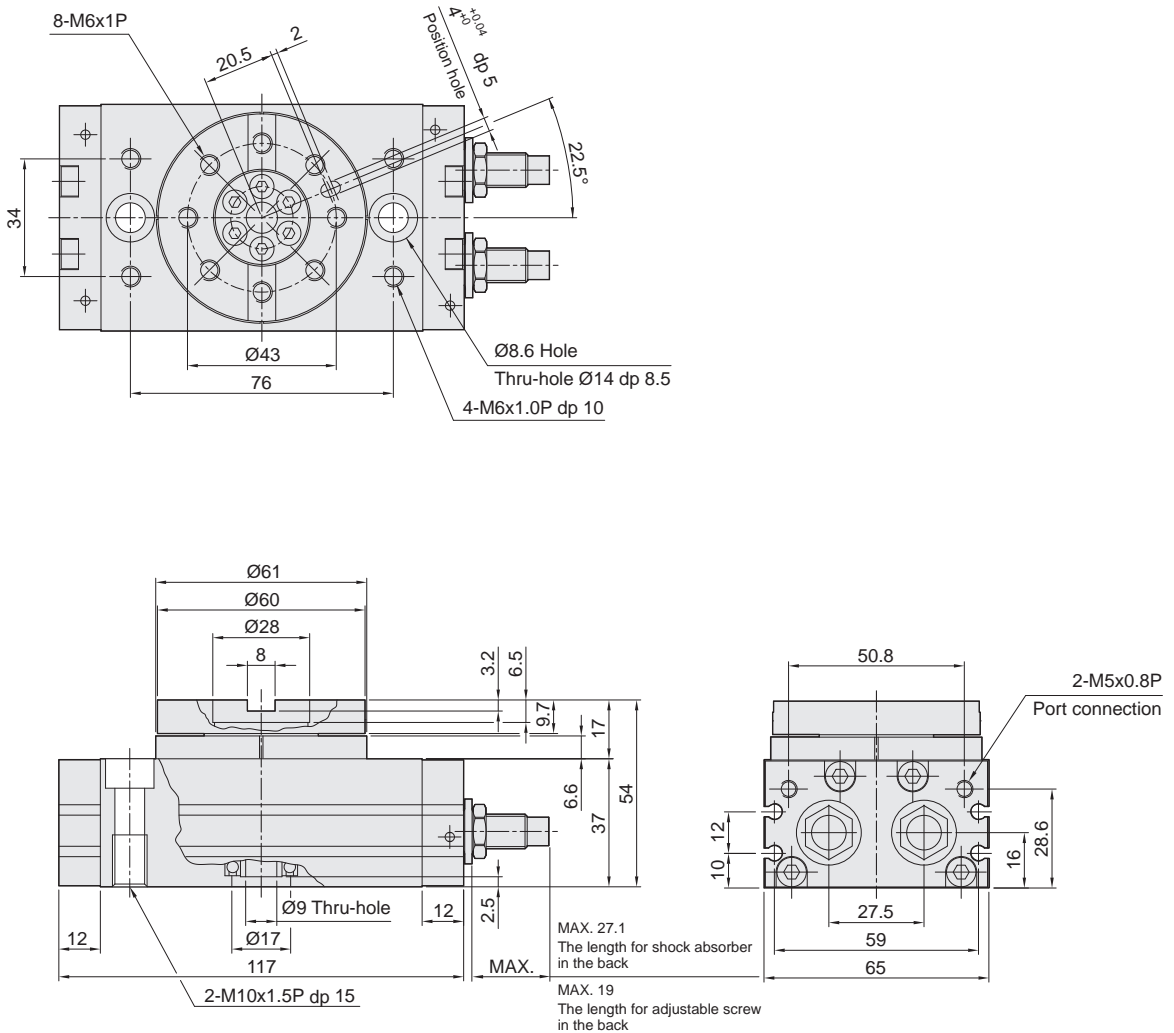
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

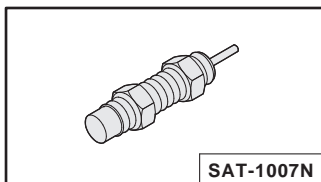
External dimension

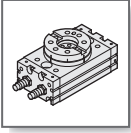
CHELIC PNEUMATIC

RTB 20



▼ Option/ shock absorber





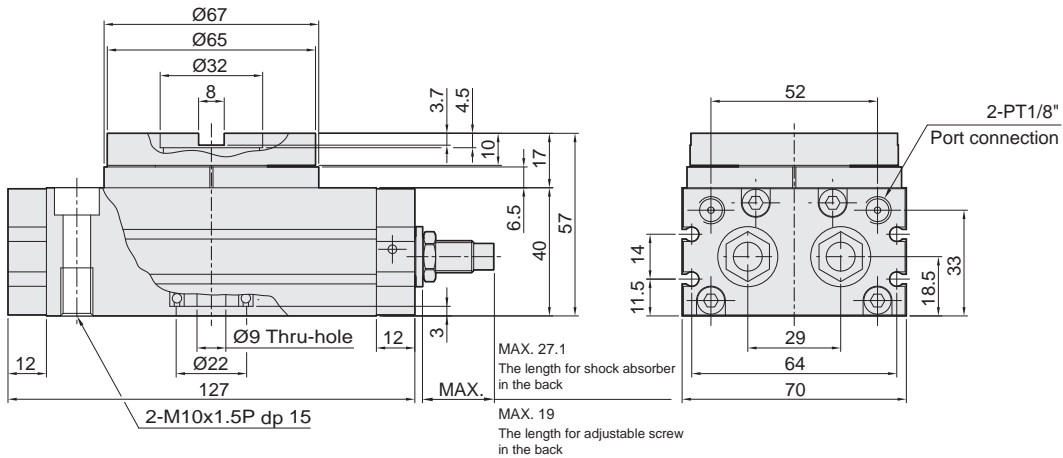
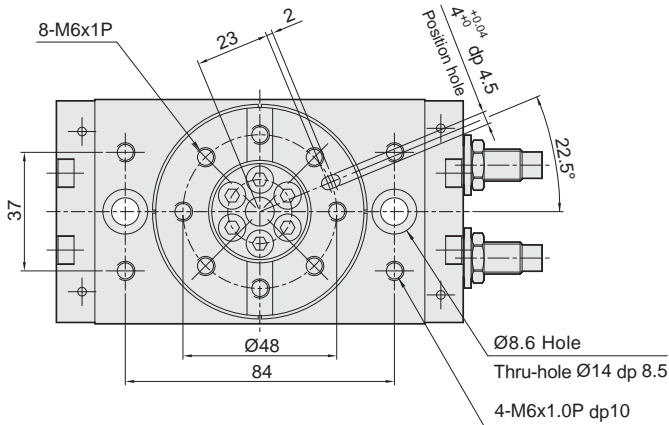
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

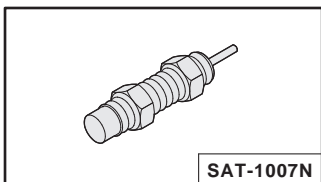
External dimension

CHELIC PNEUMATIC

RTB 30



▼ Option/ shock absorber



RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

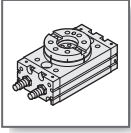
RTBM
Rotary
Cylinder

RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder



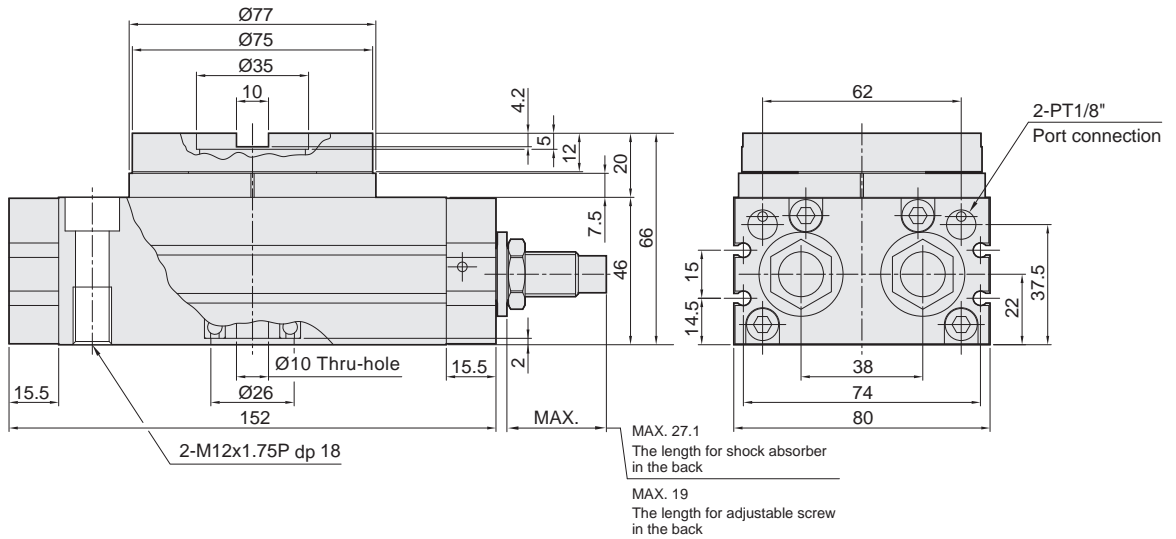
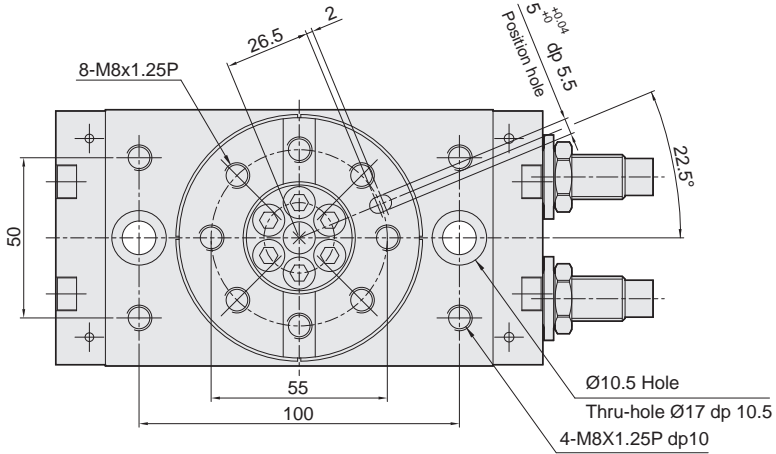
RTB series - ROTARY CYLINDER

(Basic type) With internal cushion

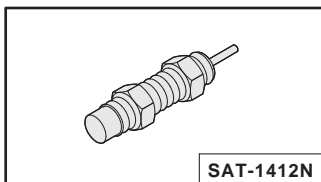
External dimension

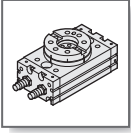
CHELIC PNEUMATIC

RTB 50



▼ Option/ shock absorber





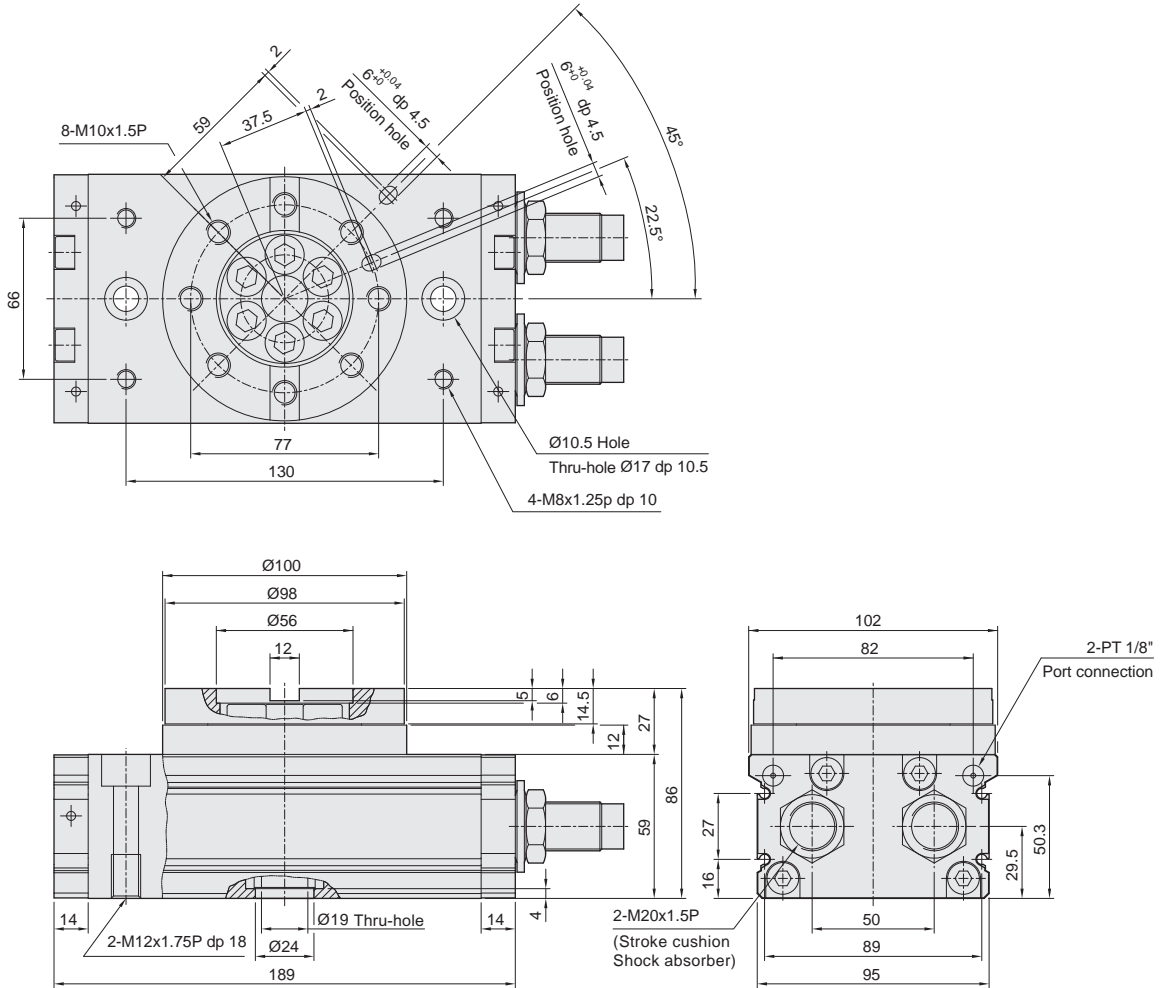
RTB series - ROTARY CYLINDER

(Basic type) With interal cushion

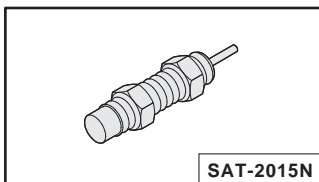
External dimension

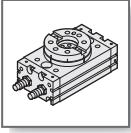
CHELIC PNEUMATIC

RTB 100



▼ Option/ shock absorber





RTB series - ROTARY CYLINDER

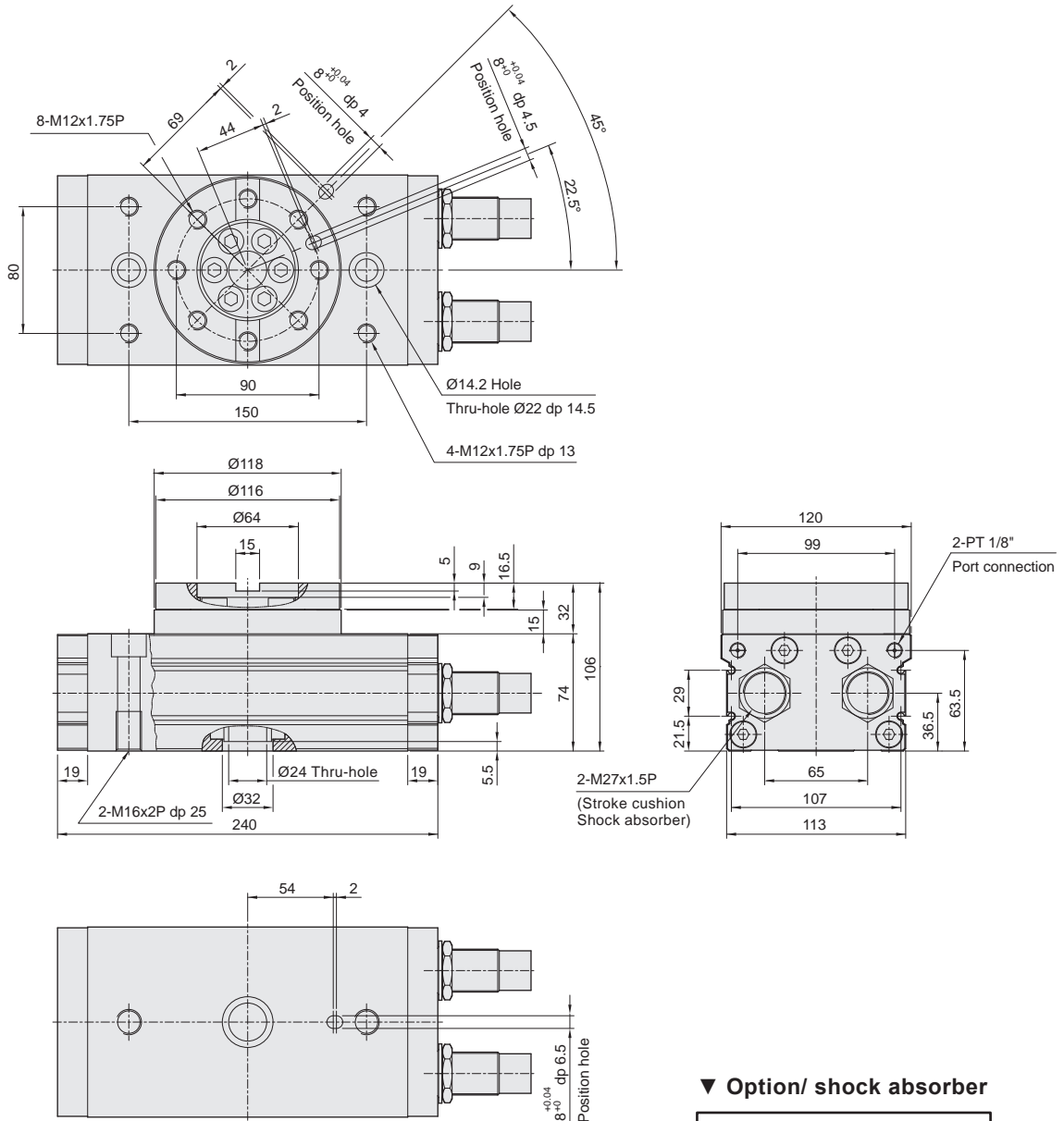
(Basic type) With internal cushion

New

External dimension

CHELIC PNEUMATIC

RTB 200



RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

RTBM
Rotary
Cylinder

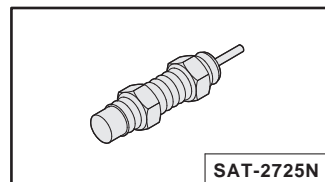
RTZB
Rotary
Cylinder

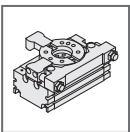
RTP
Rotary
Cylinder

RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder

▼ Option/ shock absorber





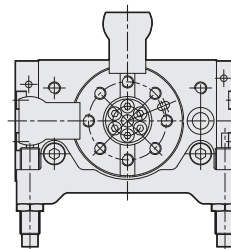
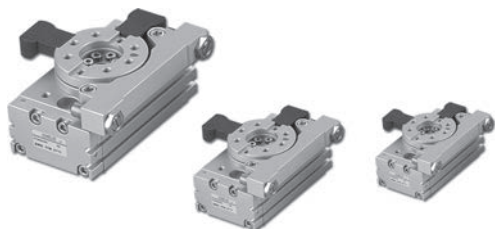
RTBM series - ROTARY CYLINDER

With external shock absorber

Operating specification and Ordering expression

CHELIC PNEUMATIC

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 ² (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

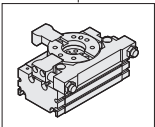
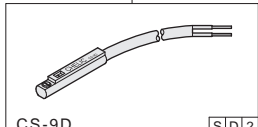
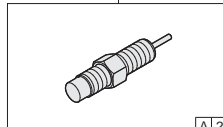
RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

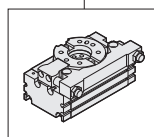
RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder

How to order

RTBM	10	×	90	-	SD 2	-	A2
Model	Torque		Rotation angle		Sensor switch		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°				

RTBM □ x 90
With fixed stand
of shock absorber



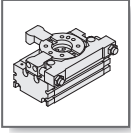
RTBM □ x 180
With fixed stand
of shock absorber

CS-9D [SD]2
[SD]: Sensor code (CS-9D)
[SB]: Sensor code (CS-9B)
[SH]: Sensor code (CS-9H)
[SDN]: Sensor code (CS-9DNPN)
[SDP]: Sensor code (CS-9DPNP)
[2]: Number of sensor
1 = 1 PCS
2 = 2 PCS
(option)

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



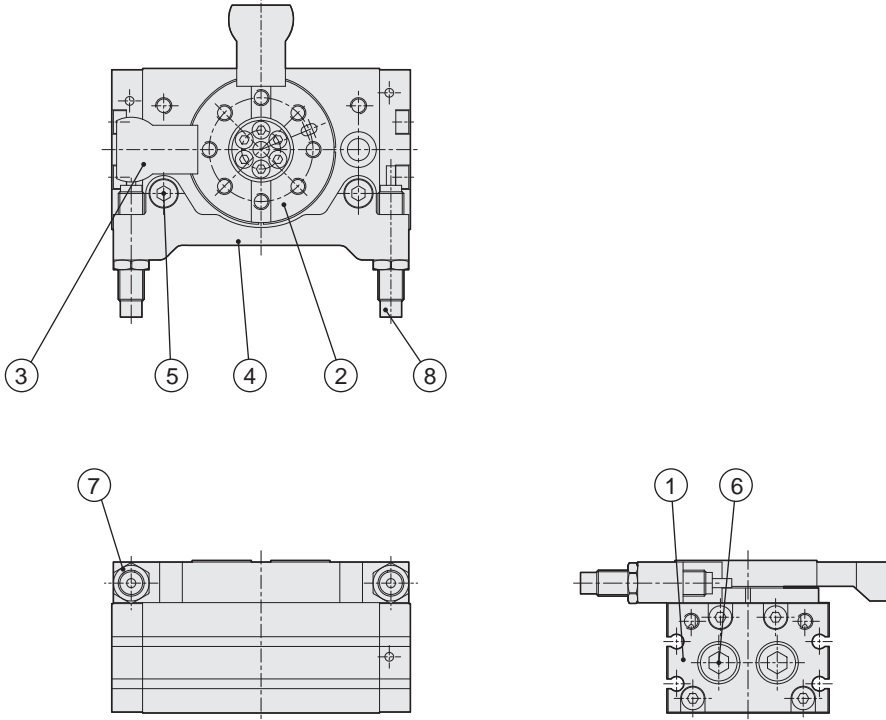
RTBM series - ROTARY CYLINDER

With external shock absorber

Component and Material list

CHELIC PNEUMATIC

External structure

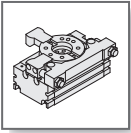


Components and Material list

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



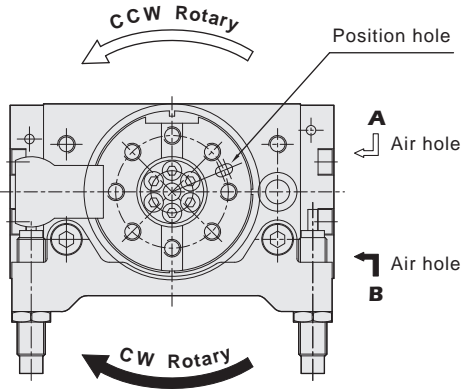
RTBM series - ROTARY CYLINDER

With external shock absorber

Application explain

CHELIC PNEUMATIC

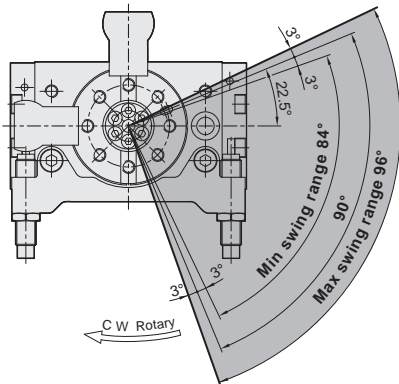
Rotary direction



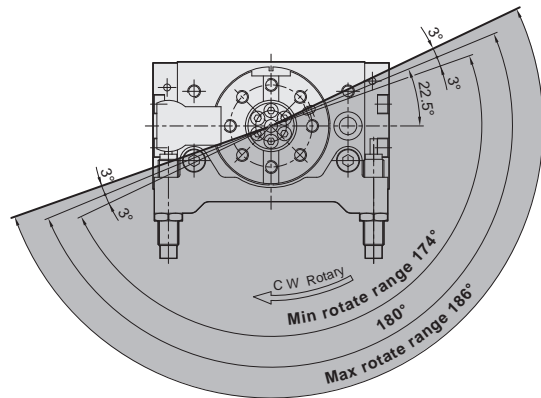
Statement

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.

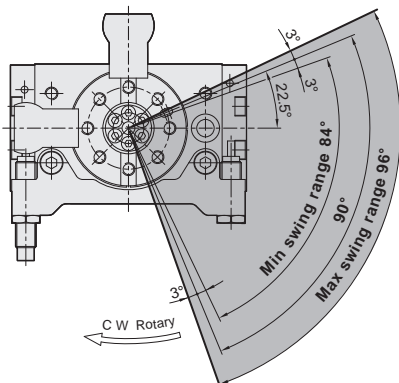
Set range of Rotary angle



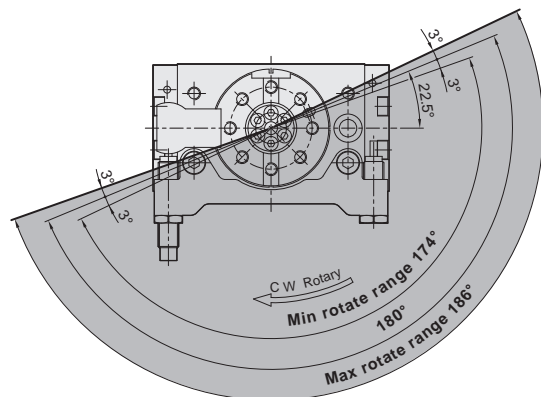
● 90° Swing Rotation



● 180° Swing Rotation



● 90° Swing Rotation



● 180° Swing Rotation

RTM
Rotary
Cylinder

RTB
Rotary
Cylinder

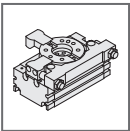
RTBM
Rotary
Cylinder

RTZB
Rotary
Cylinder

RTP
Rotary
Cylinder

RTH
Rotary
Cylinder

RTU
Hydraulic
Cylinder



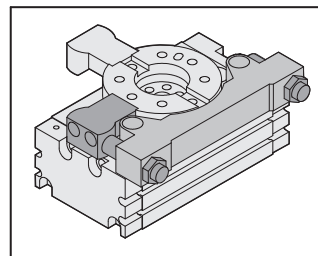
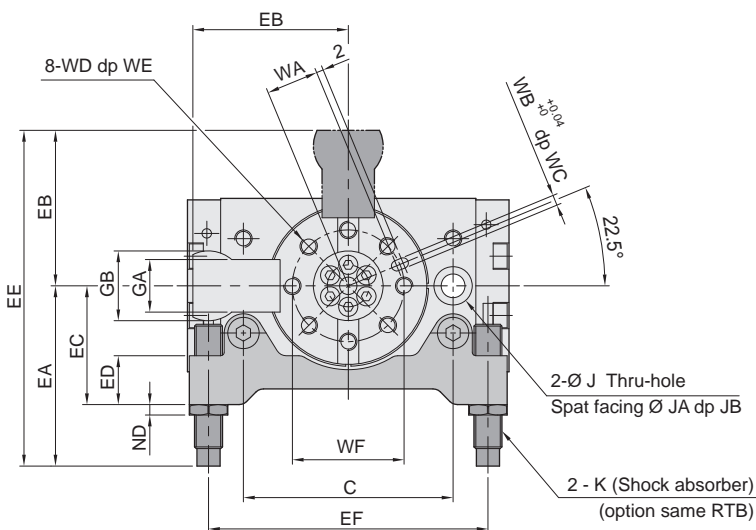
RTBM series - ROTARY CYLINDER

With external shock absorber

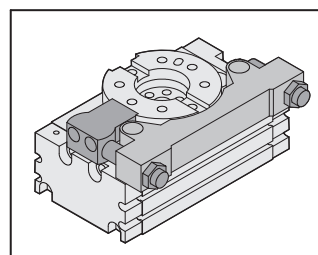
External dimension

CHELIC PNEUMATIC

RTBM X90°(180°)



RTBM X 90°

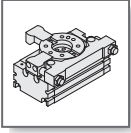


RTBM X 180°

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

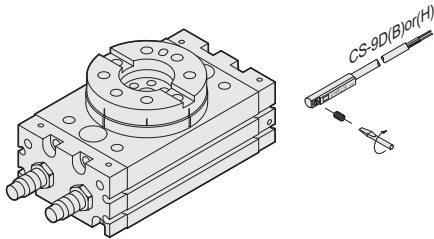
Sensor installation and Setting

CHELIC PNEUMATIC

▶ Sensor switch installation

● RTB series

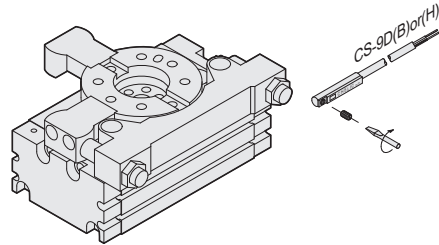
Sensor switch : CS-9D、CS-9B、CS-9H



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

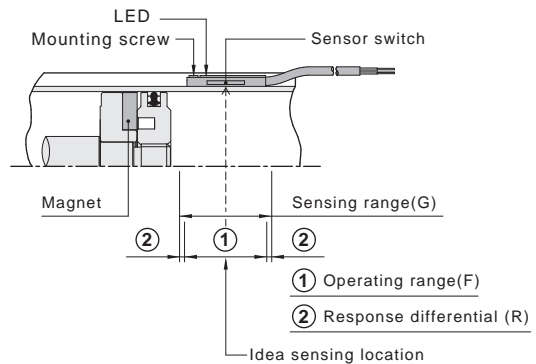
Sensor switch is fixed on the cylinder body.
The magnetic piston head will activate the sensor switch when it enters the operating range.

▶ 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

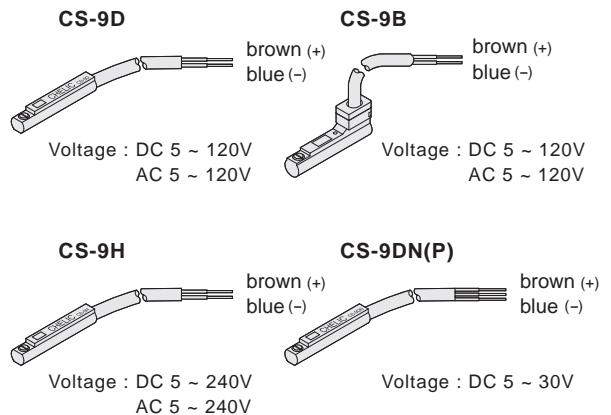
● CS-9D、CS-9B、CS-9H、CS-9DN(P)



Unit : mm

Model	Bore Size	CS-9D(B)(H),CS-9DN(P)	
		Operating range(F)	Response differential (R)
New New 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
New New New 200	Ø40	14 (12)	1
300	Ø50	14 (12)	1
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