

RT
Series

Rotary Cylinder

Features

1. Simple operation.
2. Hard anodized aluminum alloy body
3. Pinion and rack made of carbon steel offer a strong mechanism.

Allowable offer

RTH Male pivot gear (Standard type)

RTH-D Male pivot gear (Double end rod type)

RTF Female pivot gear



How to order

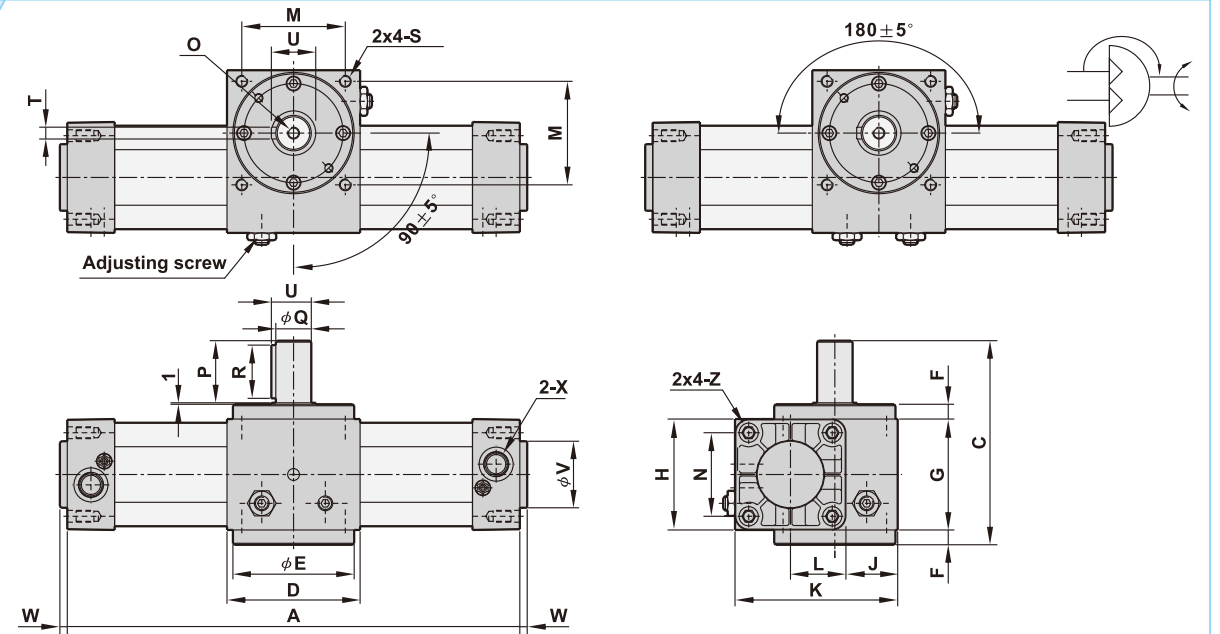
RTH	40	B90	D	SG	D	1
Rotary cylinder	Bore size	Rotating angle	Rod	Sensor	Type	Number of sensor
RTH:Male pivot gear (Standard)	40:Ø40 63:Ø63 80:Ø80	B90 :90° B180 :180°	Blank :Single rod D:Double rod	Blank :W/O sensor SG :Round type	Blank :Reed switch D :NPN E :PNP	1 pc 2 pcs
RTF :Female pivot gear				 AL-65		

Specifications

Model	RTH, RTF		
Bore size	Ø40	Ø63	Ø80
Shaft diameter	Ø16	Ø24	Ø28
Port size	1/4"	3/8"	3/8"
Max. allowable axial thrust	10kg	12kg	20kg
Rotation angle	90° ± 5°, 180° ± 5°		
Fluid	Compressed air		
Acting	Double acting		
Operating pressure range	1.5 ~ 7 kgf/cm ²		
Max. operating pressure	7 kgf/cm ²		
Body material	Aluminum alloy (6061T6)		
Ambient temperature	-10°C ~ 60°C		

Dimensions

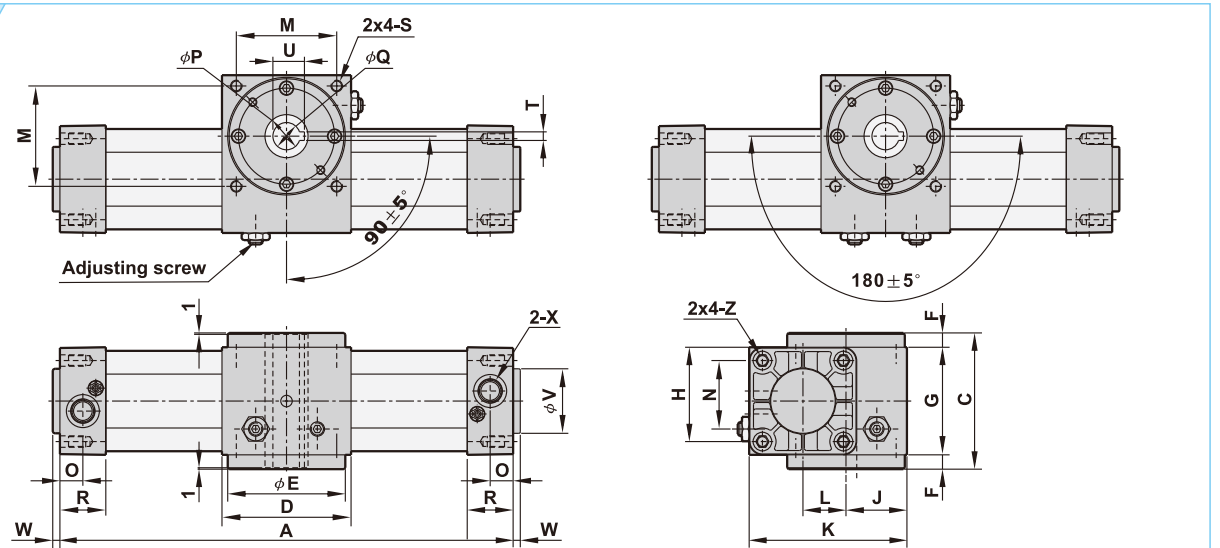
RTH



(Unit: mm)

Model	A		C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Z
	90°	180°																						
RTH40	263	326	112	75	72	8	65	53	37.5	93	27.5	60	38	M5	30	16	25	M6	5	18	35	4	G1/4	M6
RTH63	306	377	138	90	82	10	75	75	42.5	110	30	70	56.5	M8	42	24	36	M8	8	27	45	5	G3/8	M8
RTH80	343	428	170	105	96	12	95	95	51.5	135	36	82	72	M8	50	28	45	M10	8	31	45	6	G3/8	M10

RTF

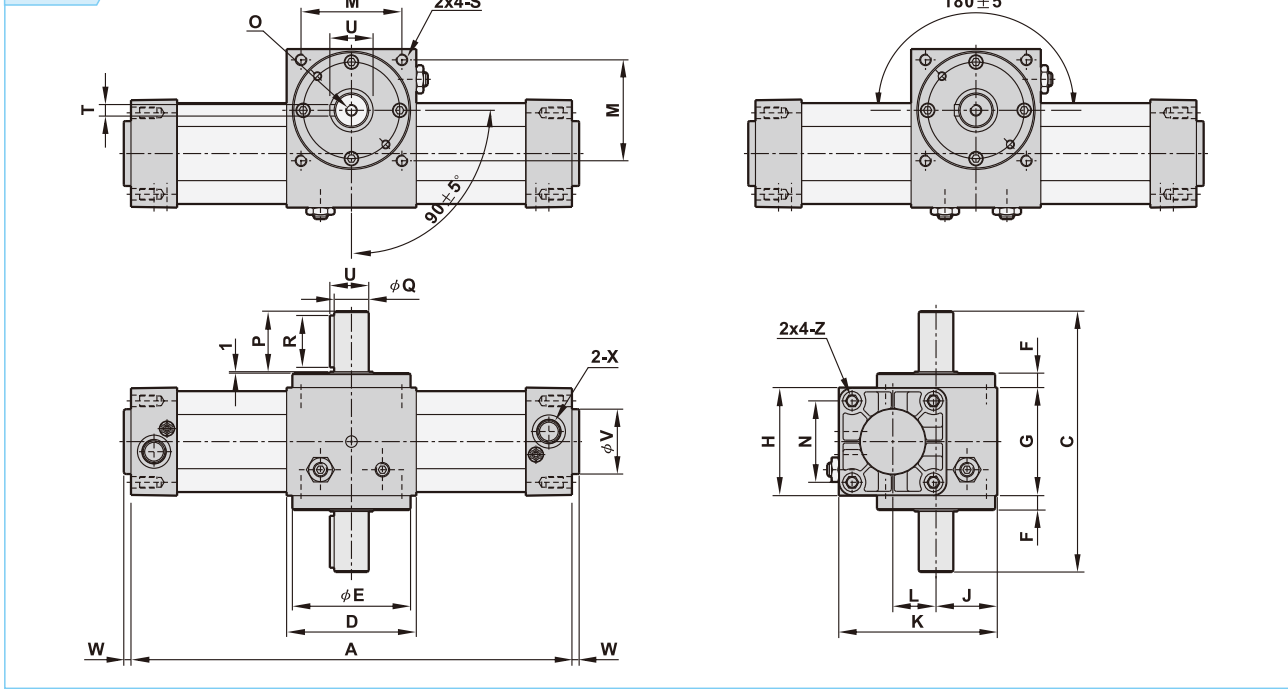


(Unit: mm)

Model	A		C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Z
	90°	180°																						
RTF40	263	326	81	75	72	8	65	53	37.5	93	27.5	60	38	15	25	14	30	M6	5	16.5	35	4	G1/4	M6
RTF63	306	377	95	90	82	10	75	75	42.5	110	30	70	56.5	16	30	19	32	M8	6	22	45	5	G3/8	M8
RTF80	343	428	119	105	96	12	95	95	51.5	135	36	82	72	19	35	24	38	M10	6	27.5	45	6	G3/8	M10

■ Dimensions

RTH-D

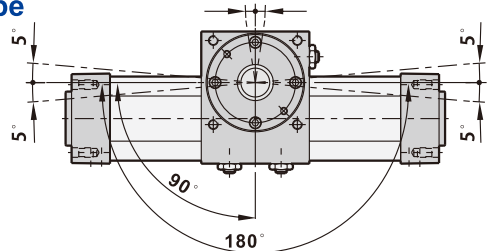


(Unit: mm)

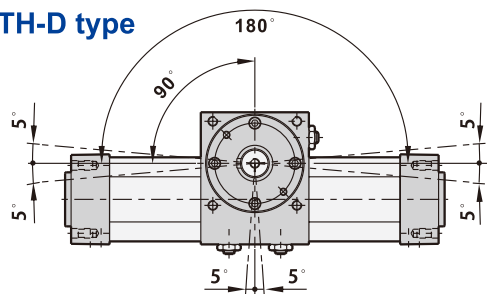
Model	A		C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Z
	90°	180°																						
RTH40-D	263	326	143	75	72	8	65	53	37.5	93	27.5	60	38	M5	30	16	25	M6	5	18	35	4	G1/4	M6
RTH63-D	306	377	181	90	82	10	75	75	42.5	110	30	70	56.5	M8	42	24	36	M8	8	27	45	5	G3/8	M8
RTH80-D	343	428	221	105	96	12	95	95	51.5	135	36	82	72	M8	50	50	45	M10	8	31	45	6	G3/8	M10

■ Rotating direction and adjustable angle

RTF type

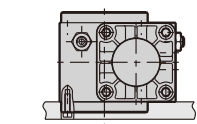


RTH, RTH-D type

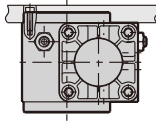


■ Mounting type

RTF type

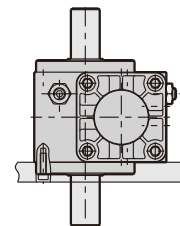


Bottom mounting

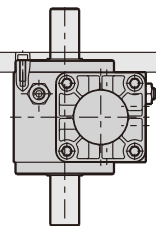


Top mounting

RTH, RTH-D type



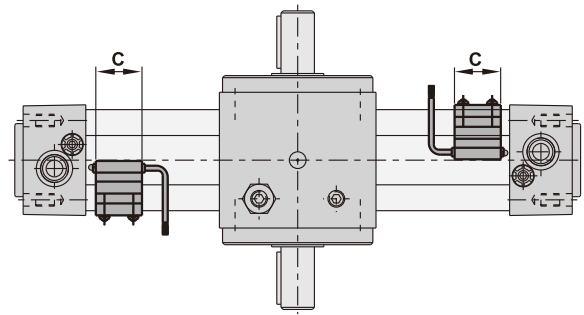
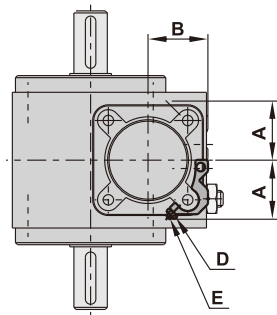
Bottom mounting



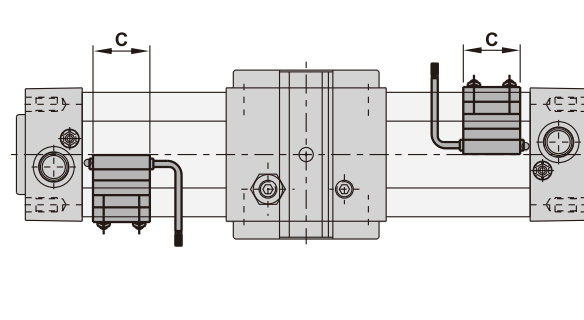
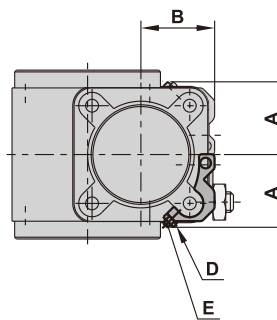
Top mounting

■ Dimensions

RTH,RTH-D



RTF



(Unit: mm)

Bore size	Sensor bracket	Weight	A	B	C	D	E
φ 40	FXX0500321	0.065	29	32	32	M4xL12	M4
φ 63	FXX0500631	0.066	40	43	32	M4xL12	M4
φ 80	FXX0500801	0.086	49.5	52	32	M4xL12	M4

■ Weight

(Unit: kg)

Bore size	RTF		RTH		RTH-D	
	90°	180°	90°	180°	90°	180°
φ 40	2.84	2.94	3	3.1	3.05	3.15
φ 63	5.07	5.47	5.4	5.8	5.55	5.95
φ 80	9.19	9.74	9.75	10.3	9.99	10.54

Compressed air consumption for a complete cycle

(Unit: l/min)

Model	Rotating angle	Operating pressure (MPa)									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
RTH40/RTF40	90°	0.1571	0.2352	0.3133	0.3915	0.4696	0.5477	0.6259	0.704	0.7821	0.8603
	180°	0.3141	0.4704	0.6267	0.7829	0.9392	1.0955	1.2517	1.408	1.5643	1.7205
RTH63/RTF63	90°	0.4383	0.6564	0.8744	1.0925	1.3105	1.5286	1.7466	1.9647	2.1828	2.4088
	180°	0.8766	1.3127	1.7488	2.185	2.6211	3.0572	3.4933	3.9294	4.3655	4.8016
RTH80/RTF80	90°	0.848	1.2698	1.6917	2.1135	2.5354	2.9572	3.3791	3.8009	4.2228	4.6447
	180°	1.6959	2.5396	3.3834	4.2271	5.0708	5.9145	6.7582	7.6019	8.4456	9.2893

Compressed air consumption calculation

$$Q = 2 \times K \times A \times n \times Dg \times \frac{P+0.101}{0.101} \times 10^{-6}$$

Q: Compressed air consumption (l/cycle)

A: Piston area

Dg: Rotation

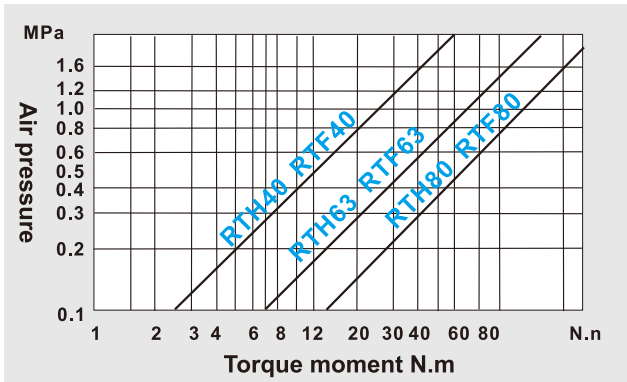
P: Air pressure

K: Constant

n: Cycle of operation(cycle/min)

Model	RTH, RTF		
Bore size (mm)	40	63	80
Constant K	0.3491	0.3927	0.4712

Output Torque table

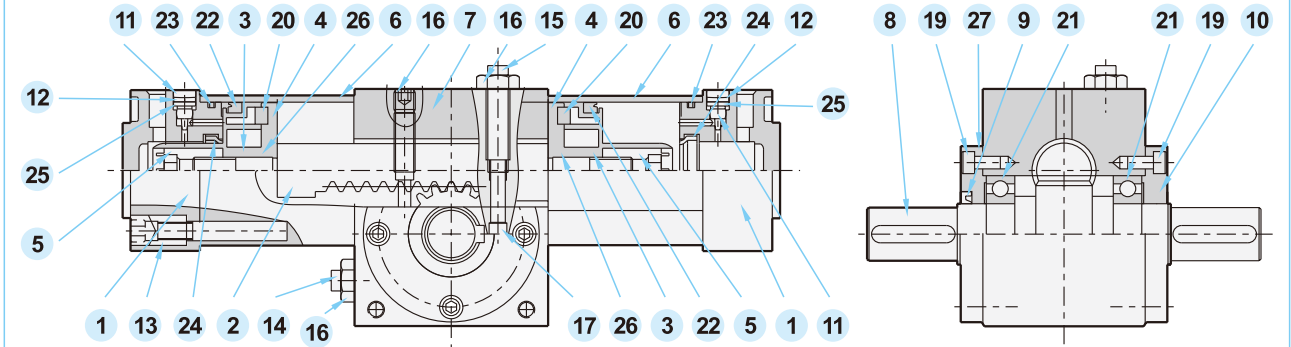


RTH/RTF Repair kit

Model	Order code	Details
RTH- φ 40	RTHSK40	Piston packing X 2
RTH- φ 63	RTHSK63	Cylinder gasket X 2
RTH- φ 80	RTHSK80	Cushion packing X 2
RTF- φ 40	RTFSK40	Needle gasket X 2
RTF- φ 63	RTFSK63	Piston gasket X 2
RTF- φ 80	RTFSK80	Rod packing X 1

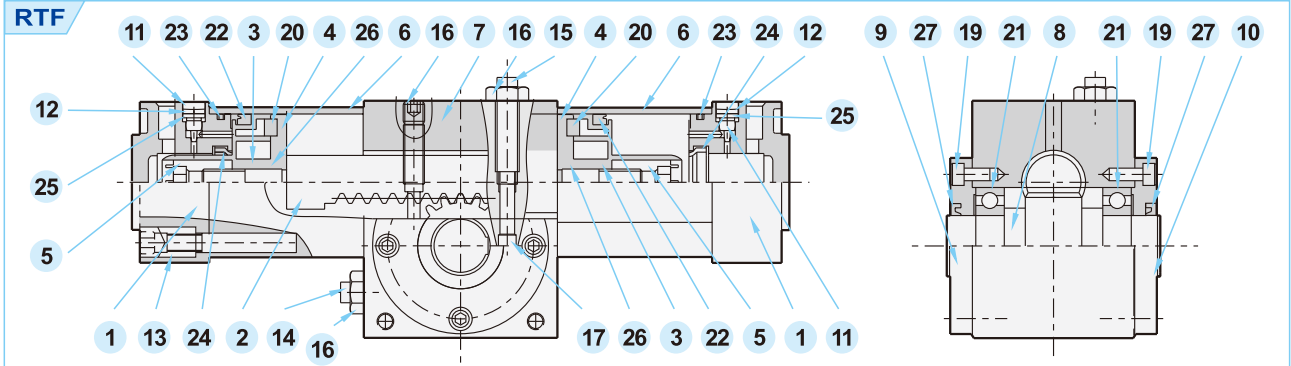
Material of parts

RTH,RTH-D



No.	Description	Qty	No.	Description	Qty	No.	Description	Qty
1	End cap	2	10	End cover	1	19	Hexagon socket head screw	8
2	Rack	1	11	Cushion needle	2	20	Magnet	2
3	Piston	2	12	Washer	2	21	Ball bearing	2
4	Magnet holder	2	13	Tie bolt	8	22	Piston packing	2
5	Piston nut	2	14	Adjusting screw	1	23	Cylinder gasket	2
6	Cylinder tube	2	15	Adjusting screw	1	24	Cushion packing	2
7	Housing	1	16	Lock nut	2	25	Needle gasket	2
8	Pinion shaft	1	17	Stopper pin	1	26	Piston gasket	2
9	Rod packing	1	18	Set screw	1	27	End cover	1

RTF



No.	Description	Qty	No.	Description	Qty	No.	Description	Qty
1	End cap	2	10	End cover	1	19	Hexagon socket head screw	8
2	Rack	1	11	Cushion needle	2	20	Magnet	2
3	Piston	2	12	Washer	2	21	Ball bearing	2
4	Magnet holder	2	13	Tie bolt	8	22	Piston packing	2
5	Piston nut	2	14	Adjusting screw	1	23	Cylinder gasket	2
6	Cylinder tube	2	15	Adjusting screw	1	24	Cushion packing	2
7	Housing	1	16	Lock nut	2	25	Needle gasket	2
8	Pinion shaft	1	17	Stopper pin	1	26	Piston gasket	2
9	End cover	1	18	Set screw	1	27	Rod packing	1