

叶片式摆动气缸 Vane Type Rotary Actuator Series KCRB2 (10~40)



规格 Specifications



尺寸 Size (mm)			10	15	20	30	40
接管口径 Port size Rc(PT)			M3x0.5		M5x0.8		
接管位置 Port location			侧面或轴向 Side ported or Axial ported				
使用流体 Fluid			过滤压缩空气 Filtered compressed air				
摆动角度 Rotating angle	单叶片式 Single vane type		90°, 180°, 270°				
	双叶片式 Double vane type		90°, 100°				
保证耐压力 Proof pressure (MPa)			1.05			1.5	
使用压力范围 Operating pressure range (MPa)			0.2~0.7	0.15~0.7		0.15~1.0	
环境及流体温度 Ambient and fluid temperature			5~60°C				
*1) 摆动时间调整范围 Rotation time adjustment range (s/90°)			0.03~0.3			0.04~0.3	0.07~0.5
允许动能 Allowable kinetic energy (J)	*2) 单叶片式 Single vane type		0.00015	0.001	0.003	0.02	0.04
				0.00025	0.0004	0.015	0.03
	双叶片式 Double vane type		0.0003	0.0012	0.0033	0.02	0.04
轴负载 Shaft load (N)	允许径向负载 Allowable radial load		15	15	25	30	60
	允许轴向负载 Allowable thrust load		10	10	20	25	40
角度可调整范围 Angle adjustable range	单叶片式 Single vane type	90°	0~85°				
		180°	0~175°				
		270°	0~230°	0~240°			0~230°
	双叶片式 Double vane type	90°	0~85°				
		100°	0~90°				
磁性开关 Auto switch			D-M9BK, D-Z80VK				

*1) 确保在速度调整范围内使用，速度低于调整范围会产生爬行现象或不能动作。Make sure to operate within the speed regulation range. Speed slower than the adjustment range can cause the unit to stick or not operate.

*2) 表中上段为使用橡胶垫缓冲（摆动端）的场合，下段为不使用垫缓冲的场合。The upper numbers in this section in the table are the value when the rubber bumper is used (at the end of the rotation), and the lower numbers are the value when the rubber bumper is not used.

型号表示方法 How to Order

KC D RB2 B S 20 - 180 S E Z

磁环 Magnet

-	无 None
D	内置磁环 Built-in magnet

安装形式 Mounting

B	基本型 Basic type
F	法兰型 Flange type (Ø10~Ø30)

尺寸
Size

轴形式 Shaft type

接管位置
Port location

-	侧面接管 Side ported
E	轴向接管 (仅无磁环类型) Axial ported (only the type without built-in magnet)

叶片形式
Vane type

S	单叶片 Single vane
D	双叶片 Double vane

摆动角度 Rotating angle

单叶片型 Single vane type	90	90°
	180	180°
	270	270°
双叶片型 Double vane type	90	90°
	100	100°

Symbol	轴形式 Shaft type	轴端形状 Shaft end shape	
		长轴 Long shaft	短轴 Short shaft
S	单轴 Single shaft	*1) 一面铣平 Single flat	-
*3) W	双轴 Double shaft	*1) 一面铣平 Single flat	一面铣平 Single flat
*2) J	双轴 Double shaft	圆轴 Round shaft	一面铣平 Single flat
*2) K	双轴 Double shaft	圆轴 Round shaft	圆轴 Round shaft
*2) T	单轴 Single shaft	圆轴 Round shaft	-
*2) Y	双轴 Double shaft	一面铣平 Single flat	长轴一面铣平 Long shaft with single flat

*1) 尺寸 40 为键形式。A key is used for size 40. *2) J, K, T, Y 为定制生产。J, K, T, and Y are made to order.

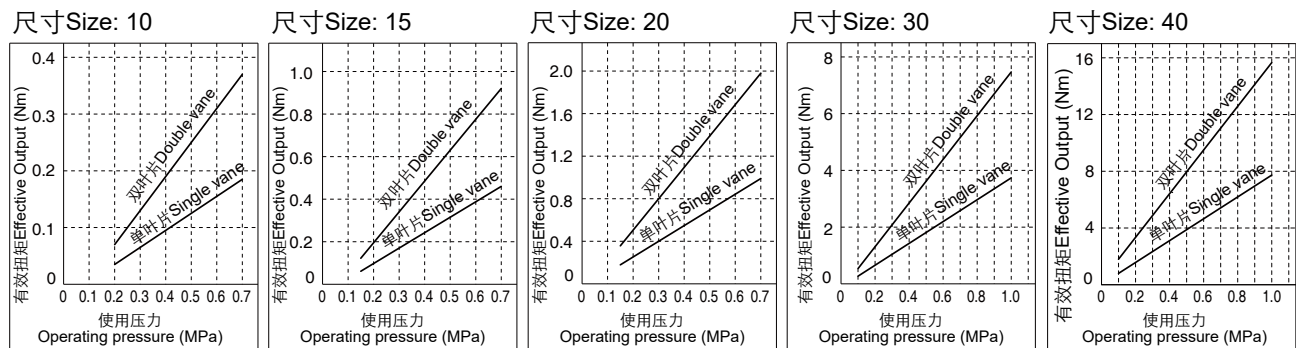
*3) 带磁环的类型只适用 W, J 形式。Only W and J are available for the type with built-in magnet.

叶片式摆动气缸

Vane Type Rotary Actuator

Series KCRB2

有效扭矩 Effective Output

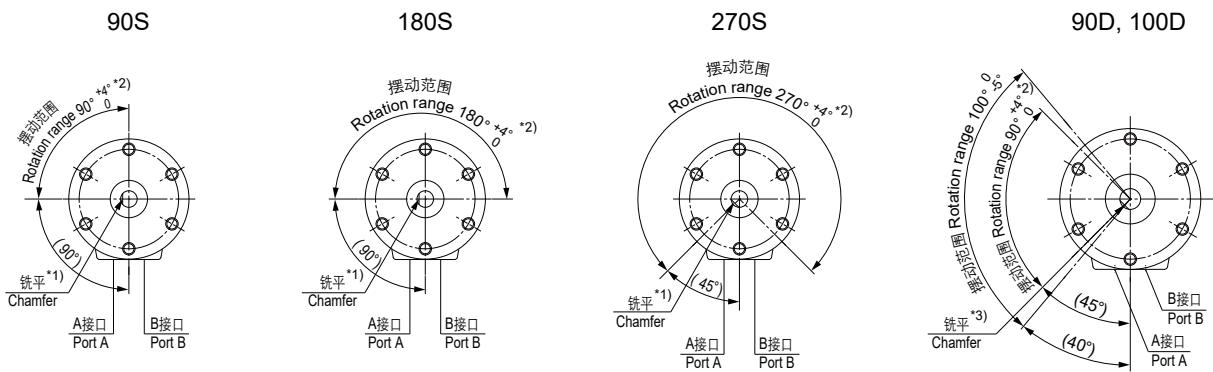


摆动范围 Rotation Range (从长轴侧看 Top View from Long Shaft Side)

(铁平位置为从 B 接口侧加压的状态 Chamfered positions shown is when Port B is pressurized)

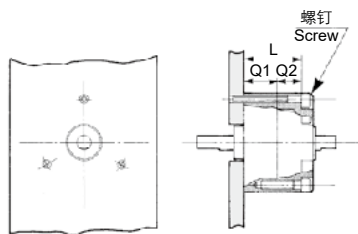
单叶片 Single vane

双叶片 Double vane



- *1) 尺寸 40 为键形式代替铁平。A parallel key will be used instead of chamfer for size 40.
2) 对于尺寸 10 单叶片形式, 90°, 180°, 270° 的摆动角度公差为 0~+5°, 对于尺寸 10 双叶片形式, 90° 的摆动角度公差为 0~+5°。
For size 10 single vane type only, the tolerance of rotating angle of 90°, 180°, 270° will be 0~+5° .
For size 10 double vane type only, the tolerance of rotating angle of 90° will be 0~+5° .
3) 双叶片式的铁平位置为 90° 规格的位置。The chamfer position of the double vane type shows the 90° specification position.

缸体直接安装 Direct Mounting of Body



尺寸 Size	L *1)	螺钉 Screw *1)
10	11.5 (20.5) *2)	M2.5
15	16	M2.5
20	24.5	M3
30	34.5	M4
40	39.5	M4

- *1) 表中的 L 为使用 JIS 标准内六角螺钉的尺寸, 螺钉头部埋入安装孔内。
Dimension "L" is for usage of JIS standard hexagon socket head cap screws, the screw's head will fit in the mounting hole.
2) () 为双叶片形式的尺寸。 () shows the dimension of double vane type.
3) Q1 和 Q2 请参考后面的外形尺寸图。
Refer to dimensions on next pages for Q1 and Q2.

叶片式摆动气缸
Vane Type Rotary Actuator
Series KCRB2

外形尺寸图 Dimensions (mm)

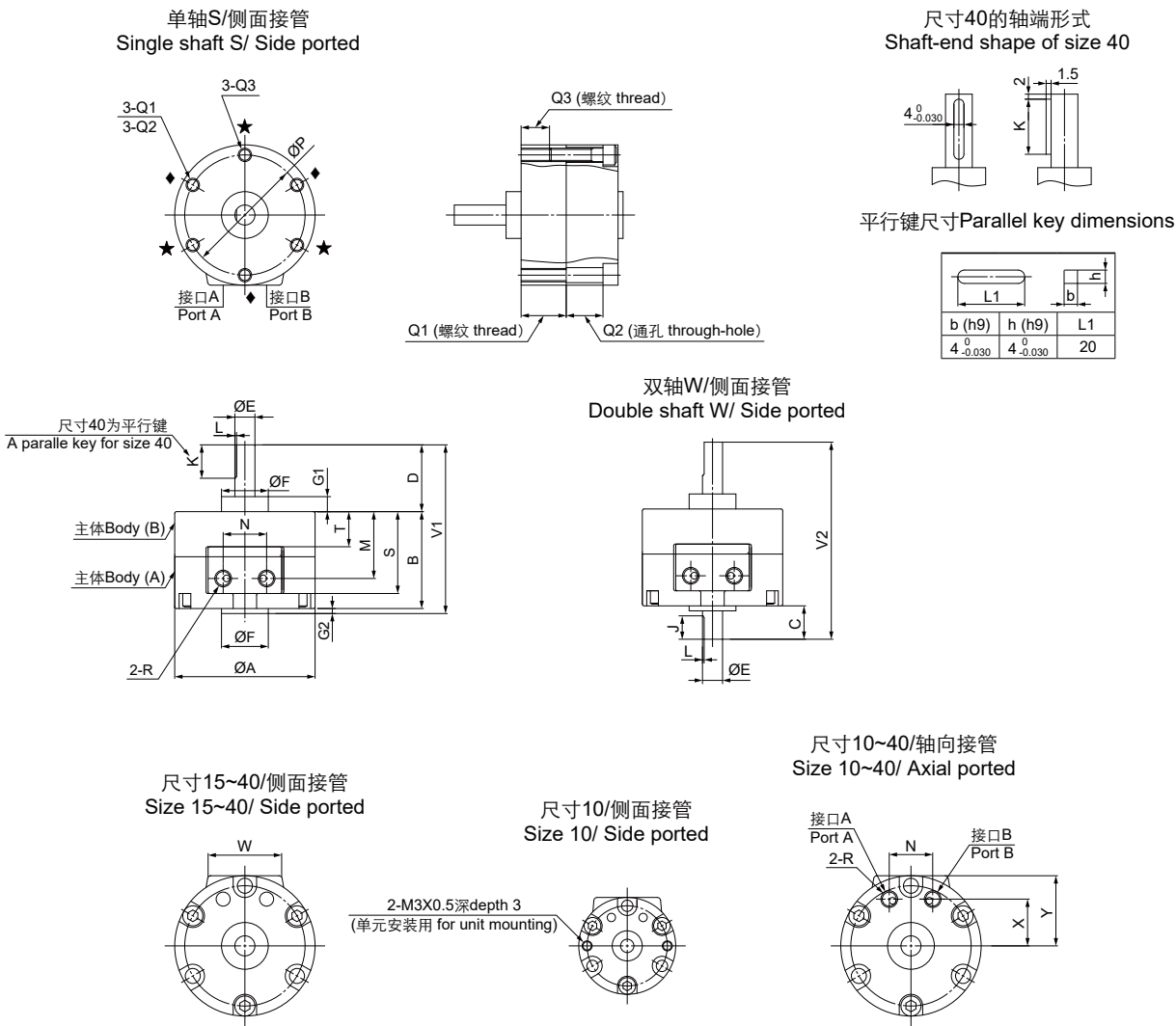
尺寸15, 20, 30, 40 Size 15, 20, 30, 40

尺寸10 (单叶片式) Size 10 (Single Vane Type)

轴形式S, W Shaft Type S, W

KCRB2B

* 对于单叶片式, 尺寸图表示90°和180° 在B接口加压的状态。
对于双叶片式, 尺寸图表示在A接口或B接口加压时的摆动中间位置。
For single vane type, the figures below show the actuator for 90° and 180° when port B is pressurized.
For double vane type, the figures below show the intermediate rotation position when port A or port B is pressurized.



尺寸 Size	A	B	C	D	E(g7)	F(h9)	G1	G2	J	K	L	M	N	P	Q1	Q2	Q3	R	S	T	V1	V2	W	X	Y
10	29	15	8	14	4 ^{-0.004} _{-0.016}	9 ⁰ _{-0.036}	3	1	5	9	0.5	9.5	9.5	24	M3x0.5 深 depth 6	6	-	M3x0.5	14	3.6	30	37	19.8	8.5	14.5
15	34	20	9	18	5 ^{-0.004} _{-0.016}	12 ⁰ _{-0.043}	4	1.5	6	10	0.5	14	10	29	M3x0.5 深 depth 10	6	M3x0.5 深 depth 5	M3x0.5	19	7.6	39.5	47	21	11	17
20	42	29	10	20	6 ^{-0.004} _{-0.016}	14 ⁰ _{-0.043}	4.5	1.5	7	10	0.5	20	13	36	M4x0.7 深 depth 13.5	11	M4x0.7 深 depth 7.5	M5x0.8	24.5	10.5	50.5	59	22	14	21
30	50	40	13	22	8 ^{-0.005} _{-0.020}	16 ⁰ _{-0.043}	5	2	8	12	1.0	26	14	43	M5x0.8 深 depth 18	16.5	M5x0.8 深 depth 10	M5x0.8	34.5	14	64	75	24	15.5	25
40	63	45	15	30	10 ^{-0.005} _{-0.020}	25 ⁰ _{-0.052}	6.5	4.5	9	20	1.0	31	20	56	M5x0.8 深 depth 16	17.5	M5x0.8 深 depth 10	M5x0.8	39.8	17	79.5	90	30	21	31.6

叶片式摆动气缸

Vane Type Rotary Actuator

Series *KCRB2*

外形尺寸图 Dimensions (mm)

内置磁环/ 尺寸15, 20, 30, 40 Size 15, 20, 30, 40 With Built-in Magnet

内置磁环/尺寸10 (单叶片式) Size 10 With Built-in Magnet (Single Vane Type)

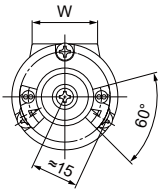
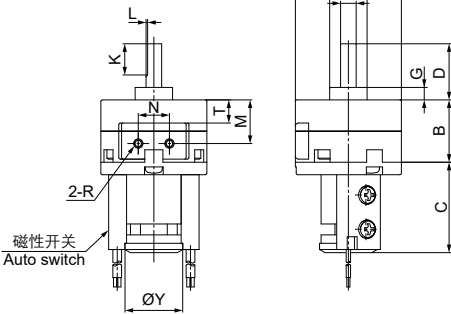
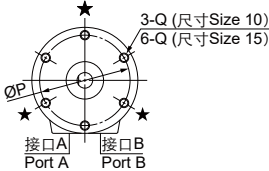
轴形式W Shaft Type W

KCDRB2B

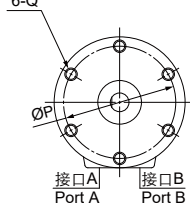
* 对于单叶片式, 尺寸图表示90°和180° 在B接口加压的状态。
对于双叶片式, 尺寸图表示在A接口或B接口加压时的摆动中间位置。
For single vane type, the figures below show the actuator for 90° and 180° when port B is pressurized.
For double vane type, the figures below show the intermediate rotation position when port A or port B is pressurized.

尺寸10, 15
Size 10, 15

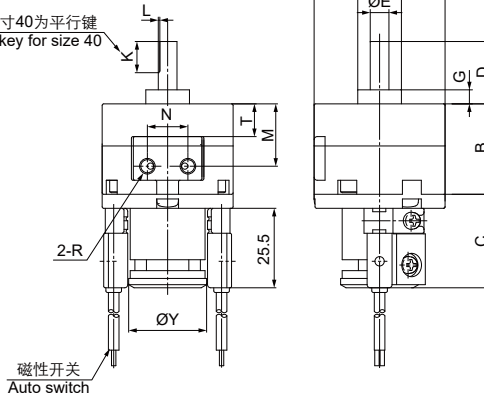
* 3-★为缸体紧固螺钉使用, 不用于外部安装。
3-★ are for tightening the body and not to be used for external mounting.



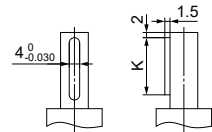
尺寸20, 30, 40
Size 20, 30, 40



尺寸40为平行键
A parallel key for size 40



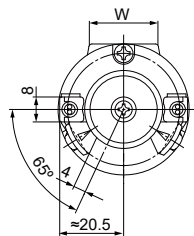
尺寸40的轴端形式
Shaft-end shape of size 40



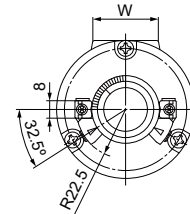
平行键尺寸
Parallel key dimensions

b (h9)	h (h9)	L1
4 ⁰ _{-0.030}	4 ⁰ _{-0.030}	20

尺寸20, 30
Size 20, 30



尺寸40
Size 40



尺寸 Size	A	B	C	D	E(g7)	F(h9)	G	K	L	M	N	P	Q3	R	T	W	Y
10	29	15	29	14	4 ^{-0.004} _{-0.016}	9 ⁰ _{-0.036}	3	9	0.5	9.5	9.5	24	M3x0.5 深 depth 6	M3x0.5	3.6	19.8	18.5
15	34	20	29	18	5 ^{-0.004} _{-0.016}	12 ⁰ _{-0.043}	4	10	0.5	14	10	29	M3x0.5 深 depth 5	M3x0.5	7.6	21	18.5
20	42	29	30	20	6 ^{-0.004} _{-0.016}	14 ⁰ _{-0.043}	4.5	10	0.5	20	13	36	M4x0.7 深 depth 7	M5x0.8	10.5	22	25
30	50	40	31	22	8 ^{-0.005} _{-0.020}	16 ⁰ _{-0.043}	5	12	1.0	26	14	43	M5x0.8 深 depth 10	M5x0.8	14	24	25
40	63	45	31	30	10 ^{-0.005} _{-0.020}	25 ⁰ _{-0.052}	6.5	20	1.0	31	20	56	M5x0.8 深 depth 10	M5x0.8	17	30	31

Series *KCRB2*

外形尺寸图 Dimensions (mm)

尺寸10 (双叶片式) Size 10 (Double Vane Type)

轴形式S, W Shaft Type S, W

KCRB2BS(W)10

内置磁环/尺寸10 (双叶片式)

Size 10 With Built-in Magnet (Double Vane Type)

轴形式W Shaft Type W

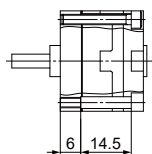
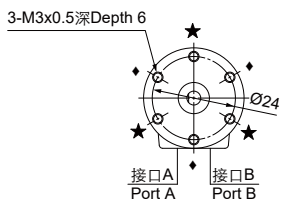
KCDRB2BW10

* 尺寸图表示在A接口或B接口加压时的摆动中间位置。

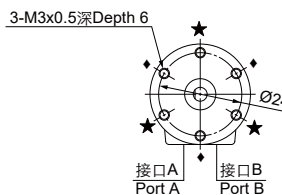
The figures below show the intermediate rotation position when port A or port B is pressurized.

单轴S/侧面接管
Single shaft S/ Side ported

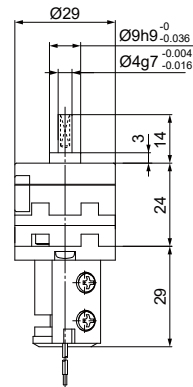
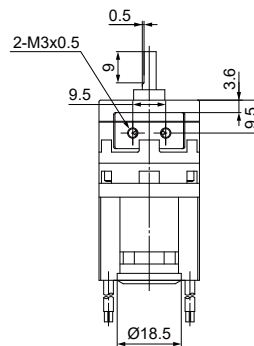
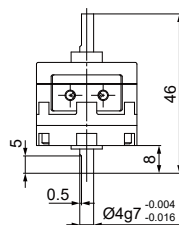
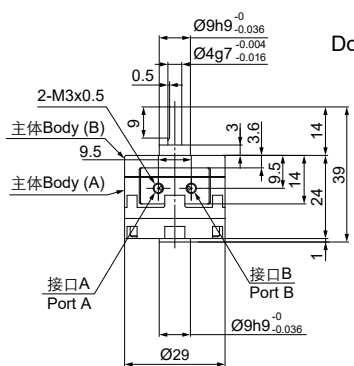
* 3-★为缸体紧固螺钉使用，不用于外部安装。
3-★ are for tightening the body and not to be used for external mounting.



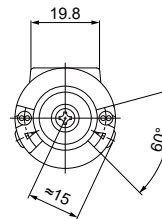
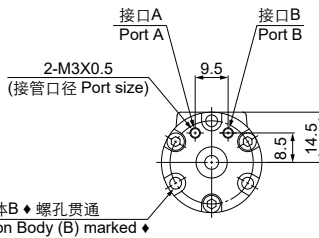
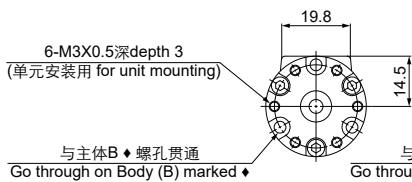
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双轴W/側面接管
Double shaft W/ Side ported



轴向接管Axial ported



叶片式摆动气缸

Vane Type Rotary Actuator

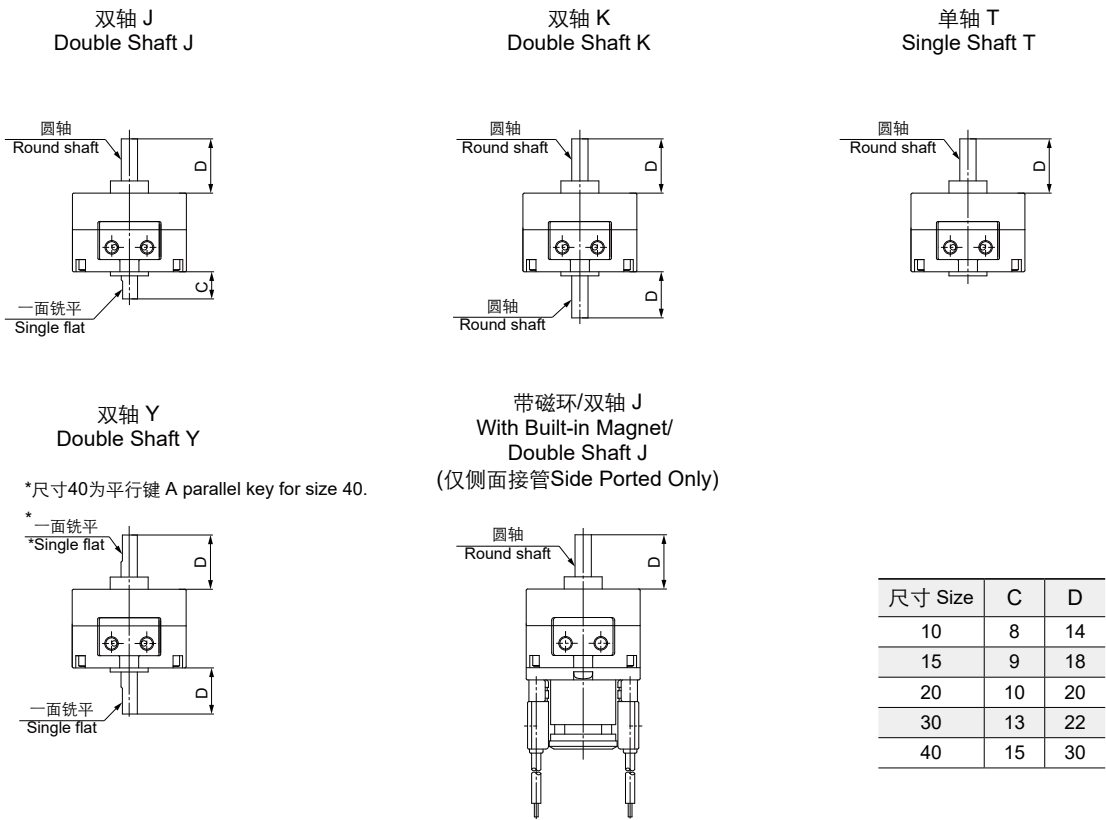
Series *KCRB2*

外形尺寸图 Dimensions (mm)

尺寸10~40 Size 10~40

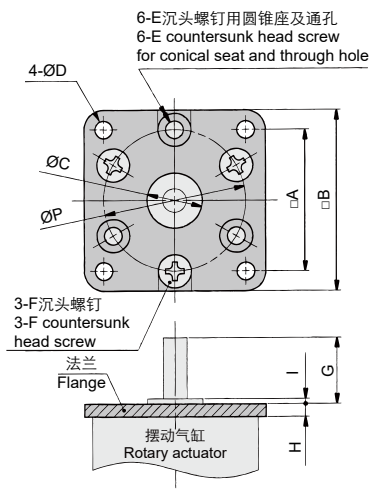
轴形式J, K, T, Y Shaft Type J, K, T, Y

内置磁环轴形式J, Shaft Type J With Built-in Magnet



3

可选附件: 法兰 (尺寸10~30) Optional : Flange (Size 10~30)



尺寸 Size	A	B	C	D	E	F	G	H	I	P
10	25	33	9	3.5	M3	M3	11.5	2.5	0.5	24
15	29	37	12	3.5	M3	M3	15.5	2.5	1.5	29
20	36	46	14	4.5	M4	M4	16.8	3.2	1.3	36
30	44	55	16	5.5	M5	M5	18.8	3.2	1.8	43