



Product feature

PMK series are standard type, PMK2 (Φ20~Φ63) series are heavy duty type, and it can support more rotational inertia if the bore size is same.

Specification

Bore(mm)	16	20	25	32	40	50	63
Fluid	Compressed air						
Action	Double acting						
Max. pressure	1.0MPa						
Min. pressure	0.1MPa						
Ambient and fluid temp.	Auto switch : -10~+60°C No switch : -10~+70°C						
Speed range	50~200mm/s						
Cushion	Rubber bumper						
Stroke tolerance	+0.6 -0.4						
Lubrication	Non-lube						
Rotation angle	90°±10°						
Rotation direction	Left • Right						
Rotation stroke	7.5	9.5		15		19	
Grip stroke	10 • 20			20 • 50			
Allowable torque	3.8	7	13	27	47	107	182
Gripping force(0.5MPa)	75	100	185	300	525	825	1400
Non-rotating frequency	±1.2°			±0.9°		±0.7°	
Port size	M5×0.8			Rc1/8		Rc1/4	

Auto switch table

Bore(mm)	Switch model	
	Direct mount	Rail mount
16		
20		
25		
32		
40		
50		
63		

Body options makeable

Bore(mm)	Null	M	F	N	MF	FN
Ø16	●	—	—	●	—	—
Ø20~Ø63	●	●	●	●	●	●

Ordering code

Heavy-duty PMK2 **B** **20** - **10** **R** **F**
 Standard P M K **B** **20** - **10** **R** **F**

Mount type

Symbol	Mount type	Suitable bore
B	Through-hole/Both ends tapped common(standard)	Ø12,Ø16
A	Both ends tapped common	Ø20~Ø63
B	Through-hole	
G	End cap flange	

G only for the body option F.
 Heavy-duty only have B, G options.

Bore

Null	Bore
16	Ø16mm
20	Ø20mm
25	Ø25mm
32	Ø32mm
40	Ø40mm
50	Ø50mm
63	Ø63mm

Ø16 no heavy-duty type

Gripping stroke

Code	Gripping stroke	Suitable bore
10	10mm	Ø16~Ø40
20	20mm	Ø16~Ø63
50	50mm	Ø50~Ø63

Body options

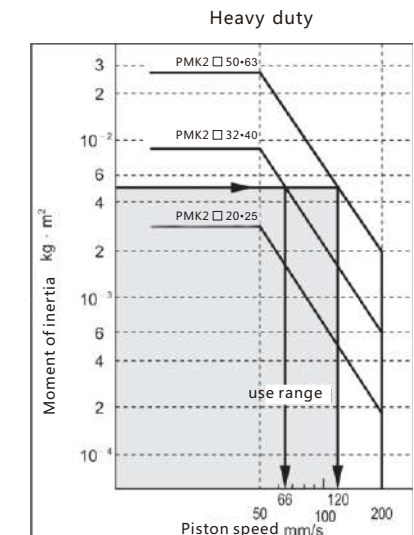
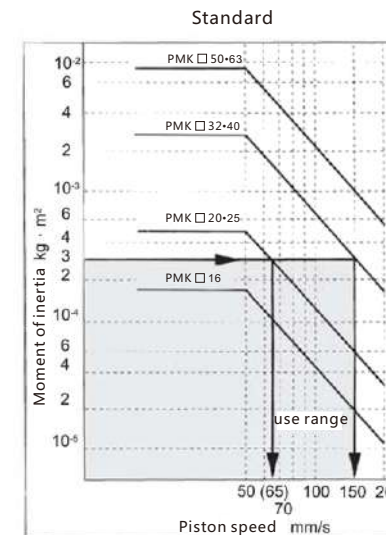
Symbol	Options
Null	Standard(rod female)
M	Rod both ends milling
F	End cap with table
N	With arm

No M for heavy duty

Rotation direction from open to close

Symbol	Rotation direction
R	Clockwise rotation
L	Anticlockwise rotation

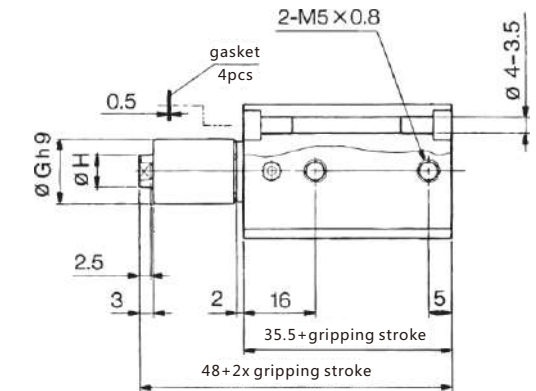
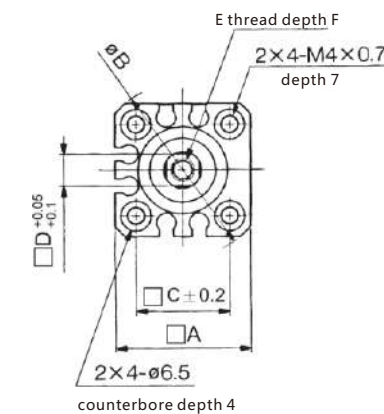
Characteristic curve



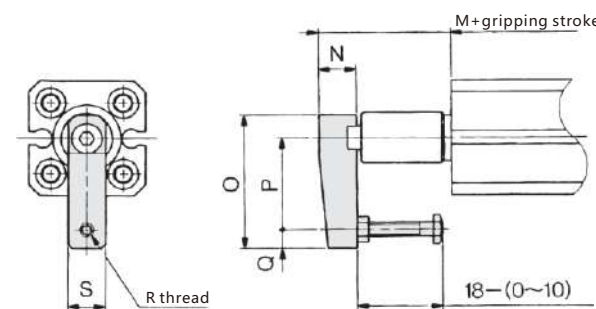
Dimensions (mm)

Through-hole(standard)/PMKB

Ø16



With arm/PMK□16-□□N



Standard

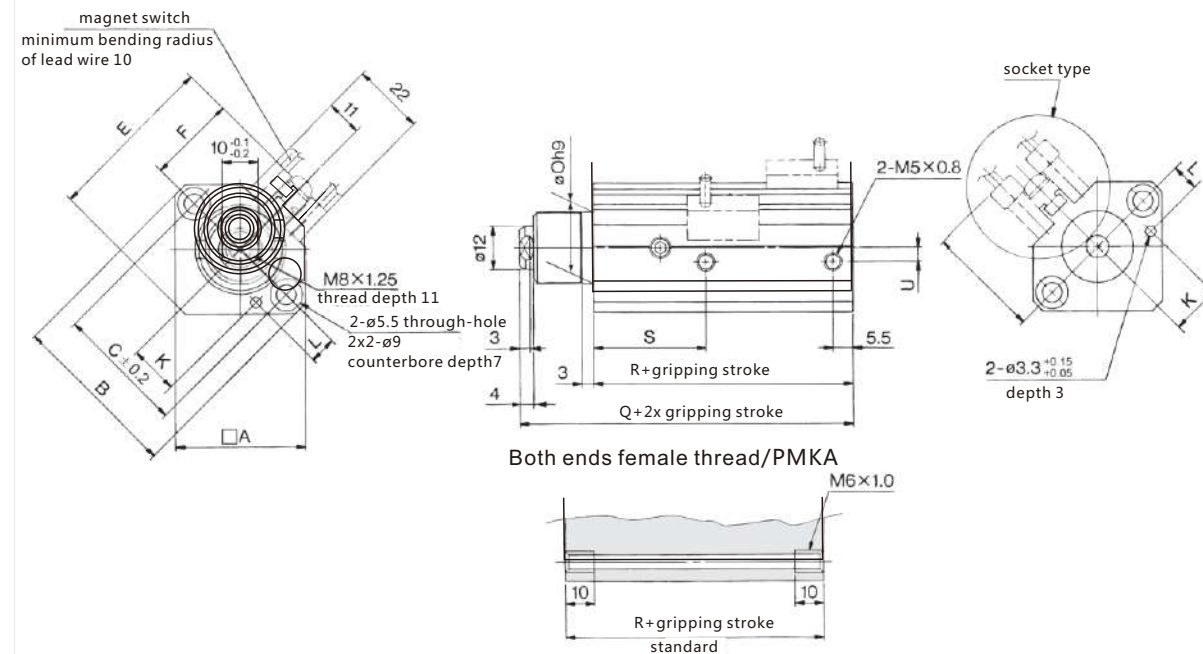
Series	A	B	C	D	E	F	Gh9	H
PMKB16	29	38	20	7	M5X0.8	6.5	14	8

With arm

Series	M	N	O	P	Q	R	S
PMKB16-□□N	21.5	11	36	25	5	M4X0.7	11

■ Dimensions (mm)

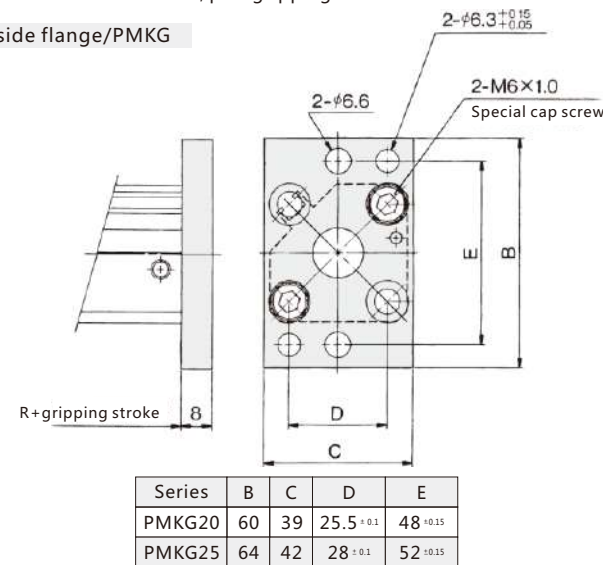
Through-hole(standard)/PMKB Ø20,Ø25



Series	A	B	C	E	F	K	L	Oh9	Q	R	S	U
PMKB20	36	46.8	36	48	24.5	13.5 ^{+0.15/-0.05}	7.5 ^{+0.15/-0.05}	20 ^{+0.052/-0.052}	72.5	62	31	4
PMKB25	40	52	40	53.8	27.5	16 ^{+0.15/-0.05}	8 ^{+0.15/-0.05}	23 ^{+0.052/-0.052}	73.5	63	32	5

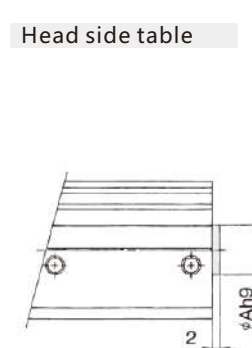
Note: when the rod all extend, plus gripping stroke and rotation stroke to suitable size.

Head side flange/PMKG



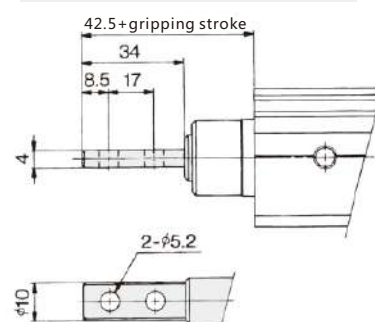
Series	B	C	D	E
PMKG20	60	39	25.5 ^{+0.1/-0.05}	48 ^{+0.15/-0.05}
PMKG25	64	42	28 ^{+0.1/-0.05}	52 ^{+0.15/-0.05}

Head side table

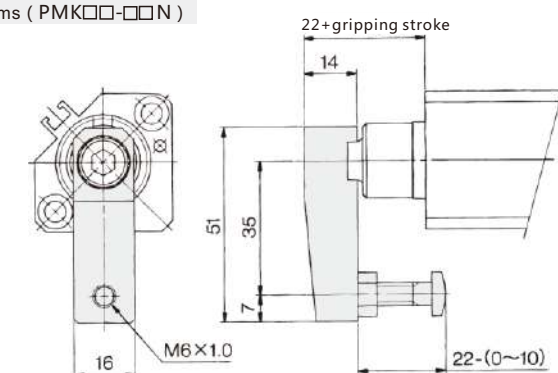


Series	Ah9
PMK□20-□□F	13 ^{+0/-0.043}
PMK□25-□□F	15 ^{+0/-0.043}

Both ends milling (PMK□□-□□M)



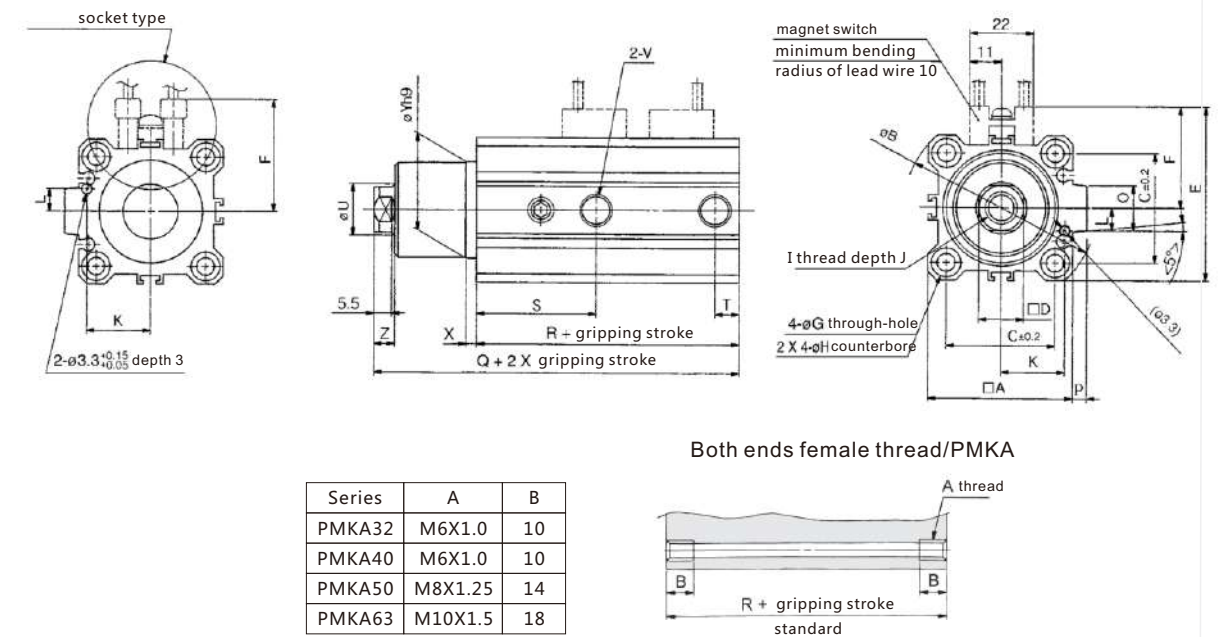
With arms (PMK□□-□□N)



■ Dimensions (mm)

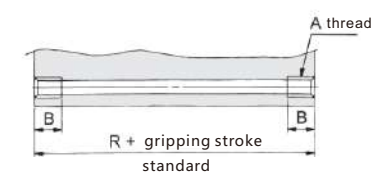
Through-hole(standard)/PMKB

Ø32,Ø40,Ø50,Ø63



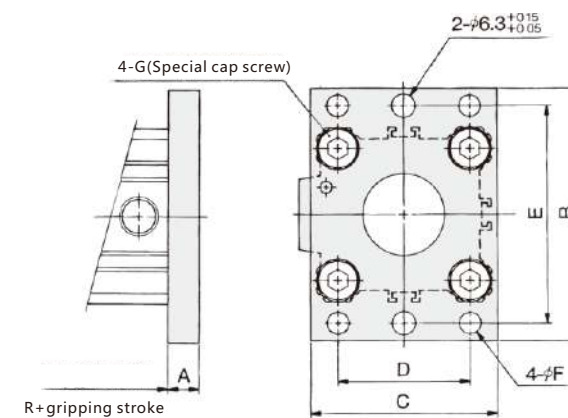
Series	A	B
PMKA32	M6X1.0	10
PMKA40	M6X1.0	10
PMKA50	M8X1.25	14
PMKA63	M10X1.5	18

Both ends female thread/PMKA



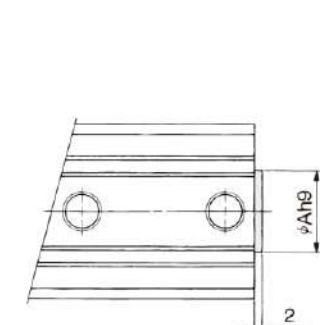
Series	A	B	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	S	T	U	V	X	Yh9	Z
PMKB32	45	60	34	14 ^{+0.1/-0.2}	54	13.5	5.5	9 depth 7	M10X1.5	12	20 ^{+0.15/-0.05}	7 ^{+0.15/-0.05}	18	4.5	93.5	71.5	37	7.5	16	Rc1/8	3	30 ^{+0/-0.062}	6.5
PMKB40	52	69	40	14 ^{+0.1/-0.2}	61	35	5.5	9 depth 7	M10X1.5	12	24 ^{+0.15/-0.05}	7 ^{+0.15/-0.05}	18	5	94.5	65	29.5	8	16	Rc1/8	3	30 ^{+0/-0.062}	6.5
PMKB50	64	86	50	17 ^{+0.1/-0.2}	73	41	6.6	11 depth 8	M12X1.75	15	30 ^{+0.15/-0.05}	8 ^{+0.15/-0.05}	22	7	112	76.5	34	10.5	20	Rc1/4	3.5	37 ^{+0/-0.062}	7.5
PMKB63	77	103	60	17 ^{+0.1/-0.2}	86	47.5	9	14 depth 10.5	M12X1.75	15	35 ^{+0.15/-0.05}	9 ^{+0.15/-0.05}	22	7	115	80	35	10.5	20	Rc1/4	3.5	48 ^{+0/-0.062}	7.5

Head side flange/PMKG



Series	A	B	C	D	E	F	C
PMKG32	8	65	48	34 ^{+0.1/-0.05}	56 ^{+0.15/-0.05}	5.5	M6X1.0
PMKG40	8	72	54	40 ^{+0.1/-0.05}	62 ^{+0.15/-0.05}	5.5	M6X1.0
PMKG50	9	89	67	50 ^{+0.1/-0.05}	76 ^{+0.15/-0.05}	6.6	M8X1.25
PMKG63	9	108	80	60 ^{+0.1/-0.05}	92 ^{+0.15/-0.05}	9	M10X1.5

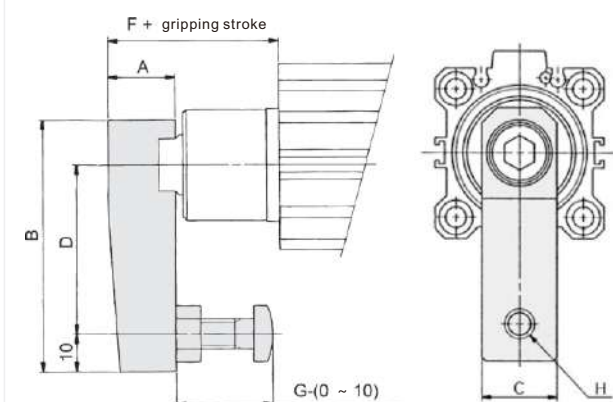
Head side table



Series	Ah9
PMK□32-□□F	21 ^{+0/-0.052}
PMK□40-□□F	28 ^{+0/-0.052}
PMK□50-□□F	35 ^{+0/-0.062}
PMK□63-□□F	35 ^{+0/-0.062}

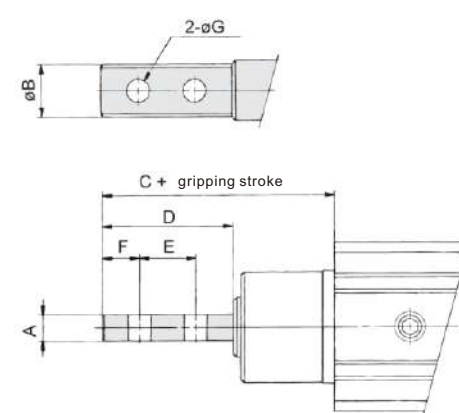
■ Dimensions (mm)

With arms



Series	A	B	C	D	F	G	H
PMK□32-□□N	18	67	20	45	35.5	25	M8X1.25
PMK□40-□□N	18	67	20	45	43	25	M8X1.25
PMK□50-□□N	22	88	22	65	53	40	M10X1.5
PMK□63-□□N	22	88	22	65	52.5	40	M10X1.5

Both ends milling



Series	A	B	C	D	E	F	G
PMK□32-□□M	6	14	53.5	36	18	9	6.2
PMK□40-□□M	6	14	61	36	18	9	6.2
PMK□50-□□M	8	18	77	46	23	11.5	8.2
PMK□63-□□M	8	18	76.5	46	23	11.5	8.2

■ Product feature

Zero rotation clamp cylinder adopt different ways of movement and structure (plane rotation is separated from up and down movement), the cylinder would not touch the workpiece in rotation.

Space-saving structure, easy mount and high working speed suit for electronic parts inspection clamp.

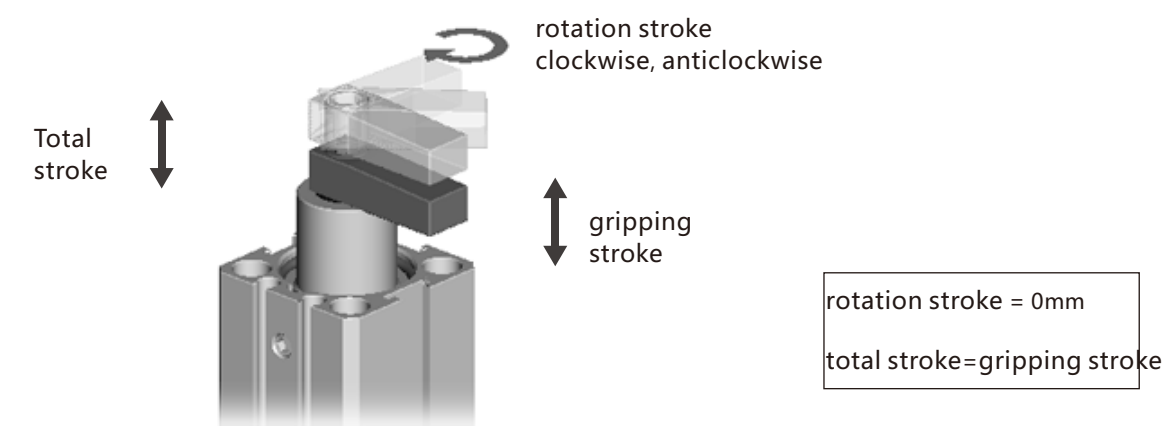
Additional sensors with a magnet which could mount directly. Non-contact sensor is available.



■ Ordering code

TC	R	20	-	5	-	S	-	A
Rotation direction (from open to close)								
L	From right to left							
R	From left to right							
Bore								
20	Ø20							
32	Ø32							
Stroke								
Code	Downward stroke	Suitable bore						
5	5mm	Ø20, Ø32						
Load type								
A	Balanced load							
B	Balanced and unbalanced load							
Magnet								
Null	Without magnet							
S	Magnet							

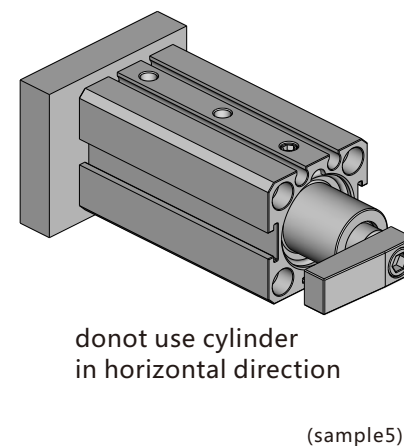
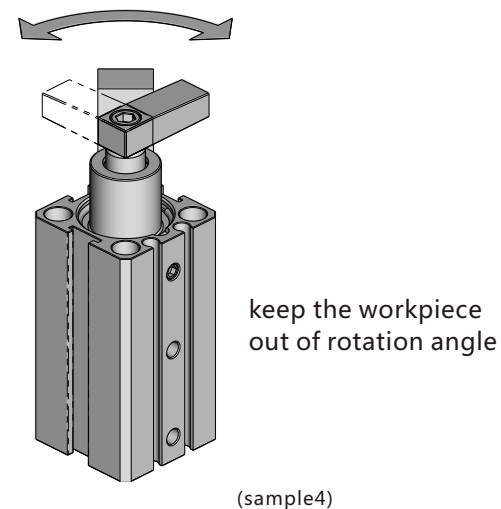
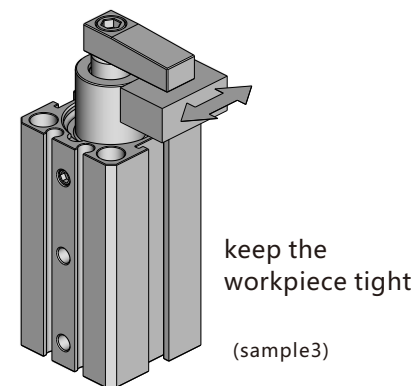
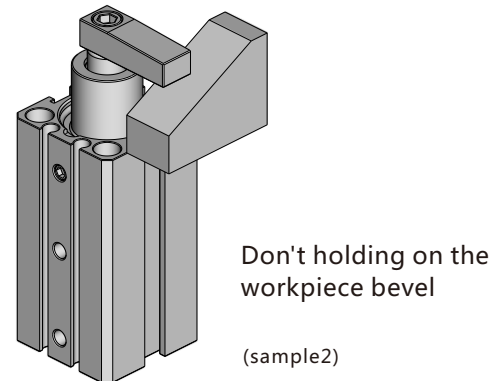
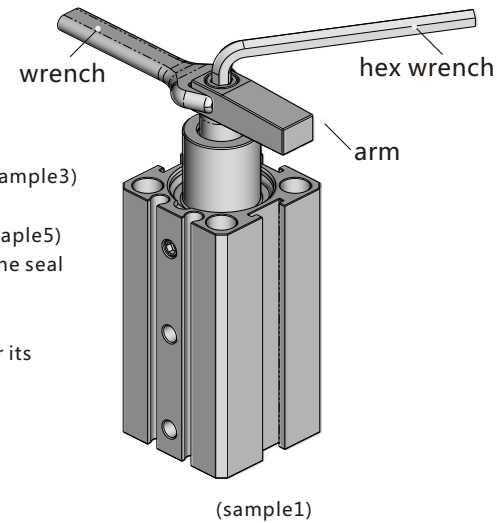
■ Use sample



Caution

 caution

- To attach and detach the arm to and from the piston rod, fix the arm with a wrench or vise and then tighten the bolt.
- If an excessive force is applied in the rotary direction, it may bring about the damage to the internal mechanism.(Sample 1)
- Clean the pipe to avoid dust into the cylinder before connecting.
 - Do not perform any work in the rotary direction.
 - Make sure that the clamping surface of the workpiece is perpendicular to the cylinder's axial line.(Sample2)
 - Make sure that the workpiece does not move during clamping.(Sample3)
 - Make sure workpiece within the clamp stroke range.(Sample 4)
 - Make sure the cylinder is axial mounting to keep its work life.(Sample5)
 - Make sure the arm works without scratches or dents, otherwise the seal may be damaged cause air leakage.
 - Use balanced load if possible to avoid the cylinder damaged.
 - Notice the length and weight of load table in unbalanced load, or its bending moment and inertia moment would damage the cylinder.



■ Specification

Series Items	TC □□20-□5-□□-A	TC □□20-□5-□□-B	TC □□32-□5-□□-A	TC □□32-□5-□□-B
Rotation stroke	0 mm			
Direct stroke	5 mm			
Action	Double acting			
Fluid	Compressed air			
Pressure range	2~7 kgf/cm ² (200~700 kpa)			
Temp. range	0°C~60°C			
Speed range	30~500 mm/sec			
Output pressure	13kgf/cm ²		34kgf/cm ²	
Standard torque	4~6 Nm (mount with lock)		8~10 Nm (mount with lock)	
Rotation angle	90±2°			
Angle gap	Max 3°		Max 4°	
Mount type	Vertical mount			
Body height	64±0.5mm	90±0.2mm	75±0.5mm	91.2±0.5mm
Front cover dia	Null	±0.02mm	Null	
Plate rotation stroke	Null	Max 0.2 mm (both sides)	Null	Max 0.3 mm (both sides)
Load type	Balanced load	Balanced and unbalanced load	Balanced load	Balanced and unbalanced load
Work life	More than 500 thousand times (normal work condition)			
Rotation direction	L: left (clockwise), R: right (anticlockwise)			
Lubrication	Lubrication free			
Cushion	Null	Rubber bumper	Polyurethane absorber	
Port size	M5×0.8			
Weight	170g	230g	370g	320 g
Induction system	With magnet			

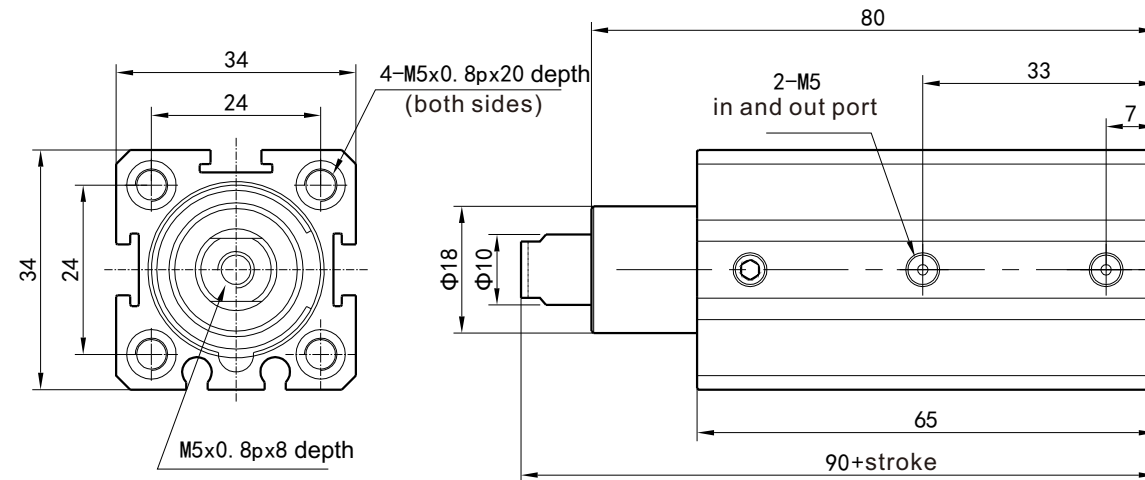
※The output pressure is theoretical data, friction resistance and the mechanical efficiency must be added in calculation.

Theoretical gripping force input is 0.5Mpa (kgf/cm²).

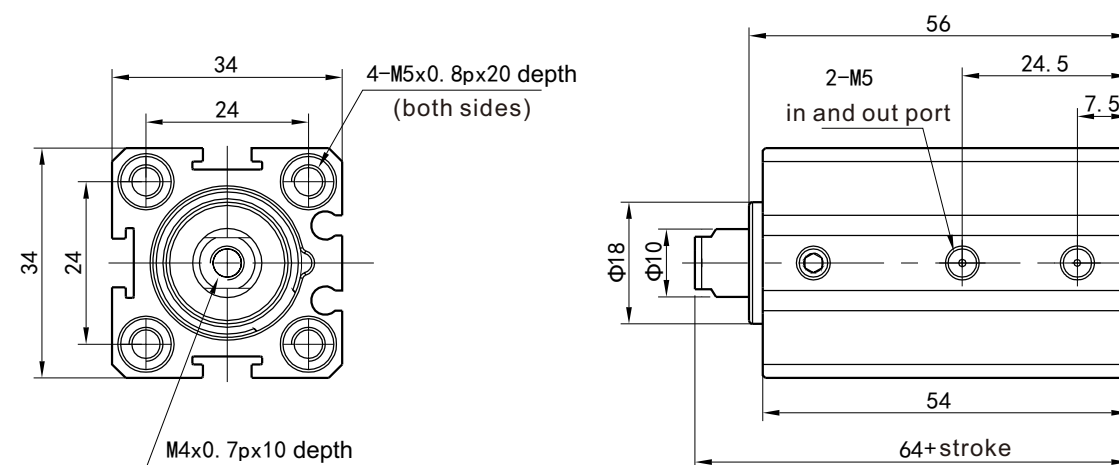
※parts of the technical parameters are our customers requirment

■ Dimensions(mm)

TCL(R)20-5-B

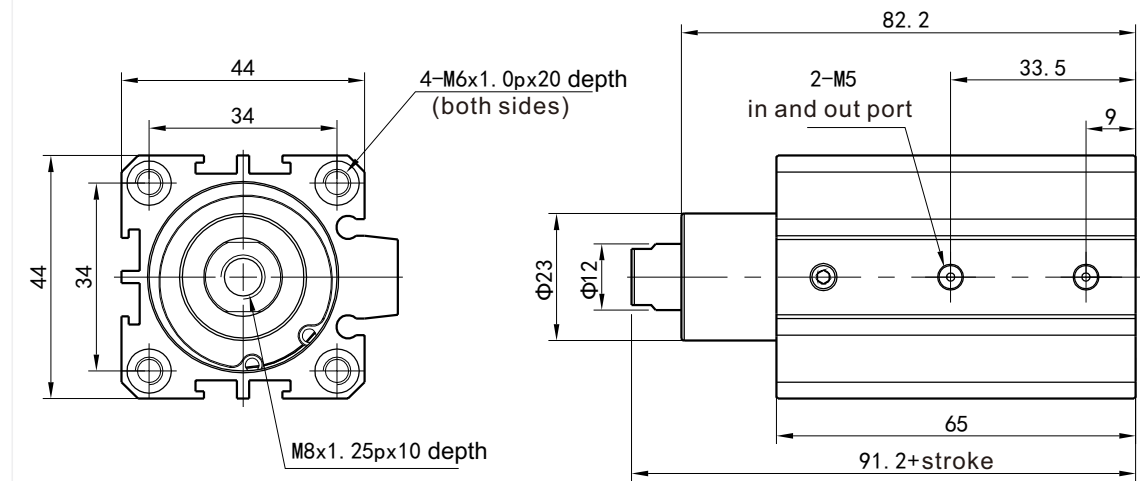


TCL(R)20-5-A

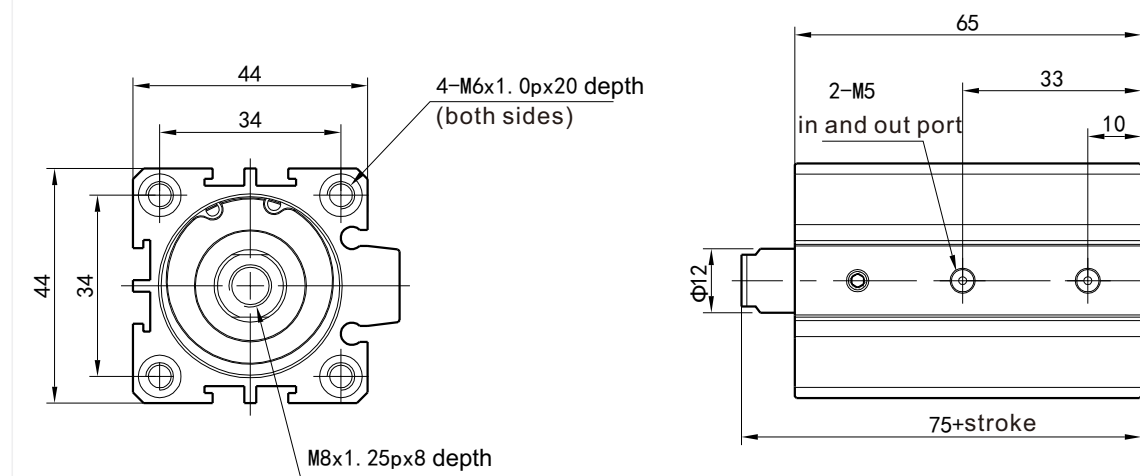


■ Dimensions(mm)

TCL(R)32-5-B



TCL(R)32-5-A

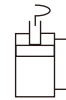




Product feature

- 1.The material of sealing element ensure its reliability when works in different conditions.
- 2.Three groove structure, high precision orientation.
- 3.Works with unilateral and bilateral (90 °).
- 4.Contains left and right rotation, 90 ° and 180 °.

Symbol



Bore (mm)	25	32	40	50	63
Action	Double acting				
Fluid	Compressed air				
Pressure range Mpa	0.1~1.0				
Proof pressure Mpa	1.5				
Temp. range	- 20~60℃				
Speed range mm/S	50~200				
Rotation angle tolarence range	±1.5°				
Cushion	No cushion				
Port size	M5×0.8		Rc1/8		

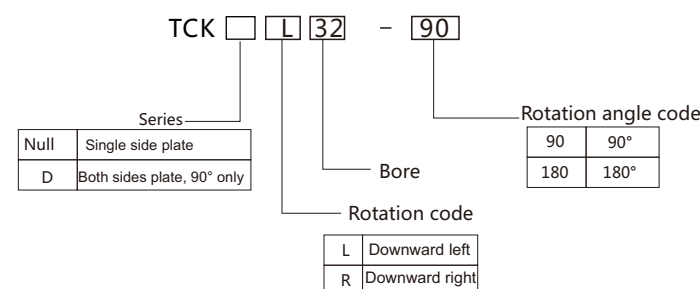
Stroke

Inner diameter (mm)	Stroke items	90°	180°	Total stroke (90°/ 180°)
25	Rotation stroke	14	20	26
32	Gripping stroke	12	6	26
40	Rotation stroke	15	21	27
	Gripping stroke	12	6	27
50	Rotation stroke	15	21	29
63	Gripping stroke	14	8	29

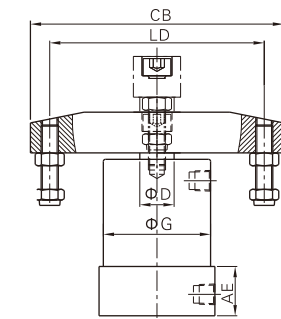
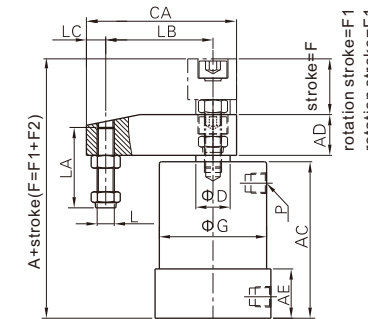
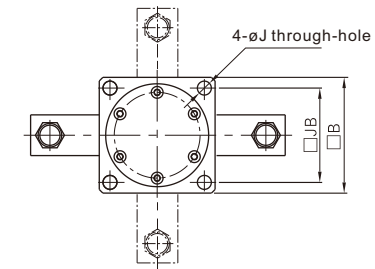
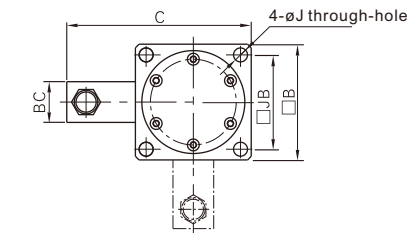
Theoretical gripping force

Inner diameter(mm)	Piston outer diameter(mm)	Air pressure (MPa)						
		0.1	0.2	0.3	0.4	0.5	0.6	0.7
25	14	-	67	134	134	168	202	235
32	16	60	120	181	241	301	361	422
40	16	105	211	316	422	527	633	738
50	20	164	329	494	659	824	989	1154
63	20	280	560	840	1121	1401	1681	1962

Ordering code



Dimensions (mm)



Bore	A	AC	AD	AE	B	BC	C	CA	CB	D	F(90°/180°)	F1(90°)
25	85	65	16	23	40	16	58	48	76	14	26	14
32	95	73	19	23	54	19	86	70	118	16	26	14
40	97	74	19	26	58	19	88	70	118	16	27	15
50	109.5	80	25.5	26	68	25.5	114	93	160	20	29	15
63	115.5	86	25.5	30	82	25.5	121	93	160	20	29	15

Bore	F1(180°)	F2(90°)	F2(180°)	G	J	JB	L	LA	LB	LC	LD	P
25	20	12	6	35	4.5	30	M6×1.0	29.5	30	8	60	M5×0.8
32	20	12	6	50	6.5	44	M8×1.25	37.5	50	9	100	1/8
40	21	12	6	55	6.5	48	M8×1.25	37.5	50	9	100	1/8
50	21	14	6	60	8.5	55	M10×1.5	45	70	10	140	1/8
63	21	14	6	70	8.5	64	M10×1.5	45	70	10	140	1/8