

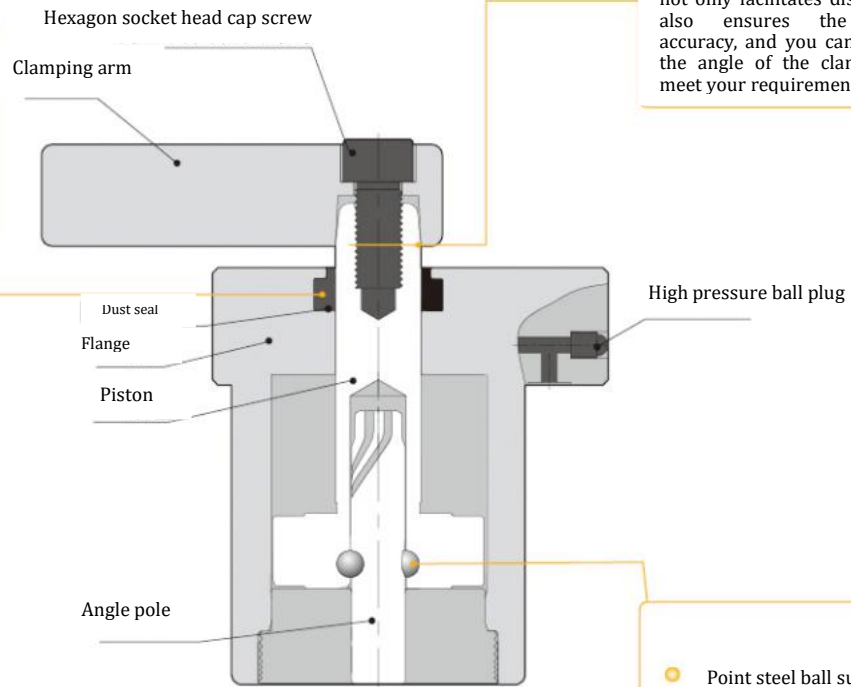
KZG-SB pneumatic upper flange air circuit plate swing clamp cylinder

Pressure Range

2-7kg/cm²



● High quality seals
High quality seals are used to effectively prevent coolant and chips from entering the cylinder block.



● High precision taper fit
The taper fit is adopted between the clamping arm and the piston, which not only facilitates disassembly, but also ensures the positioning accuracy, and you can freely adjust the angle of the clamping arm to meet your requirements.

● Point steel ball support
Three-point steel ball support mechanism is adopted to realize stable high-speed rotation.

The figure shows the sectional view of the KZG-SB clamping state

Model Representation

KZG-SG ① ② ③ * ④ (Example: KZG-SB32SR*90)

① Dimension (refer to specification sheet) ② Clamping arm ③ Rotation direction (when clamped) ④ Rotation angle

KZG-SG	32	S: single side D: double side	L: turn left R: turn right	0: Rotation angle 0° 45: Rotation angle 45° 60: Rotation angle 60° 90: Rotation angle 90°
	40			
	50			
	63			

Air Circuit Board Method

Rotation Angle (When Clamped)

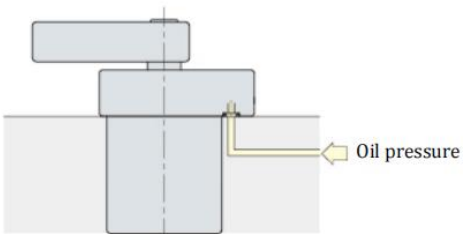
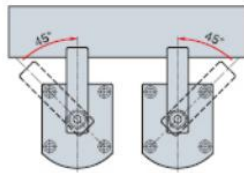
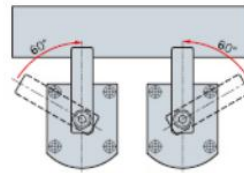


Plate type

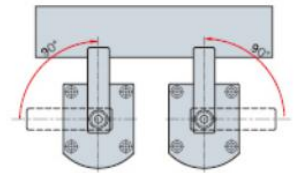
This figure shows the clamping state of KZG-SB



R: turn right L: turn left



R: turn right L: turn left



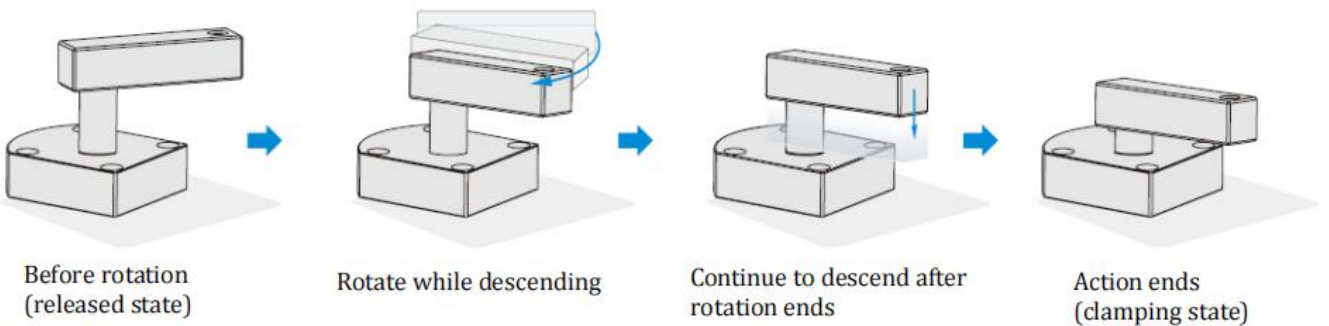
R: turn right L: turn left

Product Type

Standard type



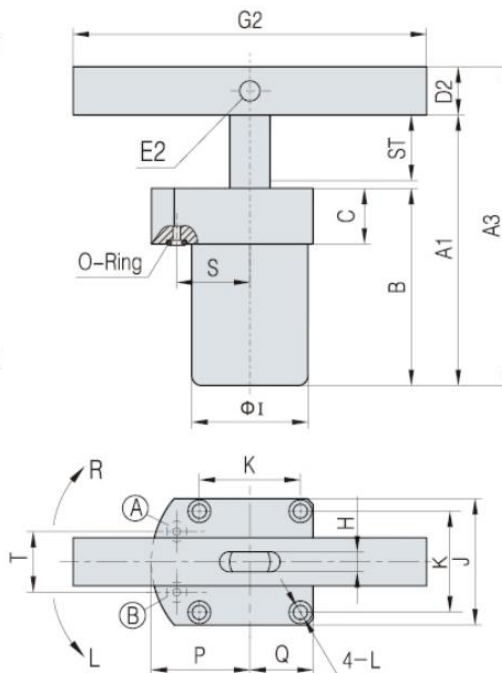
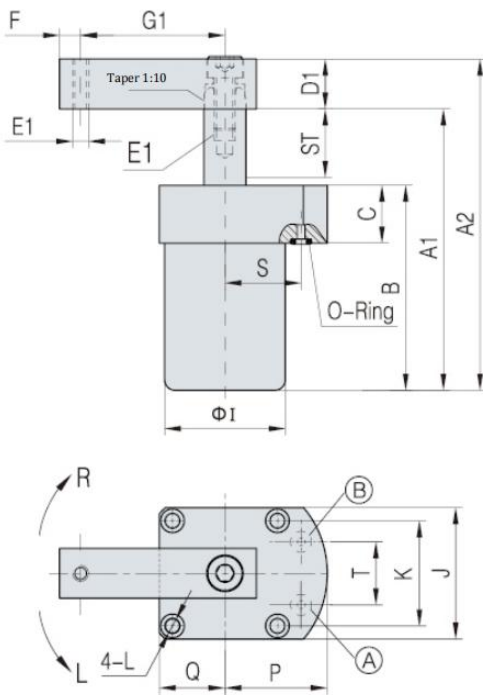
Action Description



Overall Dimension

Single-sided clamping arm SB

Double-sided clamping arm SBD



A-clamping hole
B-release hole
The figure shows the released state

Model	KZG-SB32	KZG-SB40	KZG-SB50	KZG-SB63
Dimension				
ST:Swing/clamping	26(11/15)	26(11/15)	30(13/17)	30(13/17)
A1	108	108	125	125
A2	(127)	(127)	(150.4)	(150.4)
A3	127	127	147.2	147.2
B	78	78	90	90
C	22	22	25	25
D1	□19	□19	□25.4	□25.4
D2	□19	□19	□22.2	□22.2
E1	M8*1.25	M8*1.25	M10*1.5	M10*1.5
E2	Φ8	Φ8	Φ8	Φ8
F	8	8	10	10
G1	55	55	70	70
G2	140	140	160	160
H	9	9	10	10
ΦI	Φ46	Φ55	Φ65	Φ78
J	52	62	72	85
K	40	48	57	67
L	Φ5.6-Φ9*5.5D	Φ6.8-Φ10.5*6.5D	Φ6.8-Φ10.5*6.5D	Φ9-Φ14*9.5D
P	39	43	49	59
Q	26	31	36	42.5
S	29	32	38	46
T	24	26	28	38
O-Ring	P5	P5	P7	P7

Note: ※ □ indicates square

Performance Table

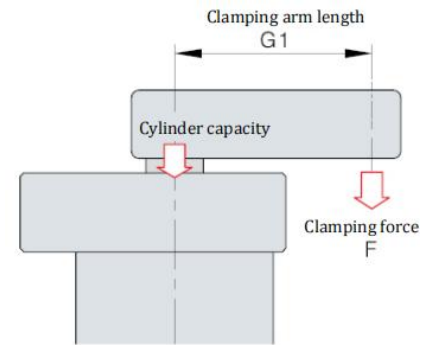
The clamping force varies depending on the length of the clamping arm (G1) and the air pressure. Please comprehensively consider the clamping arm length (G1), operating air pressure, installation size and other factors to select the appropriate swing clamp cylinder model.

Note: the longer the clamping arm of the swing clamp cylinder, the greater the force acting on the cam mechanism. Do not use a clamping arm longer than the maximum length (Max.G1)

● Interpretation of clamping force:

When KZG-SB32 is used, the supplied air pressure is 0.5MPa and the clamping arm length is 65mm, the clamping force is about 0.22kN.

F: clamping force (kN) P: operating air pressure (MPa) G1: clamping arm length (mm)



KZG-SB32				
Air pressure (MPa)	Cylinder capacity (kN)	Clamping force (kN)		
		Clamping arm length G1 (mm)		
		55	65	75
1	0.60	0.43	0.38	
0.9	0.54	0.38	0.36	0.33
0.8	0.48	0.36	0.35	0.31
0.7	0.42	0.32	0.31	0.29
0.6	0.36	0.27	0.26	0.23
0.5	0.30	0.22	0.22	0.22
0.4	0.24	0.14	0.14	0.13
0.3	0.18	0.12	0.12	0.12
0.2	0.12	0.04	0.04	0.04
0.1	0.06	0.02	0.02	0.02

KZG-SB40				
Air pressure (MPa)	Cylinder capacity (kN)	Clamping force (kN)		
		Clamping arm length G1 (mm)		
		55	65	75
1	1.06	0.58	0.55	
0.9	0.95	0.57	0.54	
0.8	0.84	0.54	0.53	0.53
0.7	0.74	0.51	0.45	0.45
0.6	0.63	0.43	0.41	0.39
0.5	0.53	0.35	0.34	0.31
0.4	0.42	0.29	0.27	0.25
0.3	0.32	0.21	0.20	0.20
0.2	0.21	0.12	0.12	0.11
0.1	0.11	0.03	0.03	0.03

KZG-SB50					
Air pressure (MPa)	Cylinder capacity (kN)	Clamping force (kN)			
		Clamping arm length G1 (mm)			
		70	80	90	100
1	1.65	1.18			
0.9	1.48	1.00	0.76	0.71	
0.8	1.32	0.88	0.74	0.70	0.73
0.7	1.15	0.76	0.65	0.63	0.63
0.6	0.99	0.66	0.55	0.53	0.53
0.5	0.82	0.57	0.52	0.52	0.44
0.4	0.66	0.45	0.43	0.39	0.33
0.3	0.49	0.33	0.31	0.31	0.31
0.2	0.33	0.22	0.22	0.22	0.22
0.1	0.16	0.11	0.11	0.09	0.09

KZG-SB63					
Air pressure (MPa)	Cylinder capacity (kN)	Clamping force (kN)			
		Clamping arm length G1 (mm)			
		70	80	90	100
1	2.80	1.58	1.51	1.41	
0.9	2.52	1.53	1.39	1.28	1.37
0.8	2.24	1.41	1.37	1.24	1.19
0.7	1.96	1.28	1.27	1.19	1.14
0.6	1.68	1.09	1.02	1.00	0.93
0.5	1.40	0.88	0.84	0.78	0.78
0.4	1.12	0.75	0.67	0.65	0.63
0.3	0.84	0.54	0.51	0.45	0.44
0.2	0.56	0.34	0.34	0.34	0.34
0.1	0.28	0.21	0.15	0.13	0.13

*Precautions:

1. This figure shows the actual measured values. The clamping force at the clamping point of the clamping arm of the standard cylinder is about 65% of the theoretical value.
2. The clamp arm with a large moment of inertia may not be able to rotate due to the supply air pressure, flow rate, and installation state of the clamp arm.
3. This figure shows the relationship between clamping force and supplied air pressure.
4. The clamping force indicates the clamping energy when the clamping arm is clamped at the horizontal position.
5. The clamping force varies with the length of the clamping arm. Use it with the supplied air pressure suitable for the length of the clamp arm.
6. If you need a clamping arm other than our standard, please contact us.

Adjustment of Rotation Speed

Since the camshaft bears the load when rotating at 90°, the action time will be limited according to the length and mass (inertia torque) of the clamping arm.

1. Calculate the moment of inertia according to the length and mass of the clamping arm.

2. In order to make the 90° rotation time within the shortest rotation interval in the figure below, please use the speed control valve to adjust the flow.

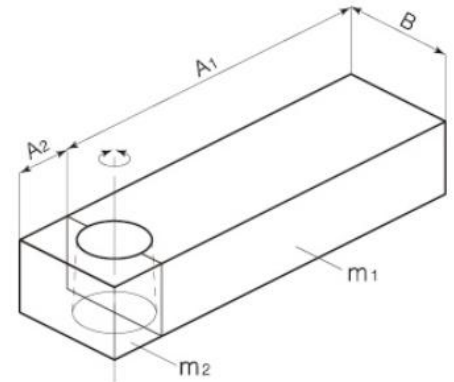
The camshaft may be damaged if it is used within the non-use scope.

Calculation example of inertia torque:

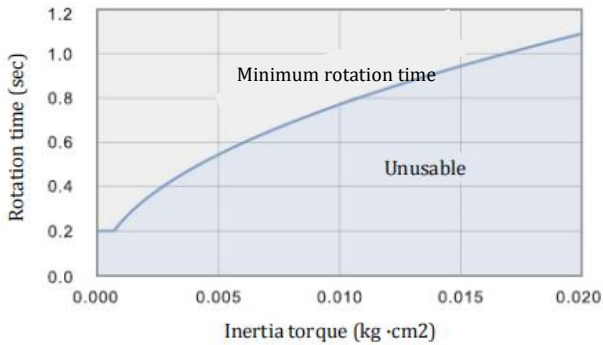
$$I = \frac{1}{12}m_1(4A_1^2+B^2) + \frac{1}{12}m_2(4A_2^2+B^2)$$

I: Inertia torque (kg • m²)

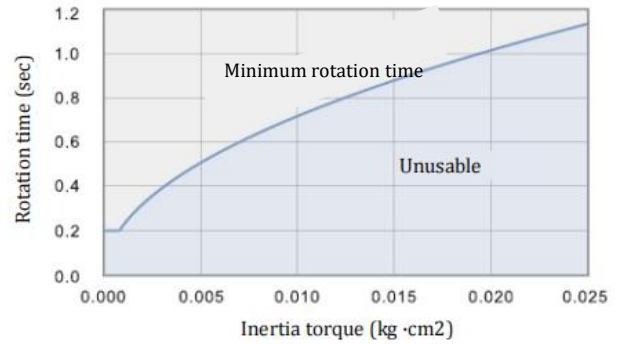
m: Mass (kg)



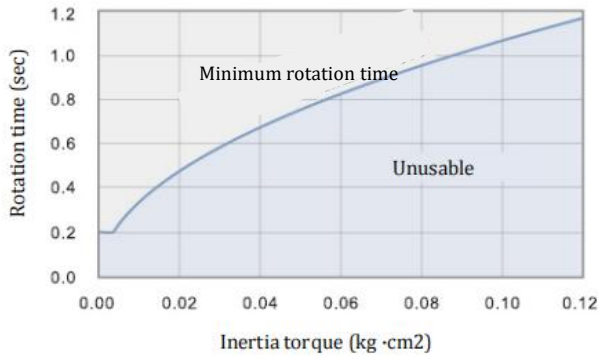
KZG-SB32



KZG-SB40



KZG-SB50



KZG-SB63

