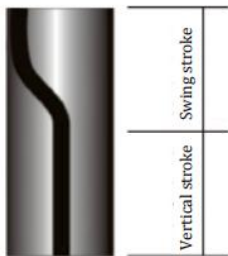


Product Features

Series Category	KZG-XG; KZG-XB/BT; KZG-SG; KZG-SB; KZG-LG											
Bore of Cylinder (mm)	Φ25				Φ32		Φ40		Φ50		Φ63	
Piston Rod Diameter(mm)	Φ14				Φ16				Φ20			
Rotation Angle	30°±3	45°±3	60°±3	90°±3	30°±3	45°±3	60°±3	90°±3	30°±3	45°±3	60°±3	90°±3
Full Stroke (mm)	17.2	18.4	19.6	22	20.2	21.7	23.1	26	22.6	24.5	26.3	30
Rotation Stroke (mm)	4.2	5.4	6.6	9	5.2	6.7	8.1	11	5.6	7.5	9.3	13
Clamping Stroke (mm)	13				15				17			
Extended Full Stroke (mm)	-	-	-	-	35.2	36.7	38.1	41	39.6	41.5	43.3	47
Extended Rotation Stroke (mm)	-	-	-	-	5.2	6.7	8.1	11	5.6	7.5	9.3	13
Extended Clamping Stroke (mm)	-	-	-	-	30				34			
Pressure Area Pull-in/Push-out (cm²)	3.37/4.91				6.03/8.04		10.56/12.57		16.49/19.63		28.03/31.17	
Theoretical Clamping Force (5KN/cm²)	16				30		50		85		140	
Maximum Operating Pressure (KN/cm²)	10											
Operating Pressure Range (KN/cm²)	2-7											

Precautions for Installation and Use

Schematic diagram of vertical and angular stroke



Clamping arm locking and disassembling method



Remark:

- Please read the installation and operation instructions carefully before using this product.
- If you need to lengthen the clamping arm, please do not exceed 1.5 times the standard length.
- Please do not clamp the workpiece at the corner stroke section when the clamping arm is descending.
- Please filter your air intake (hydraulic) source to avoid damaging the seals in the cylinder
- The working pressure you use should not exceed the maximum allowable working pressure of the product.
- The repeated positioning accuracy of the swing clamp cylinder is $\pm 1^\circ$.
- The angle direction of the swing clamp cylinder refers to the angle direction when pressing down

We are sorry that

Only XG has the Φ25 specification for the pneumatic swingclamp cylinder, and other installation methods are not available.

The maximum working pressure of the KZG swing clamp cylinder is 0.7MPa, and the rated working pressure is 0.4 to 0.6MPa

KZG-XG pneumatic lower flange piping swing clamp cylinder

Pressure Range
2-7KN/cm ²



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.

Hexagon socket head cap screw

Clamping arm

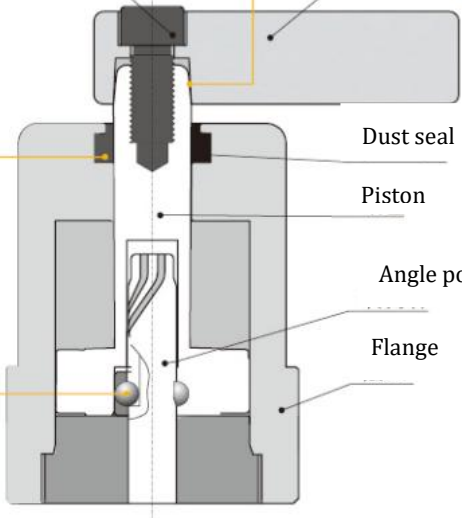
Dust seal

Piston

Angle pole

Flange

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-XG clamping state

Model Representation

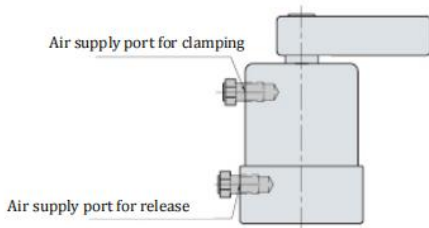
KZG-XG ① ② ③ * ④ (Example: KZG-XG25SR*90)

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

KZG-XG	25 32 40 50 63	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°
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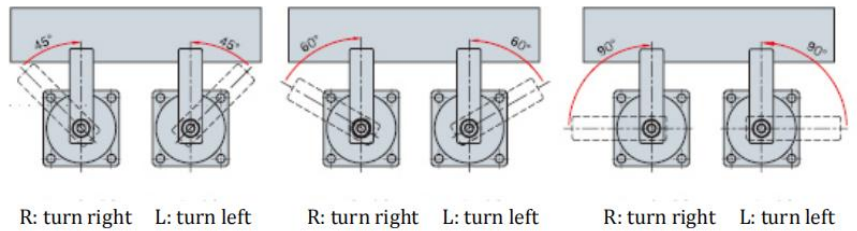
(The above is the standard model and the extended stroke type is expressed as: "KZG-XG2①②③④)C")

Piping Method

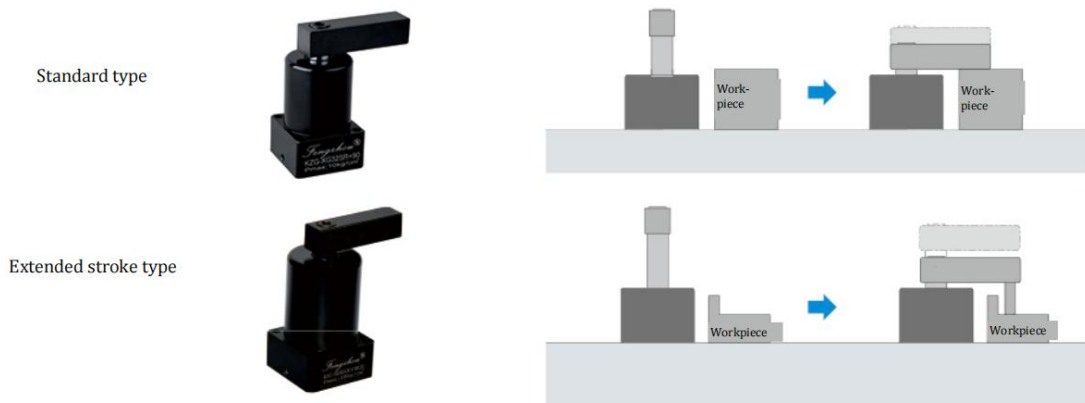


Piping type (without plate interface)
The figure shows the clamping state of KZG-XG

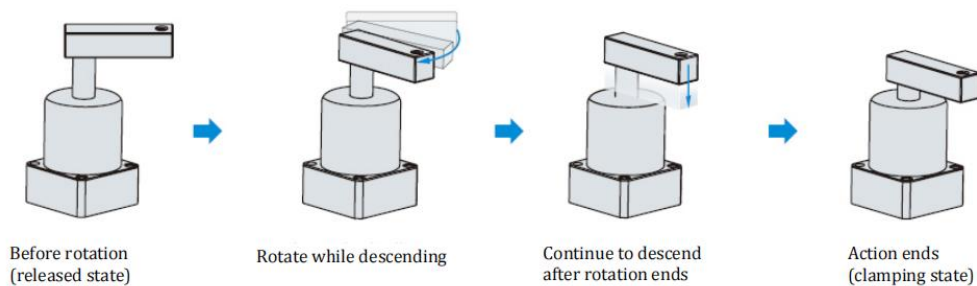
Rotation Angle (When Clamped)



Product Type



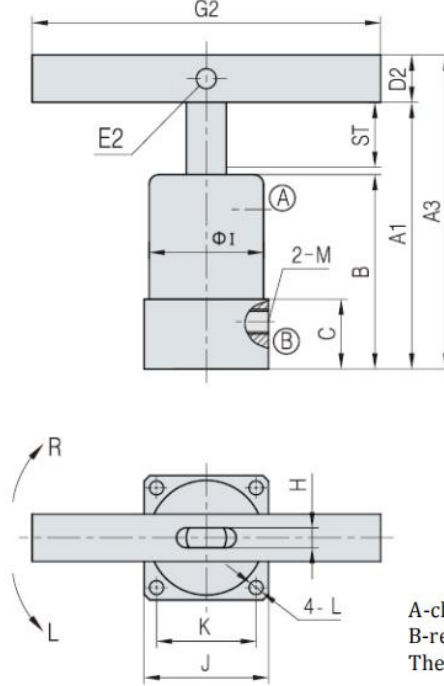
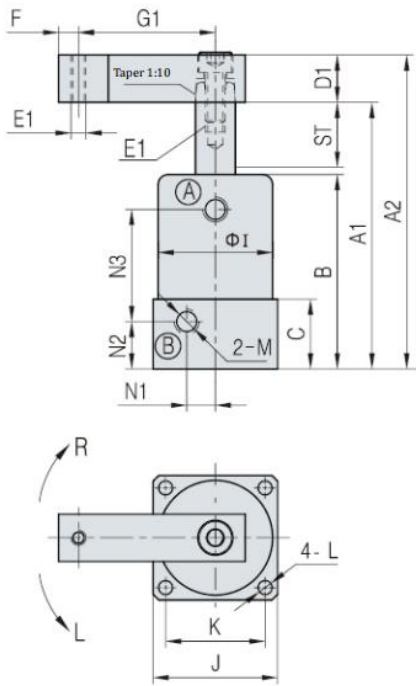
Action Description



Overall Dimension

Single-sided clamping arm XG

Double-sided clamping arm XGD



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

Model	KZG-XG25	KZG-XG32	KZG-XG40	KZG-XG50	KZG-XG63
ST=Stroke/加长	22(9/13)	26(11/15)	41(11/30)	26(11/15)	41(11/30)
A1	90	108	138	108	138
A2	(105.9)	(127)	(157)	(127)	(157)
A3	-	127	157	127	157
B	65	78	93	78	93
C	23	28	28	31	31
D1	□15.9	□19	□19	□25.4	□25.4
D2	---	□19	□19	□22.2	□22.2
E1	M6*1.0	M8*1.25	M8*1.25	M10*1.5	M10*1.5
E2	---	Φ8	Φ8	Φ8	Φ8
F	6	8	8	10	10
G1	35	55	55	70	70
G2	---	140	140	160	160
H	---	9	9	10	10
ΦI	Φ35	Φ46	Φ55	Φ65	Φ78
J	38	50	60	70	83
K	30	40	48	57	67
L	Φ4.6	Φ5.6	Φ6.8	Φ6.8	Φ9
M	M5*0.8	RP1/8	RP1/8	RP1/8	RP1/8
N1	7	11	11.5	17	20
N2	16.5	19	19	21	21
N3	39.5	45	60	53	70

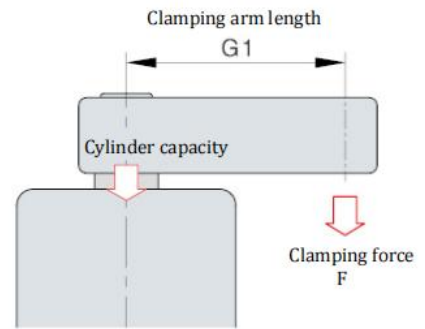
Note: ※ □ indicates square

※ For clamping arm size, please refer to the above

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-XG32 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-XG25				
Air pressure (MPa)	Cylinder capacity (kN)	Clamping force (kN)		
		Clamping arm length G1 (mm)		
		35	45	55
1	0.34	0.24	0.21	0.19
0.9	0.30	0.21	0.19	0.17
0.8	0.27	0.19	0.17	0.15
0.7	0.24	0.17	0.15	0.13
0.6	0.20	0.14	0.12	0.11
0.5	0.17	0.12	0.11	0.10
0.4	0.13	0.09	0.08	0.07
0.3	0.10	0.07	0.06	0.05
0.2	0.07	0.05	0.04	0.04
0.1	0.03	0.02	0.02	0.02

KZG-XG32				
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-XG40				
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-XG50					
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-XG63					
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.

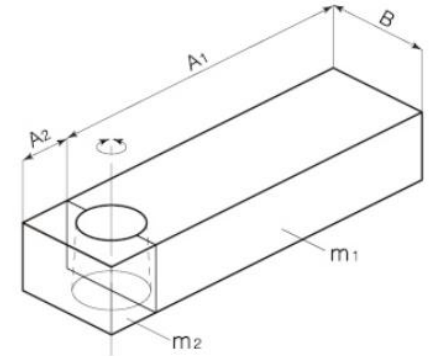
The camshaft may be damaged if it is used within the non-use scope.

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)

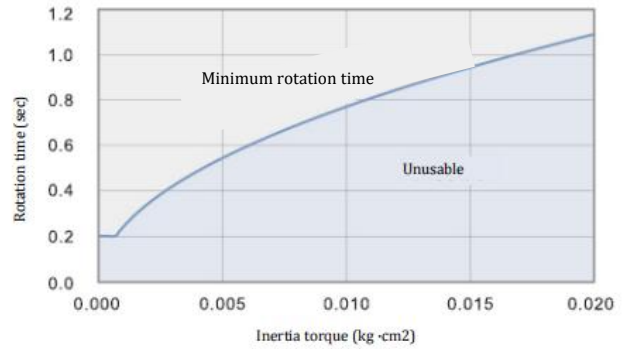
m: Mass (kg)



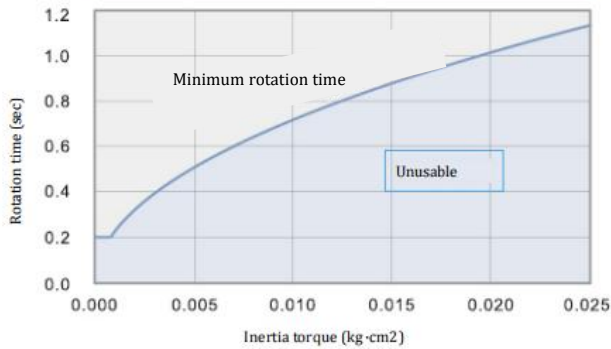
KZG-XG25



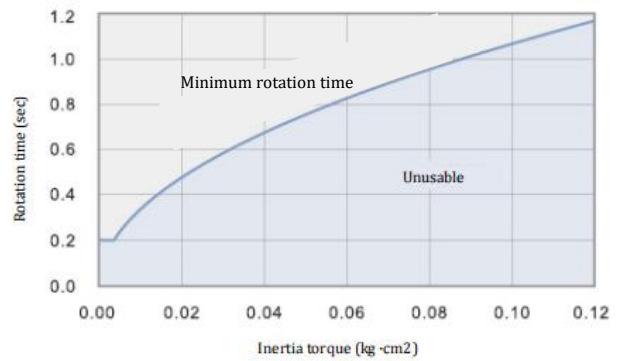
KZG-XG32



KZG-XG40



KZG-XG50



KZG-XG63

