

Pin Clamp Cylinder Compact Type

C(L)KQG32-X3036 Series

ø32

Lightweight

Weight: **41% reduction**

900 g → **530 g**

(Compared with the CKQG32-X2081, LOW type, without lock)

Compact

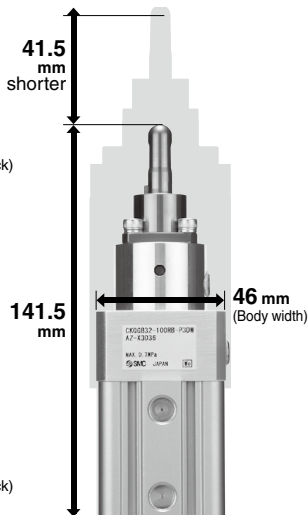
Overall length:
41.5 mm shorter

183 mm → **141.5 mm**

Body width:
4 mm shorter

50 mm → **46 mm**

(Compared with the CKQG32-X2081, LOW type, without lock)



■ Lock mechanism to prevent the dropping of workpieces during emergency stops

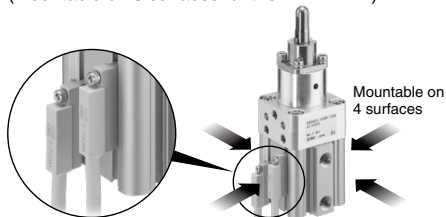
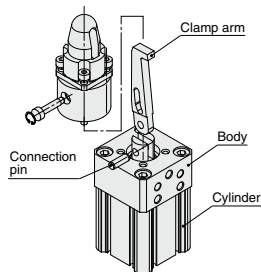
■ Round type and diamond type guide pins for workpieces with ø8 to ø20 hole diameters are available.
* ø10 to ø20 for the diamond type

■ Fine adjustment of the clamping height is possible with shims.
(Option)

■ Auto switches are mountable on 4 surfaces.
(Mountable on 3 surfaces for the D-P4DW□)

■ Easy arm replacement

The arm can be easily replaced without detaching the body and the cylinder by simply removing the connection pin.



■ Applicable Auto Switches:

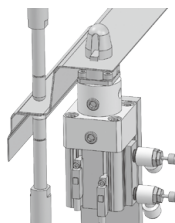
Magnetic field-resistant auto switch:
D-P3DWA□, D-P4DW□

General purpose type auto switch:
D-M9□W(V), D-A9□

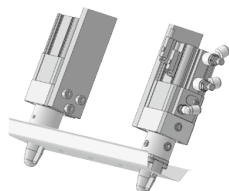


Application Examples

For use in narrow spaces



Drop prevention for workpieces during emergency stops when locked in the unclamping direction



Pin Clamp Cylinder Compact Type

C(L)KQG32-X3036

ø32

How to Order

C L K Q G B 32 - 075 R A - P3DWASC - X3036

With lock

Nil	Without lock
L	With lock

Mounting surface position (viewed from top)

Symbol	Mounting surface position
A	
B	
C	
D	

Bore size

32 32 mm

Guide pin diameter

* For guide pin diameter, refer to the next page.

Guide pin shape

R	Round type	
D	Diamond type	

Auto switch type

Nil	Without auto switch
-----	---------------------

* Refer to the table below for the applicable auto switch model.
 * Auto switches are shipped together, (but not assembled).
 * When the total thickness of clamped workpiece is over 2 mm, the auto switch may not be adjusted to the most sensitive position.

Clamp arm position (clockwise viewed from top)

Symbol	Clamp arm position	Symbol	Clamp arm position
A	Same as the port side 	C	180° from the port side
B	90° from the port side 	D	270° from the port side

Number of auto switches

Nil	2
S	1 (Unclamping side)

Auto Switch Models: Refer to pages 552 to 554 for further information on auto switches.

Magnetic Field Resistant Auto Switches

Type	Auto switch model	Applicable magnetic field	Electrical entry	Indicator light	Wiring (Pin no. in use)	Load voltage	Lead wire length	Applicable load
Solid state auto switch	P3DWASC	AC magnetic field (Single-phase AC welding magnetic field)	Pre-wired connector	2-color indicator	2-wire (3-4) 2-wire (1-4)	24 VDC	0.3 m	Relay, PLC
	P3DWASE							
	P3DWA		Grommet		2-wire		0.5 m	
	P3DWAL						3 m	
	P3DWAZ		Pre-wired connector		2-wire (3-4) 2-wire (1-4)		5 m	
	P4DWSC						0.3 m	
	P4DWSE		Grommet		2-wire		3 m	
	P4DWL						5 m	
P4DWZ								

General Purpose Type Auto Switches General purpose type auto switches cannot be used under a strong magnetic field.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model		Lead wire length (m)				Pre-wired connector	Applicable load		
					DC	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)				
Solid state auto switch	—	Grommet	Yes	3-wire (NPN) 3-wire (PNP)	5 V, 12 V	—	M9NV	M9N	●	●	●	○	○	IC circuit		
							M9PV	M9P	●	●	●	○	○			
				2-wire	12 V	M9BV	M9B	●	●	●	○	○	—			
				3-wire (NPN) 3-wire (PNP)		5 V, 12 V	M9NVV	M9NW	●	●	●	○			○	IC circuit
	Water resistant (2-color indicator)			2-wire	12 V	M9VW	M9W	●	●	●	○	○	—			
						3-wire (NPN) 3-wire (PNP)	5 V, 12 V	M9VAV	M9VA	○	○	○			○	IC circuit
				2-wire	12 V	M9PAV	M9PA	○	○	●	○	○	—			
						M9BAV	M9BA	○	○	●	○	○			—	
Reed auto switch	—	Grommet	No	3-wire (NPN equivalent)	—	5 V	A96V	A96	●	—	—	—	—	IC circuit		—
				2-wire	24 V	12 V	100 V	A93V ^{*1}	A93	●	●	●	—	—	—	Relay, PLC
				—	5 V, 12 V	100 V or less	A90V	A90	●	—	—	—	—	—	—	IC circuit

*1 The 1 m lead wire is only applicable to the D-A93.

* Solid state auto switches marked with "○" are produced upon receipt of order.

* Lead wire length symbols: 0.5 m..... Nil (Example) M9NVV
 1 m..... M (Example) M9NVV
 3 m..... L (Example) M9NVV
 5 m..... Z (Example) M9NVV

Cylinder Specifications

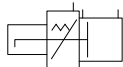


Without lock

With lock

Symbol

With lock



Without lock



Model			C(L)KQG32-X3036
Action			Double acting
Bore size [mm]			32
Cylinder stroke/Clamp stroke [mm]			12.5 (Without workpiece)/9
Fluid			Air
Minimum operating pressure			CKQ: 0.1 MPa CLKQ: 0.15 MPa*1
Maximum operating pressure	Guide pin diameter [mm]	ø7.5 to ø13.0	0.7 MPa
		ø13.5 to ø20.0	1.0 MPa
Ambient and fluid temperatures			-10 to 60°C (No freezing)
Cushion			None
Lubrication			Non-lube
Piston speed (Clamp speed)			50 to 150 mm/s
Port size (Cylinder port)			Rc1/8

*1 Minimum operating pressure is 0.2 MPa when cylinder part and locking part use the same piping.

Lock Specifications

Locking action	Spring locking (Exhaust locking)
Unlocking pressure	0.2 MPa
Lock starting pressure	0.05 MPa
Locking direction	Unclamp direction locking
Port size (Lock release port)	Rc1/8
Holding force (Maximum static load)	402 N

Clamping Force

Guide pin diameter [mm]	Operating pressure [MPa]									
	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
ø7.5 to ø13.0	121	181	241	302	362	422	—	—	—	
ø13.5 to ø20.0	121	181	241	302	362	422	483	543	603	

* It takes approximately 0.3 seconds for the cylinder to operate to generate clamping force from an unclamping state (when no speed controller is installed). Design circuit taking into consideration the time before the clamping force is generated.

* Determine the clamping force according to the strength of the workpiece. It can be damaged if the clamping force is too large.

* Guide pins and clamp arms are consumable items. Please prepare spare parts in case they are damaged.

It is recommended to prepare spare parts for guide pins and clamp arms, especially for products used in workpieces with ø12 or less hole diameters.

Guide Pin Diameter

Symbol	075	076	077	078	079	080	095	096	097	098	099	100	105	106	107	108	109	110	115	116	117	118	119	120
Guide pin diameter [mm]	7.5	7.6	7.7	7.8	7.9	8.0	9.5	9.6	9.7	9.8	9.9	10.0	10.5	10.6	10.7	10.8	10.9	11.0	11.5	11.6	11.7	11.8	11.9	12.0
Applicable hole diameter of workpiece [mm]	For ø8						For ø10						For ø12											
Guide pin shape	Round type												Round type/Diamond type											
Symbol	125	126	127	128	129	130	135	136	137	138	139	140	145	146	147	148	149	150	155	156	157	158	159	160
Guide pin diameter [mm]	12.5	12.6	12.7	12.8	12.9	13.0	13.5	13.6	13.7	13.8	13.9	14.0	14.5	14.6	14.7	14.8	14.9	15.0	15.5	15.6	15.7	15.8	15.9	16.0
Applicable hole diameter of workpiece [mm]	For ø13						For ø14						For ø15						For ø16					
Guide pin shape	Round type/Diamond type																							
Symbol	175	176	177	178	179	180	195	196	197	198	199	200												
Guide pin diameter [mm]	17.5	17.6	17.7	17.8	17.9	18.0	19.5	19.6	19.7	19.8	19.9	20.0												
Applicable hole diameter of workpiece [mm]	For ø18						For ø20																	
Guide pin shape	Round type/Diamond type																							

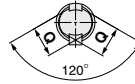
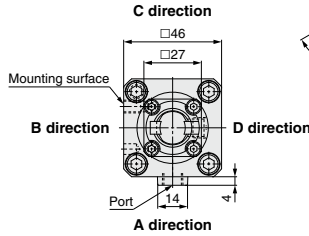
Weight

Guide pin diameter	[g]	
	Without lock	With lock
ø7.5 to ø8.0	530	775
ø9.5 to ø10.0		
ø10.5 to ø11.0		
ø11.5 to ø12.0		
ø12.5 to ø13.0		
ø13.5 to ø14.0	545	790
ø14.5 to ø15.0		
ø15.5 to ø16.0		
ø17.5 to ø18.0	570	815
ø19.5 to ø20.0		

C(L)KQG32-X3036

Dimensions

CKQG□32-□□□-X3036 (Without lock)

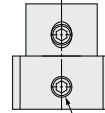
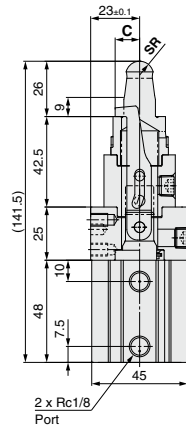
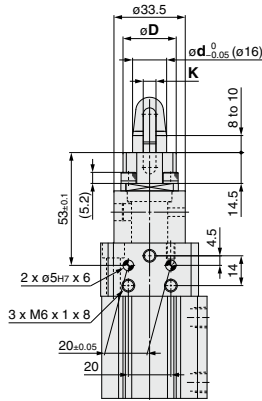


Diamond type

The diamond pin is not available for guide pin diameters of $\phi 7.5$ to 8.0 .



Without lock



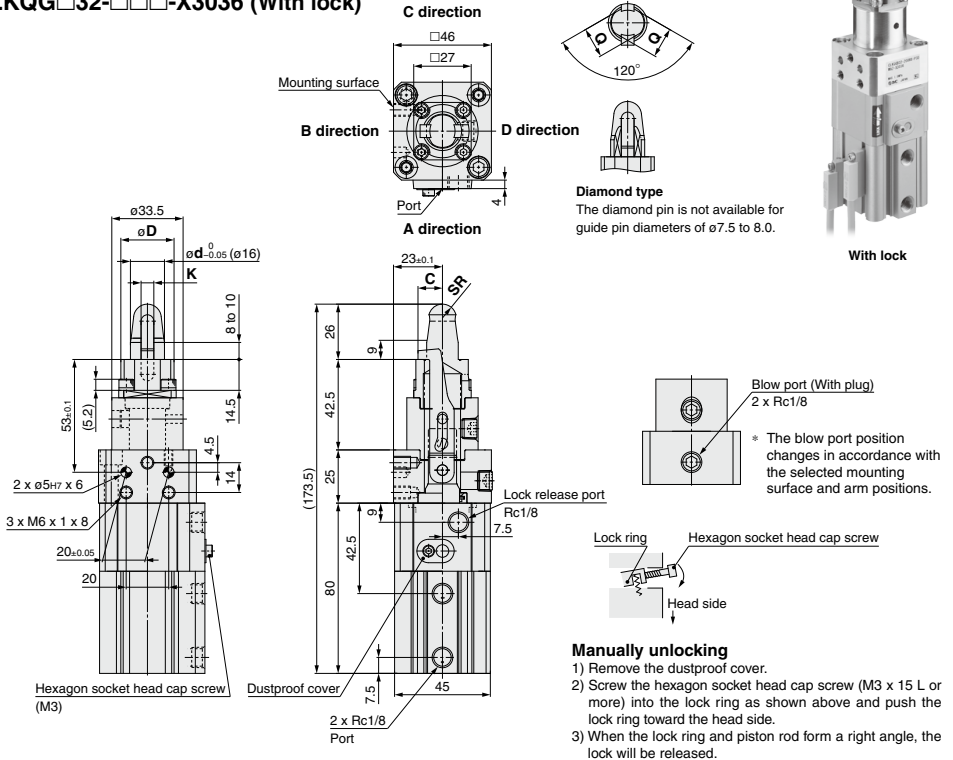
Blow port (With plug)
 $2 \times Rc1/8$

* The blow port position changes in accordance with the selected mounting surface and arm positions.

Hole diameter of workpiece	C	ϕD	ϕd	K	SR	Q	Model number	Hole diameter of workpiece	C	ϕD	ϕd	K	SR	Q	Model number
$\phi 8$	6	$\phi 20$	$\phi 7.5$	3.5	3.5	—	075	$\phi 14$	10.5	$\phi 25$	$\phi 13.5$	6	5.5	12.6	135
			076				$\phi 13.6$				136				
			077				$\phi 13.7$				137				
			078				$\phi 13.8$				138				
			079				$\phi 13.9$				139				
			080				$\phi 14.0$				140				
			095				$\phi 14.5$				145				
$\phi 10$	7.5	$\phi 20$	$\phi 9.6$	4	4.5	9.2	096	$\phi 15$	10.5	$\phi 25$	$\phi 14.6$	6	6	13.3	146
			097				$\phi 14.7$				147				
			098				$\phi 14.8$				148				
			099				$\phi 14.9$				149				
			100				$\phi 15.0$				150				
			105				$\phi 15.5$				155				
			106				$\phi 15.6$				156				
$\phi 11$	7.5	$\phi 20$	$\phi 10.7$	4	4.5	9.8	107	$\phi 16$	11.5	$\phi 25$	$\phi 15.7$	6	6.5	14.3	157
			108				$\phi 15.8$				158				
			109				$\phi 15.9$				159				
			110				$\phi 16.0$				160				
			115				$\phi 16.5$				165				
			116				$\phi 16.6$				166				
			117				$\phi 16.7$				167				
$\phi 12$	8.5	$\phi 20$	$\phi 11.8$	5	5	10.9	118	$\phi 18$	13	$\phi 27$	$\phi 17.7$	6	7.5	16.4	177
			119				$\phi 17.8$				178				
			120				$\phi 17.9$				179				
			125				$\phi 18.0$				180				
			126				$\phi 18.5$				185				
			127				$\phi 18.6$				186				
			128				$\phi 18.7$				187				
$\phi 13$	8.5	$\phi 20$	$\phi 12.8$	5	5.5	11.6	128	$\phi 20$	13	$\phi 27$	$\phi 19.7$	6	8	17.2	197
			129				$\phi 19.8$				198				
			130				$\phi 19.9$				199				
							$\phi 20.0$				200				

Dimensions

CLKQG□32-□□□-X3036 (With lock)



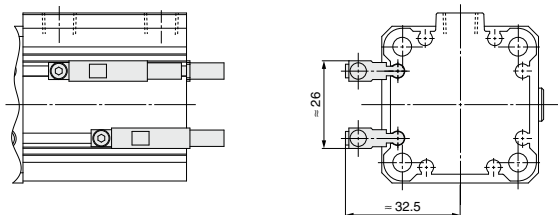
Hole diameter of workpiece	C	ϕD	ϕd	K	SR	Q	Model number	Hole diameter of workpiece	C	ϕD	ϕd	K	SR	Q	Model number
$\phi 8$	6	$\phi 20$	$\phi 7.5$	3.5	3.5	—	075	$\phi 14$	10.5	$\phi 25$	$\phi 13.5$	6	5.5	12.6	135
			$\phi 7.6$				076				$\phi 13.6$				136
			$\phi 7.7$				077				$\phi 13.7$				137
			$\phi 7.8$				078				$\phi 13.8$				138
			$\phi 7.9$				079				$\phi 13.9$				139
			$\phi 8.0$				080				$\phi 14.0$				140
			$\phi 9.5$				095				$\phi 14.5$				145
$\phi 10$	7.5	$\phi 20$	$\phi 9.6$	4	4.5	9.2	096	$\phi 15$	10.5	$\phi 25$	$\phi 14.6$	6	6	13.3	146
			$\phi 9.7$				097				$\phi 14.7$				147
			$\phi 9.8$				098				$\phi 14.8$				148
			$\phi 9.9$				099				$\phi 14.9$				149
			$\phi 10.0$				100				$\phi 15.0$				150
			$\phi 10.5$				105				$\phi 15.5$				155
			$\phi 10.6$				106				$\phi 15.6$				156
$\phi 11$	7.5	$\phi 20$	$\phi 10.7$	4	4.5	9.8	107	$\phi 16$	11.5	$\phi 25$	$\phi 15.7$	6	6.5	14.3	157
			$\phi 10.8$				108				$\phi 15.8$				158
			$\phi 10.9$				109				$\phi 15.9$				159
			$\phi 11.0$				110				$\phi 16.0$				160
			$\phi 11.5$				115				$\phi 17.5$				175
			$\phi 11.6$				116				$\phi 17.6$				176
			$\phi 11.7$				117				$\phi 17.7$				177
$\phi 12$	8.5	$\phi 20$	$\phi 11.8$	5	5	10.9	118	$\phi 18$	13	$\phi 27$	$\phi 17.8$	6	7.5	16.4	178
			$\phi 11.9$				119				$\phi 17.9$				179
			$\phi 12.0$				120				$\phi 18.0$				180
			$\phi 12.5$				125				$\phi 19.5$				195
			$\phi 12.6$				126				$\phi 19.6$				196
			$\phi 12.7$				127				$\phi 19.7$				197
			$\phi 12.8$				128				$\phi 19.8$				198
$\phi 13$	8.5	$\phi 20$	$\phi 12.9$	5	5.5	11.6	129	$\phi 20$	13	$\phi 27$	$\phi 19.9$	6	8	17.2	199
			$\phi 13.0$				130				$\phi 20.0$				200

C(L)KQG32-X3036 Auto Switch Mounting

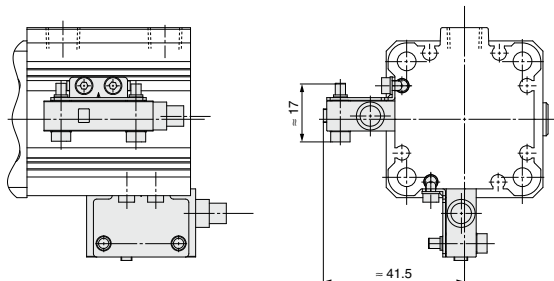
Auto Switch Mounting Height

Applicable cylinder: C(L)KQG32-X3036

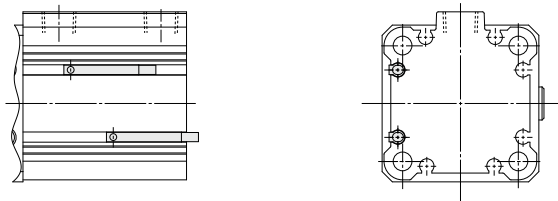
D-P3DWA□



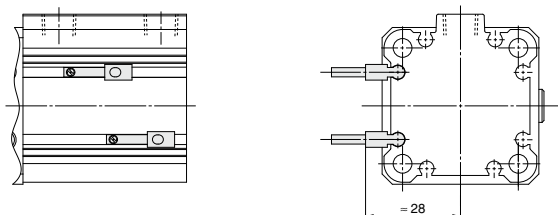
D-P4DW□



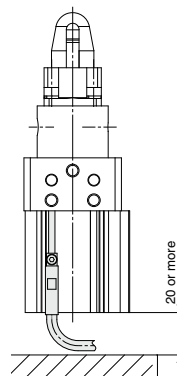
D-M9□ D-M9□W D-A9□



D-M9□V D-M9□WV D-A9□V

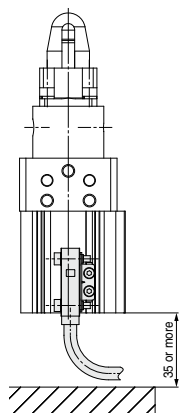


For D-P3DWA□



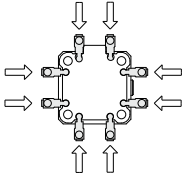
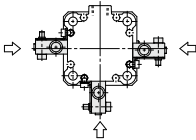
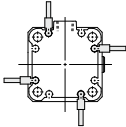
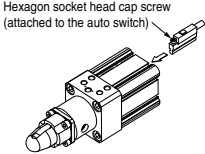
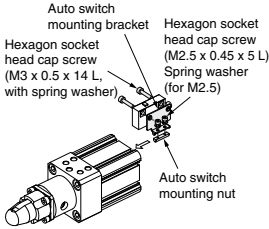
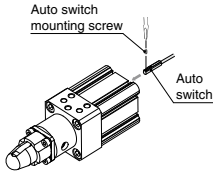
* Allow 20 mm or more space at the cylinder head side to secure the minimum bending radius of the auto switch lead wire.

For D-P4DW□



* Allow 35 mm or more space at the cylinder head side to secure the minimum bending radius of the auto switch lead wire.

Auto Switch Mounting Bracket Part No./Mounting Method

Applicable cylinder	C(L)KQG32-X3036													
Applicable auto switches	D-P3DWA□	D-P4DW□	D-M9□(V), D-M9□W(V), D-M9□A(V) D-A9□(V)											
Bore size [mm]	φ32													
Auto switch mounting bracket part no.	BQ7-032													
Auto switch mounting bracket fitting parts lineup/Weight	—	<ul style="list-style-type: none"> ● Auto switch mounting bracket ● Auto switch mounting nut ● Hexagon socket head cap screw (M3 x 0.5 x 14 L, with spring washer) ● Hexagon socket head cap screw (M2.5 x 0.45 x 5 L) ● Spring washer (for M2.5) Weight: 8.5 g	—											
Auto switch mounting surfaces	Surfaces with auto switch mounting slot	Surfaces with auto switch mounting slot	Surfaces with auto switch mounting slot											
	 <p style="text-align: center;">* When mounting on the port side, select fittings with width across 12 mm or less.</p>													
Mounting of auto switch	<ol style="list-style-type: none"> ① Insert the auto switch into the mating groove of the cylinder tube. ② Check the detecting position of the auto switch and fix the auto switch firmly with the hexagon socket head cap screw (attached to the auto switch). <p>* The tightening torque for the hexagon socket head cap screw is 0.2 to 0.3 N·m.</p> <div style="text-align: center;">  <p>Hexagon socket head cap screw (attached to the auto switch)</p> </div>	<ol style="list-style-type: none"> ① Fix the auto switch and the auto switch mounting bracket temporarily with the hexagon socket head cap screws (M3 x 14 L). ② Insert the hexagon socket head cap screws (M2.5 x 5 L) into the spring washers (for M2.5), and tighten the auto switch mounting bracket and auto switch mounting nut temporarily. ③ Insert the temporarily fixed auto switch mounting nut into the mating groove of the cylinder tube. ④ Check the detecting position of the auto switch and fix the auto switch firmly with the hexagon socket head cap screws (M2.5 x 5 L, M3 x 14 L). <p>* The tightening torque for the hexagon socket head cap screw (M3 x 14 L) is 0.5 to 0.6 N·m.</p> <p>* The tightening torque for the hexagon socket head cap screw (M2.5 x 5 L) is 0.25 to 0.35 N·m.</p> <div style="text-align: center;">  <p>Auto switch mounting bracket Hexagon socket head cap screw (M3 x 0.5 x 14 L, with spring washer) Hexagon socket head cap screw (M2.5 x 0.45 x 5 L) Spring washer (for M2.5) Auto switch mounting nut</p> </div>	 <p style="text-align: center;">Auto switch mounting screw Auto switch</p> <p>● When tightening the auto switch mounting screw, use a watchmaker's screwdriver with a handle 5 to 6 mm in diameter.</p> <p>Tightening Torque of Auto Switch Mounting Screw [N·m]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Auto switch model</th> <th style="text-align: left;">Tightening torque</th> </tr> </thead> <tbody> <tr> <td>D-M9□(V)</td> <td rowspan="2" style="text-align: center;">0.05 to 0.15</td> </tr> <tr> <td>D-M9□W(V)</td> </tr> <tr> <td>D-A93</td> <td rowspan="2" style="text-align: center;">0.05 to 0.10</td> </tr> <tr> <td>D-M9□A(V)</td> </tr> <tr> <td>D-A9□(V)</td> <td rowspan="2" style="text-align: center;">0.10 to 0.20</td> </tr> <tr> <td>(Excludes the D-A93)</td> </tr> </tbody> </table>	Auto switch model	Tightening torque	D-M9□(V)	0.05 to 0.15	D-M9□W(V)	D-A93	0.05 to 0.10	D-M9□A(V)	D-A9□(V)	0.10 to 0.20	(Excludes the D-A93)
Auto switch model	Tightening torque													
D-M9□(V)	0.05 to 0.15													
D-M9□W(V)														
D-A93	0.05 to 0.10													
D-M9□A(V)														
D-A9□(V)	0.10 to 0.20													
(Excludes the D-A93)														

C(L)KQG32-X3036

Replacement Parts

Guide Pin Order No.

CKQG32X - 075 R

● Guide pin diameter
* Refer to Table 1 below.

● Guide pin shape

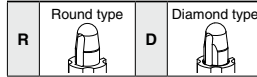


Table 1. Guide Pin Diameter

Symbol	075	076	077	078	079	080	095	096	097	098	099	100	105	106	107	108	109	110	115	116	117	118	119	120
Guide pin diameter [mm]	7.5	7.6	7.7	7.8	7.9	8.0	9.5	9.6	9.7	9.8	9.9	10.0	10.5	10.6	10.7	10.8	10.9	11.0	11.5	11.6	11.7	11.8	11.9	12.0
Applicable hole diameter of workpiece [mm]	For ø8						For ø10						For ø11						For ø12					
Guide pin shape	Round type						Round type/Diamond type						Round type/Diamond type						Round type/Diamond type					

Symbol	125	126	127	128	129	130	135	136	137	138	139	140	145	146	147	148	149	150	155	156	157	158	159	160
Guide pin diameter [mm]	12.5	12.6	12.7	12.8	12.9	13.0	13.5	13.6	13.7	13.8	13.9	14.0	14.5	14.6	14.7	14.8	14.9	15.0	15.5	15.6	15.7	15.8	15.9	16.0
Applicable hole diameter of workpiece [mm]	For ø13						For ø14						For ø15						For ø16					
Guide pin shape	Round type/Diamond type												Round type/Diamond type											

Symbol	175	176	177	178	179	180	195	196	197	198	199	200
Guide pin diameter [mm]	17.5	17.6	17.7	17.8	17.9	18.0	19.5	19.6	19.7	19.8	19.9	20.0
Applicable hole diameter of workpiece [mm]	For ø18						For ø20					
Guide pin shape	Round type/Diamond type											

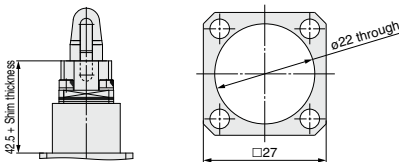
Clamp Arm Assembly Order No.

Applicable hole diameter of workpiece	Order No.
For ø8	CKQ32-54-117ZV-R
For ø10 and ø11	CKQ32-54-118ZV-R
For ø12 and ø13	CKQ32-54-119ZV-R
For ø14 and ø15	CKQ32-54-120ZV-R
For ø16	CKQ32-54-121ZV-R
For ø18 and ø20	CKQ32-54-122ZV-R

* The clamp arm includes a basic internal retaining ring.

Option

Shim



Description	Part no.	Note
Shim A	CKQ32-36A746MN	Plate thickness 1 [mm]
Shim B	CKQ32-36B746MN	Plate thickness 0.5 [mm]

- Shims can be mounted up to 3 mm.
- For auto switches (excludes the M9□V), when the total thickness of shims and a workpiece is over 2 mm, the auto switch may not be adjusted to the most sensitive position.