

Pin Clamp Cylinders

Compact Cylinder Type C(L)KQG32

**Magnetic field resistant
auto switch mounting type**
LOW type (-X2081)
HIGH type (-X2082)

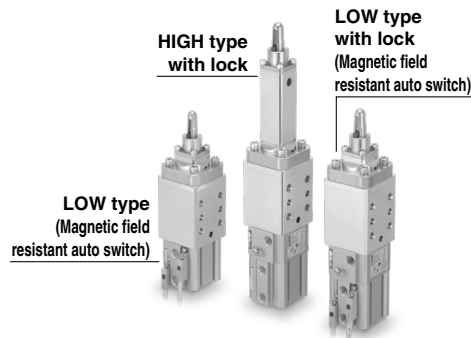
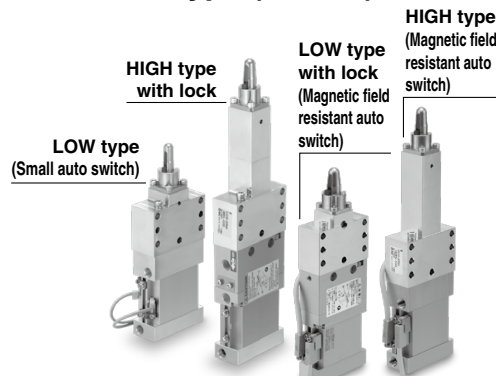
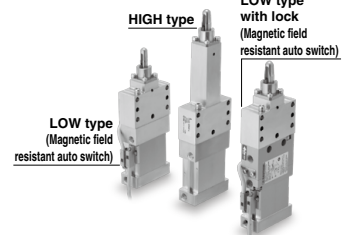


Plate Cylinder Type C(L)KU32

**New Magnetic field resistant auto switch mountable
Small auto switch mounting type**
LOW type (-X2321)
HIGH type (-X2322)



**Magnetic field resistant
auto switch mounting type**
LOW type (-X2091)
HIGH type (-X2092)

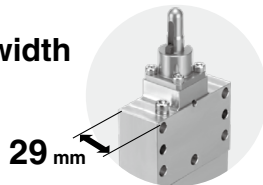


Use the new series "C(L)KU32-X2321/X2322" with improved mountability of the magnetic field resistant auto switch.

■ $\varnothing 32$ pin clamp cylinder available

- Compact design makes it applicable to a broad range of workpieces.
- Contributes to a lightweight jig.

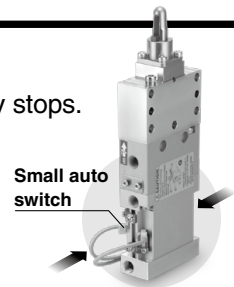
■29 mm width



■All types with lock

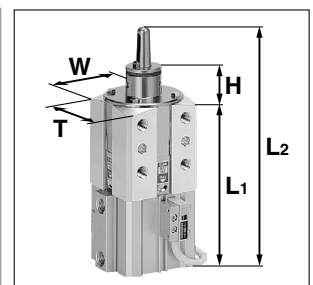
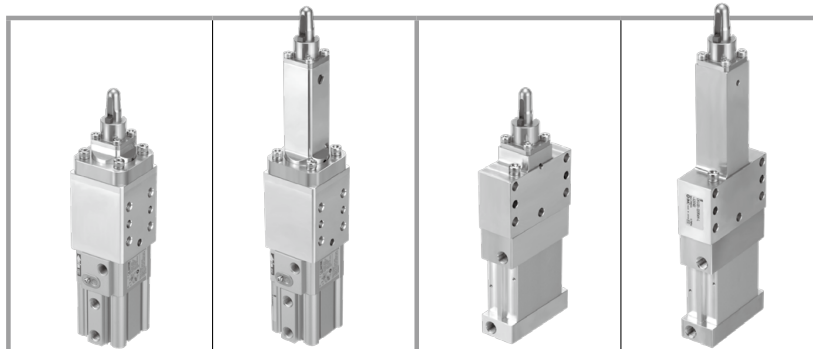
- Holds a workpiece during emergency stops.

■Plate cylinder type with small auto switch



- Guide pins and a diamond shape option (available for $\varnothing 10$ or more) for workpieces with $\varnothing 9$, $\varnothing 11$ and $\varnothing 13$ hole diameters

■2 types of clamping heights can be selected. Height: 30 mm (LOW type), 100 mm (HIGH type)



[mm]

Model	C(L)KQG32 Compact cylinder type (Guide pin diameter: $\varnothing 12$)		C(L)KU32 Plate cylinder type (Guide pin diameter: $\varnothing 12$)		C(L)KQG50 (Guide pin diameter: $\varnothing 13$)	
Clamping height	LOW type	HIGH type	LOW type	HIGH type	LOW type	HIGH type
Clamping height H	30	100	30	100	24	54
Body thickness T	50		29		66	
Body width W	50		70		66	
Body length L1	127 (159)		132.5 (160)		147.5 (182.5)	
Overall length L2	183 (215)	253 (295)	118.5 (216)	258.5 (286)	204.5 (239.5)	234.5 (269.5)
Weight [g]	900 (1140)	1110 (1350)	740 (950)	910 (1120)	1670 (2190)	1840 (2350)

* Values in () for specification with lock

Series C(L)KQG32/C(L)KU32



14-E638

Pin Clamp Cylinders

Series C(L)KQG32/C(L)KU32

■ Added diamond type to guide pin shapes.

- Applicable hole diameter of workpiece for $\phi 10$ to $\phi 20$

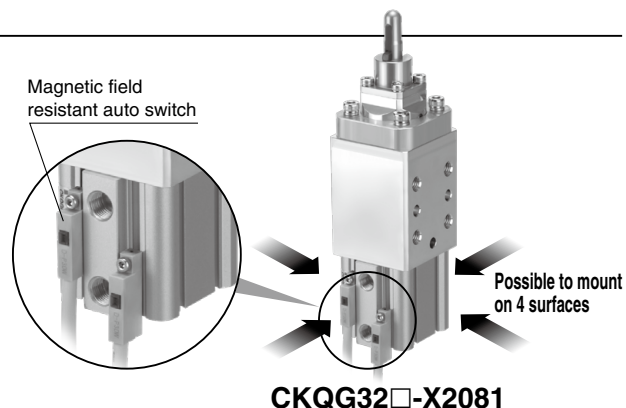
■ Lock mechanism to prevent dropping of workpiece during emergency stops

■ Magnetic field resistant auto switch and small auto switch available

Corresponding model/C(L)KQG32 type
(-X2081, -X2082)

- Magnetic field resistant auto switch: D-P3DWA□

* D-P4DW also available. (Order separately)
Refer to page 20.



Corresponding model/C(L)KU32 type (-X2321, -X2322 only)

- New** • Magnetic field resistant auto switch: D-P3DWA□

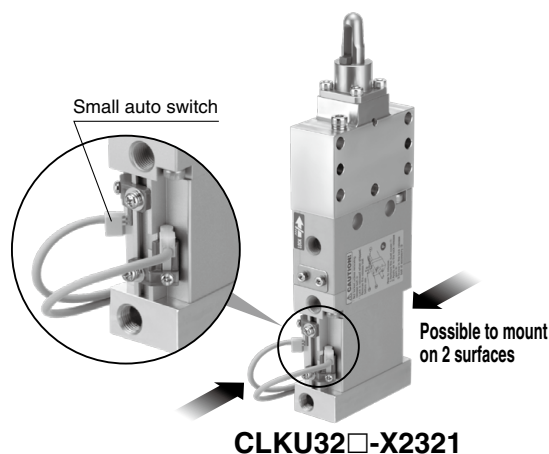
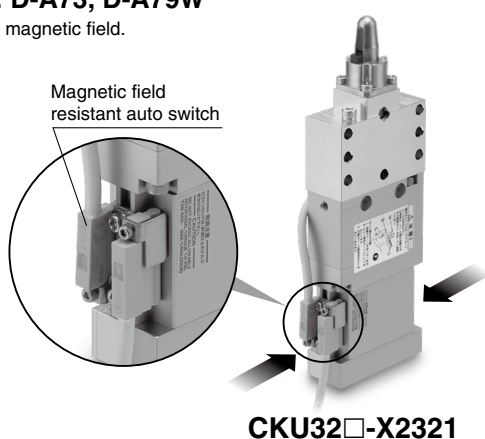
- Solid state auto switch*: D-M9□V, D-M9□WV

- Reed auto switch*: D-A73, D-A79W

* Cannot be used under strong magnetic field.

New Magnetic field resistant auto switch available

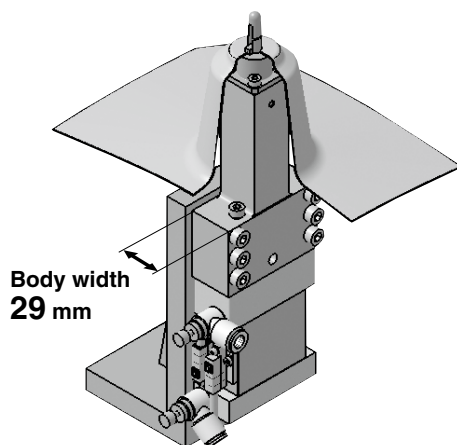
Mounting workability improved by changing the auto switch structure



Application Examples

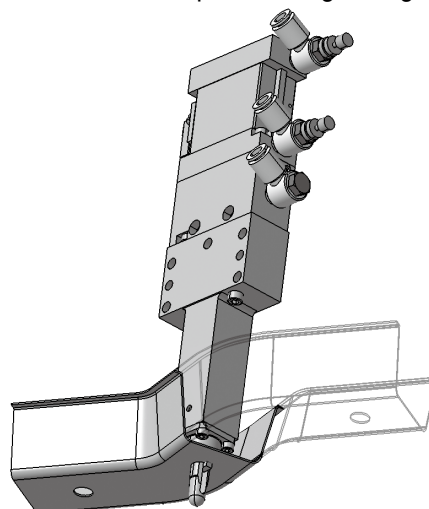
CKU32 (Plate cylinder type)

- Compatible with installing in narrow spaces
- For clamping small and lightweight workpiece and material handling, etc.



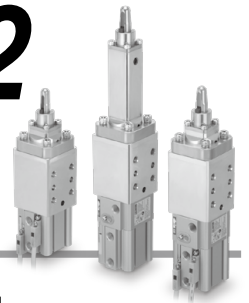
CLKU32 (Plate cylinder type with lock)

- Unclamp direction locking
- Drop prevention for workpiece during emergency stops



Pin Clamp Cylinder Compact Cylinder Type

Series C(L)KQG32



How to Order

Clamping height
LOW type

C L K Q G B 32 - 075 R A L - C -X2081

Clamping height
HIGH type

C L K Q G B 32 - 075 R A H - C -X2082

With lock

Nil	Without lock
L	With lock

Bore size
32 32 mm

Number of auto switches

Nil	2 pcs.
S	1 pc. (Unclamping side)

Mounting surface position
(viewed from top)

Symbol	Mounting surface position
A	
B	
C	
D	

Guide pin diameter
* For guide pin diameter, refer to Table 1 below.

Guide pin shape

R	Round type	D	Diamond type
---	------------	---	--------------

Auto switch type

Nil	Without auto switch (Built-in magnet)
C	D-P3DWASC
E	D-P3DWASE
N	D-P3DWA
L	D-P3DWAL
Z	D-P3DWAZ

- * Auto switches are shipped together, (but not assembled).
- * Refer to the table below for the applicable auto switches.
- * When the total thickness of clamped workpiece is over 2 mm, the auto switch may not be adjusted to the most sensitive position.
- * Secure the minimum bending radius of the auto switch lead wire before use (Refer to page 19).

Clamp arm position (clockwise viewed from top)

Symbol	Clamp arm position	Symbol	Clamp arm position
A		C	
B		D	

Table 1. Guide Pin Diameter

Symbol	075	076	077	078	079	080	085	086	087	088	089	090	095	096	097	098	099	100	105	106	107	108	109	110
Guide pin diameter [mm]	7.5	7.6	7.7	7.8	7.9	8.0	8.5	8.6	8.7	8.8	8.9	9.0	9.5	9.6	9.7	9.8	9.9	10.0	10.5	10.6	10.7	10.8	10.9	11.0
Applicable hole diameter of workpiece [mm]	For ø8						For ø9						For ø10						For ø11					
Guide pin shape	Round type												Round type/Diamond type											
Symbol	115	116	117	118	119	120	125	126	127	128	129	130	135	136	137	138	139	140	145	146	147	148	149	150
Guide pin diameter [mm]	11.5	11.6	11.7	11.8	11.9	12.0	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
Applicable hole diameter of workpiece [mm]	For ø12						For ø13						For ø14						For ø15					
Guide pin shape	Round type/Diamond type																							
Symbol	155	156	157	158	159	160	175	176	177	178	179	180	195	196	197	198	199	200						
Guide pin diameter [mm]	15.5	15.6	15.7	15.8	15.9	16.0	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 ø16						For ø18						For ø20											
Guide pin shape	Round type/Diamond type																							

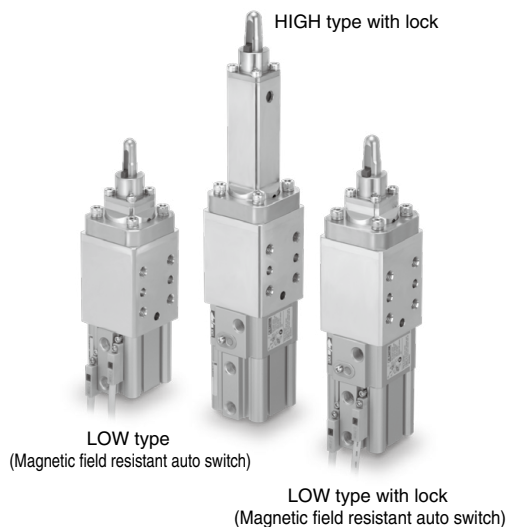
Applicable Auto Switches/Refer to the Best Pneumatics No.3 for further information on auto switches.

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	D-P3DWASC	AC magnetic field (Single-phase AC welding magnetic field)	Pre-wired connector	2-color indication	2-wire (3-4)	24 VDC	0.3 m	Relay, PLC ^{Note 1)}
	D-P3DWASE				2-wire (1-4)		0.5 m	
	D-P3DWA		Grommet		2-wire		3 m	
	D-P3DWAL						5 m	
	D-P3DWA7							

Note 1) PLC: Programmable Logic Controller

Note 2) There are applicable auto switches other than the listed above. For details, refer to page 20.

Series C(L)KQG32



Basic Specifications

Model			C(L)KQG32
Action			Double acting
Bore size [mm]			32
Cylinder stroke/Clamp stroke [mm]			12.5 (Without workpiece)/10
Fluid			Air
Minimum operating pressure			CKQ□: 0.1 MPa CLKQ□: 0.15 MPa*
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 temperature			−10 to 60°C (No freezing)
Cushion			None
Lubrication			Non-lube
Piston speed (Clamp speed)			50 to 150 mm/sec
Port size (Cylinder port)			Rc1/8

* 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

Model	Guide pin diameter [mm]	Operating pressure [MPa]									[N]
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
C(L)KQG32	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	

Note 1) 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.

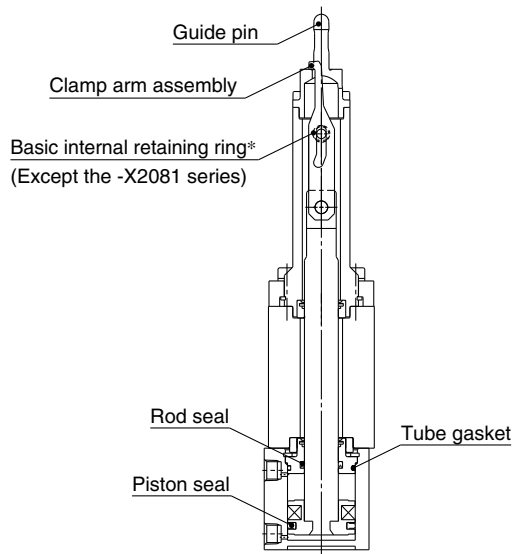
Note 2) Determine the clamping force according to the strength of the workpiece. It can be damaged if the clamping force is too large.

Note 3) 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.

Weight

						Unit: g
Model		CKQG32		CLKQG32		
		-X2081	-X2082	-X2081	-X2082	
Guide pin diameter [mm]	ø7.5 to ø8.0	900	1110	1140	1350	
	ø8.5 to ø9.0					
	ø9.5 to ø10.0					
	ø10.5 to ø11.0					
	ø11.5 to ø12.0					
	ø12.5 to ø13.0	940	1150	1180	1390	
	ø13.5 to ø14.0					
	ø14.5 to ø15.0					
	ø15.5 to ø16.0	950	1160	1190	1400	
	ø17.5 to ø18.0					
ø19.5 to ø20.0						

Replacement Parts



CKQG□32-100R□H-X2082

■Guide Pin Order No.

CKQG32X- 075 R

Guide pin diameter

* Refer to Table 1 (Symbol 2) below.

Guide pin shape

	Round type	Diamond type
R		

■Clamp Arm Assembly Order No.

CKQG32X- 08 B

Applicable hole diameter of workpiece

* Refer to Table 1 (Symbol 1) below.

Clamp arm assembly

* The clamp arm includes a basic internal retaining ring.

■Seal Kit (For type without lock only)

Kit no.	Contents
CQ2B32-PS	①Piston seal ②Rod seal ③Tube gasket

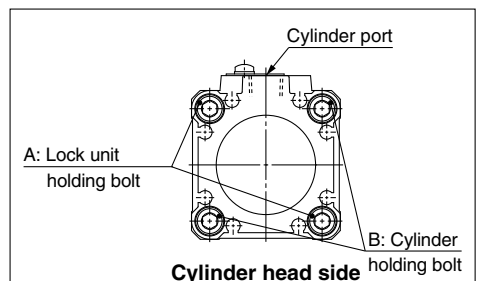
* Seal kit includes ①, ②, ③. Since the seal kit does not include a grease pack, order the "Grease Pack" below separately.

* CLKQ cannot be disassembled and therefore no seal kit is available.

■Grease Pack

Kit no.	Contents
GR-S-010	Grease 10 g

* Please consult with SMC when replacing the actuating cylinders.



⚠ Warning

When replacing the arm for cylinders with lock (Series CLKQG32), never loosen A: Lock unit holding bolt shown above (2 places). (Cylinders are fixed in place with B: Cylinder holding bolt (2 places).)

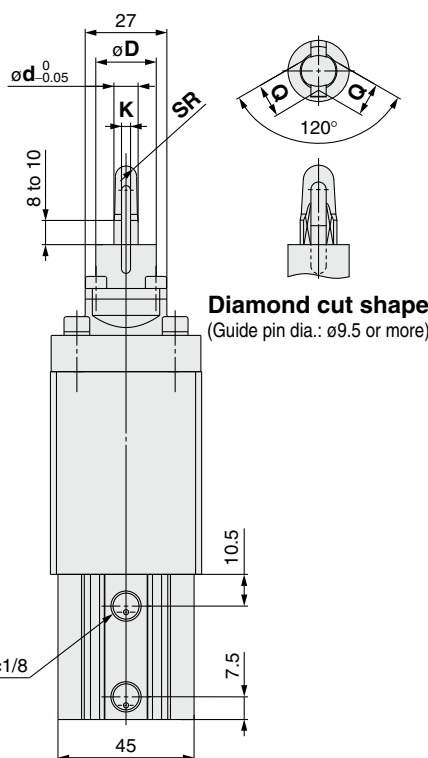
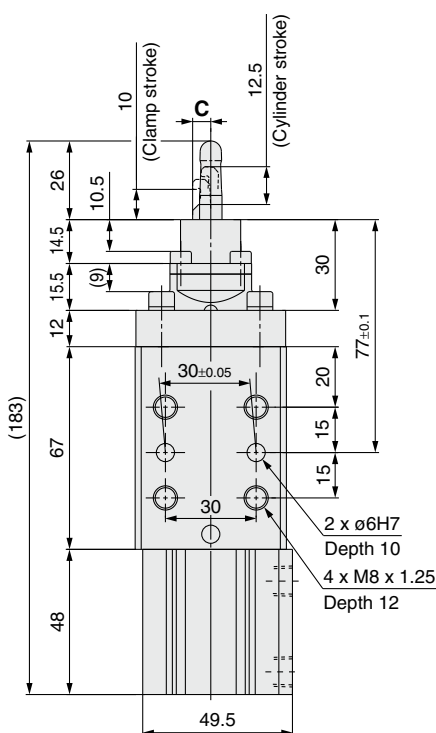
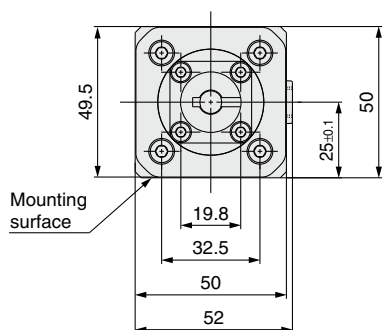
Table 1. Guide Pin Diameter/Applicable Hole Diameter of Workpiece

Symbol 1	Applicable hole diameter of workpiece	Symbol 2	Guide pin diameter	Shape	Symbol 1	Applicable hole diameter of workpiece	Symbol 2	Guide pin diameter	Shape	Symbol 1	Applicable hole diameter of workpiece	Symbol 2	Guide pin diameter	Shape
08	8	075	7.5	Round type	12	12	115	11.5	Round type Diamond type	16	16	155	15.5	Round type Diamond type
		076	7.6				116	11.6				156	15.6	
		077	7.7				117	11.7				157	15.7	
		078	7.8				118	11.8				158	15.8	
		079	7.9				119	11.9				159	15.9	
		080	8.0				120	12.0				160	16.0	
09	9	085	8.5		13	13	125	12.5		18	18	175	17.5	
		086	8.6				126	12.6				176	17.6	
		087	8.7				127	12.7				177	17.7	
		088	8.8				128	12.8				178	17.8	
		089	8.9				129	12.9				179	17.9	
		090	9.0				130	13.0				180	18.0	
10	10	095	9.5	14	14	135	13.5	20	20	195	19.5			
		096	9.6			136	13.6			196	19.6			
		097	9.7			137	13.7			197	19.7			
		098	9.8			138	13.8			198	19.8			
		099	9.9			139	13.9			199	19.9			
		100	10.0			140	14.0			200	20.0			
11	11	105	10.5	15	15	145	14.5							
		106	10.6			146	14.6							
		107	10.7			147	14.7							
		108	10.8			148	14.8							
		109	10.9			149	14.9							
		110	11.0			150	15.0							

Series C(L)KQG32

Dimensions

CKQG□32 (Clamping height LOW type) * The figures below indicate the CKQGB32-□RCL-X2081.



Mounting surface position

A	
B	
C	
D	

Clamp arm position

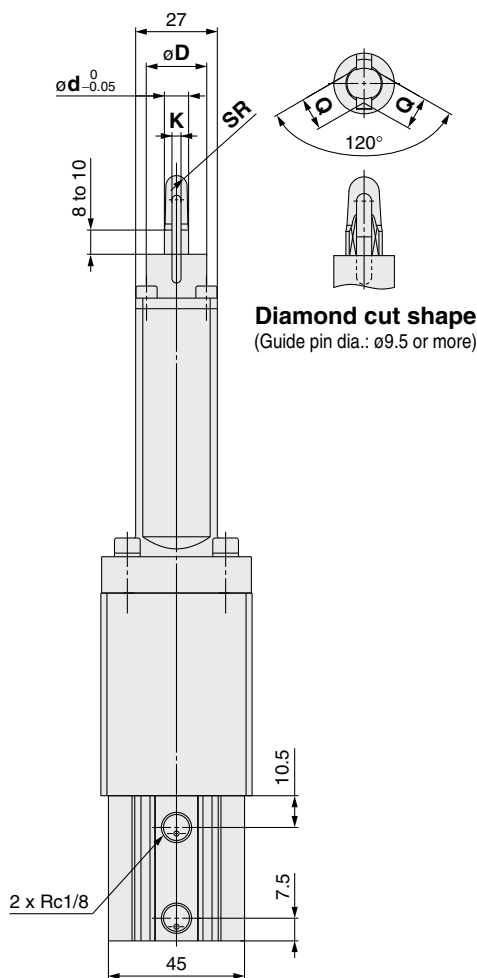
A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø8	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
			8.0				080
ø9	6.5	20	8.5	4	4	—	085
			8.6				086
			8.7				087
			8.8				088
			8.9				089
			9.0				090
ø10	7.5	20	9.5	4	4.5	9.2	095
			9.6				096
			9.7				097
			9.8				098
			9.9				099
			10.0				100
ø11	7.5	20	10.5	4	4.5	9.8	105
			10.6				106
			10.7				107
			10.8				108
			10.9				109
			11.0				110

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø12	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
ø13	8.5	20	12.5	5	5.5	11.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
			13.0				130
ø14	10.5	25	13.5	6	5.5	12.6	135
			13.6				136
			13.7				137
			13.8				138
			13.9				139
			14.0				140
ø15	10.5	25	14.5	6	6	13.3	145
			14.6				146
			14.7				147
			14.8				148
			14.9				149
			15.0				150

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø16	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
			16.0				160
ø18	13	27	17.5	6	7.5	16.4	175
			17.6				176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
ø20	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
			20.0				200

CKQG□32 (Clamping height HIGH type) * The figures below indicate the CKQGB32-□RCH-X2082.



A	
B	
C	
D	

A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side

The diagram shows a square connector with four leads labeled A, B, C, and D. Lead A is on the right, B is at the bottom, C is on the left, and D is at the top. A horizontal arrow labeled 'Port side' points from the right towards the connector. A label 'Clamp arm' points to a small horizontal bar on the left side of the connector, near lead C.

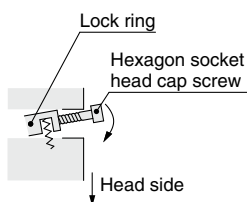
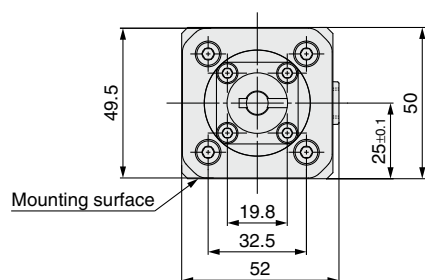
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø16	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
			16.0				160
ø18	13	27	17.5	6	7.5	16.4	175
			17.6				176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
ø20	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
			20.0				200

Series C(L)KQG32



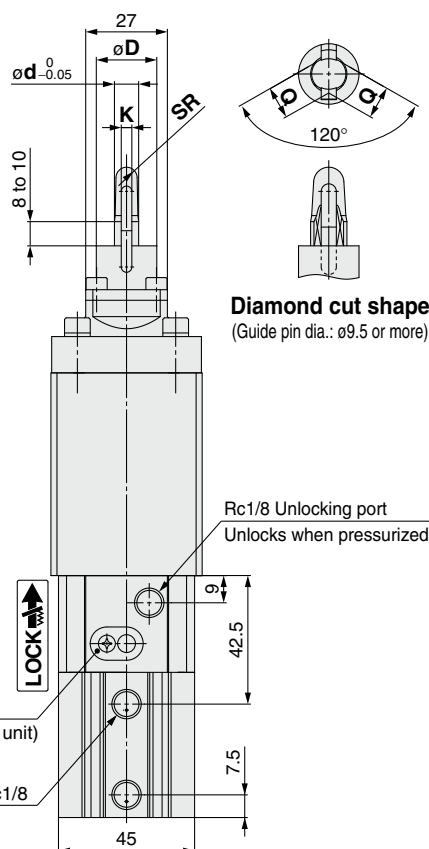
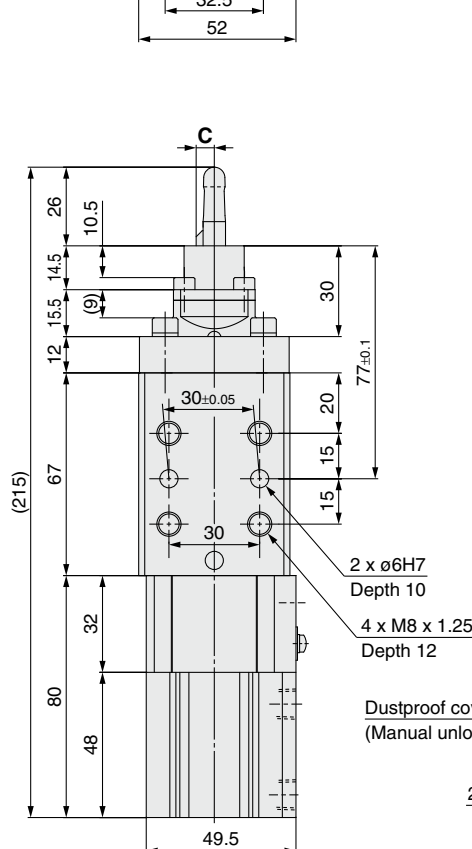
Dimensions

CLKQG□32 (Clamping height LOW type) * The figures below indicate the CLKQGB32-□RCL-X2081.



Manually unlocking

- 1) Remove the dustproof cover.
- 2) Screw the hexagon socket head cap screw (M3 x 15 L or more) into the lock ring shown on the left and raise the lock ring toward the head side.
- 3) The lock ring and piston rod form a right angle, and the lock is released.



Mounting surface position

A	 Port side Mounting surface
B	 Port side Mounting surface
C	 Port side Mounting surface
D	 Port side Mounting surface

Clamp arm position

A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side

The diagram shows a square plate with four circular holes arranged in a 2x2 grid. The holes are labeled with letters: 'A' is at the top-right, 'B' is at the bottom-right, 'C' is at the top-left, and 'D' is at the bottom-left. A horizontal arrow labeled 'Port side' points from the right towards the center of the plate. A label 'Clamp arm' with a line pointing to the top edge of the plate is located above the 'D' hole.

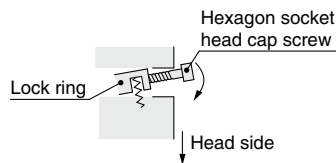
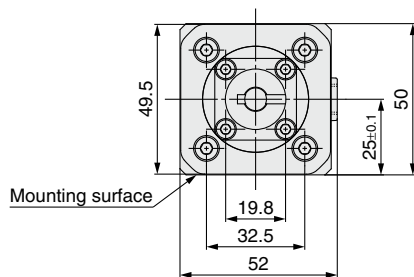
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø8	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
			8.0				080
ø9	6.5	20	8.5	4	4	—	085
			8.6				086
			8.7				087
			8.8				088
			8.9				089
			9.0				090
ø10	7.5	20	9.5	4	4.5	9.2	095
			9.6				096
			9.7				097
			9.8				098
			9.9				099
			10.0				100
ø11	7.5	20	10.5	4	4.5	9.8	105
			10.6				106
			10.7				107
			10.8				108
			10.9				109
			11.0				110

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
$\phi 12$	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
$\phi 13$	8.5	20	12.5	5	5.5	11.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
			13.0				130
$\phi 14$	10.5	25	13.5	6	5.5	12.6	135
			13.6				136
			13.7				137
			13.8				138
			13.9				139
			14.0				140
$\phi 15$	10.5	25	14.5	6	6	13.3	145
			14.6				146
			14.7				147
			14.8				148
			14.9				149
			15.0				150

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø16	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
			16.0				160
ø18	13	27	17.5	6	7.5	16.4	175
			17.6				176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
ø20	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
			20.0				200

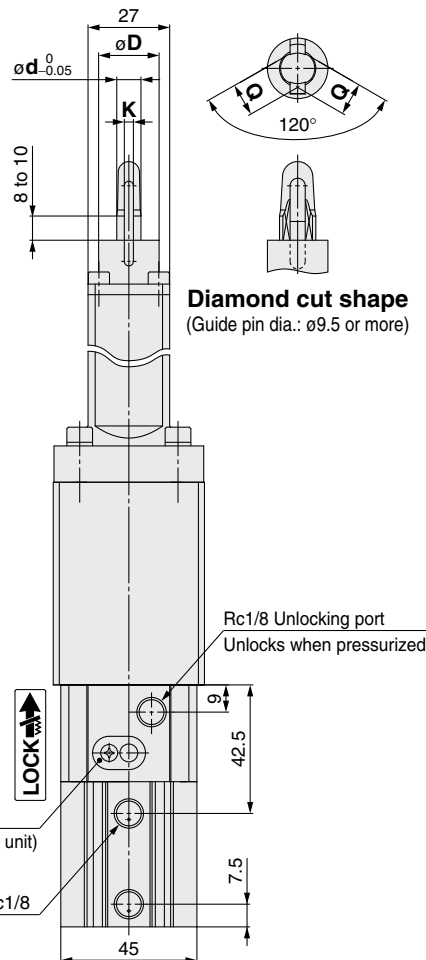
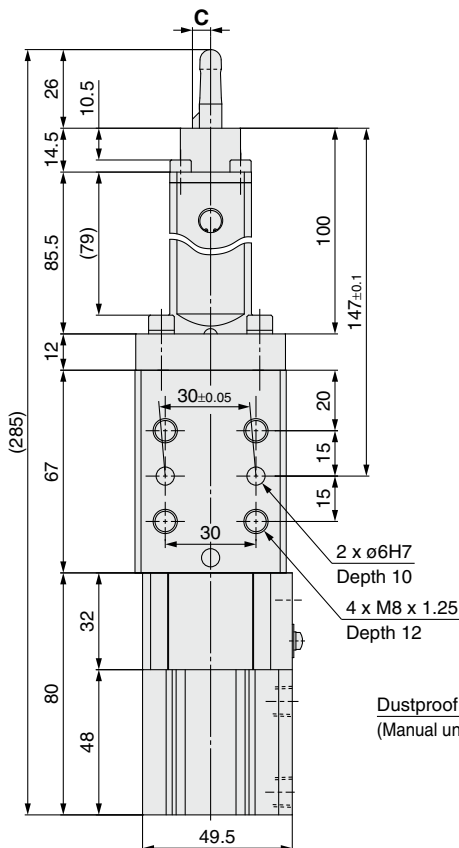


CLKQG□32 (Clamping height HIGH type) * The figures below indicate the CLKQGB32-□RCH-X2082.



Manually unlocking

- 1) Remove the dustproof cover.
- 2) Screw the hexagon socket head cap screw (M3 x 15 L or more) into the lock ring shown on the left and raise the lock ring toward the head side.
- 3) The lock ring and piston rod form a right angle, and the lock is released.



Mounting surface position

A	 Port side Mounting surface
B	 Port side Mounting surface
C	 Port side Mounting surface
D	 Port side Mounting surface

Clamp arm position

A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side

Diagram illustrating the orientation of the four-way valve ports relative to the port side:

- A**: Same as the port side
- B**: 90° from the port side
- C**: 180° from the port side
- D**: 270° from the port side

The diagram shows a square valve body with four ports labeled A, B, C, and D. Port A is on the right, labeled "Port side". Port B is at the bottom, Port C is on the left, and Port D is at the top. A "Clamp arm" is shown at the top, connected to port D. The valve body has internal circular components and arrows indicating flow paths.

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø8	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
			8.0				080
ø9	6.5	20	8.5	4	4	—	085
			8.6				086
			8.7				087
			8.8				088
			8.9				089
			9.0				090
ø10	7.5	20	9.5	4	4.5	9.2	095
			9.6				096
			9.7				097
			9.8				098
			9.9				099
			10.0				100
ø11	7.5	20	10.5	4	4.5	9.8	105
			10.6				106
			10.7				107
			10.8				108
			10.9				109
			11.0				110

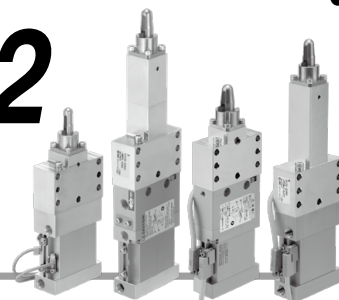
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø12	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
ø13	8.5	20	12.5	5	5.5	11.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
			13.0				130
ø14	10.5	25	13.5	6	5.5	12.6	135
			13.6				136
			13.7				137
			13.8				138
			13.9				139
			14.0				140
ø15	10.5	25	14.5	6	6	13.3	145
			14.6				146
			14.7				147
			14.8				148
			14.9				149
			15.0				150

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø16	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
			16.0				160
ø18	13	27	17.5	6	7.5	16.4	175
			17.6				176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
ø20	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
			20.0				200

Pin Clamp Cylinder Plate Cylinder Type

Magnetic Field Resistant Auto Switch/Small Auto Switch Mounting

Series C(L)KU32



How to Order

Clamping height LOW type C L KU 32 - 075 R A L - P3DWASC - X2321

Clamping height HIGH type C L KU 32 - 075 R A H - M9BWV - X2322

With lock

Nil	Without lock
L	With lock

Bore size

32	Equiv. ø32 piston area
----	------------------------

Guide pin diameter

* For guide pin diameter, refer to Table 1 on the next page.

Guide pin shape

R	Round type	D	Diamond type
---	------------	---	--------------

Clamp arm position (viewed from top)

Symbol	Clamp arm position	Symbol	Clamp arm position
A	Same direction as the port side Port side → Clamp arm	B	Opposite direction of the port side Port side → Clamp arm

Auto switch

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

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2 pcs.
S	1 pc. (Unclamping side)

* Auto switches and mounting brackets are shipped together, (but not assembled).
* For the M9□WV, A73 and A79W, when the total thickness of clamped workpiece is over 2 mm, the auto switch may not be adjusted to the most sensitive position.
⚠ Small auto switches (D-M9□/D-A7□) cannot be used under strong magnetic field.

Applicable Auto Switches/Refer to the Best Pneumatics No. 3 for further information on auto switches.

Magnetic Field Resistant Auto Switch

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	D-P3DWASC	AC magnetic field (Single-phase AC welding magnetic field)	Pre-wired connector	2-color indication	2-wire (3-4)	24 VDC	0.3 m	Relay, PLC (Note 1)
	D-P3DWASE				2-wire (1-4)		0.5 m	
	D-P3DWA		Grommet		2-wire		3 m	
	D-P3DWAL						5 m	
	D-P3DWAZ							

Note 1) PLC: Programmable Logic Controller

Note 2) There are applicable auto switches other than the listed above. For details, refer to the table below.

Small Auto Switch

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	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	M9NV	—	●	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)			M9PV	—	●	●	●	○	○	—	
				2-wire			M9BV	—	●	●	●	○	○	—	
				3-wire (NPN)	24 V	5 V, 12 V	M9NWV	—	●	●	●	○	○	IC circuit	
				3-wire (PNP)			M9PWV	—	●	●	●	○	○	—	
				2-wire			M9BWV	—	●	●	●	○	○	—	
Reed auto switch	Diagnostic indication (2-color indication)	Grommet	Yes	2-wire	24 V	100 V	A73	—	●	—	●	●	—	—	Relay, PLC
							A79W	—	●	—	●	—	—	—	

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

* The D-A9□ and A9□V cannot be mounted.

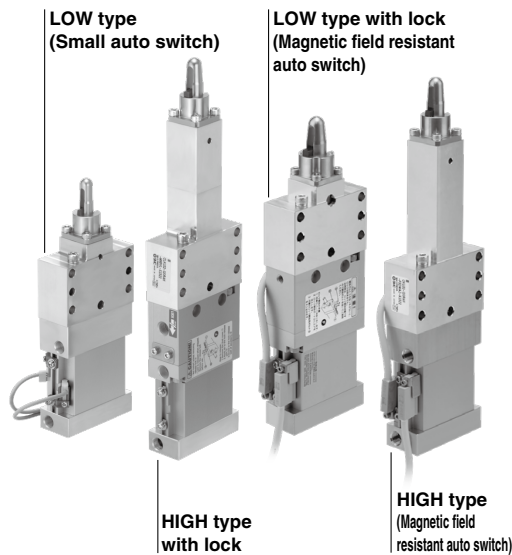
* For details about auto switches with pre-wired connector, refer to the Best Pneumatics No. 3.

* Auto switches and mounting brackets are shipped together, (but not assembled).

* Lead wire length symbols: 0.5 m.....Nil (Example) M9NWV
1 m.....M (Example) M9NWVM
3 m.....L (Example) M9NWVL
5 m.....L (Example) M9NWVZ

Pin Clamp Cylinder Plate Cylinder Type **Series C(L)KU32**

Magnetic Field Resistant Auto Switch/Small Auto Switch Mounting



Basic Specifications

Model	C(L)KU32	
Action	Double acting	
Bore size [mm]	Equivalent to 32	
Cylinder stroke/Clamp stroke [mm]	12.5 (Without workpiece)/10	
Fluid	Air	
Minimum operating pressure	CKU□: 0.1 MPa	CLKU□: 0.15 MPa*
Maximum operating pressure	0.7 MPa	
Ambient and fluid temperature	-10 to 60°C (No freezing)	
Cushion	None	
Lubrication	Non-lube	
Piston speed (Clamp speed)	50 to 150 mm/sec	
Port size (Cylinder port)	Rc1/8	

* 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
Locking 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

Model	Guide pin diameter [mm]	Operating pressure [MPa]					
		0.2	0.3	0.4	0.5	0.6	0.7
C(L)KU32	ø7.5 to ø20.0	130	195	260	325	390	455

Note 1) 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.

Note 2) Determine the clamping force according to the strength of the workpiece. It can be damaged if the clamping force is too large.

Note 3) 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.

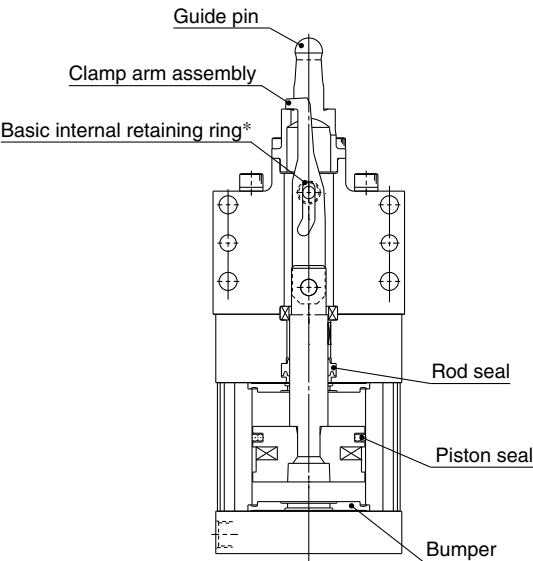
Table 1. Guide Pin Diameter

Symbol	075	076	077	078	079	080	085	086	087	088	089	090	095	096	097	098	099	100	105	106	107	108	109	110
Guide pin diameter [mm]	7.5	7.6	7.7	7.8	7.9	8.0	8.5	8.6	8.7	8.8	8.9	9.0	9.5	9.6	9.7	9.8	9.9	10.0	10.5	10.6	10.7	10.8	10.9	11.0
Applicable hole diameter of workpiece [mm]	For ø8						For ø9						For ø10						For ø11					
Guide pin shape	Round type												Round type/Diamond type											
Symbol	115	116	117	118	119	120	125	126	127	128	129	130	135	136	137	138	139	140	145	146	147	148	149	150
Guide pin diameter [mm]	11.5	11.6	11.7	11.8	11.9	12.0	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
Applicable hole diameter of workpiece [mm]	For ø12						For ø13						For ø14						For ø15					
Guide pin shape	Round type/Diamond type																							
Symbol	155	156	157	158	159	160	175	176	177	178	179	180	195	196	197	198	199	200						
Guide pin diameter [mm]	15.5	15.6	15.7	15.8	15.9	16.0	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 ø16						For ø18						For ø20											
Guide pin shape	Round type/Diamond type																							

Weight

Model		CKU32		CLKU32	
		-X2321	-X2322	-X2321	-X2322
Guide pin diameter [mm]	ø7.5 to ø8.0	740	910	950	1120
	ø8.5 to ø9.0				
	ø9.5 to ø10.0				
	ø10.5 to ø11.0				
	ø11.5 to ø12.0				
	ø12.5 to ø13.0	780	950	990	1160
	ø13.5 to ø14.0				
	ø14.5 to ø15.0				
	ø15.5 to ø16.0	790	960	1000	1170
	ø17.5 to ø18.0				
	ø19.5 to ø20.0				

Replacement Parts



CKU32-120R□L-X2321

Guide Pin Order No.

CKQG32X-075R

Guide pin diameter

* Refer to Table 1 (Symbol 2) below.

Guide pin shape

	Round type	Diamond type
R		

Seal Kit (For type without lock only)

Kit no.	Contents
MUB32-PS	①Piston seal ②Rod seal ③Bumper

* Seal kit includes ①, ②, ③. Since the seal kit does not include a grease pack, order the "Grease Pack" below separately.
* CLKU cannot be disassembled and therefore no seal kit is available.

Grease Pack

Kit no.	Contents
GR-S-010	Grease 10 g

* Please consult with SMC when replacing the actuating cylinders.

Clamp Arm Assembly Order No.

CKQG32X-08B

Applicable hole diameter of workpiece

* Refer to Table 1 (Symbol 1) below.

Clamp arm assembly

* The clamp arm includes a basic internal retaining ring.

Table 1. Guide Pin Diameter/Applicable Hole Diameter of Workpiece

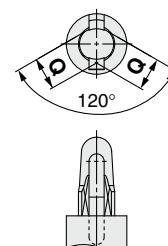
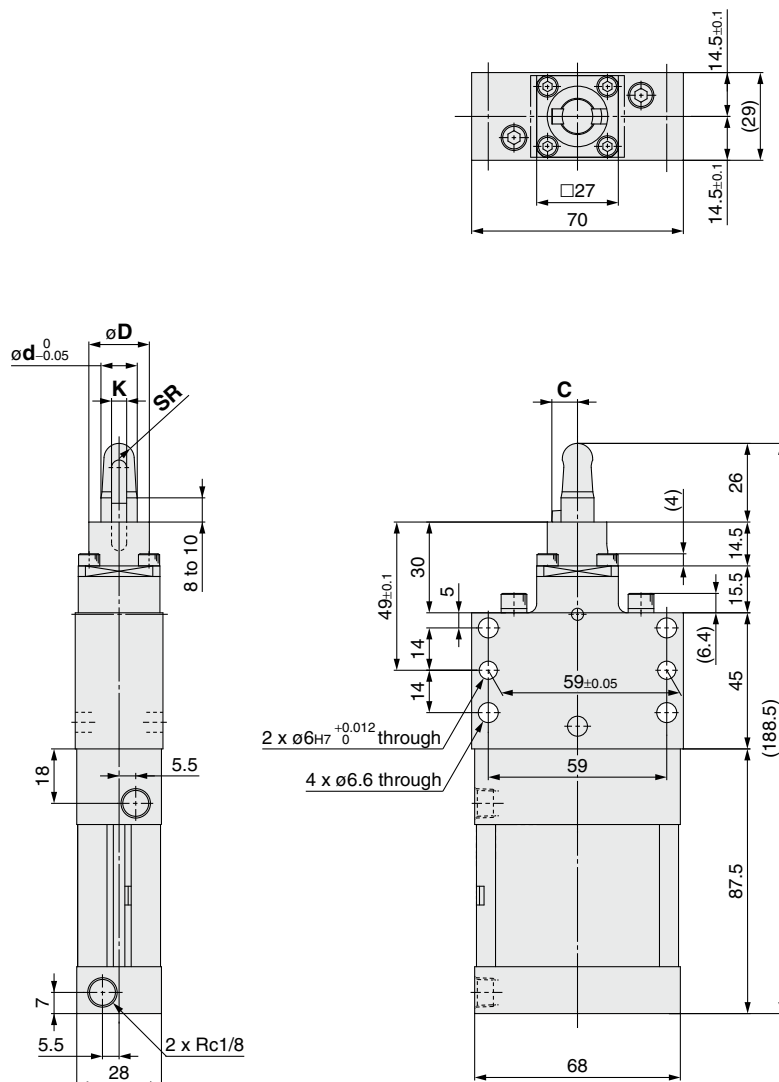
Symbol 1	Applicable hole diameter of workpiece	Symbol 2	Guide pin diameter	Shape	Symbol 1	Applicable hole diameter of workpiece	Symbol 2	Guide pin diameter	Shape	Symbol 1	Applicable hole diameter of workpiece	Symbol 2	Guide pin diameter	Shape
08	8	075	7.5	Round type	12	12	115	11.5	Round type	16	16	155	15.5	Round type
		076	7.6				116	11.6				156	15.6	
		077	7.7				117	11.7				157	15.7	
		078	7.8				118	11.8				158	15.8	
		079	7.9				119	11.9				159	15.9	
		080	8.0				120	12.0				160	16.0	
		085	8.5				125	12.5				175	17.5	
09	9	086	8.6	Round type	13	13	126	12.6	Round type	18	18	176	17.6	Round type
		087	8.7				127	12.7				177	17.7	
		088	8.8				128	12.8				178	17.8	
		089	8.9				129	12.9				179	17.9	
		090	9.0				130	13.0				180	18.0	
		095	9.5	Diamond type	14	14	135	13.5	Diamond type	20	20	195	19.5	Diamond type
		096	9.6				136	13.6				196	19.6	
10	10	097	9.7				137	13.7				197	19.7	
		098	9.8				138	13.8				198	19.8	
		099	9.9				139	13.9				199	19.9	
		100	10.0				140	14.0				200	20.0	
		105	10.5		15	15	145	14.5						
		106	10.6				146	14.6						
		107	10.7				147	14.7						
11	11	108	10.8				148	14.8						
		109	10.9				149	14.9						
		110	11.0				150	15.0						

Pin Clamp Cylinder Plate Cylinder Type Magnetic Field Resistant Auto Switch/Small Auto Switch Mounting **Series C(L)KU32**



Dimensions

CKU32 (Clamping height LOW type) * Refer to "How to Order" for positional relationship of the mounting surface and port.
* The figures below indicate the CKU32-□RAL-X2321.



Diamond cut shape
(Guide pin dia.: Ø9.5 or more)

Clamp arm position

A	Same as the port side
B	Opposite side of the port

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø8	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
			8.0				080
ø9	6.5	20	8.5	4	4	—	085
			8.6				086
			8.7				087
			8.8				088
			8.9				089
			9.0				090
ø10	7.5	20	9.5	4	4.5	9.2	095
			9.6				096
			9.7				097
			9.8				098
			9.9				099
			10.0				100
ø11	7.5	20	10.5	4	4.5	9.8	105
			10.6				106
			10.7				107
			10.8				108
			10.9				109
			11.0				110

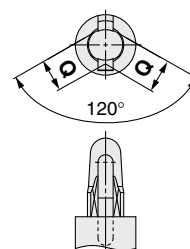
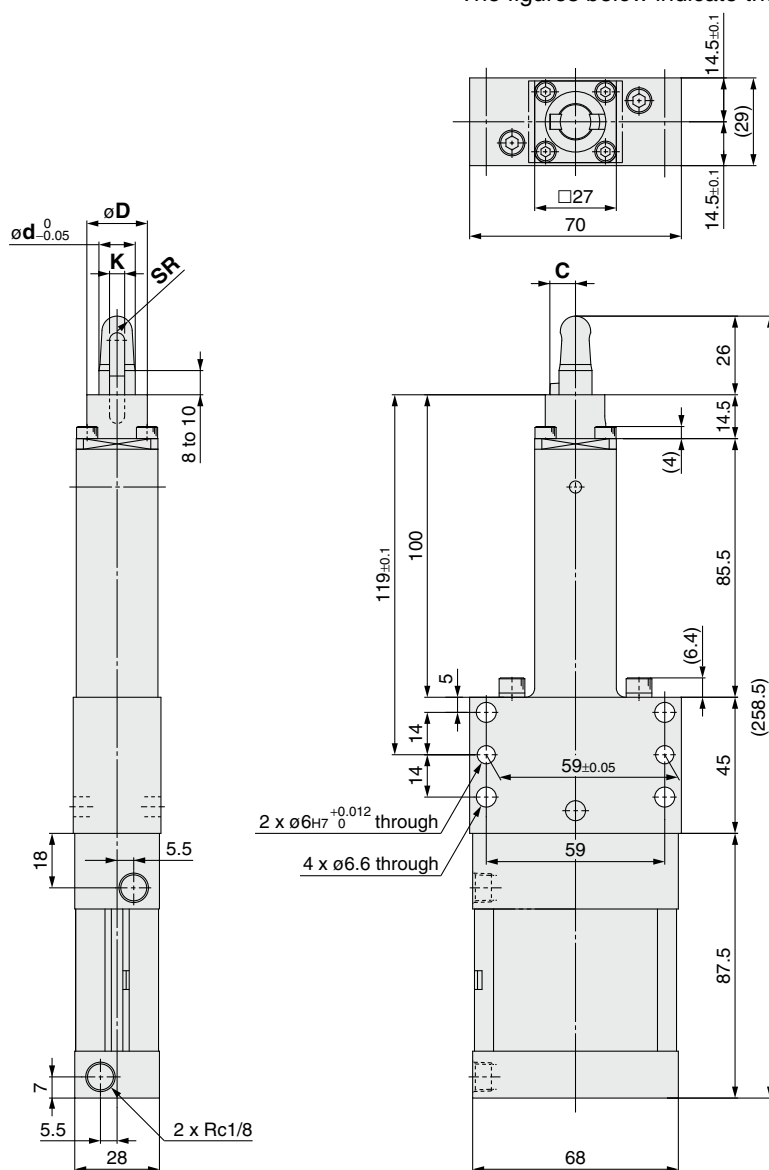
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø12	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
ø13	8.5	20	12.5	5	5.5	11.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
			13.0				130
ø14	10.5	25	13.5	6	5.5	12.6	135
			13.6				136
			13.7				137
			13.8				138
			13.9				139
			14.0				140
ø15	10.5	25	14.5	6	6	13.3	145
			14.6				146
			14.7				147
			14.8				148
			14.9				149
			15.0				150

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø16	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
			16.0				160
ø18	13	27	17.5	6	7.5	16.4	175
			17.6				176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
ø20	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
			20.0				200

Series C(L)KU32

Dimensions

CKU32 (Clamping height HIGH type) * Refer to "How to Order" for positional relationship of the mounting surface and port.
* The figures below indicate the CKU32-□RAH-X2322.



Diamond cut shape
(Guide pin dia.: $\phi 9.5$ or more)

Clamp arm position

A	Same as the port side
B	Opposite side of the port

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
$\phi 8$	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
			8.0				080
$\phi 9$	6.5	20	8.5	4	4	—	085
			8.6				086
			8.7				087
			8.8				088
			8.9				089
			9.0				090
$\phi 10$	7.5	20	9.5	4	4.5	9.2	095
			9.6				096
			9.7				097
			9.8				098
			9.9				099
			10.0				100
$\phi 11$	7.5	20	10.5	4	4.5	9.8	105
			10.6				106
			10.7				107
			10.8				108
			10.9				109
			11.0				110

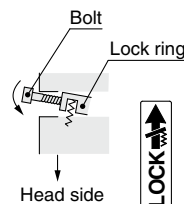
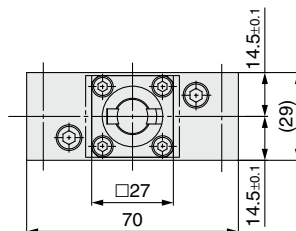
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
$\phi 12$	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
$\phi 13$	8.5	20	12.5	5	5.5	11.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
			13.0				130
$\phi 14$	10.5	25	13.5	6	5.5	12.6	135
			13.6				136
			13.7				137
			13.8				138
			13.9				139
			14.0				140
$\phi 15$	10.5	25	14.5	6	6	13.3	145
			14.6				146
			14.7				147
			14.8				148
			14.9				149
			15.0				150

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
$\phi 16$	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
			16.0				160
$\phi 18$	13	27	17.5	6	7.5	16.4	175
			17.6				176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
$\phi 20$	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
			20.0				200



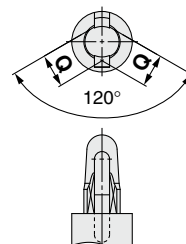
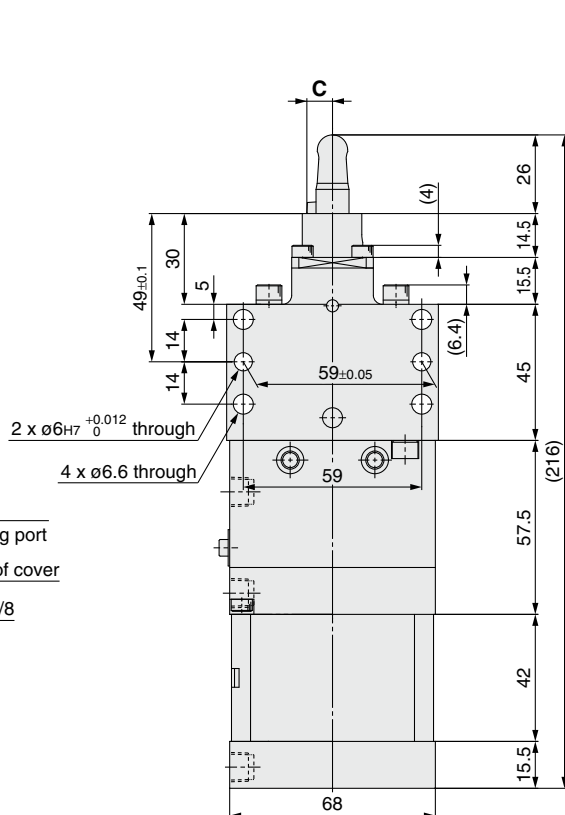
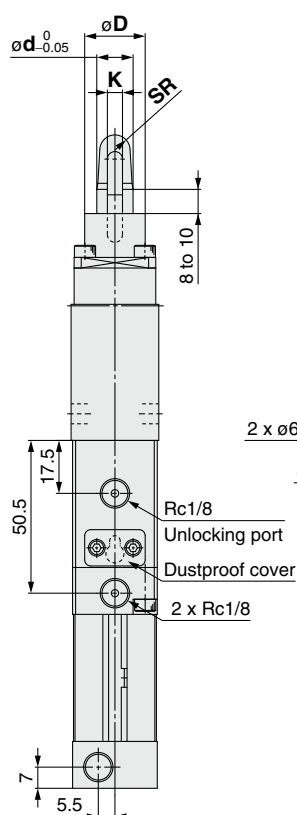
Dimensions

CLKU32 (Clamping height LOW type) * Refer to "How to Order" for positional relationship of the mounting surface and port.
* The figures below indicate the CLKU32-□RAL-X2321.



Manually unlocking

- 1) Remove the dustproof cover.
- 2) Screw the commercially available bolt (M3 x 25 L or more) into the lock ring shown on the left and raise the lock ring toward the head side.
- 3) The lock ring and piston rod form a right angle, and the lock is released.



Diamond cut shape
(Guide pin dia.: ø11.5 or more)

Clamp arm position

A	Same as the port side
B	Opposite side of the port

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø8	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
ø9	6.5	20	8.0	4	4	—	080
			8.5				085
			8.6				086
			8.7				087
			8.8				088
ø10	7.5	20	8.9	4	4.5	9.2	089
			9.0				090
			9.5				095
			9.6				096
			9.7				097
ø11	7.5	20	9.8	4	4.5	9.8	098
			9.9				099
			10.0				100
			10.5				105
			10.6				106

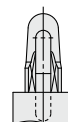
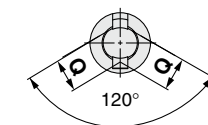
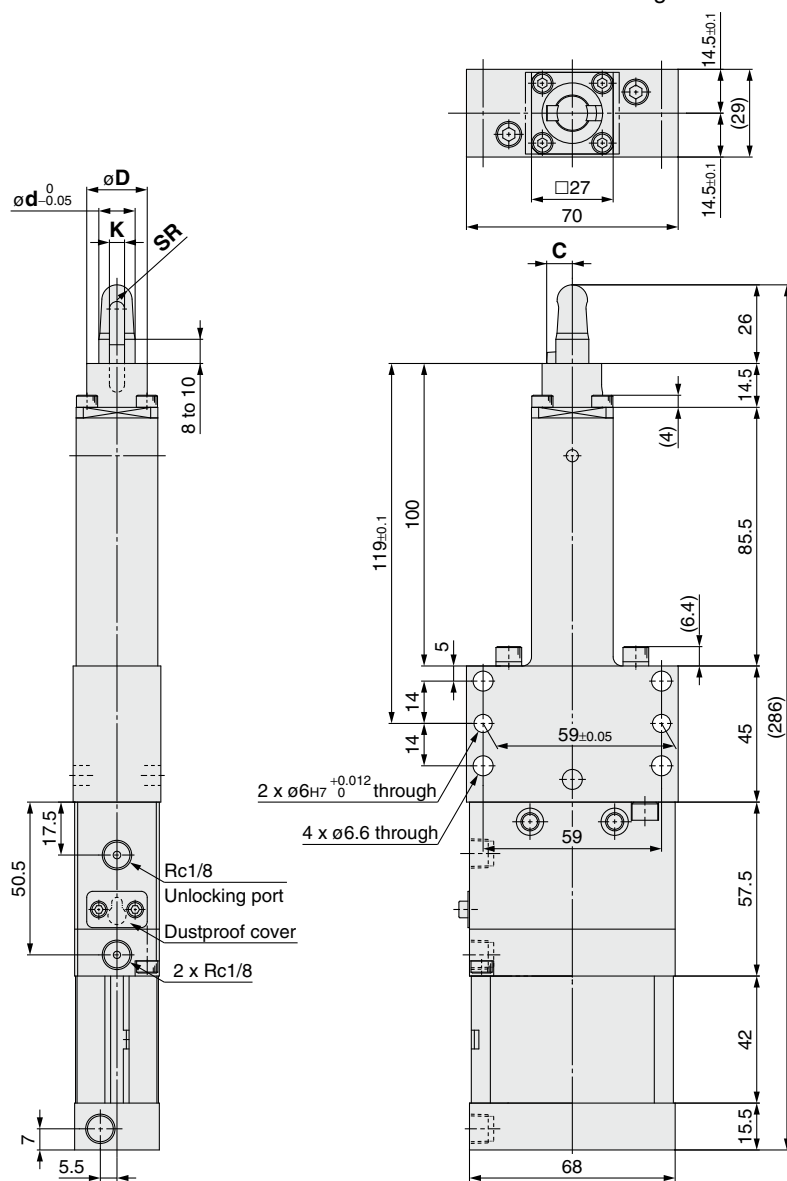
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø12	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
ø13	8.5	20	12.0	5	5.5	11.6	120
			12.5				125
			12.6				126
			12.7				127
			12.8				128
ø14	10.5	25	12.9	6	5.5	12.6	129
			13.0				130
			13.5				135
			13.6				136
			13.7				137
ø15	10.5	25	13.8	6	6	13.3	138
			13.9				139
			14.0				140
			14.5				145
			14.6				146

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø16	11.5	25	15.5	6	6.5	14.3	155
			15.6				156
			15.7				157
			15.8				158
			15.9				159
ø18	13	27	16.0	6	7.5	16.4	160
			17.5				175
			17.6				176
			17.7				177
			17.8				178
ø20	13	27	17.9	6	8	17.2	179
			18.0				180
			19.5				195
			19.6				196
			19.7				197

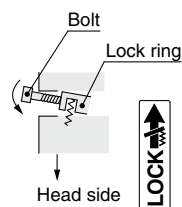
Series C(L)KU32

Dimensions

CLKU32 (Clamping height HIGH type) * Refer to "How to Order" for positional relationship of the mounting surface and port.
* The figures below indicate the CLKU32-□RAH-X2322.



Diamond cut shape
(Guide pin dia.: $\phi 9.5$ or more)



Manually unlocking

- 1) Remove the dustproof cover.
- 2) Screw the commercially available bolt (M3 x 25 L or more) into the lock ring shown on the left and raise the lock ring toward the head side.
- 3) The lock ring and piston rod form a right angle, and the lock is released.

Clamp arm position

A	Same as the port side
B	Opposite side of the port

Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
$\phi 8$	6	20	7.5	3.5	3.5	—	075
			7.6				076
			7.7				077
			7.8				078
			7.9				079
$\phi 9$	6.5	20	8.0	4	4	—	080
			8.5				085
			8.6				086
			8.7				087
			8.8				088
$\phi 10$	7.5	20	8.9	4	4.5	9.2	089
			9.0				090
			9.5				095
			9.6				096
			9.7				097
$\phi 11$	7.5	20	9.8	4	4.5	9.8	098
			9.9				099
			10.0				100
			10.5				105
			10.6				106
$\phi 12$	8.5	20	10.7	4	4.5	9.8	107
			10.8				108
			10.9				109
			11.0				110
			11.5				115
$\phi 13$	8.5	20	11.6	5	5.5	11.6	116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
$\phi 14$	10.5	25	12.5	6	5.5	12.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
$\phi 15$	10.5	25	13.0	6	6	13.3	130
			13.5				135
			13.6				136
			13.7				137
			13.8				138
$\phi 16$	11.5	25	13.9	6	6.5	14.3	139
			14.0				140
			14.5				145
			14.6				146
			14.7				147
$\phi 17$	11.5	25	14.8	6	6.5	14.3	148
			14.9				149
			15.0				150
			15.5				155
			15.6				156
$\phi 18$	13	27	15.7	6	7.5	16.4	157
			15.8				158
			15.9				159
			16.0				160
			17.5				175
$\phi 19$	13	27	17.6	6	8	17.2	176
			17.7				177
			17.8				178
			17.9				179
			18.0				180
$\phi 20$	13	27	19.5	6	8	17.2	195
			19.6				196
			19.7				197
			19.8				198
			19.9				199
$\phi 21$	13	27	20.0	6	8	17.2	200
			20.5				205

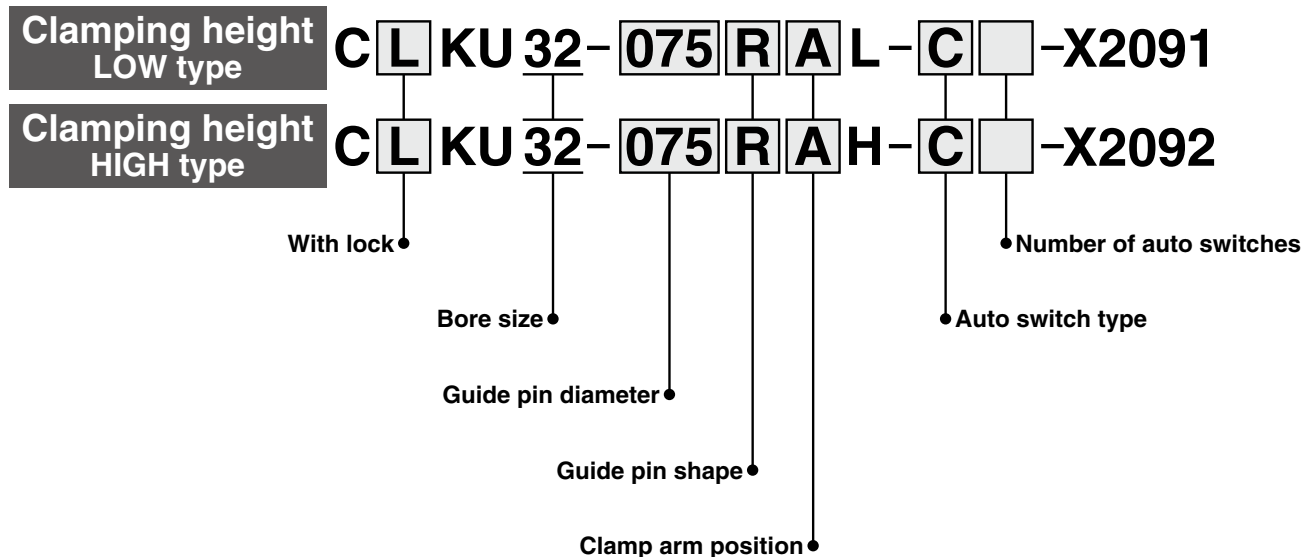
Hole diameter of workpiece	C	D	d	K	SR	Q	Model number
ø12	8.5	20	11.5	5	5	10.9	115
			11.6				116
			11.7				117
			11.8				118
			11.9				119
			12.0				120
ø13	8.5	20	12.5	5	5.5	11.6	125
			12.6				126
			12.7				127
			12.8				128
			12.9				129
			13.0				130
ø14	10.5	25	13.5	6	5.5	12.6	135
			13.6				136
			13.7				137
			13.8				138
			13.9				139
			14.0				140
ø15	10.5	25	14.5	6	6	13.3	145
			14.6				146
			14.7				147
			14.8				148
			14.9				149
			15.0				150

Pin Clamp Cylinder Plate Cylinder Type

Series *C(L)KU32*

Use the new series "Pin Clamp Cylinder/Plate Cylinder Type **C(L)KU32-X2321/X2322**" with improved mountability of the magnetic field resistant auto switch. For details, refer to page 9.

How to Order



Series C(L)KQG32/C(L)KU32

Options

Dimensions

Shim

C(L)KQG32-X2081

LOW type

C(L)KQG32-X2082

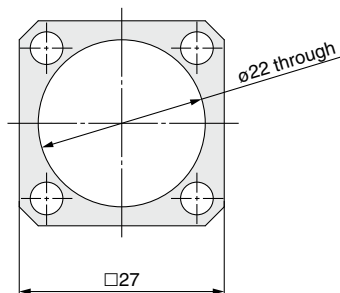
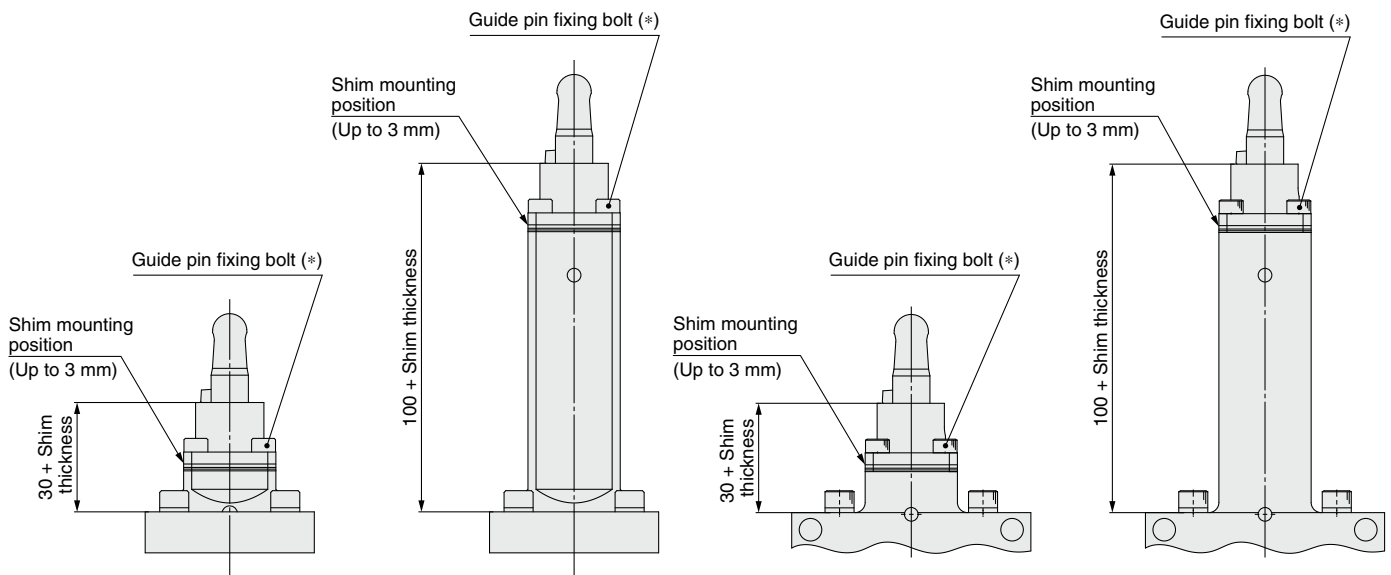
HIGH type

C(L)KU32-X2321

LOW type

C(L)KU32-X2322

HIGH type



Shim dimensions

Description	Part no.	Note
Shim A	CKQ32-36A746MN	Plate thickness 1 [mm]
Shim B	CKQ32-36B746MN	Plate thickness 0.5 [mm]
Guide pin fixing long bolt	CA00644	Bolt size M4 x 12 L

- Shims can be mounted up to 3 mm.
However, when mounting 2 mm or more shims, use the above guide pin fixing long bolt instead of a guide pin fixing bolt (marked with *).
- For auto switches (except 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.

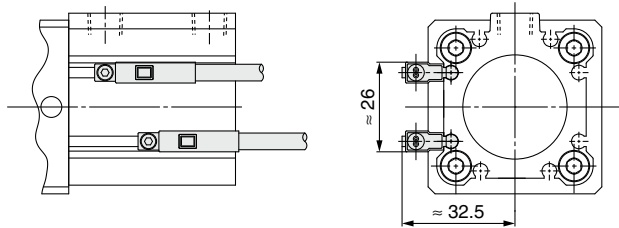
Series C(L)KQG32

Auto Switch Mounting 1

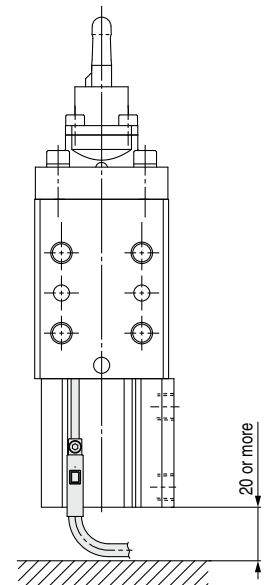
Auto Switch Mounting Height

Applicable cylinder: C(L)KQG32-X2081
C(L)KQG32-X2082

D-P3DWA□

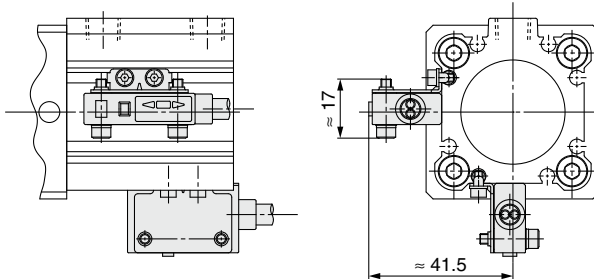


For D-P3DWA□

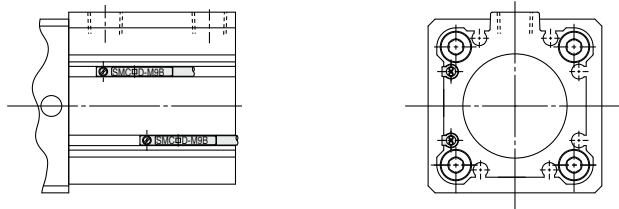


Note) Allow 20 mm or more space at the cylinder head side to secure the minimum bending radius of the auto switch lead wire.

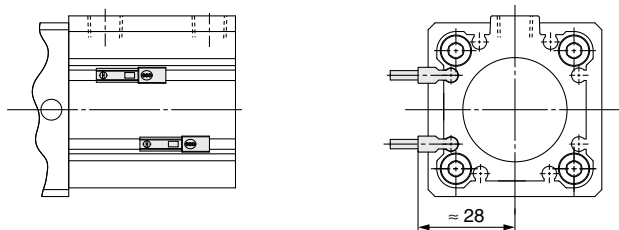
D-P4DW□



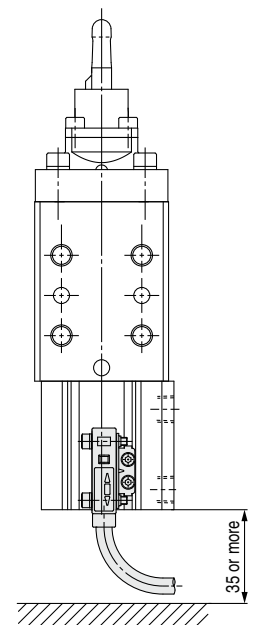
D-M9□
D-M9□W
D-A9□



D-M9□V
D-M9□WV
D-A9□V

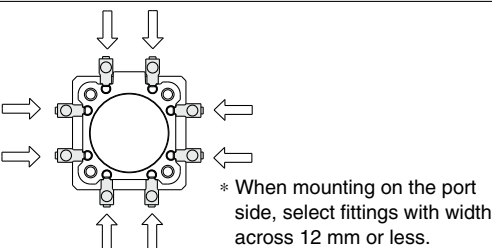
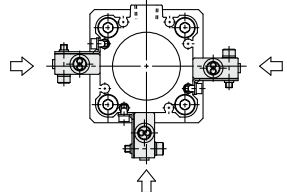
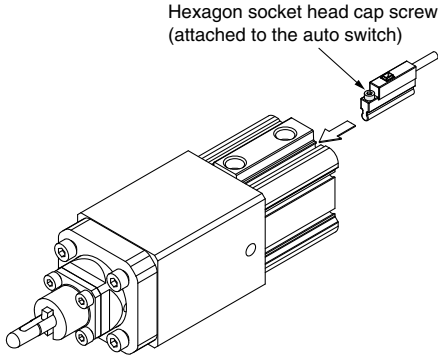
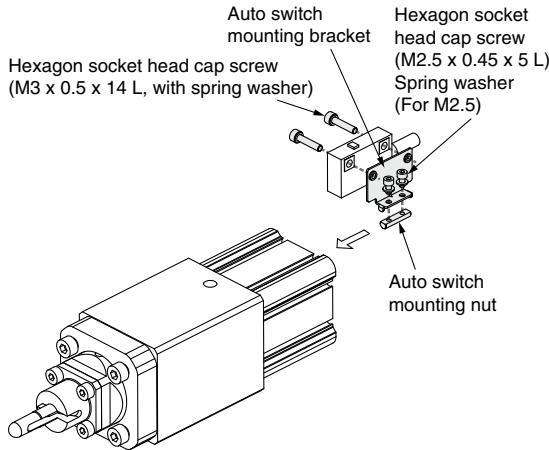


For D-P4DW□



Note) 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-X2081/-X2082	
Applicable auto switches	D-P3DWA□	D-P4DW□
Bore size [mm]	ø32	ø32
Auto switch mounting bracket part no.	—	BQ7-032
Auto switch mounting bracket fitting parts lineup/Weight	—	• Auto switch mounting bracket • Auto switch mounting nut (M2.5 x 0.45 x 5 L) • Hexagon socket head cap screw (M2.5 x 0.45 x 5 L) • Hexagon socket head cap screw (M3 x 0.5 x 14 L, with spring washer) • 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
	 * When mounting on the port side, select fittings with width across 12 mm or less.	
Mounting of auto switch	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). Note) The tightening torque for the hexagon socket head cap screw is 0.2 to 0.3 N·m.  Hexagon socket head cap screw (attached to the auto switch)	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 screw (M2.5 x 5 L, M3 x 14 L). Note 1) The tightening torque for the hexagon socket head cap screw (M3 x 14 L) is 0.5 to 0.6 N·m. Note 2) The tightening torque for the hexagon socket head cap screw (M2.5 x 5 L) is 0.25 to 0.35 N·m.  Auto switch mounting bracket Hexagon socket head cap screw (M2.5 x 0.45 x 5 L) Spring washer (For M2.5) Hexagon socket head cap screw (M3 x 0.5 x 14 L, with spring washer) Auto switch mounting nut

Other than the applicable auto switches listed in “How to Order”, the following auto switches are mountable.

Refer to the Best Pneumatics No. 3 for detailed specifications.

Applicable Cylinder: C(L)KQG32-X2081, C(L)KQG32-X2082

Type	Model	Electrical entry	Features	Type	Model	Electrical entry	Features
Solid state auto switch	D-M9□	Grommet (In-line)	—	Reed auto switch	D-A90	Grommet (In-line)	Without Indicator light
	D-M9□W		Diagnostic indication (2-color indication)		D-A93/A96		—
	D-M9□V	Grommet (Perpendicular)	—		D-A90V	Grommet (Perpendicular)	Without Indicator light
	D-M9□WV		Diagnostic indication (2-color indication)		D-A93V/A96V		—

* With pre-wired connector is also available for solid state auto switches. For details, refer to the Best Pneumatics No. 3.

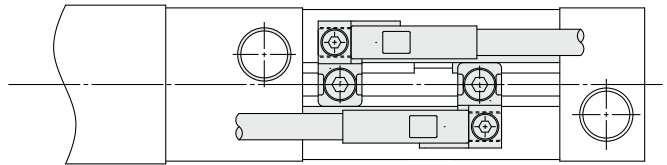
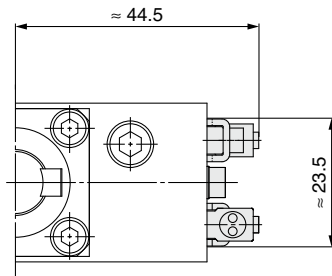
Series C(L)KU32

Auto Switch Mounting 2

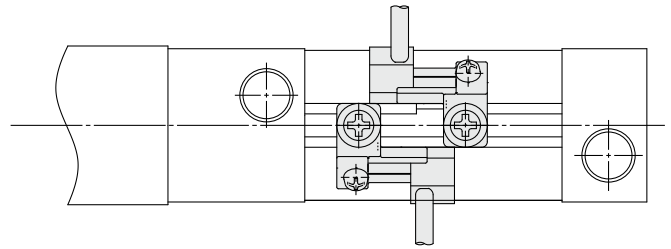
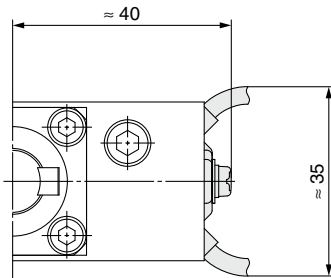
Auto Switch Mounting Height

Applicable cylinder: C(L)KU32-X2321
C(L)KU32-X2322

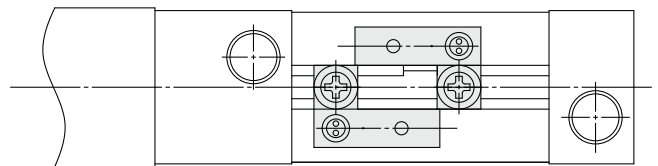
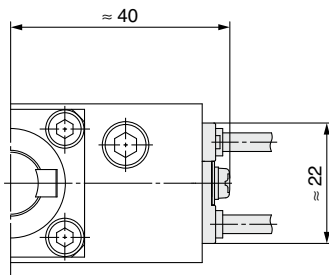
D-P3DWA□



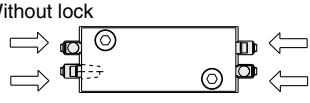
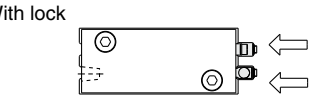
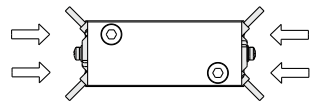
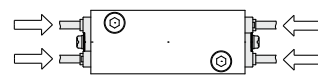
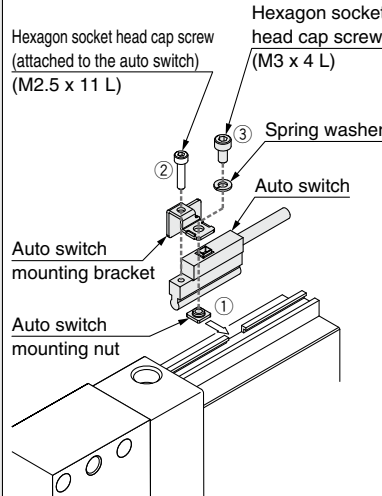
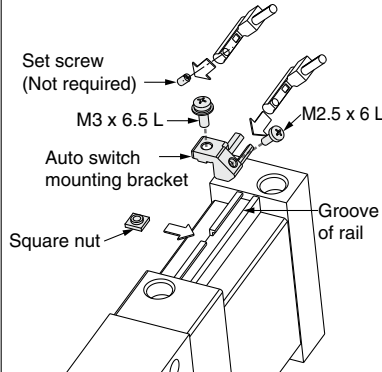
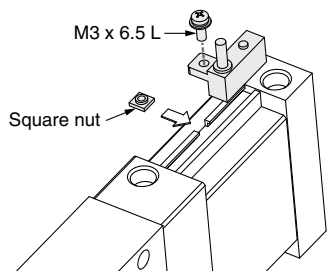
D-M9□V
D-M9□WV



D-A7□



Auto Switch Mounting Bracket Part No./Mounting Method

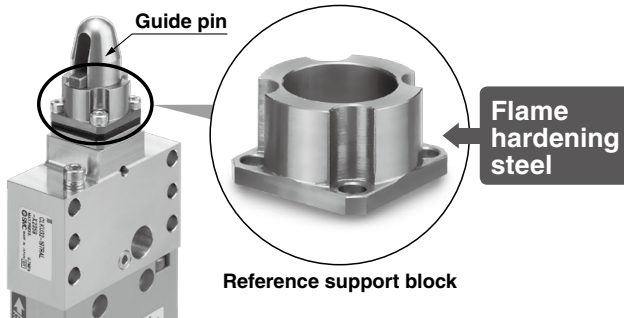
Applicable cylinder	-X2321/-X2322	-X2321/-X2322	-X2321/-X2322
Applicable auto switches	D-P3DWA□	D-M9□V/M9□WV	D-A73/A79W
Bore size [mm]	ø32	ø32	ø32
Auto switch mounting bracket part no.	BMU4-040S	BMU1-025 (Below ①, ②) BQ2-012 (Below ③, ④)	BMU1-025
Auto switch mounting bracket fitting parts lineup/Weight	①Hexagon socket head cap screw (M3 x 4 L) ②Auto switch mounting nut ③Spring washer (M3) ④Auto switch mounting bracket Weight: 4 g	①Cross recessed round head screw (M3 x 6.5 L) ②Square nut ③Auto switch mounting bracket ④Round head combination screw (M2.5 x 6 L) Weight: 5 g	• Cross recessed round head screw (M3 x 6.5 L) • Square nut Weight: 2 g
Auto switch mounting surfaces	Surfaces with auto switch mounting slot Without lock  With lock 	Surfaces with auto switch mounting slot 	Surfaces with auto switch mounting slot 
Mounting of auto switch	①Remove the screw (M2.5 x 11 L) attached to the auto switch temporarily. ②Insert the temporarily removed screw into the auto switch mounting bracket, and fix the bracket on the auto switch. ③Slide the auto switch mounting nut into the groove of the rail, and fix the auto switch mounting bracket on the cylinder with the hexagon socket head cap screw (M3 x 4 L) and spring washer (M3). Note) The tightening torque for the hexagon socket head cap screw (M2.5 x 11 L) is 0.2 to 0.3 N·m. The tightening torque for the hexagon socket head cap screw (M3 x 4 L) is 0.5 to 0.7 N·m. 	①Remove the set screw attached to the auto switch. (The set screw is not required.) ②Fix the auto switch to the auto switch mounting bracket with the round head combination screw (M2.5 x 6 L). ③Slide the square nut into the groove of the rail, and fix the auto switch mounting bracket on the cylinder with the cross recessed round head screw (M3 x 6.5 L). Note) The tightening torque for the round head combination screw (M2.5 x 6 L) is 0.1 to 0.2 N·m and for the cross recessed round head screw (M3 x 6.5 L) is 0.5 to 0.7 N·m. 	①Slide the square nut into the groove of the rail, and fix the auto switch on the cylinder with the cross recessed round head screw (M3 x 6.5 L). Note) The tightening torque for the cross recessed round head screw (M3 x 6.5 L) is 0.5 to 0.7 N·m. 

 Safety Instructions	Be sure to read "Handling Precautions for SMC Products" (M-E03-3) before using.
--	---

Responses to reduction of spare parts, short lead times, and a drastic reduction of special orders

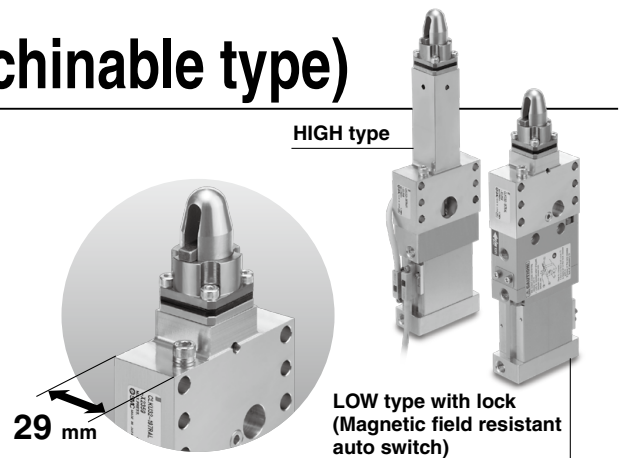
Pin Plate Cylinder (Reference support block machinable type)

1 Guide pin is separated from the reference support block.



Reference support block can be machined by the customer.
(The block can be changed to a desired shape.)

Note) After machining (or even without machining), use the reference support block after it has been flame hardened. However, do not perform quenching.
For machining and treatment, consult with SMC.

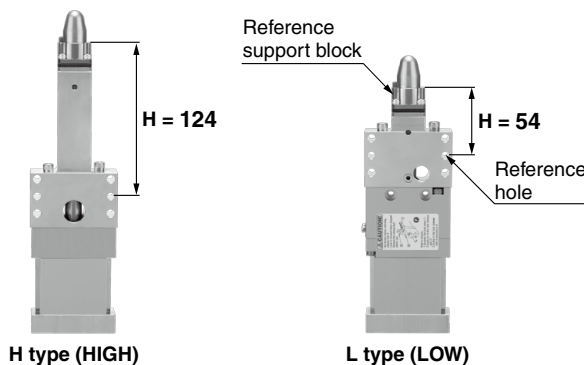


■ $\varnothing 32$ plate cylinder type

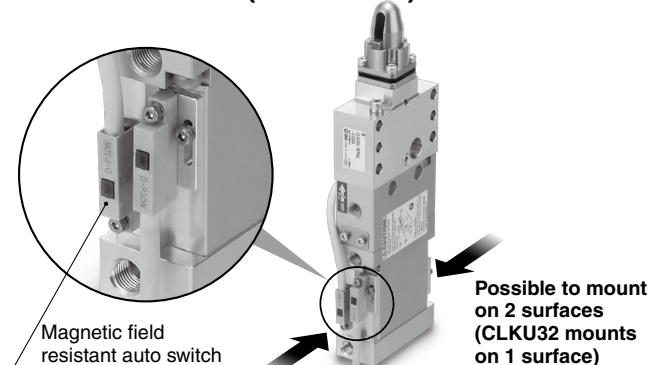
■ Slim body: 29 mm in width

■ Model with lock mechanism, which prevents workpiece drops during emergency stops, can be selected.

2 The height from the reference hole to the surface of the reference support block can be selected from 2 types "HIGH" or "LOW".



Magnetic field resistant auto switches are mountable. (D-P3DW□)



3 Equipped with shims (3 mm) as standard. (Height can be changed.)

Shims (3 mm)
Shim thickness
1 mm: 2 pcs.
0.5 mm: 2 pcs.



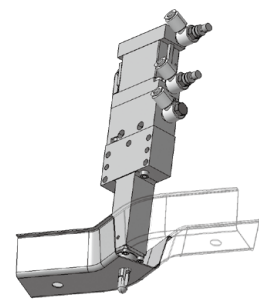
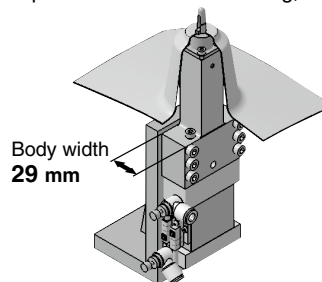
Application Examples

CKU32 (Pin plate cylinder)

- Compatible with installing in narrow spaces
- For clamping small and lightweight workpiece and material handling, etc.

CLKU32 (Pin plate cylinder/With lock)

- Unclamp direction locking
- Drop prevention for workpiece during emergency stops



➔ Achieves reduction of spare parts, short lead times, and a drastic reduction of special orders according to features 1, 2, and 3.

C(L)KU32-X2359



Pin Plate Cylinder

C(L)KU32-X2359

How to Order

Built-in standard magnet type
with magnetic field resistant auto switch

C **KU 32** - **127** **R** **A** **L** - **C** - **X2359**

One-way lock

Nil	Without lock
L	With lock during clamping

Bore size

32	Equiv. ø32 piston area
-----------	------------------------

Guide pin diameter

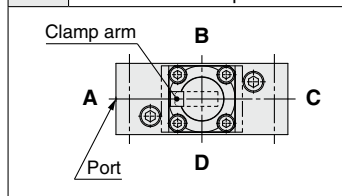
Symbol	127	175	177	197
Guide pin diameter [mm]	12.7	17.5	17.7	19.7
Applicable hole diameter of workpiece [mm]	ø13	ø18	ø20	
Guide pin shape	Round type, Diamond type			

Guide pin shape

	Round type	Diamond type
R		

Clamp arm position (viewed from top)

A*	Same as the port side
B	90° from the port side
C*	180° from the port side
D	270° from the port side



* For LOW type, clamp arm positions are usable only with A and C.

Reference support block machinable type

Number of auto switches

Nil	2 pcs.
S	1 pc. (Unclamping side)

Auto switch

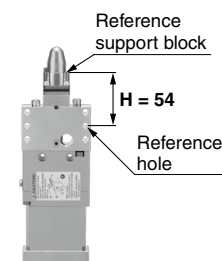
Nil	Without auto switch (Built-in magnet)
C	D-P3DWSC
E	D-P3DWSE
N	D-P3DW
L	D-P3DWL
Z	D-P3DWZ

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

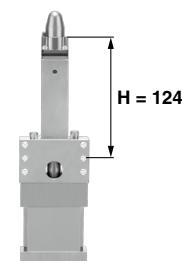
Clamping height (Refer to figures below)

L	LOW type (54 mm)
H	HIGH type (124 mm)

LOW type



HIGH type



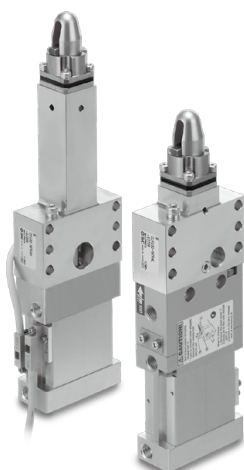
Model Examples

CKU32-127RBH-C-X2359
CLKU32-177RAH-CS-X2359

Applicable Auto Switches/Refer to the Best Pneumatics No. 3 for further information on 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	D-P3DWSC	AC magnetic field (Single-phase AC welding magnetic field)	Pre-wired connector	2-color indication	2-wire (3-4)	24 VDC	0.3 m	Relay, PLC Note)
	D-P3DWSE		2-wire (1-4)		0.5 m			
	D-P3DW		Grommet		2-wire		3 m	
	D-P3DWL						5 m	
	D-P3DWZ							

Note) PLC: Programmable Logic Controller



Basic Specifications

Model	C(L)KU32	
Action	Double acting	
Bore size (mm)	32 equivalent	
Cylinder stroke/Clamp stroke (mm)	12.5 (Without workpiece)/10	
Fluid	Air	
Minimum operating pressure	CKU□: 0.1 MPa	CLKU□: 0.15 MPa*
Maximum operating pressure	0.7 MPa	
Ambient and fluid temperature	-10 to 60°C (No freezing)	
Cushion	None	
Lubrication	Non-lube	
Piston speed (Clamp speed)	50 to 150 mm/sec	
Port size (Cylinder port)	Rc1/8	

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

Lock Specifications

Model	CLKU32
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

Model	Guide pin diameter (mm)	Operating pressure (MPa)						(N)
		0.2	0.3	0.4	0.5	0.6	0.7	
C(L)KU32	ø12.7 to ø19.7	130	195	260	325	390	455	

Note 1) 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.

Note 2) Determine the clamping force according to the strength of the workpiece. It can be damaged if the clamping force is too large.

Note 3) Guide pins and clamp arms are consumable items. Please prepare spare parts in case they are damaged.

Replacement Parts

(C(L)KU, LOW type/HIGH type common)

Guide Pin Order No.

Guide pin		Part no.
Diameter (mm)	Shape	
12.7	Round type	CKU32-45-530ZL
	Diamond type	CKU32-45-531ZL
17.5	Round type	CKU32-45-694ZL
	Diamond type	CKU32-45-695ZL
17.7	Round type	CKU32-45-532ZL
	Diamond type	CKU32-45-533ZL
19.7	Round type	CKU32-45-534ZL
	Diamond type	CKU32-45-535ZL

Clamp Arm Order No.

Guide pin		Part no.
Diameter (mm)	Shape	
12.7	Round type/ Diamond type common	CKU32-54-530ZL
17.5		CKU32-54-532ZL
17.7		
19.7		

Reference Support Block Order No.

Guide pin		Part no.
Diameter (mm)	Shape	
12.7	Round type/ Diamond type common	CKU32-36-530ZL
17.5		CKU32-36-532ZL
17.7		
19.7		

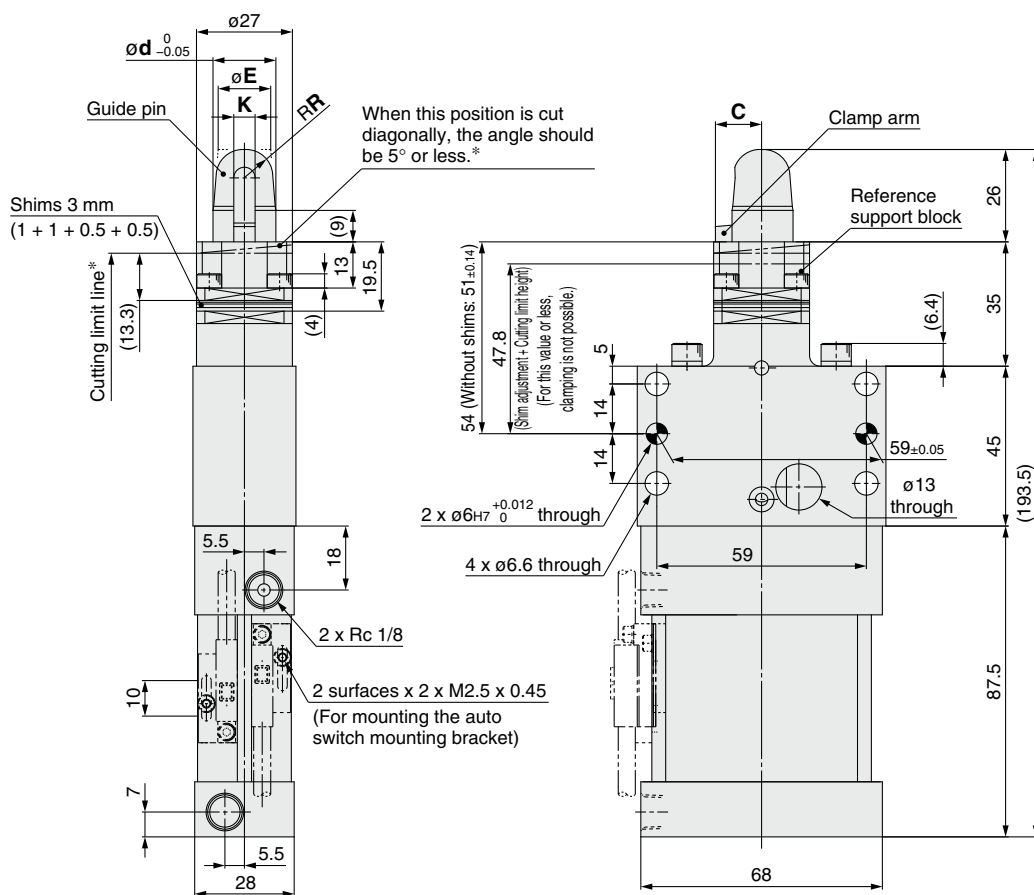
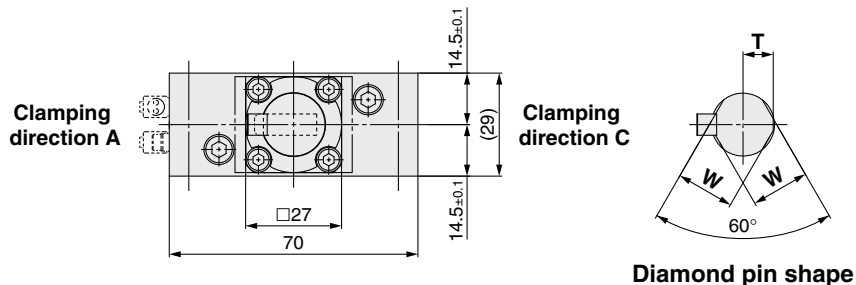
Weight

						(g)
Guide pin		Model				
Diameter (mm)	Shape	CKU32-X2359		CLKU32-X2359		
		LOW type	HIGH type	LOW type	HIGH type	
12.7	Round type	790	960	1000	1170	
	Diamond type					
17.5	Round type	840	1010	1050	1220	
	Diamond type					
17.7	Round type					
	Diamond type					
19.7	Round type					
	Diamond type					

C(L)KU32-X2359

Dimensions

CKU32 (Clamping height LOW type)

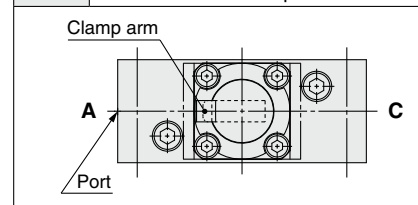


* The customer should regulate the dimensional accuracy associated with machining. If the cutting limit line is exceeded because of over-machining, clamping failures, etc. may occur and this is not covered by the warranty.

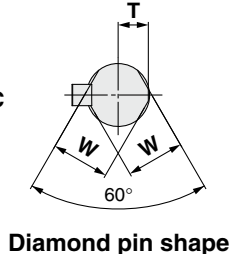
Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7				9.8	16.8
19.7		19.7	15				

Clamp arm position

A	Same as the port side
C	180° from the port side



CKU32 (Clamping height HIGH type)



Clamp arm position

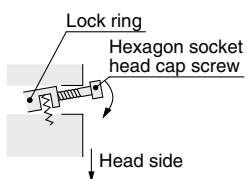
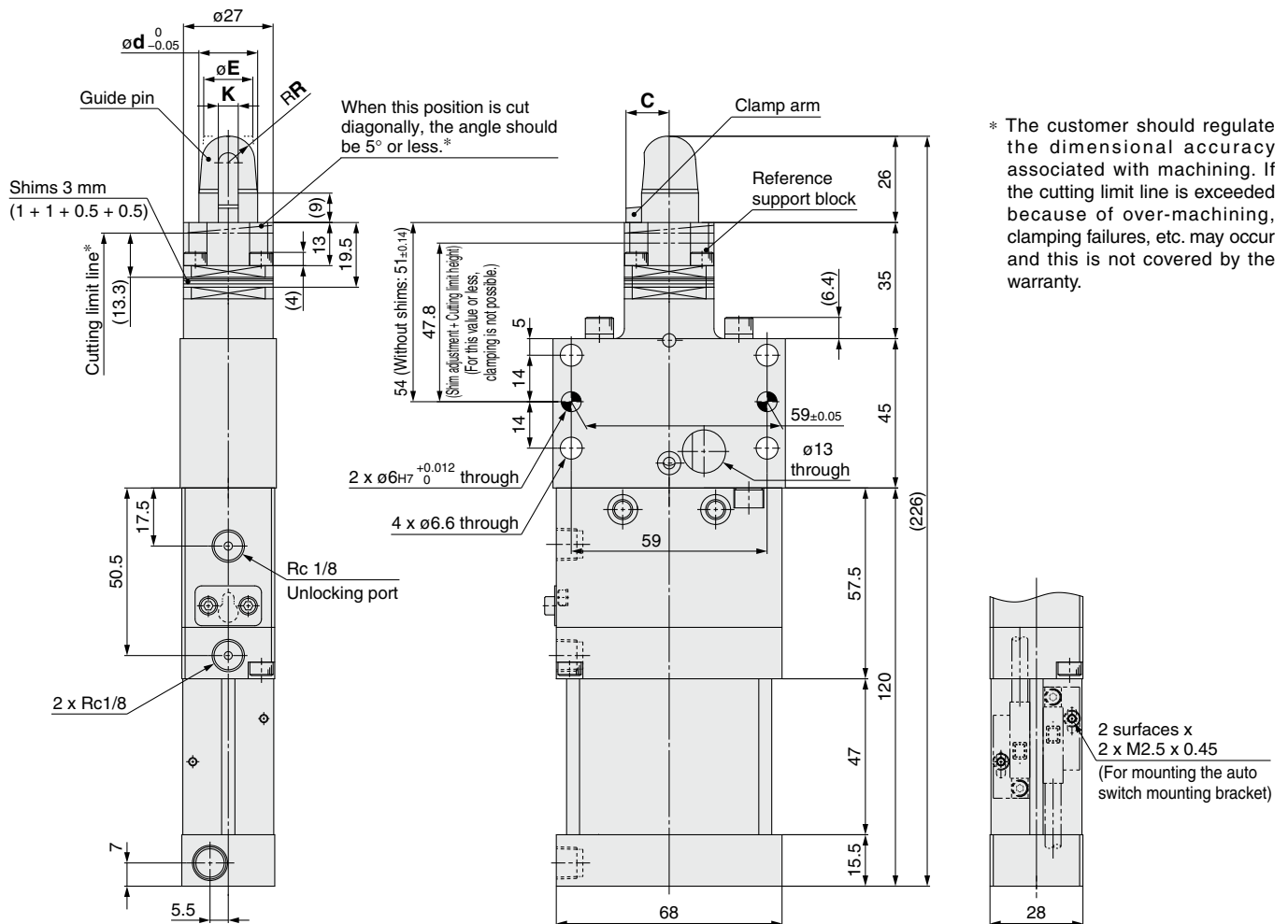
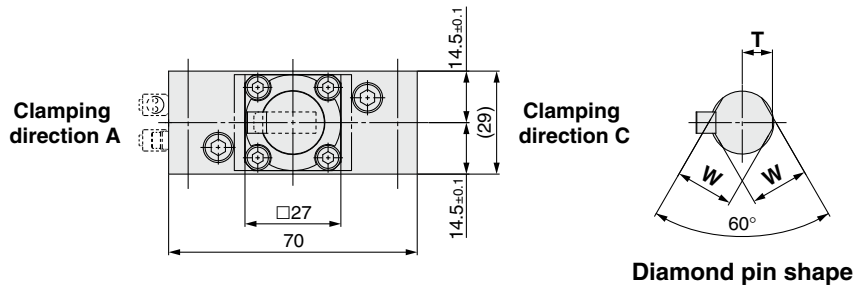
Diagram of a 4-way valve in closed position. The valve body is a square with a central circular port. The internal spool is in the closed position, blocking all four ports. The ports are labeled A, B, C, and D. The spool is labeled 'Spool' and the valve body is labeled 'Valve body'.

Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7					
19.7		19.7	15			9.8	16.8

C(L)KU32-X2359

Dimensions

CLKU32 (Clamping height LOW type)

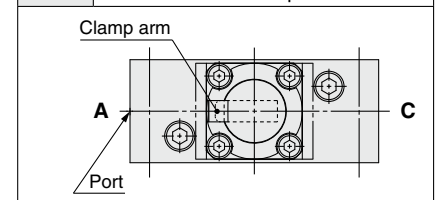


Manually unlocking

- 1) Remove the dustproof cover.
- 2) Screw the hexagon socket head cap screw (M3 x 15 L or more) into the lock ring shown on the left and raise the lock ring toward the head side.
- 3) The lock ring and piston rod form a right angle, and the lock is released.

Clamp arm position

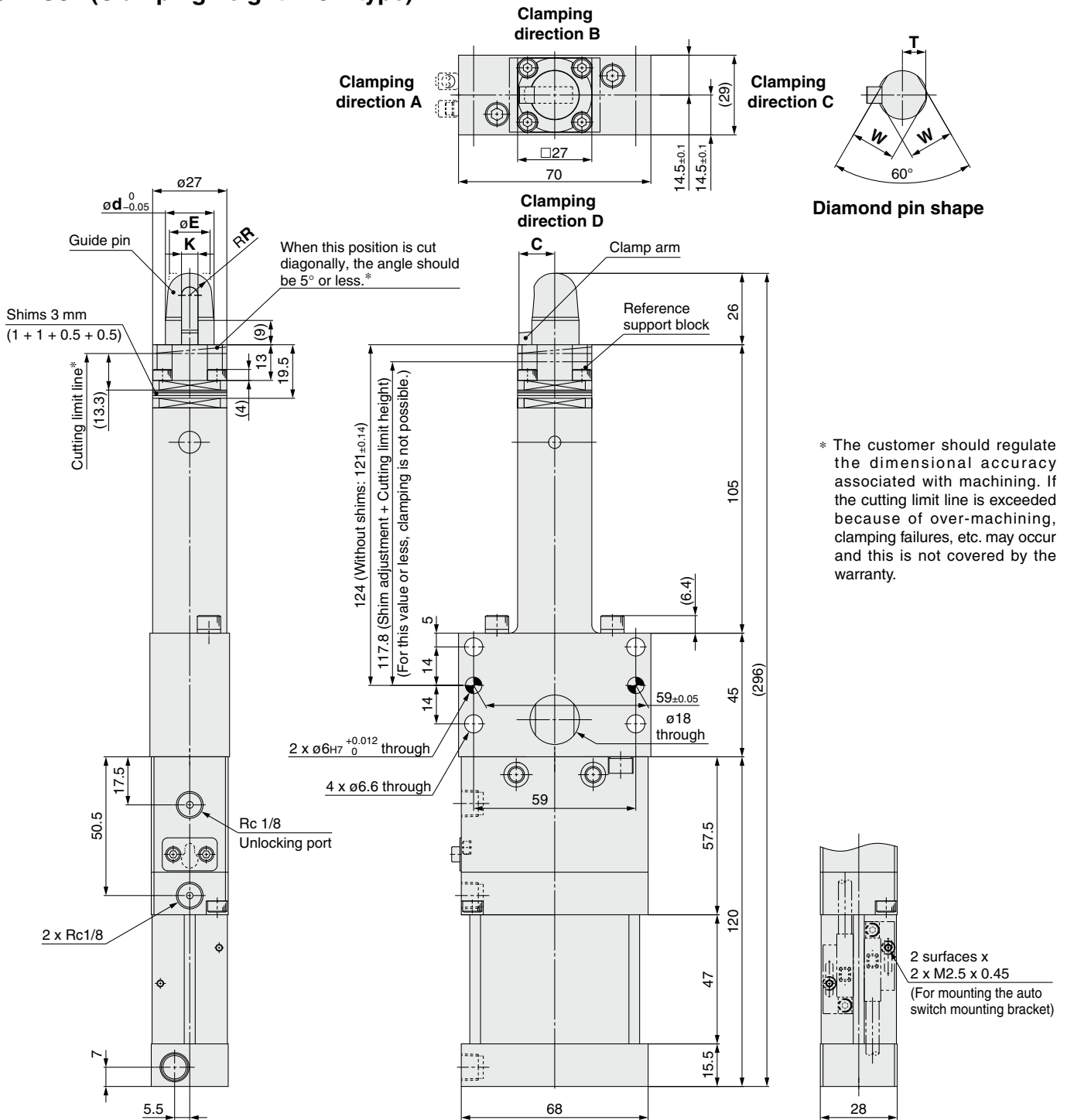
A	Same as the port side
C	180° from the port side



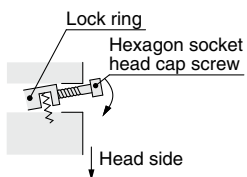
Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7				9.8	16.8
19.7		19.7	15				

Dimensions

CLKU32 (Clamping height HIGH type)



* The customer should regulate the dimensional accuracy associated with machining. If the cutting limit line is exceeded because of over-machining, clamping failures, etc. may occur and this is not covered by the warranty.

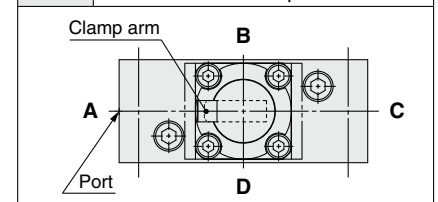


Manually unlocking

- 1) Remove the dustproof cover.
- 2) Screw the hexagon socket head cap screw (M3 x 15 L or more) into the lock ring shown on the left and raise the lock ring toward the head side.
- 3) The lock ring and piston rod form a right angle, and the lock is released.

Clamp arm position

A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side



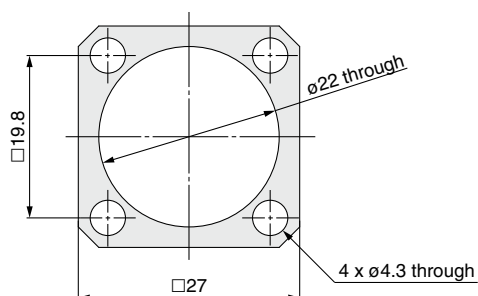
Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7				9.8	16.8
19.7		19.7	15				

C(L)KU32-X2359

Option/Auto Switch Mounting

Dimensions

Shim

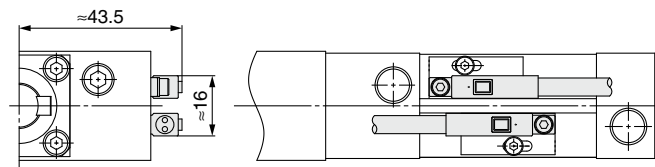


•Shims can be mounted up to 3 mm.

Description	Plate thickness (mm)	Part no.
Shim A	1	CKQ32-36A746MN
Shim B	0.5	CKQ32-36B746MN

Auto Switch Mounting Height

D-P3DW□



Auto Switch Mounting Bracket Part No./Mounting Method

Applicable auto switch	D-P3DW□
Auto switch mounting bracket part no.	CKU32-42-530ZL-R
Auto switch mounting bracket fitting parts lineup/Weight	•Hexagon socket head cap screw (M2.5 x 9 L) •Auto switch mounting bracket Weight: 4 g
Auto switch mounting surfaces	Surfaces with auto switch mounting slot Without lock With lock
Mounting of auto switch	1. The hexagon socket head cap screw attached to the auto switch is not required. Turn to loosen and remove. * This procedure is only for auto switches that are ordered separately. Hexagon socket head cap screws are removed when auto switches are shipped together with cylinder. 2. Fix the auto switch and the auto switch mounting bracket with the hexagon socket head cap screw (M2.5 x 9 L) shipped together with the auto switch mounting bracket. 3. Check the detecting position of the auto switch by sliding it along the cylinder tube rib, before fixing the auto switch on the cylinder tube threaded portion by inserting the hexagon socket head cap screw (M2.5 x 9 L) into the long hole of the auto switch mounting bracket. Note) The tightening torque for the hexagon socket head cap screw (M2.5 x 9 L) is 0.2 to 0.3 N·m.