# 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**

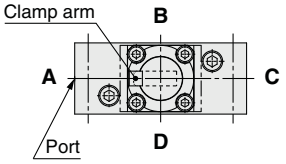
| Symbol | 127 | 175 | 177 | 197 |
|---|---|---|---|---|
| Guide pin diameter [mm] | 12.7 | 17.5 | 17.7 | 19.7 |
| Applicable hole diameter of workpiece [mm] | ø13 | ø18 | | ø20 |
| Guide pin shape | Round type, Diamond type | | | |

**Guide pin shape**

| | | | |
|---|---|---|---|
| **R** | Round type | **D** | Diamond type |

**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 |

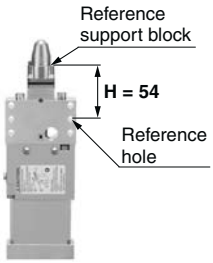



* For LOW type, clamp arm positions are usable only with A and C.

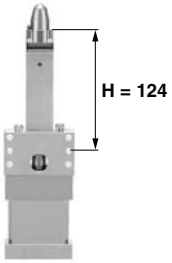
**Clamping height (Refer to figures below)**

| | |
|---|---|
| **L** | LOW type (54 mm) |
| **H** | HIGH type (124 mm) |

LOW type




HIGH type




**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.

**Number of auto switches**

| | |
|---|---|
| **Nil** | 2 pcs. |
| **S** | 1 pc. (Unclamping side) |

**Reference support block machinable 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) | | | |
| | **D-P3DW** | | Grommet | | 2-wire | | 0.5 m | |
| | **D-P3DWL** | | | | | | 3 m | |
| | **D-P3DWZ** | | | | | | 5 m | |

Note) PLC: Programmable Logic Controller



SMC

## 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 | |
| **Mimimum 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

(N)

| Model | Guide pin diameter (mm) | Operating pressure (MPa) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 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.

## 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 | | | | |

## 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.

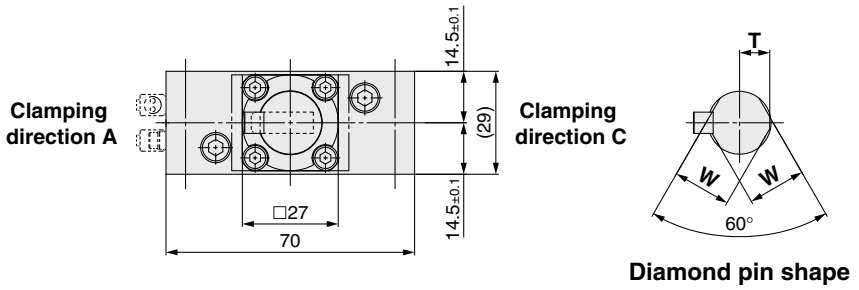
| Guide pin | | Part no. |
|---|---|---|
| Diameter (mm) | Shape | |
| 12.7 | Round type/ Diamond type common | CKU32-54-530ZL |
| 17.5 | | CKU32-54-532ZL |
| 17.7 | | |
| 19.7 | | |

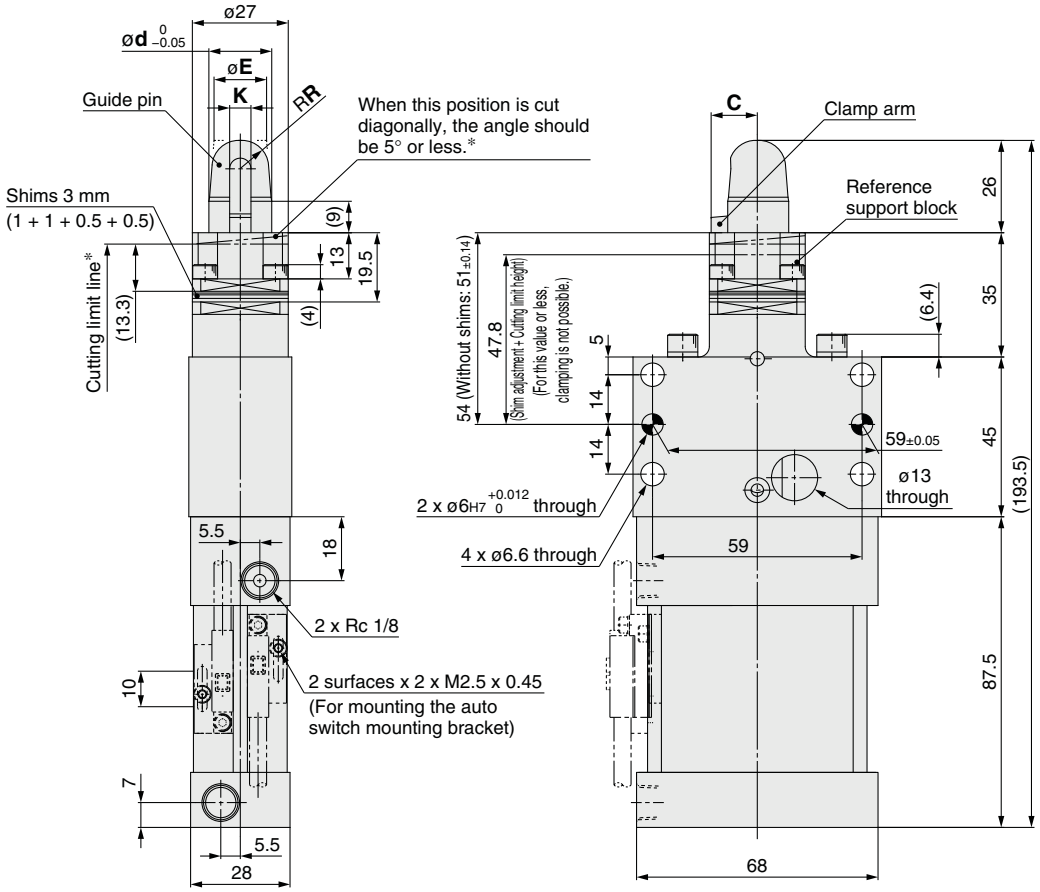
### Reference Support Block Order No.

| 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 | | CKU32-36-534ZL |

## Dimensions

### CKU32 (Clamping height LOW type)



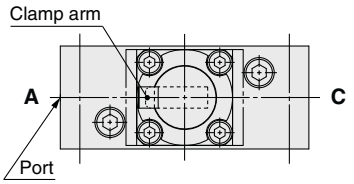




* The customer should regulate the dimensional accuracy associated with machining. If the cutting limit line is exceeded because of over-machining, clamping failures, etc. may occur and this is not covered by the warranty.

| 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 | | | | | |
| 19.7 | | 19.7 | 15 | | | 9.8 | 16.8 |

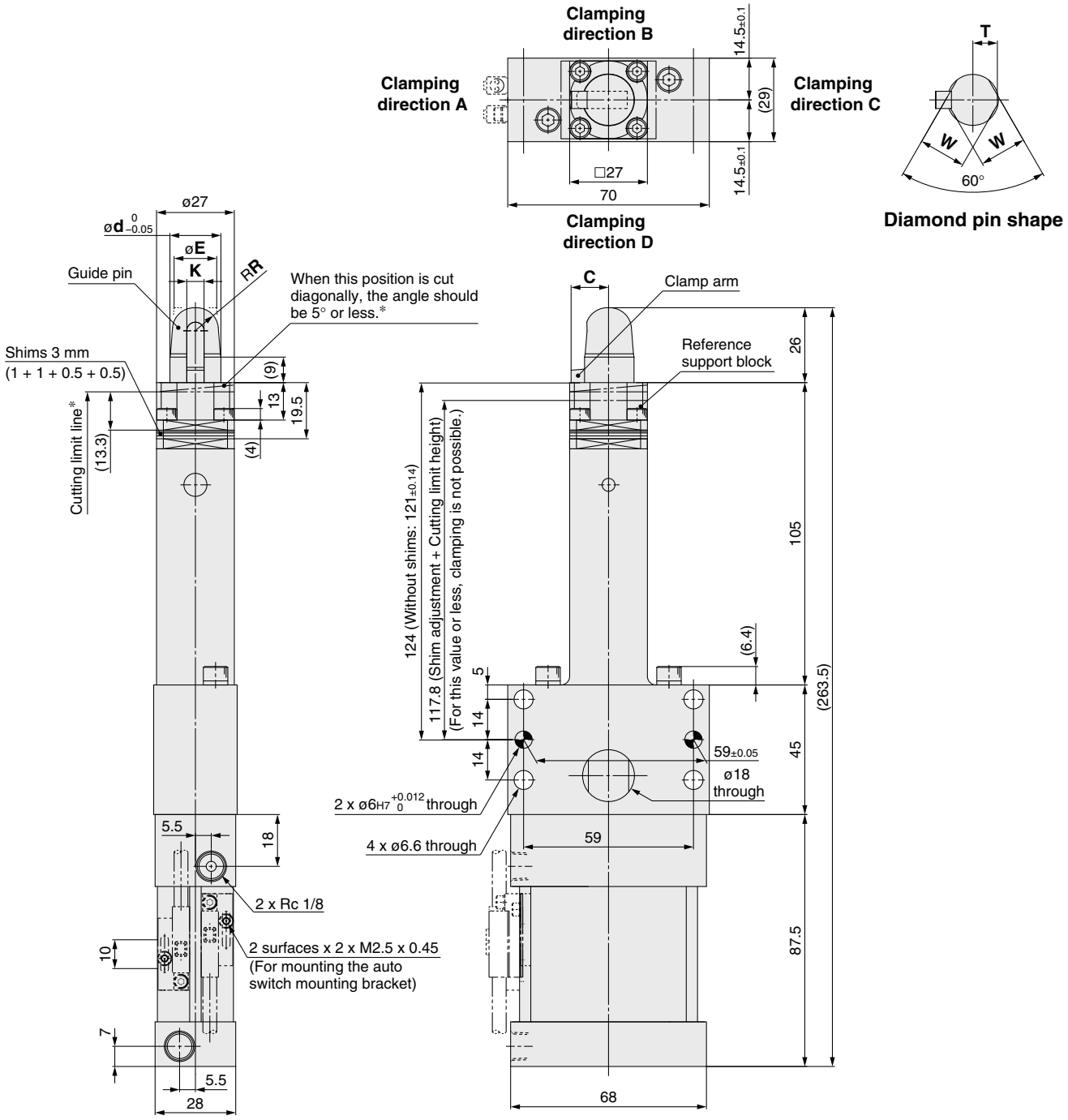
**Clamp arm position**

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



## Dimensions

### CKU32 (Clamping height HIGH type)

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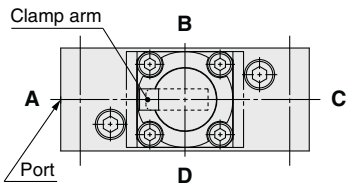
| Pin diameter | C | d | E | K | R | T | W |
|---|---|---|---|---|---|---|---|
| 12.7 | 8.5 | 12.7 | 10.4 | 5 | 5 | 6 | 11.6 |
| 17.5 | 13 | 17.5 | 14.8 | 6 | 7.5 | 8.5 | 16.4 |
| 17.7 | | 17.7 | | | | | |
| 19.7 | | 19.7 | 15 | | | 9.8 | 16.8 |

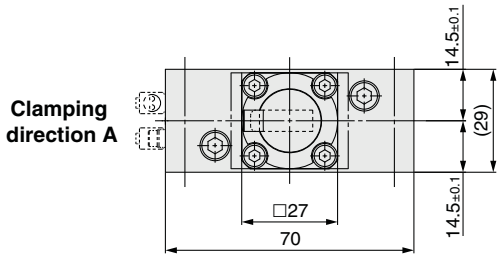
### Clamp arm position

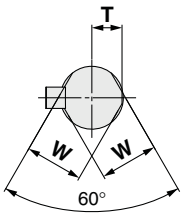
| | |
|---|---|
| A | Same as the port side |
| B | 90° from the port side |
| C | 180° from the port side |
| D | 270° from the port side |



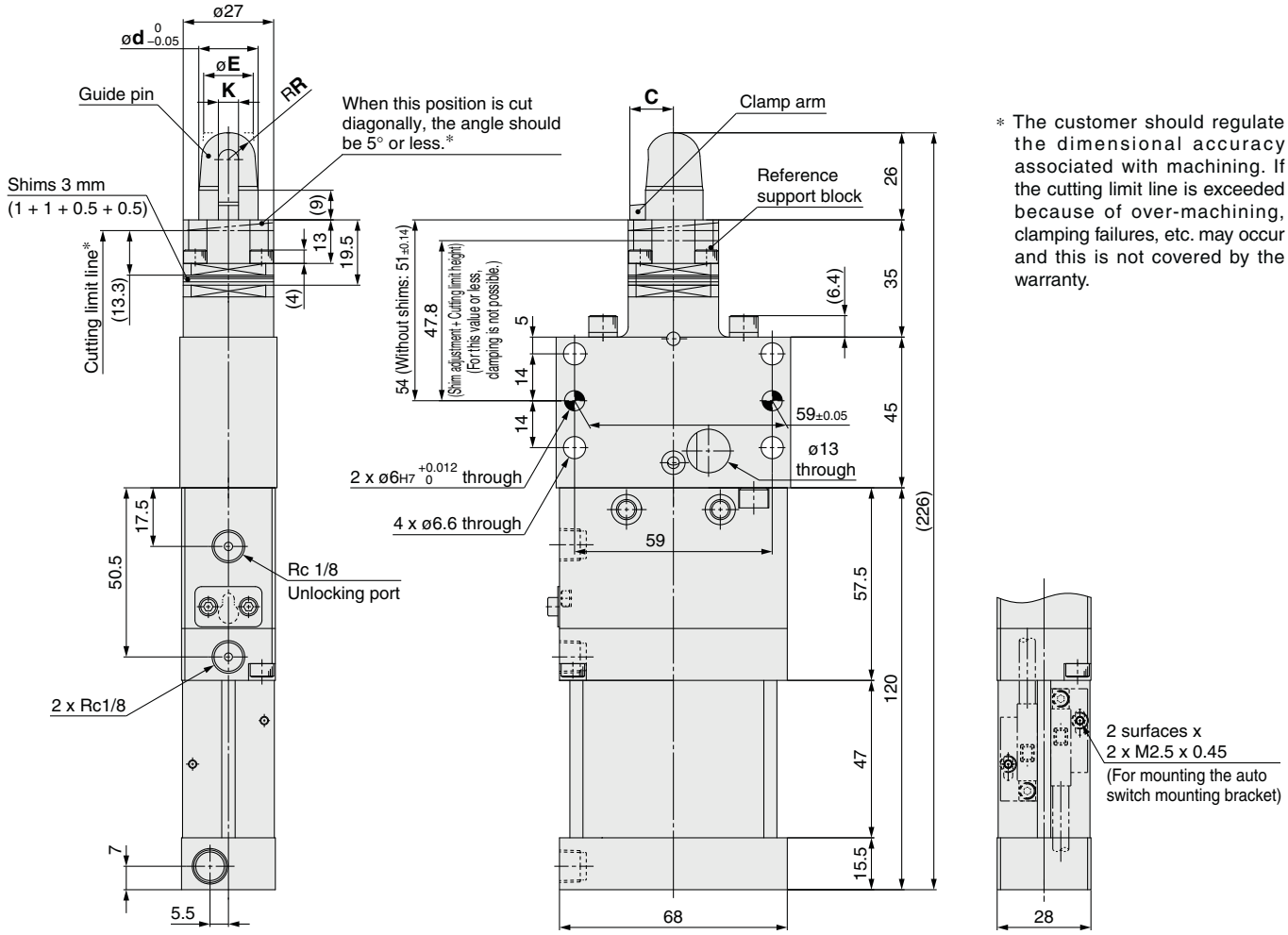
## Dimensions

### CLKU32 (Clamping height LOW type)




**Diamond pin shape**

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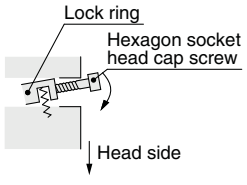
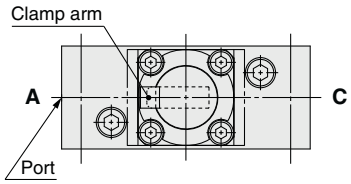



**Manually unlocking**

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**

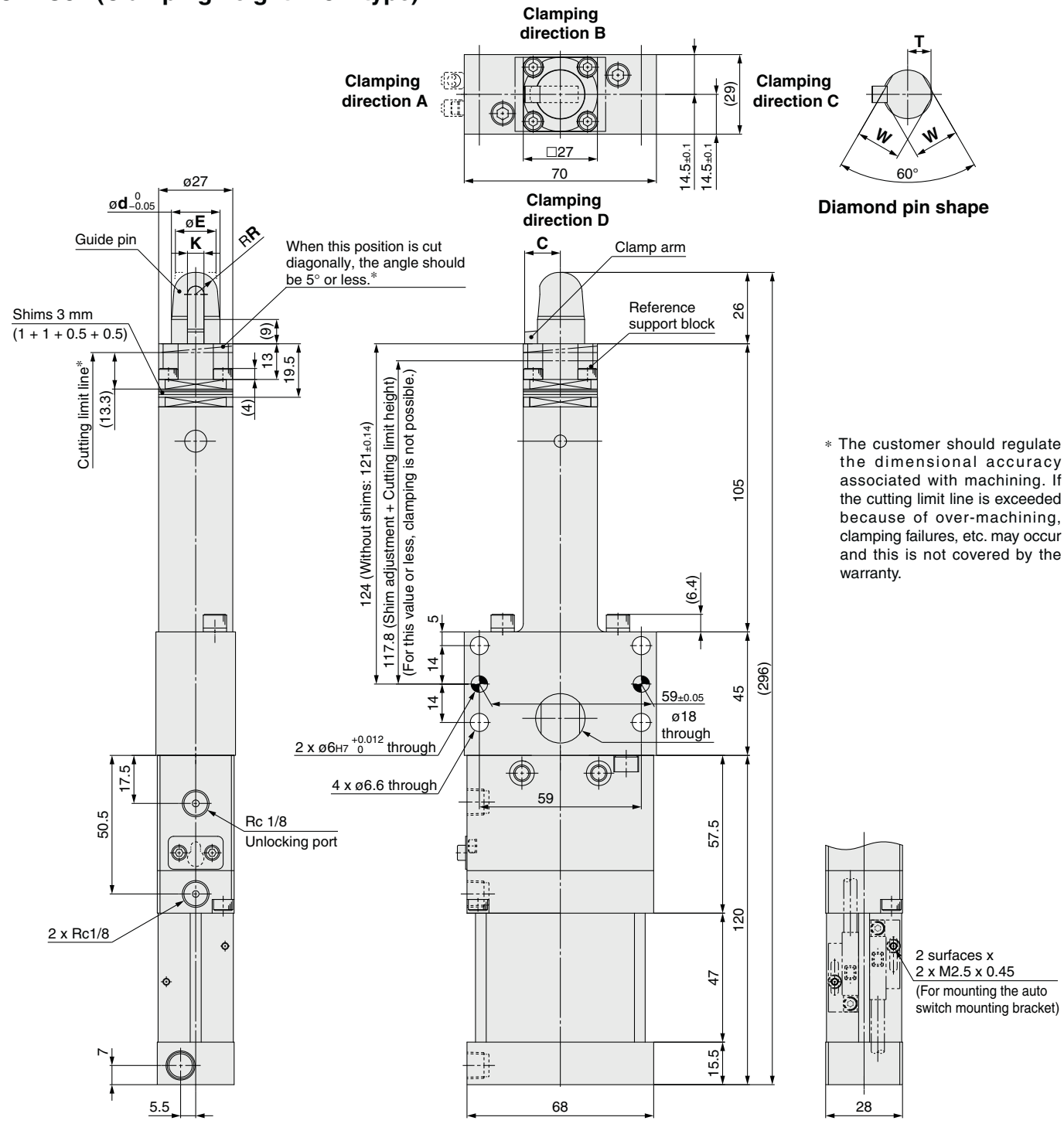
| | |
|---|---|
| **A** | Same as the port side |
| **C** | 180° from the port side |



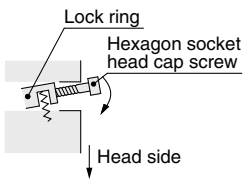

| Pin diameter | C | d | E | K | R | T | W |
|---|---|---|---|---|---|---|---|
| 12.7 | 8.5 | 12.7 | 10.4 | 5 | 5 | 6 | 11.6 |
| 17.5 | 13 | 17.5 | 14.8 | 6 | 7.5 | 8.5 | 16.4 |
| 17.7 | | 17.7 | | | | | |
| 19.7 | | 19.7 | 15 | | | 9.8 | 16.8 |

## 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 |
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| **C** | 180° from the port side |
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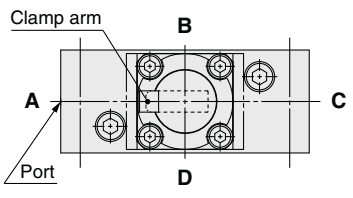
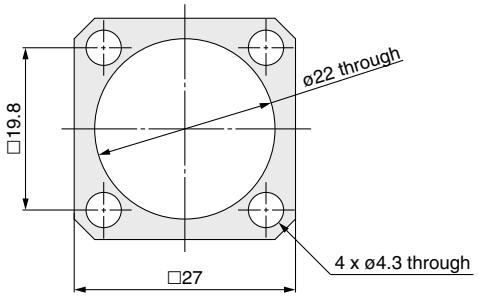



| Pin diameter | C | d | E | K | R | T | W |
|---|---|---|---|---|---|---|---|
| 12.7 | 8.5 | 12.7 | 10.4 | 5 | 5 | 6 | 11.6 |
| 17.5 | 13 | 17.5 | 14.8 | 6 | 7.5 | 8.5 | 16.4 |
| 17.7 | | 17.7 | | | | | |
| 19.7 | | 19.7 | 15 | | | 9.8 | 16.8 |

# C(L)KU32-X2359
# Option/Auto Switch Mounting

## Dimensions

### Shim

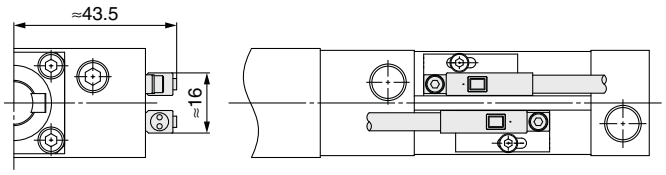



•Shims can be mounted up to 3 mm.

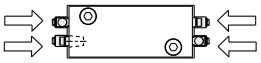
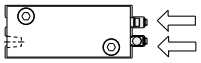
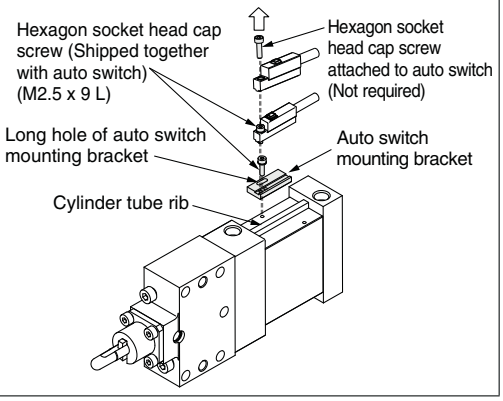
| Description | Plate thickness (mm) | Part no. |
|---|---|---|
| Shim A | 1 | **CKQ32-36A746MN** |
| Shim B | 0.5 | **CKQ32-36B746MN** |

## 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)<br>•Auto switch mounting bracket<br>Weight: 4 g |
| Auto switch mounting surfaces | Surfaces with auto switch mounting slot<br>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.<br>* 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.<br>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.<br>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.<br>Note) The tightening torque for the hexagon socket head cap screw (M2.5 x 9 L) is 0.2 to 0.3 N·m.<br>  |