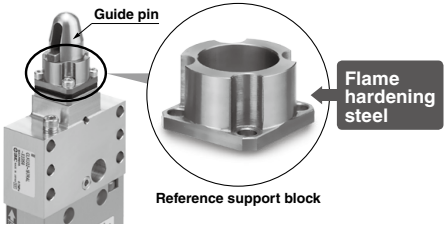
Responses to reduction of spare parts, short lead times, and a drastic reduction of special orders

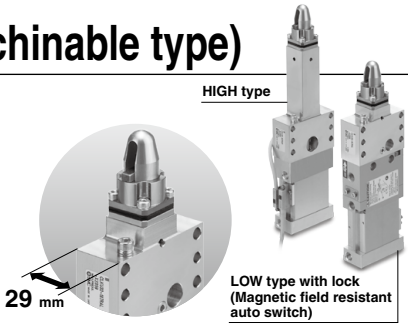
Pin Plate Cylinder
(Reference support block machinable type)

1 Guide pin is separated from the reference support block.



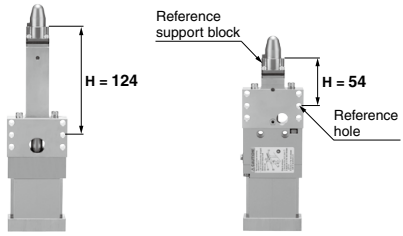
Reference support block can be machined by the customer.
(The block can be changed to a desired shape.)

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.

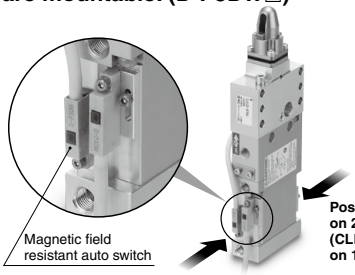


■Ø32 plate cylinder type
■Slim body: 29 mm in width
■Model with lock mechanism, which prevents workpiece drops during emergency stops, can be selected.

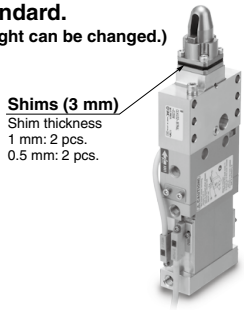
2 The height from the reference hole to the surface of the reference support block can be selected from 2 types "HIGH" or "LOW".



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

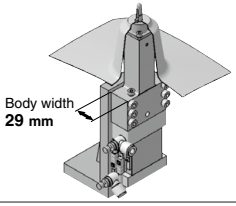


3 Equipped with shims (3 mm) as standard.
(Height can be changed.)

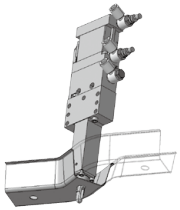


Application Examples

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

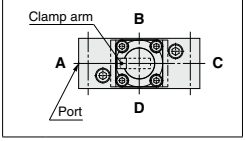
Symbol	**127**	**175**	**177**	**197**
Guide pin diameter [mm]	12.7	17.5	17.7	19.7
Applicable hole diameter of workpiece [mm]	ø13	ø18		ø20
Guide pin shape	Round type, Diamond type			

Guide pin shape

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



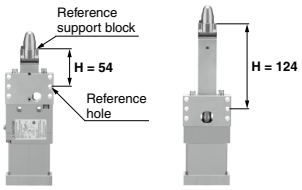
* For LOW type, clamp arm positions are usable only with A and C.

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

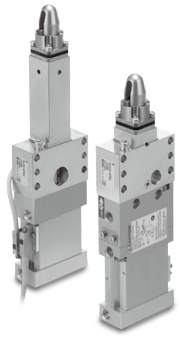
Model Examples

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



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		

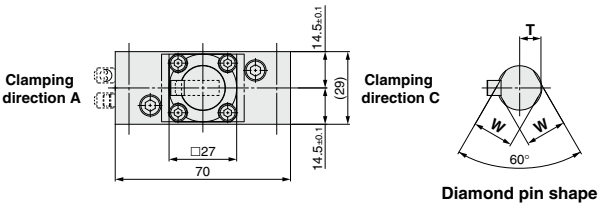
Reference Support Block Order No.

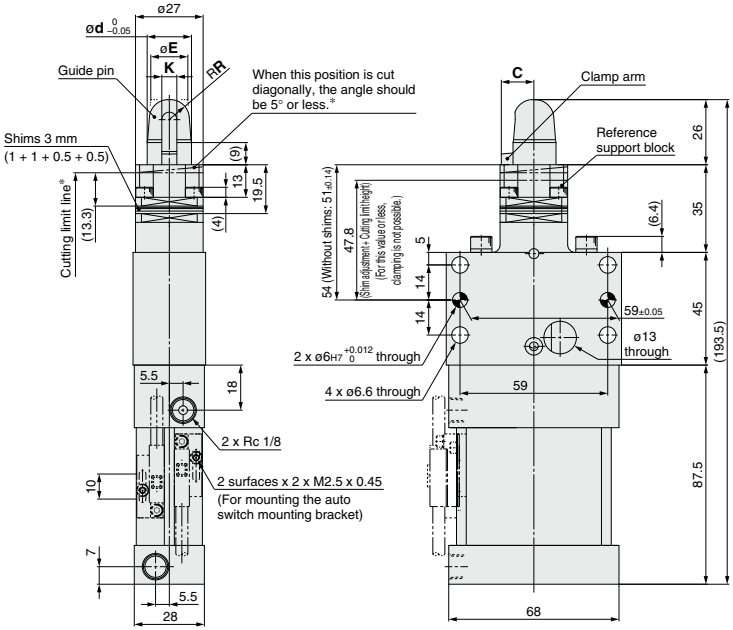
Guide pin		Part no.
Diameter (mm)	Shape	
12.7	Round type/ Diamond type common	CKU32-36-530ZL
17.5		CKU32-36-532ZL
17.7		
19.7		CKU32-36-534ZL

C(L)KU32-X2359

Dimensions

CKU32 (Clamping height LOW type)



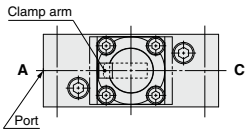


* The customer should regulate the dimensional accuracy associated with machining. If the cutting limit line is exceeded because of over-machining, clamping failures, etc. may occur and this is not covered by the warranty.

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					
19.7		19.7	15			9.8	16.8

Clamp arm position

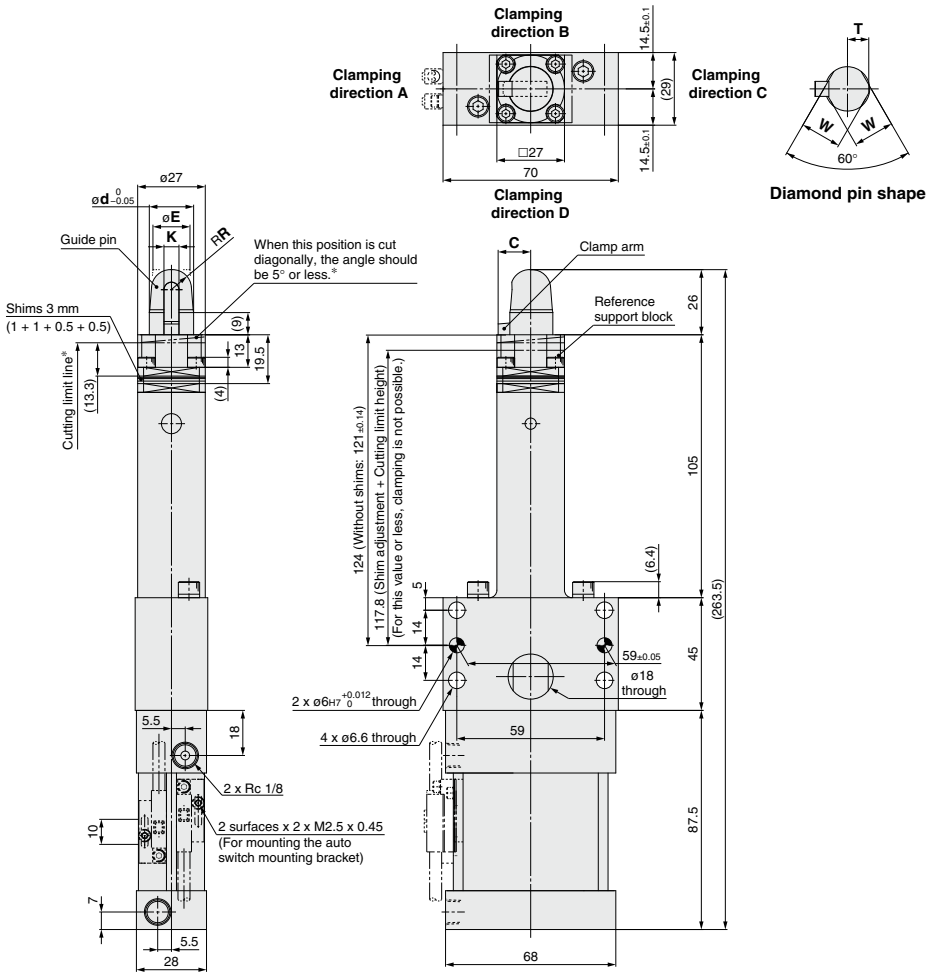
A	Same as the port side
C	180° from the port side



SMC

Dimensions

CKU32 (Clamping height HIGH type)



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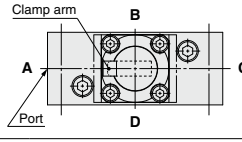
Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7					
19.7		19.7	15			9.8	16.8

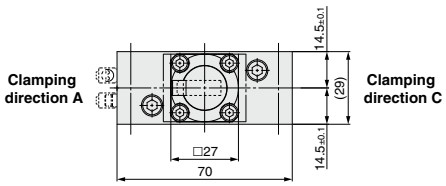
Clamp arm position

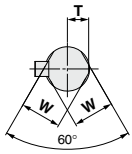
A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side



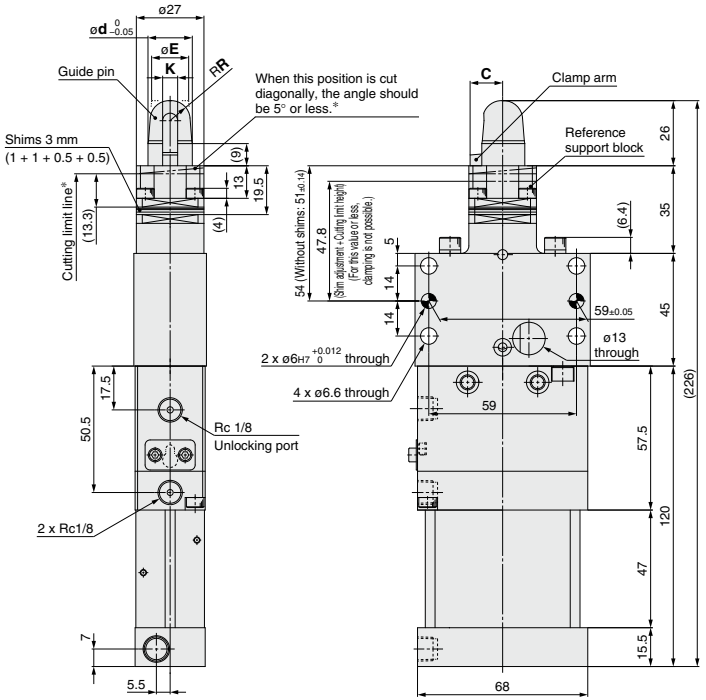
Dimensions

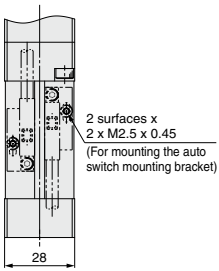
CLKU32 (Clamping height LOW type)





Diamond pin shape





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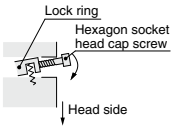
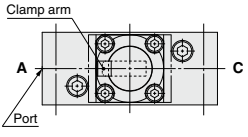


Manually unlocking

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

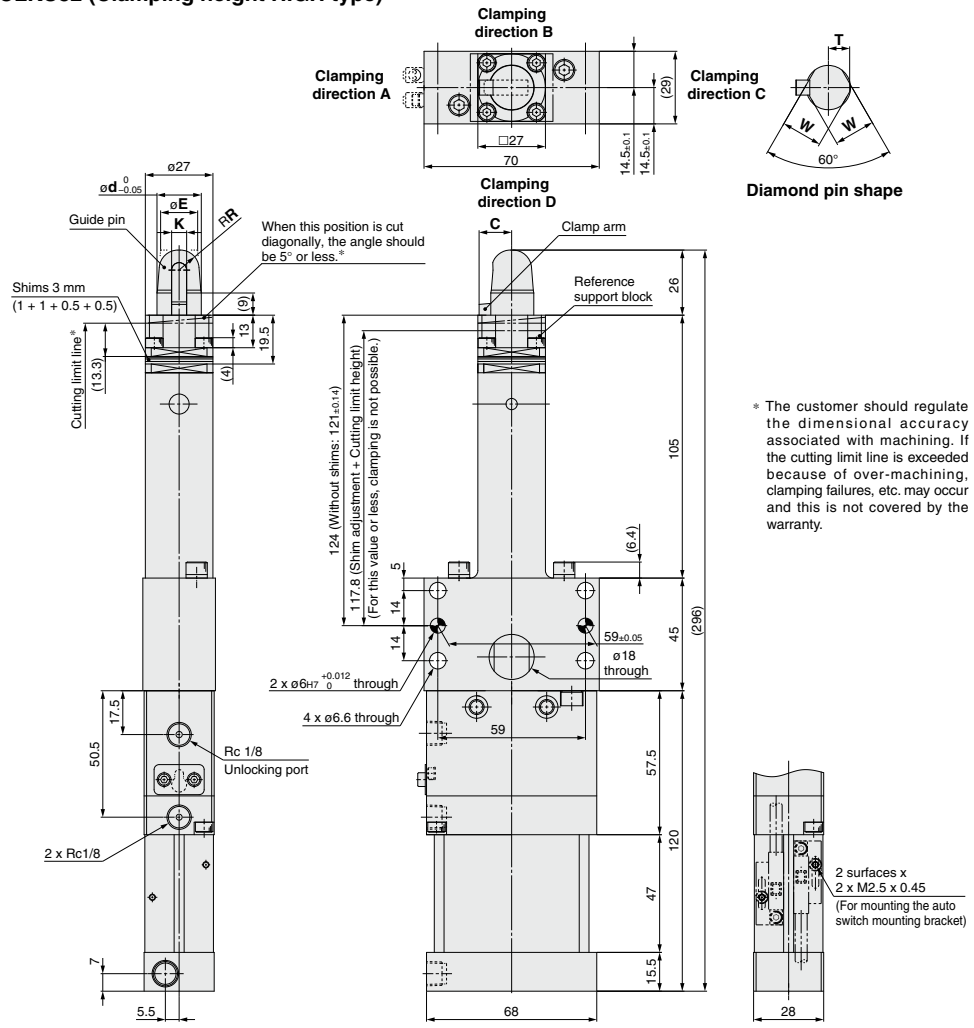
A	Same as the port side
C	180° from the port side



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)



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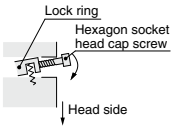


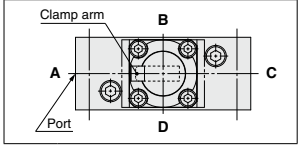
Manually unlocking

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.

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

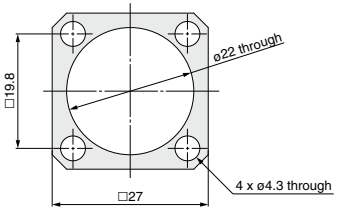
A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side



Option/Auto Switch Mounting

Dimensions

Shim

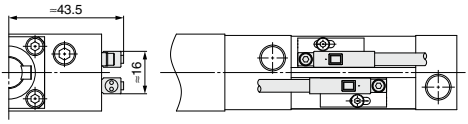


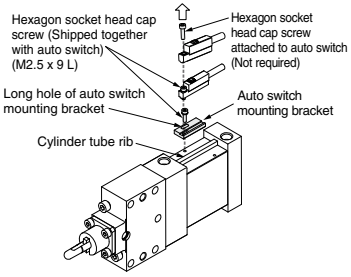
•Shims can be mounted up to 3 mm.

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.