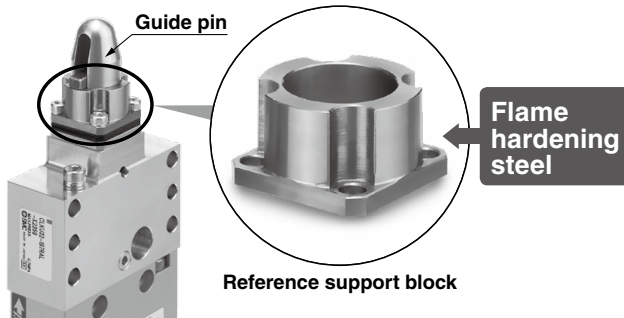


Responses to reduction of spare parts, short lead times, and a drastic reduction of special orders

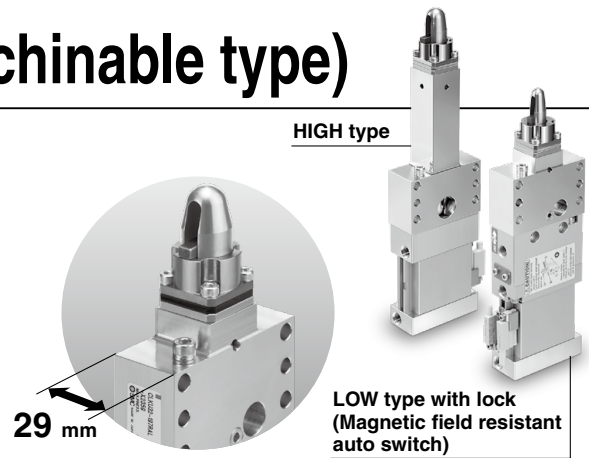
Pin Plate Cylinder (Reference support block machinable type)

1 Guide pin is separated from the reference support block.



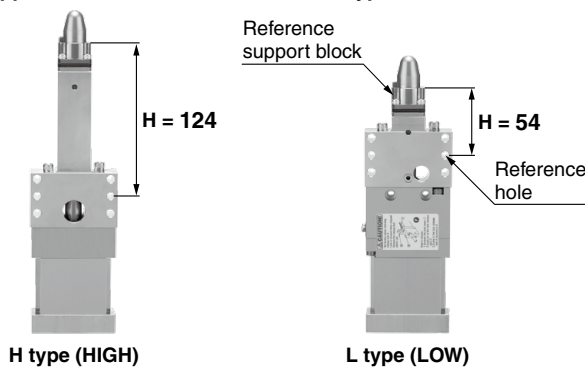
Reference support block can be machined by the customer. (The block can be changed to a desired shape.)

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.

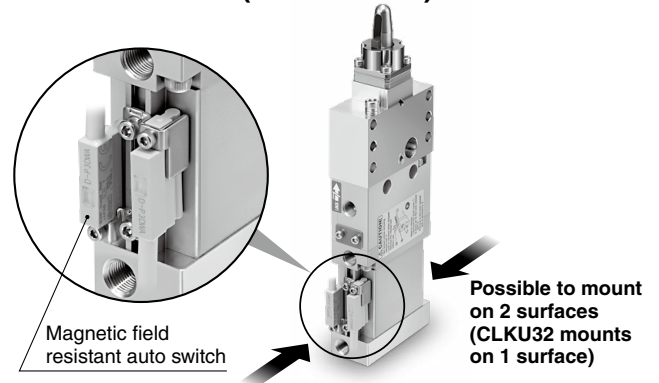


- $\varnothing 32$ plate cylinder type
- Slim body: 29 mm in width
- Model with lock mechanism, which prevents workpiece drops during emergency stops, can be selected.

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-P3DWA□)



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

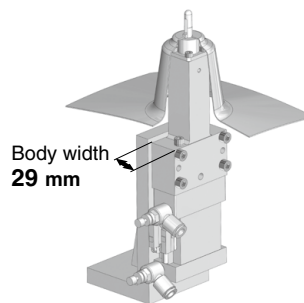
Shims (3 mm)
Shim thickness
1 mm: 2 pcs.
0.5 mm: 2 pcs.



Application Examples

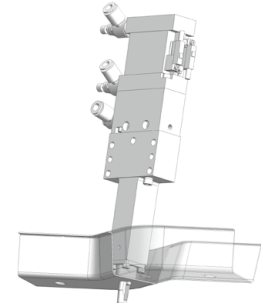
CKU32 (Pin plate cylinder)

- 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-X2359A



Pin Plate Cylinder

C(L)KU32-X2359A

How to Order

C **KU 32** - **127** **R A L** - **P3DWASC** **S** - **X2359A**

One-way lock

Nil	Without lock
L	With lock during clamping

Bore size

32	Equiv. $\phi 32$ 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]	$\phi 13$	$\phi 18$	$\phi 20$	
Guide pin shape	Round type, Diamond type			

Reference support block machinable type

Number of auto switches

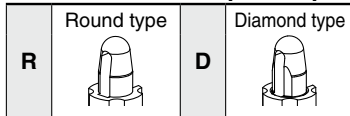
Nil	2 pcs.
S	1 pc. (Unclamping side)

Auto switch

Nil	Without auto switch
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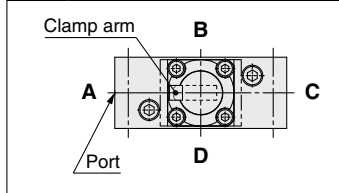
- * Refer to the table below for applicable auto switches.
- * When the total thickness of clamped workpiece is over 2 mm, the auto switch may not be adjusted to the most sensitive position.

Guide pin shape



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



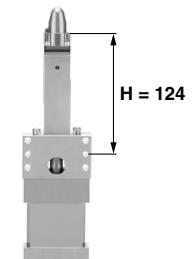
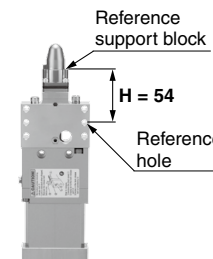
* For LOW type, clamp arm positions are usable only with A and C.

Clamping height (Refer to figures below)

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

LOW type

HIGH type



Applicable Auto Switches/Refer to the Web Catalog 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	P3DWASC	AC magnetic field (Single-phase AC welding magnetic field)	Pre-wired connector	2-color indicator	2-wire (3-4)	24 VDC	0.3 m 0.5 m 3 m 5 m	Relay, PLC
	P3DWASE				2-wire (1-4)			
	P3DWA		Grommet		2-wire			
	P3DWAL							
	P3DWAZ							

General Purpose Auto Switches ⚠ General purpose auto switches cannot be used under a strong magnetic field./Refer to the Web Catalog for further information on auto switches.

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

* 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 Plate Cylinder **C(L)KU32-X2359A**



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 temperatures	-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)					
		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		
17.7		
19.7		

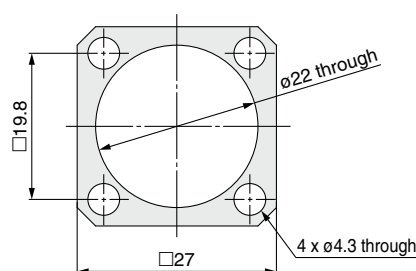
Reference Support Block Order No.

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

Weight

Guide pin		Model			
Diameter (mm)	Shape	CKU32-X2359A		CLKU32-X2359A	
		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	840	1010	1050	1220
	Diamond type				
19.7	Round type	840	1010	1050	1220
	Diamond type				

Shim Dimensions



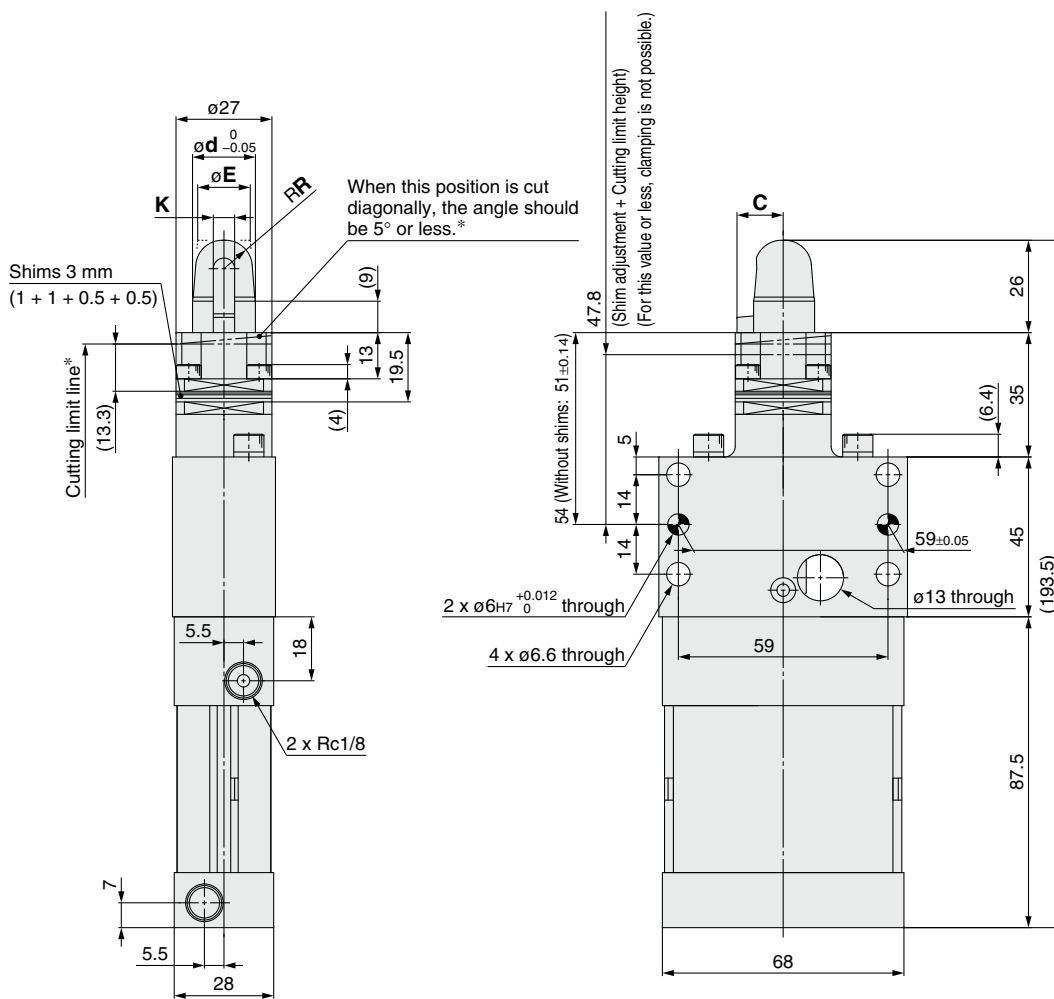
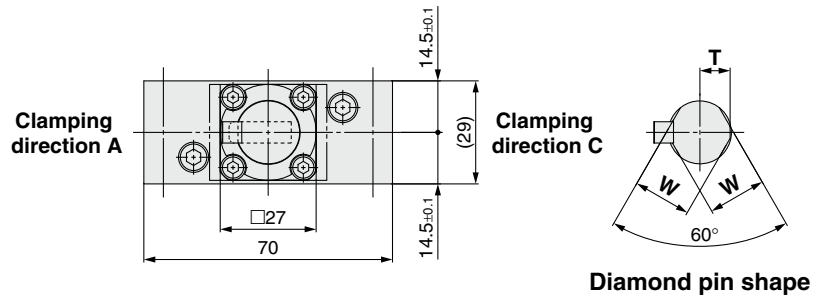
• Shims can be mounted up to 3 mm.

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

C(L)KU32-X2359A

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.

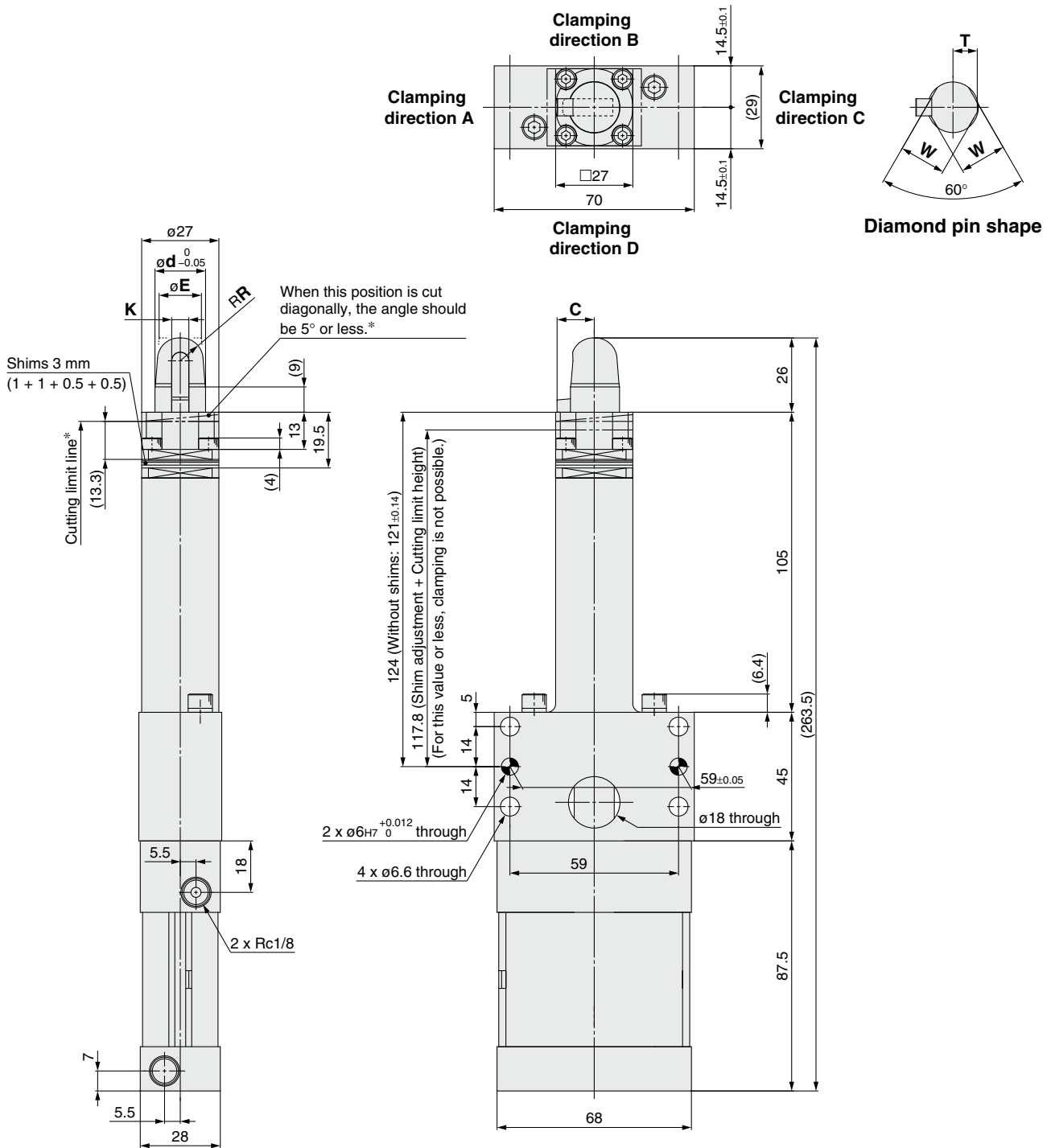
Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7					
19.7		19.7	15			9.8	16.8

Clamp arm position

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

Dimensions

CKU32 (Clamping height HIGH type)

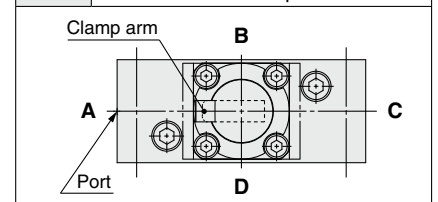


* The customer should regulate the dimensional accuracy associated with machining. If the cutting limit line is exceeded because of over-machining, clamping failures, etc. may occur and this is not covered by the warranty.

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				16.8	
19.7		19.7	15			9.8	16.8

Clamp arm position

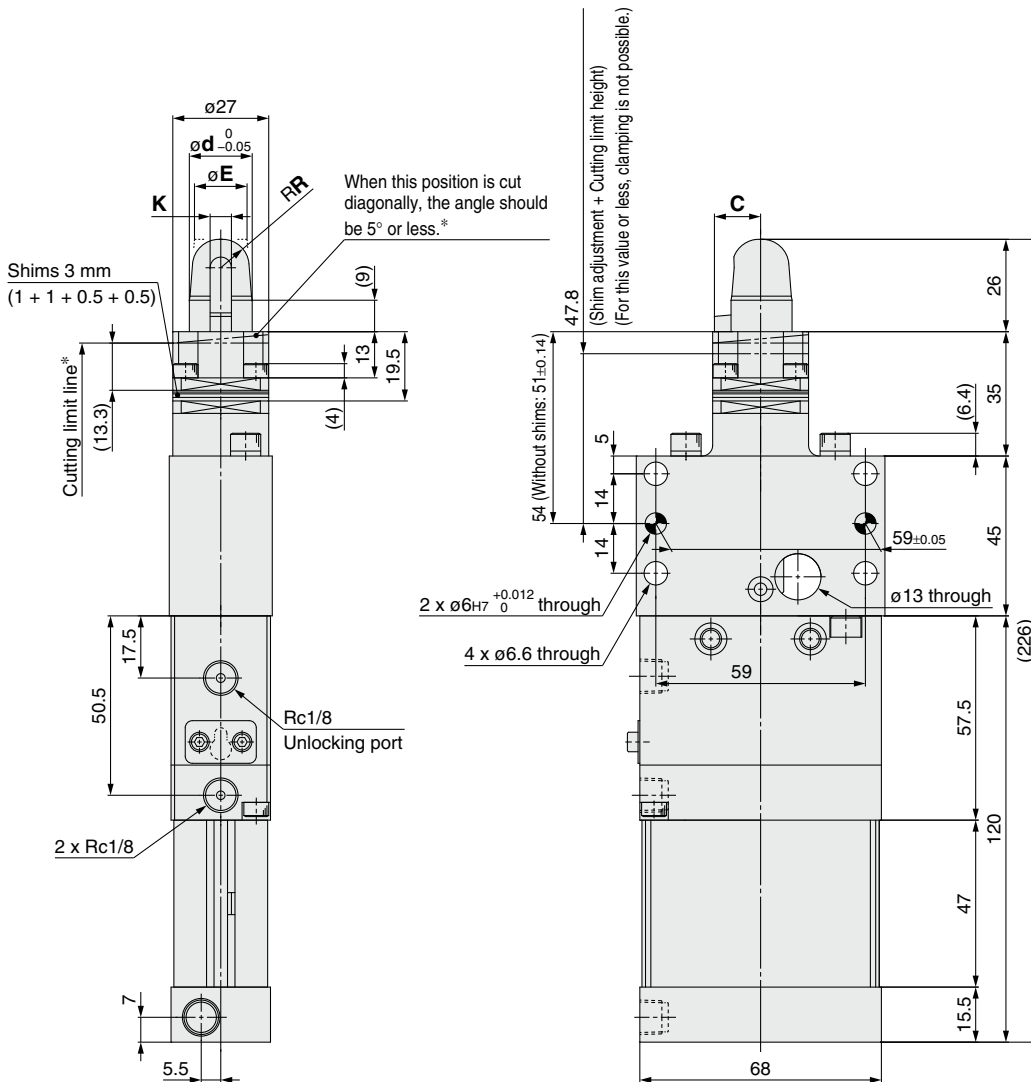
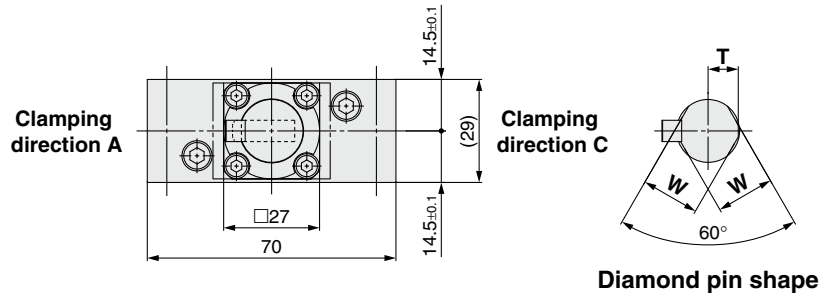
A	Same as the port side
B	90° from the port side
C	180° from the port side
D	270° from the port side



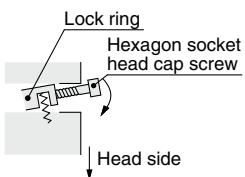
C(L)KU32-X2359A

Dimensions

CLKU32 (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.

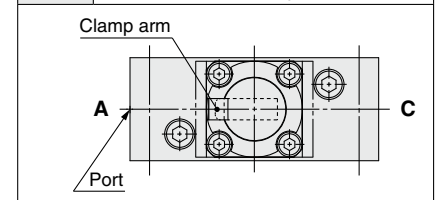


Manually unlocking

- 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

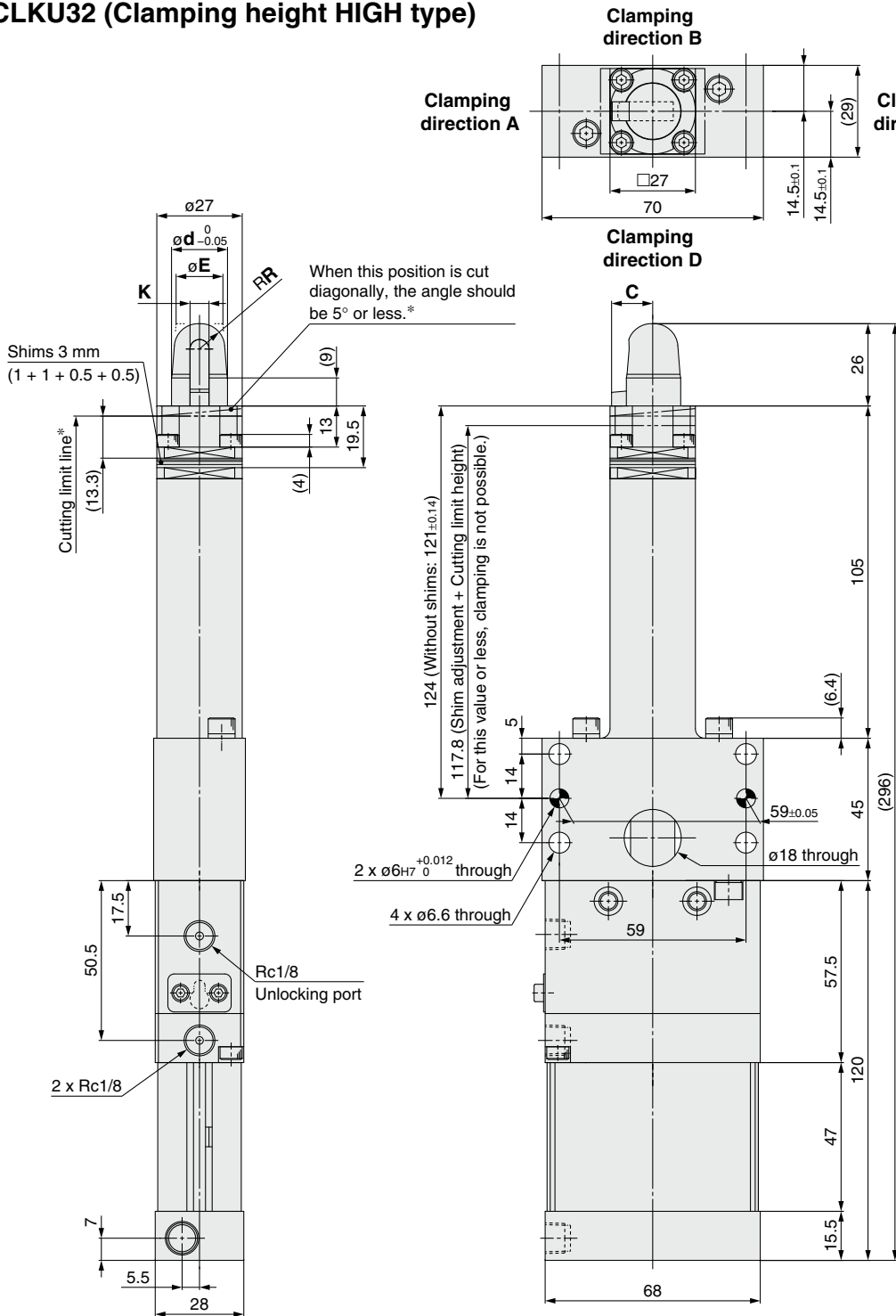
A	Same as the port side
C	180° from the port side



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				

Dimensions

CLKU32 (Clamping height HIGH type)



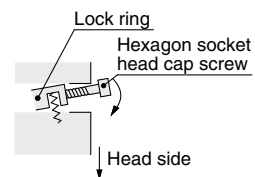
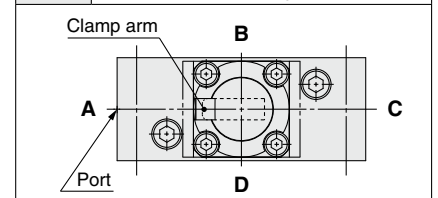
* The customer should regulate the dimensional accuracy associated with machining. If the cutting limit line is exceeded because of over-machining, clamping failures, etc. may occur and this is not covered by the warranty.

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



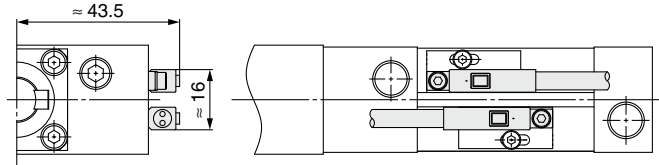
Pin diameter	C	d	E	K	R	T	W
12.7	8.5	12.7	10.4	5	5	6	11.6
17.5	13	17.5	14.8	6	7.5	8.5	16.4
17.7		17.7					
19.7		19.7	15				

C(L)KU32-X2359A

Auto Switch Mounting

Auto Switch Mounting Height

D-P3DWA□



Auto Switch Mounting Bracket Part No./Mounting Method

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) ②Auto switch mounting 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) • Auto switch mounting 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 12 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 12 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. Hexagon socket head cap screw (attached to the auto switch) (M2.5 x 12 L) Hexagon socket head cap screw (M3 x 4 L) Spring washer Auto switch Auto switch mounting bracket Auto switch mounting nut Groove of rail	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 auto switch mounting 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. Set screw (Not required) M3 x 6.5 L M2.5 x 6 L Auto switch mounting bracket Auto switch Auto switch mounting nut Groove of rail	①Slide the auto switch mounting 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. M3 x 6.5 L Auto switch Auto switch mounting nut