



## AKQ

### Pin-type clamping air cylinder



#### Features

- Refined positioning pins with high precision.
- A wide variety of diameters for positioning pins, suitable for a wide range of applications.
- Widely used in the positioning and clamping welding of automotive thin sheets.
- The entire series is designed with magnetic rings.

#### Specifications

Cylinder diameter mm	50
Operation mode	Double-acting type
Operating fluid	Compressed air (filtered through a sieve with a $\leq 25\mu\text{m}$ screening process)
Operating pressure range MPa ( kgf/cm <sup>2</sup> )	0.15 ~ 1.0 ( 1.5 ~ 10.2 )
Environmental and fluid temperature °C	0~60
Lubrication and oil supply <sup>①</sup>	Not required
Buffering	Rubber cushioning
Clamping stroke mm	13
Clamping force <sup>②</sup> N	660
Port size Rc	1/4

Note: ① If lubrication is required, use turbine oil ISO VG32; ② Under 0.5 MPa air pressure conditions.

## Order Code

**AKQ**

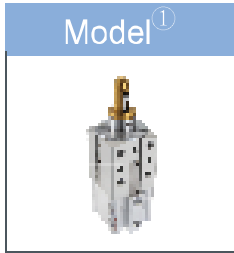
**A**

**50**

**X**

**175**

**R**



Installation surface<sup>②</sup>

A	Front
B	Side

Cylinder diameter mm

50	Ø50
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X

Positioning pin model<sup>③</sup>

Please refer to the selection and configuration table for details

Positioning pin shape<sup>③</sup>

R	Cylindrical	
D	Diamond	

**A**

**L**

**S**

Clamping arm position<sup>④</sup>

A	0°
B	90°
C	180°
D	270°

Clamping height<sup>⑤</sup>

L	60mm
H	90mm

Adjusting shims

blank	None
S	With 3mm shim

Note :

1. Magnetic switches need to be ordered separately; please refer to the Magnetic Switch Model Table for the model.
2. Refer to the Installation Surface Position Table for details.
3. Consult the Selection and Configuration Table for more information.
4. See the Clamping Arm Position Table for details.
5. Refer to the Clamping Position Height Table for more information.



## ■ Magnetic Switch Model Table

Cylinder diameter (mm)	2-wire	3-wire	Anti-magnetic switch
	Non-contact	Non-contact	Non-contact
50	TDX	TDS	TDP3* <sup>1</sup>

Note 1: The TDP3 strong magnetic switch is only suitable for use in AC welding machines.

## ■ Ordering Example

- Order cylinder with a diameter of 50mm; positioning pin diameter: 17.5mm; side-mounted installation position; cylindrical-shaped positioning pin; clamping arm position at 90°; clamping height at 60mm; pin-type clamping cylinder without adjustment pads.  
Correct ordering code: AKQB50X175RBL

- Order cylinder with a diameter of 50mm; positioning pin diameter: 19.5mm; front-mounted installation position; diamond-shaped positioning pin; clamping arm position at 0°; clamping height at 90mm; with adjustment pads; requiring a magnetic switch (auxiliary component TD series, model: TDX, wire length 2 meters) for pin-type clamping cylinder.

Cylinder correct ordering code: AKQA 50X195DAHS

Magnetic switch correct ordering code: TDX-2000

## Product configuration

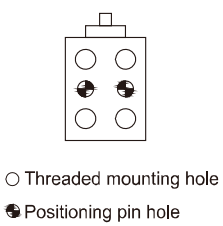
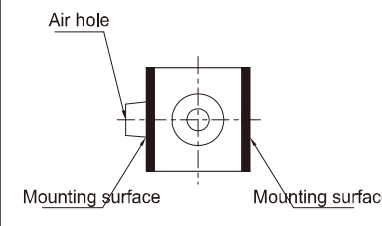
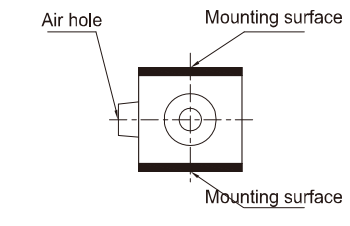
### ■ Product selection

Positioning pin model number	125	127	128	129	130	145	147	148	149	150	155	157	158	159	160	175	177
Positioning pin outer diameter	12.5	12.7	12.8	12.9	13	14.5	14.7	14.8	14.9	15	15.5	15.7	15.8	15.9	16.0	17.5	17.7
Cylindrical	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Diamond	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

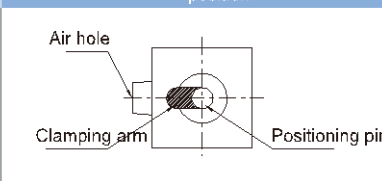
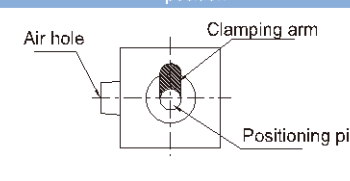
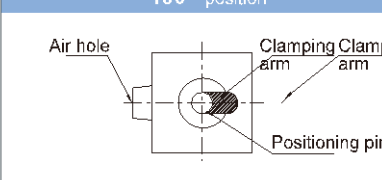
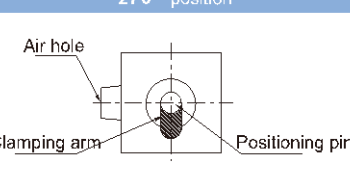
Positioning pin model number	178	179	180	195	197	198	199	200	245	247	248	249	250	295	297	298	299	300
Positioning pin outer diameter	17.8	17.9	18.0	19.5	19.7	19.8	19.9	20.0	24.5	24.7	24.8	24.9	25.0	29.5	29.7	29.8	29.9	30.0
Cylindrical	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Diamond	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



## ■ Installation surface position table

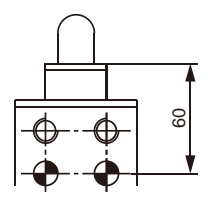
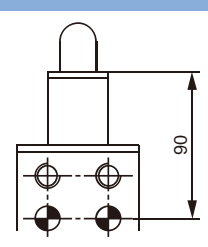
Installation surface position	Front installation	Side installation
 <p>○ Threaded mounting hole ● Positioning pin hole</p>		

## ■ Clamping arm position

Clamping arm position <sup>①</sup>	0° position	90° position
		
	180° position	270° position
		

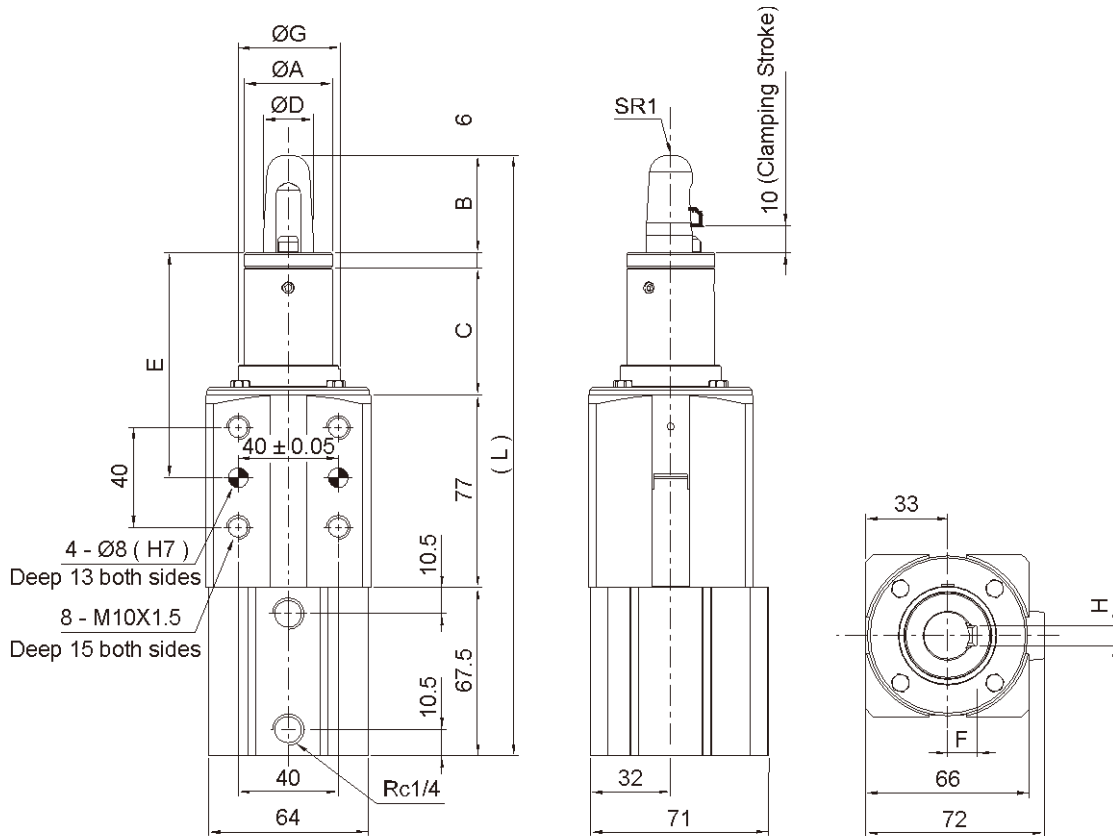
Note 1: The air hole reference is in a clockwise direction.

## ■ Clamping Position Height Table

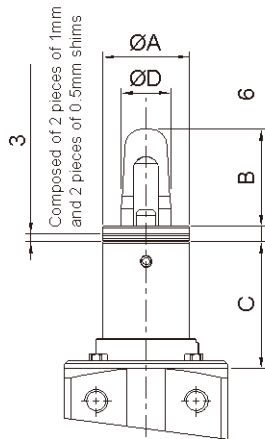
Clamping Position Height( mm )	
L type	H type
	



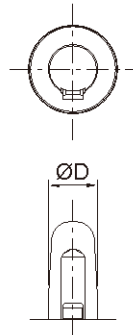
## Dimensions (mm)



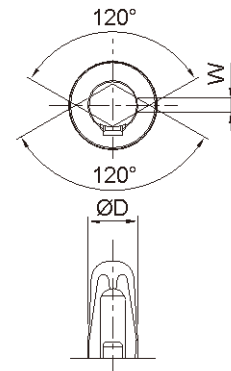
### ● Adjustable pad type



### ● Cylindrical



### ● Diamond



Positioning pin diameter D	A	B	C		E		L		F	G	H	R1	W
			H type	L type	H type	L type	H type	L type					
12.5	30	33	51	21	90	60	234.5	204.5	9	36	6	4	—
12.7	30	33	51	21	90	60	234.5	204.5	9	36	6	4	—
12.8	30	33	51	21	90	60	234.5	204.5	9	36	6	4	—
12.9	30	33	51	21	90	60	234.5	204.5	9	36	6	4	—
13.0	30	33	51	21	90	60	234.5	204.5	9	36	6	4	—
14.5	30	34	51	21	90	60	235.5	205.5	11	36	7	5	—
14.7	30	34	51	21	90	60	235.5	205.5	11	36	7	5	—
14.8	30	34	51	21	90	60	235.5	205.5	11	36	7	5	—
14.9	30	34	51	21	90	60	235.5	205.5	11	36	7	5	—
15.0	30	34	51	21	90	60	235.5	205.5	11	36	7	5	—
15.5	30	34	51	21	90	60	235.5	205.5	11	36	7	5.5	—
15.7	30	34	51	21	90	60	235.5	205.5	11	36	7	5.5	—
15.8	30	34	51	21	90	60	235.5	205.5	11	36	7	5.5	—
15.9	30	34	51	21	90	60	235.5	205.5	11	36	7	5.5	—
16.0	30	34	51	21	90	60	235.5	205.5	11	36	7	5.5	—
17.5	35	37	51	21	90	60	238.5	208.5	12	40	7	6	6
17.7	35	37	51	21	90	60	238.5	208.5	12	40	7	6	6
17.8	35	37	51	21	90	60	238.5	208.5	12	40	7	6	6
17.9	35	37	51	21	90	60	238.5	208.5	12	40	7	6	6
18.0	35	37	51	21	90	60	238.5	208.5	12	40	7	6	6
19.5	35	39	51	21	90	60	240.5	210.5	13	40	8	7	7
19.7	35	39	51	21	90	60	240.5	210.5	13	40	8	7	7
19.8	35	39	51	21	90	60	240.5	210.5	13	40	8	7	7
19.9	35	39	51	21	90	60	240.5	210.5	13	40	8	7	7
20.0	35	39	51	21	90	60	240.5	210.5	13	40	8	7	7
24.5	40	39	51	21	90	60	240.5	210.5	16	47	8	9.5	7
24.7	40	39	51	21	90	60	240.5	210.5	16	47	8	9.5	7
24.8	40	39	51	21	90	60	240.5	210.5	16	47	8	9.5	7
24.9	40	39	51	21	90	60	240.5	210.5	16	47	8	9.5	7
25.0	40	39	51	21	90	60	240.5	210.5	16	47	8	9.5	7
29.5	40	39	51	21	90	60	240.5	210.5	18	47	8	11	9
29.7	40	39	51	21	90	60	240.5	210.5	18	47	8	11	9
29.8	40	39	51	21	90	60	240.5	210.5	18	47	8	11	9
29.9	40	39	51	21	90	60	240.5	210.5	18	47	8	11	9
30.0	40	39	51	21	90	60	240.5	210.5	18	47	8	11	9