

# Manual positioning ring

A device that only requires bolts to achieve high-precision positioning



## Manual is the position ring

### Product features:

- Manual positioning, locking, and unlocking;
- Repetitive positioning accuracy<0.003mm;
- Material: Hardened stainless steel;
- Quickly achieve high-precision positioning of trays and substrates;
- Compact design that can effectively utilize space.

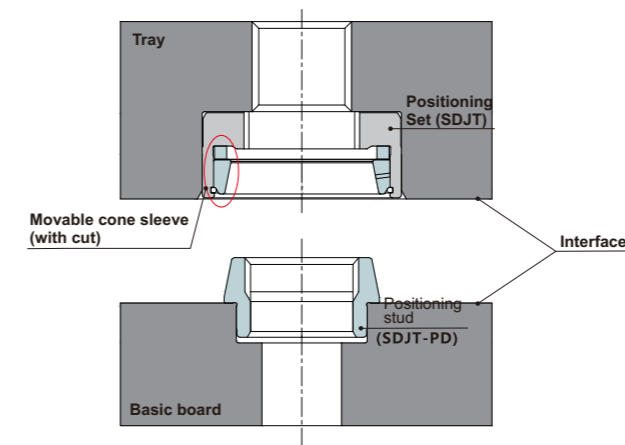
### Applicable industry:

- Suitable for metal or non-metal processing fields;
- Suitable for quick change of manual fixtures, capable of achieving high-precision positioning between trays and substrates;
- Suitable for heavy-duty pallet positioning, with high load-bearing capacity.



## Source Logic Diagram:

The manual positioning device achieves two sided constrained positioning through a movable cone sleeve



### Advantage:

- ① Can absorb the positioning errors of each positioning pin/positioning sleeve's positioning position;
- ② Can absorb errors caused by wear and tear of positioning parts due to long-term use;
- ③ Can absorb the spacing accuracy error between installation holes;
- ④ Capable of absorbing changes in hole spacing accuracy error (distance) caused by temperature fluctuations.

### Advantages of movable cone sleeve:

It can absorb dimensional errors through the up and down movement of the cone sleeve, making the gap between positioning rivets, directional rivets, and positioning zero, and ensuring reliable repeat positioning accuracy through two-dimensional constraint positioning.

## Manual positioning ring

The manual positioning device consists of positioning rivets (SDJT-PD)/directional rivets (SDJT-PC)/positioning sleeve (SDJT).



① Positioning Stud (SDJT-PD)

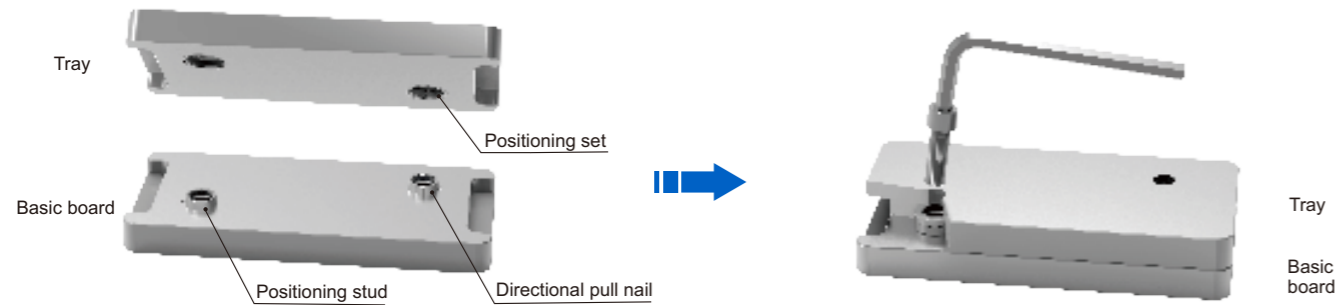


② Directional Stud (SDJT-PC)



③ Positioning Set (SDJT)

## Action principle:



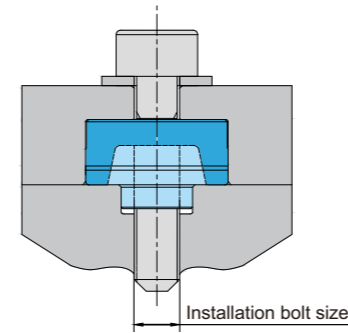
① Install the positioning rivets, directional rivets, and positioning sleeves on the base plate side and tray side respectively using installation tools

② Place the tray steadily on top of the base board, so that the positioning sleeve, positioning rivets, and directional rivets cooperate with each other

① Secure the tray to the base plate using bolts that match the manual positioning device

② Bolt tightening sequence: First tighten the positioning bolt (SDJT-PD), then tighten the directional bolt (SDJT-PC)

## Installation bolt size:

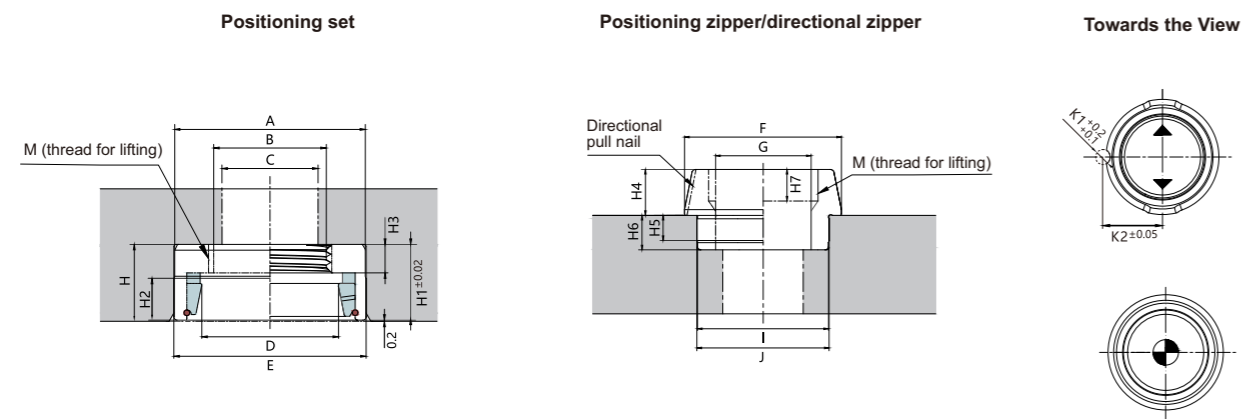


Installation bolt size	M4
	M5
	M6
	M8
	M10
	M12
M16	

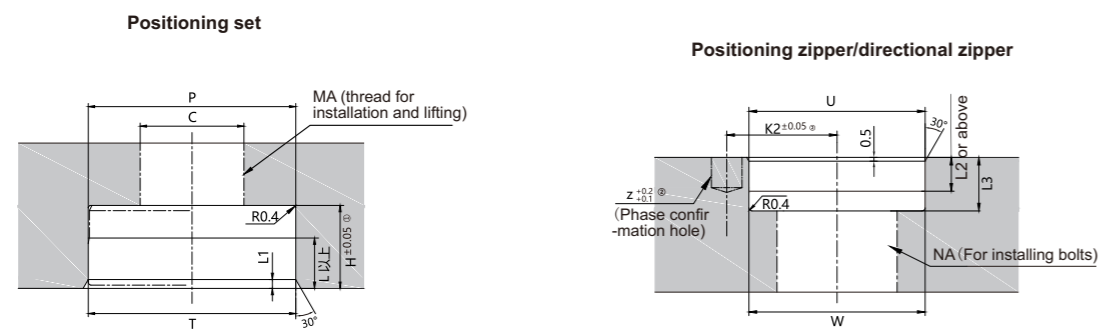
## Positioning device model combination:

Installation bolt size	Positioning zipper/ directional zipper model	Positioning sleeve model	Function
M4 bolt	Positioning zipper/SDJT0040-PD	Positioning sleeve/SDJT-0040	Benchmark positioning function
	Directional pull nail/SDJT0040-PC		Unidirectional positioning function
M5 bolt	Positioning zipper/SDJT0050-PD	Positioning sleeve/SDJT-0050	Benchmark positioning function
	Directional pull nail/SDJT0050-PC		Unidirectional positioning function
M6 bolt	Positioning zipper/SDJT0060-PD	Positioning sleeve/SDJT-0060	Benchmark positioning function
	Directional pull nail/SDJT0060-PC		Unidirectional positioning function
M8 bolt	Positioning zipper/SDJT0080-PD	Positioning sleeve/SDJT-0080	Benchmark positioning function
	Directional pull nail/SDJT0080-PC		Unidirectional positioning function
M10 bolt	Positioning zipper/SDJT0100-PD	Positioning sleeve/SDJT-0100	Benchmark positioning function
	Directional pull nail/SDJT0100-PC		Unidirectional positioning function
M12 bolt	Positioning zipper/SDJT0120-PD	Positioning sleeve/SDJT-0120	Benchmark positioning function
	Directional pull nail/SDJT0120-PC		Unidirectional positioning function
M16 bolt	Positioning zipper/SDJT0160-PD	Positioning sleeve/SDJT-0160	Benchmark positioning function
	Directional pull nail/SDJT0160-PC		Unidirectional positioning function

### Outline dimension diagram:



### Processing dimensions of installation location:



be careful:

- ① When the substrate and tray are made of dissimilar metals, it is recommended to process them with  $H \pm 0.02$ .
- ② Match the holes used for phase confirmation with the notches used for phase confirmation of the directional rivets as needed. This project involves selective processing. If this project is implemented for processing, the difficulty of phase adjustment can be simplified by marking the phase or using parallel pins when installing directional rivets.

### Main parameter table:

Model		SDJT0040	SDJT0050	SDJT0060	SDJT0080	SDJT0100	SDJT0120	SDJT0160
Repetitive positioning accuracy	(mm)	0.003						
Trip	(mm)	0.2				0.3		
Maximum loading weight	Horizontal installation (kg)	100	200	300	400	500	600	800
	Vertical installation (kg)	20	40	60	80	100	120	160
Minimum tightening force	(kN)	1.2	1.4	1.5	1.8	2.0	2.5	3.0
Tightening sequence		Positioning Stud (SDJT-PD) → Directional Stud (SDJT-PC)						
Usage temperature	(°C)	0~70						
Weight	Positioning sales (g)	2	3	4	5	10	15	25
	Positioning set (g)	4	7	10	11	22	36	50

### Outline dimension table and installation position processing dimension table:

Order number	SDJT0040	SDJT0050	SDJT0060	SDJT0080	SDJT0100	SDJT0120	SDJT0160
ØA	12.8	15.8	17.8	19.8	24.8	29.8	34.8
ØB	5.1	6.8	9	11	12.5	16.5	20.5
ØC	4.3	5.3	6.8	9	11	14	18
ØD	7.7	9.5	11.5	13.3	16.8	20.2	24.9
ØE	13 <sup>+0.033</sup> / <sub>+0.02</sub>	16 <sup>+0.033</sup> / <sub>+0.02</sub>	18 <sup>+0.033</sup> / <sub>+0.02</sub>	20 <sup>+0.033</sup> / <sub>+0.02</sub>	25 <sup>+0.033</sup> / <sub>+0.02</sub>	30 <sup>+0.033</sup> / <sub>+0.02</sub>	35 <sup>+0.042</sup> / <sub>+0.026</sub>
ØF	9	10.8	12.8	14.8	18.6	22.2	27.3
ØG	4.3	5.3	6.8	8.5	11	14	18
ØI	6.3	7.8	9.8	11.8	14.8	17.8	22.8
ØJ	6.5p6 <sup>+0.024</sup> / <sub>+0.015</sub>	8p6 <sup>+0.024</sup> / <sub>+0.015</sub>	10p6 <sup>+0.024</sup> / <sub>+0.015</sub>	12p6 <sup>+0.029</sup> / <sub>+0.018</sub>	15p6 <sup>+0.029</sup> / <sub>+0.018</sub>	18p6 <sup>+0.029</sup> / <sub>+0.018</sub>	23p6 <sup>+0.035</sup> / <sub>+0.022</sub>
K1	1.5	1.5	1.5	2	2.5	3	4
K2	4.7	5.6	6.5	7.6	9.6	11.4	14.4
M	M6	M8	M10	M12*1	M14*1.5	M18*1.5	M22*1.5
N	M5	M6	M8	M10	M12	M14*1.5	M20*1.5
MA	M5	M6	M8	M10	M12	M16	M20
NA	M4	M5	M6	M8	M10	M12	M16
ØP	13 <sup>+0.011</sup> / <sub>-0.1</sub>	16 <sup>+0.011</sup> / <sub>-0.1</sub>	18 <sup>+0.011</sup> / <sub>-0.1</sub>	20 <sup>+0.013</sup> / <sub>-0.1</sub>	25 <sup>+0.013</sup> / <sub>-0.1</sub>	30 <sup>+0.013</sup> / <sub>-0.1</sub>	35 <sup>+0.016</sup> / <sub>-0.1</sub>
ØT	13H6 <sup>+0.011</sup> / <sub>0</sub>	16H6 <sup>+0.011</sup> / <sub>0</sub>	18H6 <sup>+0.011</sup> / <sub>0</sub>	20H6 <sup>+0.013</sup> / <sub>0</sub>	25H6 <sup>+0.013</sup> / <sub>0</sub>	30H6 <sup>+0.013</sup> / <sub>0</sub>	35H6 <sup>+0.016</sup> / <sub>0</sub>
ØU	6.5H6 <sup>+0.009</sup> / <sub>0</sub>	8H6 <sup>+0.009</sup> / <sub>0</sub>	10H6 <sup>+0.009</sup> / <sub>0</sub>	12H6 <sup>+0.011</sup> / <sub>0</sub>	15H6 <sup>+0.011</sup> / <sub>0</sub>	18H6 <sup>+0.011</sup> / <sub>0</sub>	23H6 <sup>+0.013</sup> / <sub>0</sub>
ØW	6.5 <sup>+0.009</sup> / <sub>-0.1</sub>	8 <sup>+0.009</sup> / <sub>-0.1</sub>	10 <sup>+0.009</sup> / <sub>-0.1</sub>	12 <sup>+0.011</sup> / <sub>-0.1</sub>	15 <sup>+0.011</sup> / <sub>-0.1</sub>	18 <sup>+0.011</sup> / <sub>-0.1</sub>	23 <sup>+0.013</sup> / <sub>-0.1</sub>
H	7	8	8.5	9	11	13	14
H1	6.8	7.8	8.3	8.8	10.8	12.8	13.8
H2	3.8	4	4	4.5	5.5	6.5	8
H3	2	2.8	3.2	3.5	4.2	5.2	5.2
H4	4.5	4.5	4.5	5	6	7	8
H5	2.5	3	3	3	4	4.5	4.5
H6	3.5	4	4	4	5	6	6
H7	3.5	3.5	3.5	3.5	4.5	5	6
L	4.2	4.5	5	5.5	6.5	7.5	8.5
L1	0.5	0.8	0.8	1	1.2	1.5	1.5
L2	3.5	4	4	4	5	5.5	5.5
L3	4.5	5	5	5	6	7	7