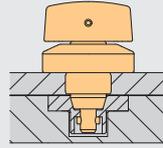


# Flex Locators

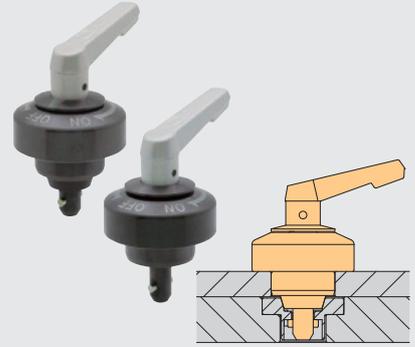


# One Touch



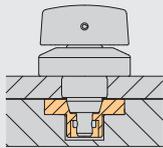
ONE-TOUCH FLEX LOCATOR CLAMPERS (Knob)

Part No. CP723



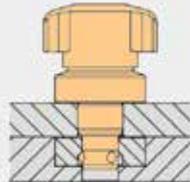
ONE-TOUCH FLEX LOCATOR CLAMPERS

Part No. CP722



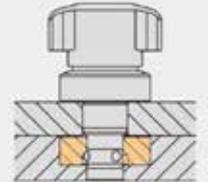
ONE-TOUCH FLEX LOCATOR BUSHINGS

Part No. CP727



RETRACTABLE ONE-TOUCH CLAMPING LOCATORS

Part No. CP740



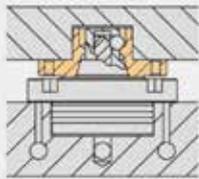
LOCATING RECEIVERS

Part No. CP745



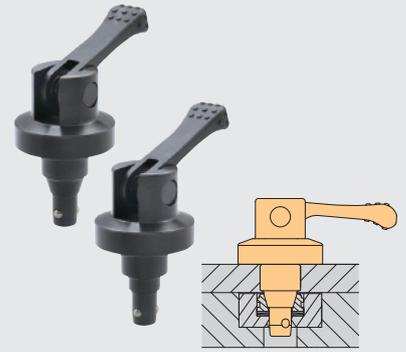
PRECISION ONE-TOUCH CLAMPING LOCATORS

Part No. CP741



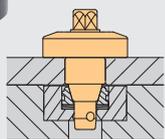
LOCATING RECEIVERS

Part No. AMWF-BU



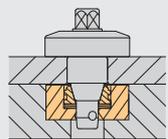
ONE-TOUCH FLEX LOCATOR CLAMPERS (Cam Handle)

Part No. CP731



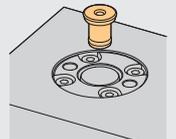
ONE-TOUCH FLEX LOCATOR CLAMPERS (Hexagon Head)

Part No. CP730



ONE-TOUCH FLEX LOCATOR BUSHINGS

Part No. CP735



ONE-TOUCH FLEX LOCATOR PROTECTING COVERS

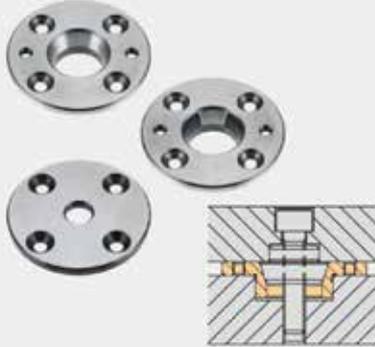
Part No. CP735-P



### ADJUSTABLE-TORQUE WRENCHES

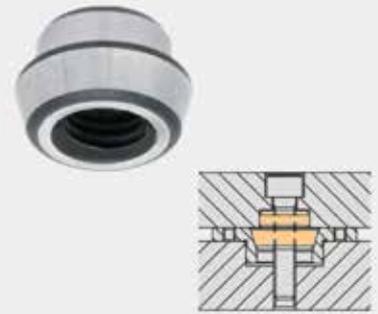
Part No. CP-TCW

# Locating Element



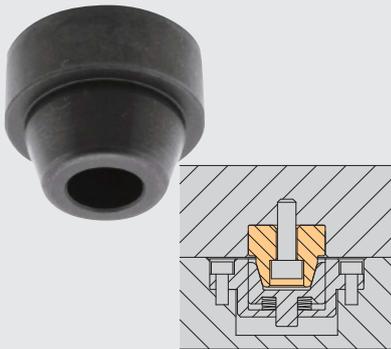
### PRECISION LOCATING RECEIVERS

Part No. CP780



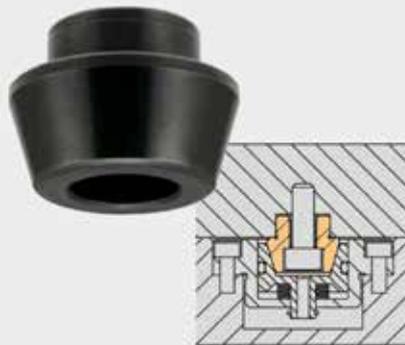
### TAPERED PINS

Part No. CP157



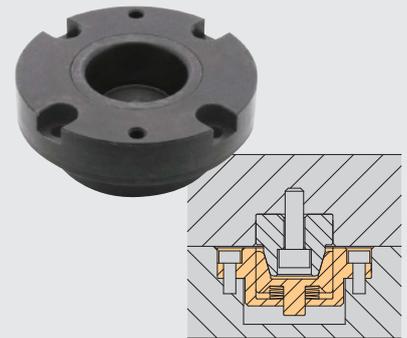
### FLEX LOCATOR PINS

Part No. CP720



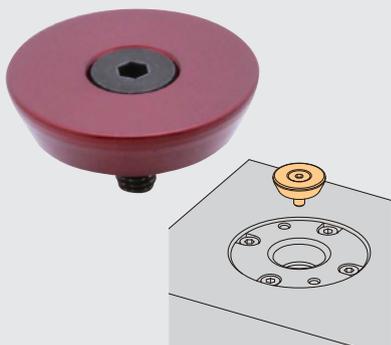
### FLEX LOCATOR PINS

Part No. CP720-N



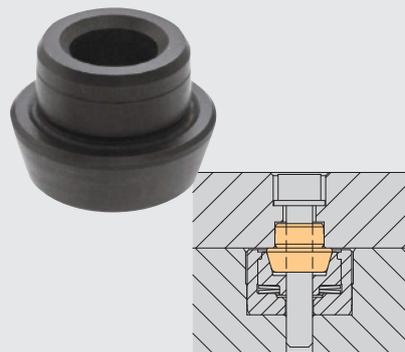
### FLEX LOCATOR BUSHINGS (Blind)

Part No. CP725



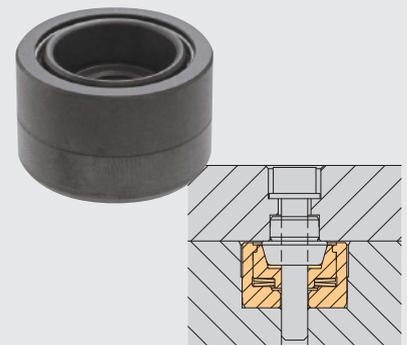
### FLEX LOCATOR PROTECTING COVERS

Part No. CP725-P



### FLEX LOCATOR PINS

Part No. CP721

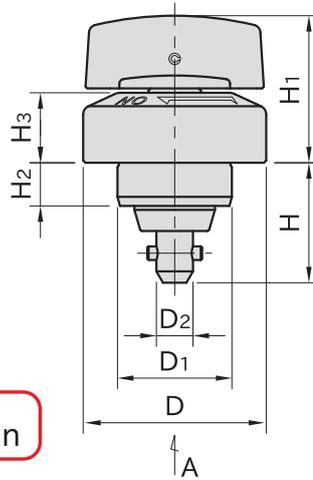
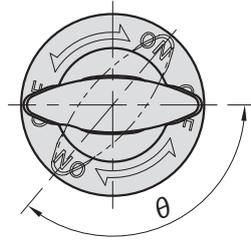


### FLEX LOCATOR BUSHINGS (Through)

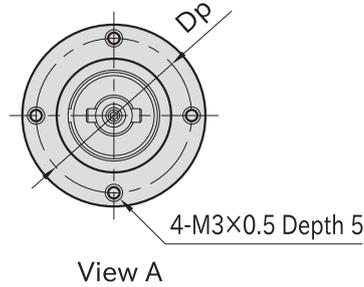
Part No. CP726

# CP723

# ONE-TOUCH FLEX LOCATOR CLAMPERS (Knob)



Body / Shank	Tapered Pin	Knob	Pin
SCM440 steel Black oxide finished	SCM440 steel Nitrocarburized	SCS13 stainless steel (Equivalent to SUS304)	SUS304 stainless steel



★ **Key Point**  
Space saving operation

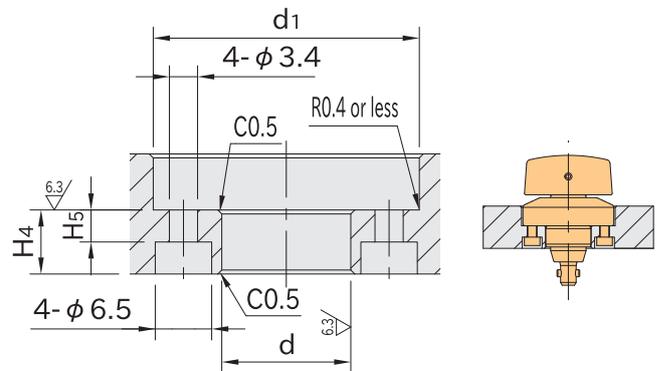
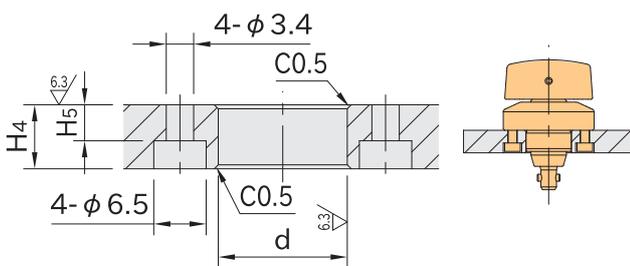
Part Number	D <sub>1</sub> (g6)	H <sub>2</sub>	D	H <sub>1</sub>	H <sub>3</sub>	D <sub>2</sub>	H	θ	D <sub>p</sub>
<b>CP723-0632R-04</b>	16	7.5	32	27	12	5.5	22	120°	25.5
<b>CP723-0840R-06</b>	25	9.5	40	32	15.5	8	26	130°	34

Part Number	Clamping Force(N)	Lifting Force (N) *	Weight (g)	Proper One-Touch Flex Locator Bushing
<b>CP723-0632R-04</b>	350	30	96	CP727-0632R
<b>CP723-0840R-06</b>	600	100	211	CP727-0840R

\*) The lifting force is the power of the inner spring of the body to push up the movable tapered bushing.

## How To Use

### ■ Mounting Hole Dimension



Part Number	d (H7)	H <sub>4</sub> (±0.05)	d <sub>1</sub>	H <sub>5</sub>
<b>CP723-0632R-04</b>	16	8	33	4
<b>CP723-0840R-06</b>	25	10	41	6

## Supplied With

- **CP723-0632R-04**: Four pieces of hex. socket-head cap screws M3×0.5-8L
- **CP723-0840R-06**: Four pieces of hex. socket-head cap screws M3×0.5-10L

## Reference

How To Use ONE-TOUCH FLEX LOCATORS  
(Handle / Knob)

# CP722

# ONE-TOUCH FLEX LOCATOR CLAMPERS



One Touch

Pneumatic

Locating Element

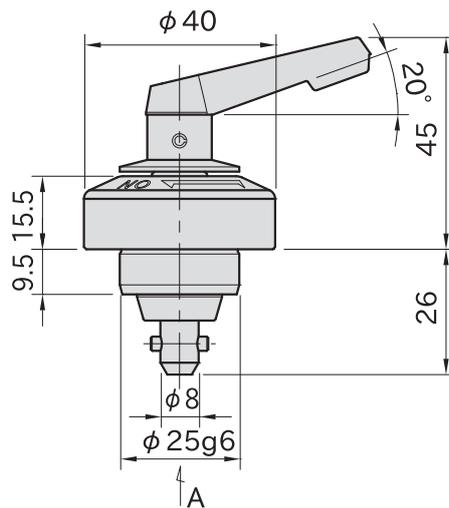
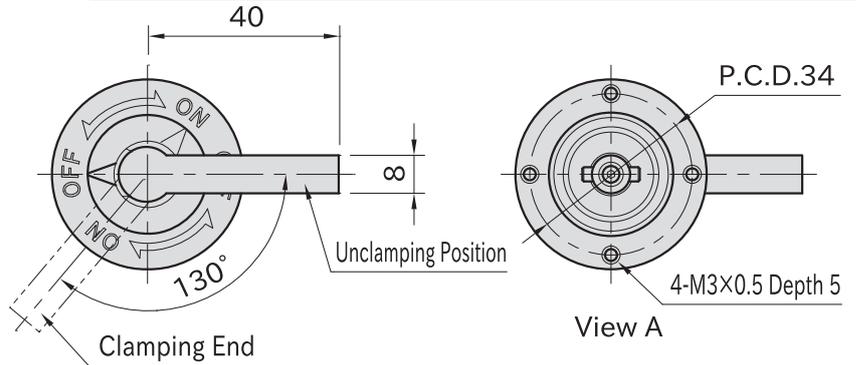


**CP722-0840R-06**

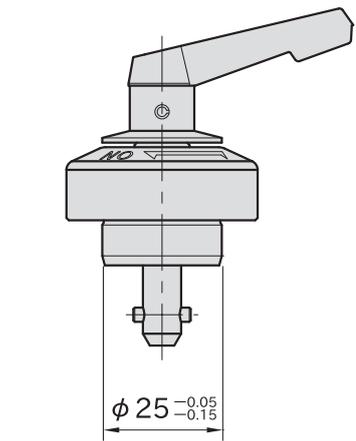


**CP722-0840R-06N**

Body / Shank	Tapered Pin	Handle	Pin
SCM440 steel Black Oxide Finished	SCM440 Nitrocarburized	ZDC1 die-cast zinc Silver-gray painted	SUS303 stainless steel



**CP722-0840R-06**



**CP722-0840R-06N**

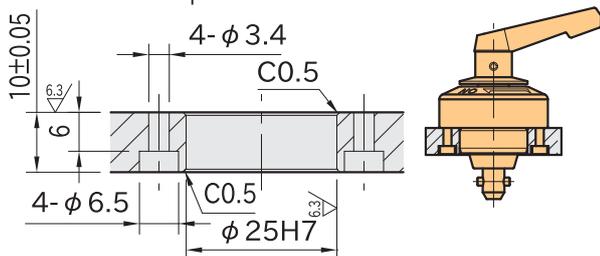
Part Number	Tapered Pin	Clamping Force (N)	Lifting Force (N)*	Weight (g)	Proper One-Touch Flex Locator Bushing
<b>CP722-0840R-06</b>	With	600	100	220	<b>CP727-0840R</b>
<b>CP722-0840R-06N</b>	Without	700	—	215	

\*) The lifting force is the power of the inner spring of the body to push up the movable tapered pin.

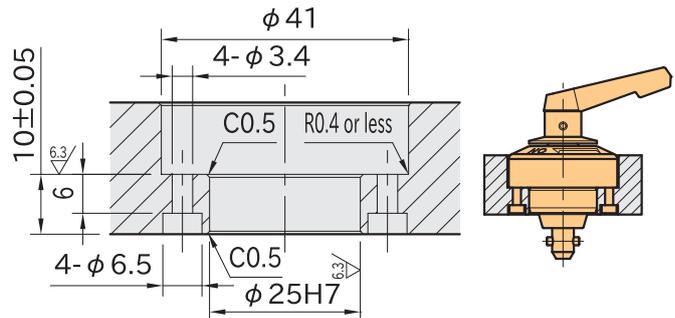
## How To Use

### Mounting Hole Dimension

Can be used with plates of 10mm ~ 22mm thickness.



Installation on 10mm-thick Plate



Installation on 10mm-22mm Thick Plate  
Drill a counterbored hole.

## Reference

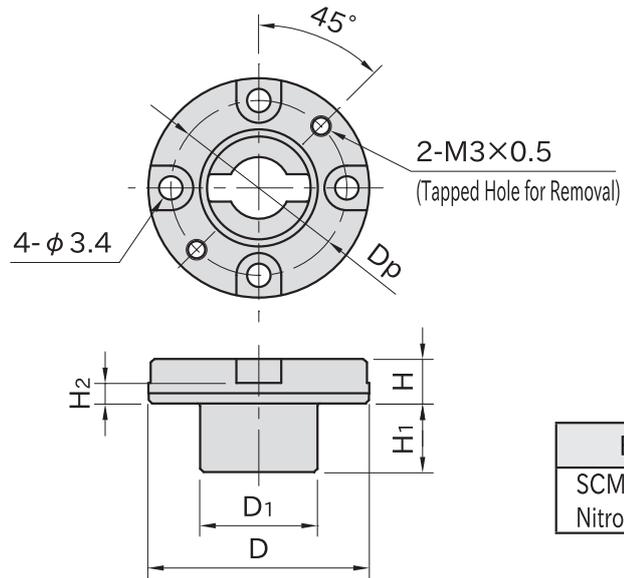
How To Use ONE-TOUCH FLEX LOCATORS  
(Handle / Knob)

## Supplied With

4 of M3×0.5-10L Hex Socket-Head Cap Screw

# CP727

# ONE-TOUCH FLEX LOCATOR BUSHINGS

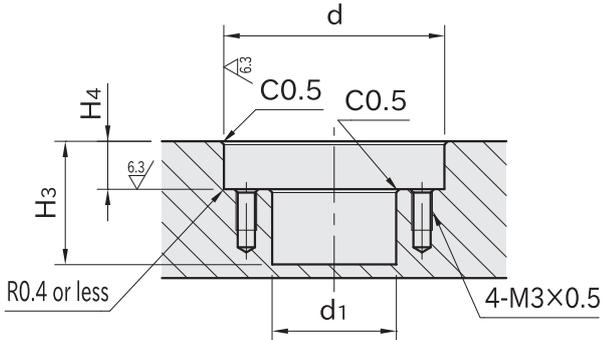


Body
SCM440 steel
Nitrocarburized

Part Number	D (g6)	H	D <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	D <sub>p</sub>	Weight (g)
<b>CP727-0632R</b>	28	5.5	12.5	8	2	21.5	20
<b>CP727-0840R</b>	32	6.5	17	10	3	25.5	32

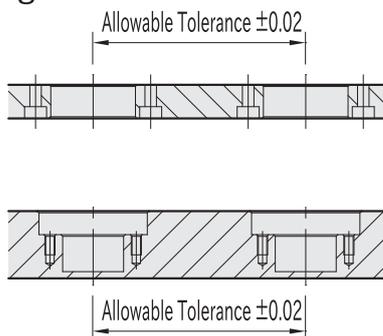
## How To Use

### ■ Mounting Hole Dimension



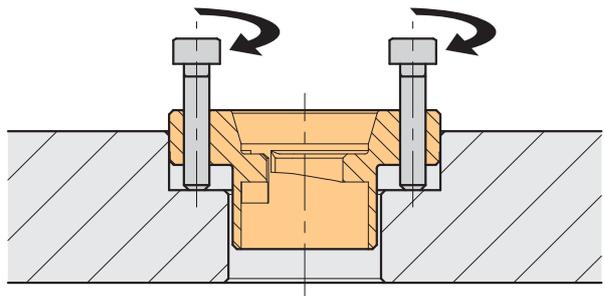
Part Number	d (H7)	H <sub>4</sub> (±0.05)	d <sub>1</sub>	H <sub>3</sub>
<b>CP727-0632R</b>	28	6	13.5	15
<b>CP727-0840R</b>	32	7	18	18

### ■ Spacing Tolerance



### ■ How to Remove

Insert screws into the tapped holes to lift up the bushing for removal.



## Related Product

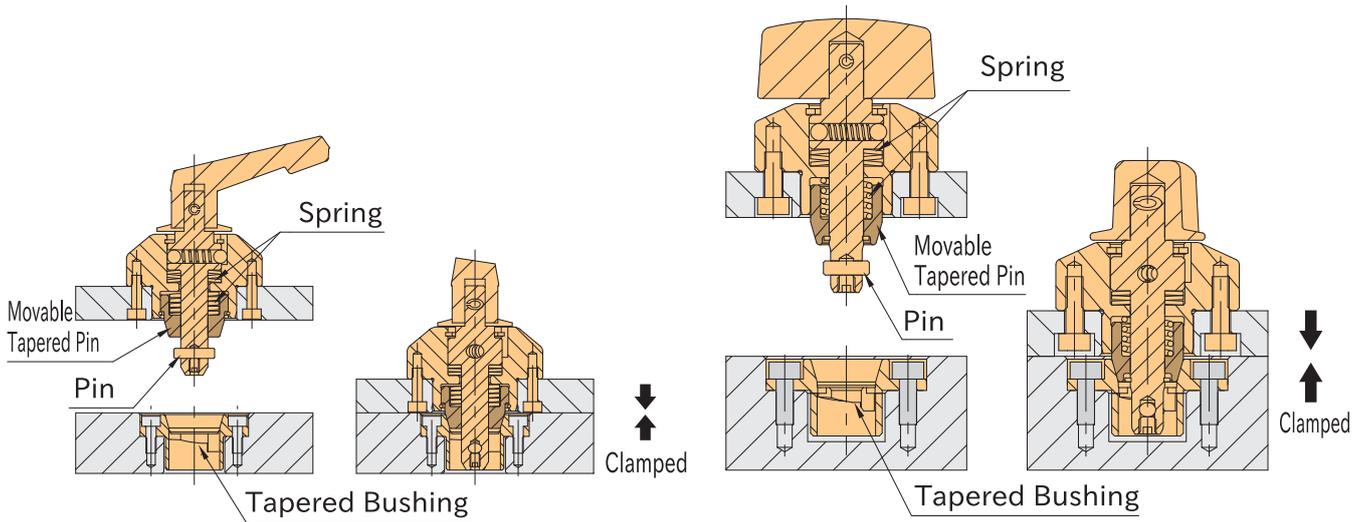
- [CP722](#) ONE-TOUCH FLEX LOCATOR CLAMPERS
- [CP723](#) ONE-TOUCH FLEX LOCATOR CLAMPERS(Knob)

## Reference

How To Use ONE-TOUCH FLEX LOCATORS (Handle / Knob)

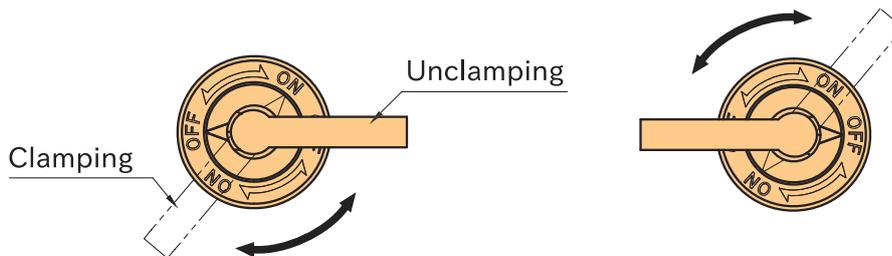
# How To Use ONE-TOUCH FLEX LOCATORS (Handle / Knob)

## Feature

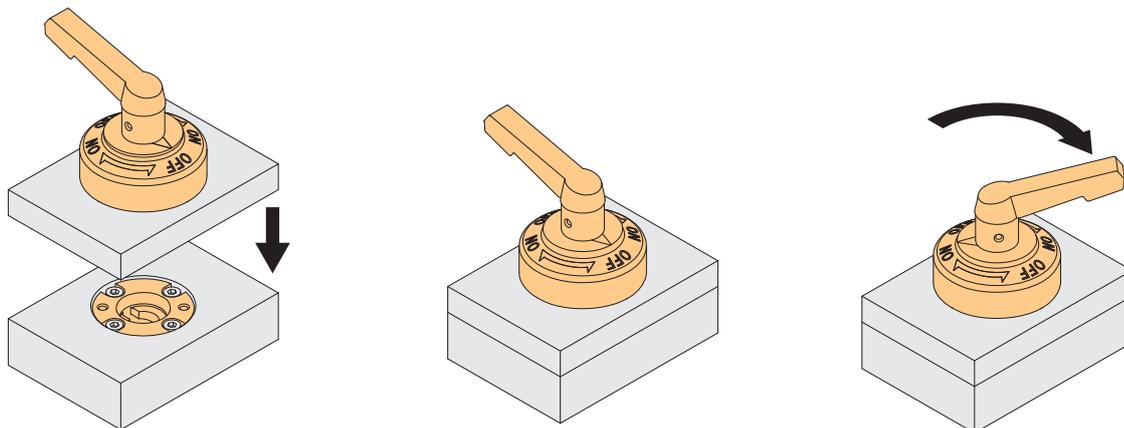


- The plates are located by fitting of the tapered pin and the tapered bushing.
  - The pin contacts the cam surface inside the bushing, and it compresses the inner spring, then the plates are clamped.
- Note: [CP722-0840R-06N](#) does not have locating function.

Two pair of clamping and unclamping positions of handle can be chosen for [CP722](#).



## How To Operate

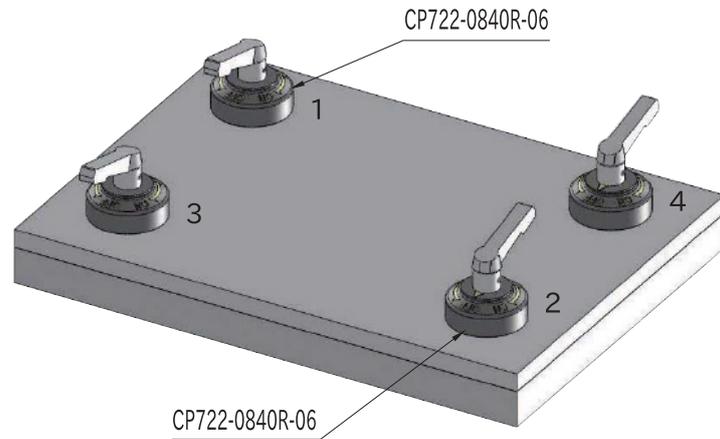


1. Ensure the handle is positioned at "OFF" mark.
2. Insert the clammer to the bushing.
3. Turn the handle to "ON" mark for clamping.

- \*) Follow back these steps for unclamping.
- \*) Same operation for Knob style.

## Tightening Order

1. Ensure the handle is positioned at "OFF" mark and lift down the fixture plate.
  2. Turn the handle and clamp in order of 1→2→3→4.
- \*) For unclamping, ensure the handle is positioned at "OFF" mark and disassemble the fixture plate.

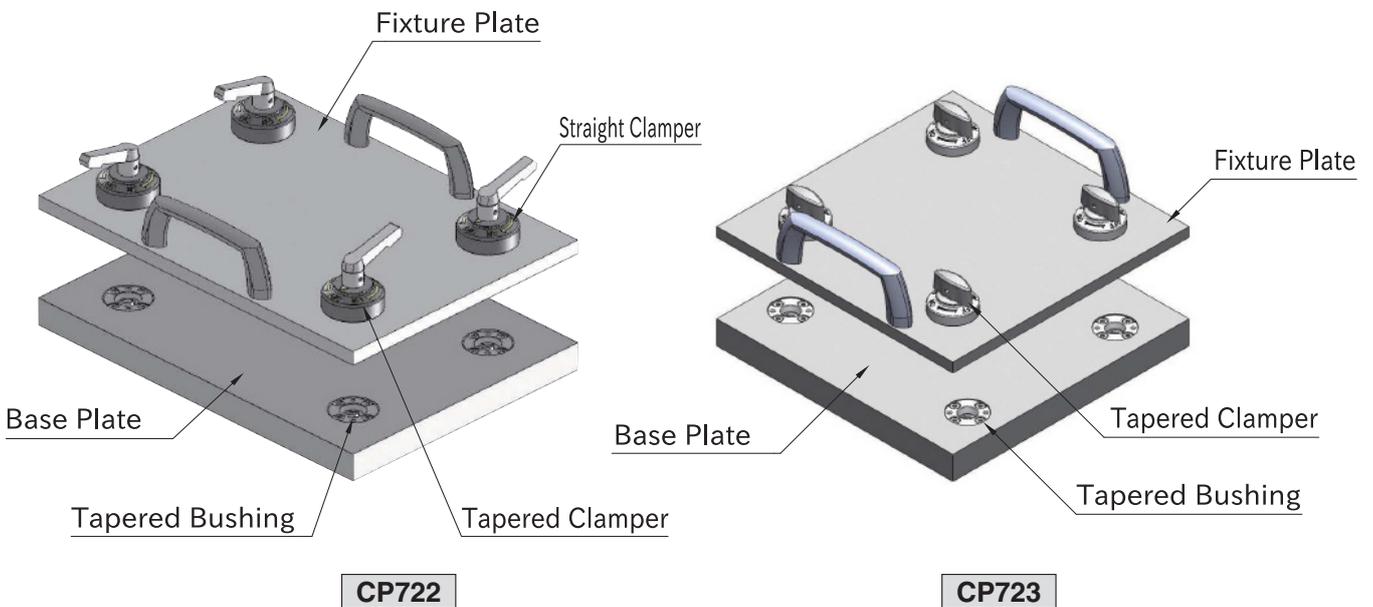


If the handles are not tightened in the correct order, the locating repeatability may exceed 10 μm.

## How To Use

### Horizontal Assembly of Fixture Plate

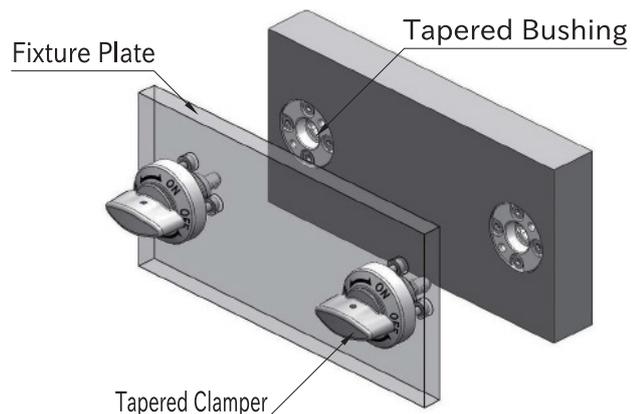
Note: Ensure not to lift the fixture plate up and down with gripping the handle of the clampers.



### Vertical Assembly of Fixture Plate

Locating repeatability is 20 μm.

Size		Max. Loading Weight(kg)
CP722	0840R	40
CP727		
Size		Max. Loading Weight(kg)
CP723	0632R	12
CP727	0840R	40



Note: The maximum loading weight is the entire sum of the weight of fixture plates, fixtures and workpieces.

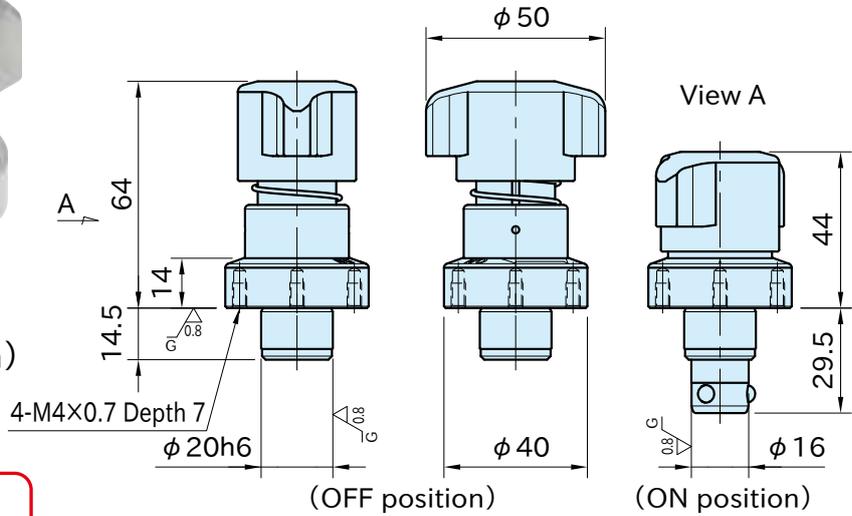
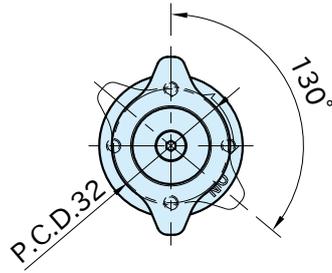
Note: The maximum loading weight shown is the value when two sets of tapered clamper and tapered bushing are used.

# CP740

## RETRACTABLE ONE-TOUCH CLAMPING LOCATORS



(OFF position) (ON position)



### ★Key Point

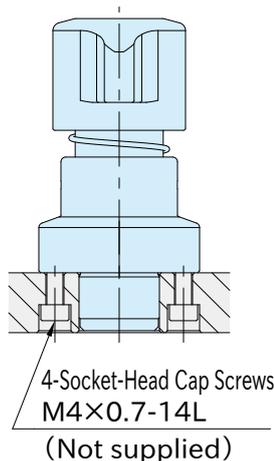
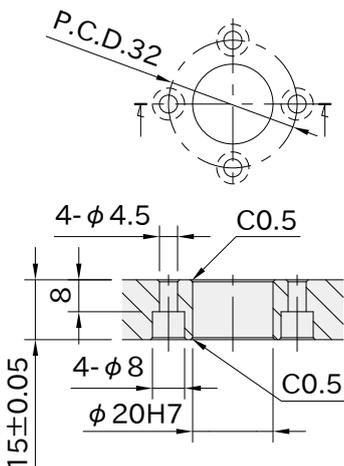
Retractable shaft allows sliding movement

Body	Shaft	Cam Shaft	Knob	Ball	Spring	
SUS303 stainless steel	Pre-hardened steel Electroless nickel plated	SCM415 steel Electroless nickel plated Carburized-hardened	SCS13 stainless steel (Equivalent to SUS304)	SUS440C stainless steel	Equivalent to SWOSC-V steel	SUS304WPB stainless steel

Part Number	Clamping Force (N)	Weight (g)	Locating Receivers
<b>CP740-1640LA</b>	2500	350	CP745-1640L, CP745-1640S

### How To Use

#### ■ Mounting Hole Dimension



### Reference

How To Use RETRACTABLE ONE-TOUCH CLAMPING LOCATORS

# CP745

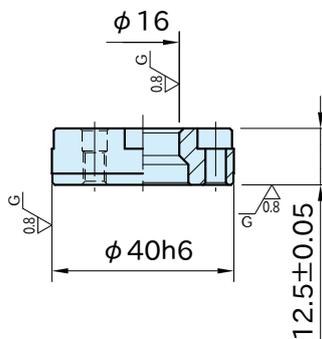
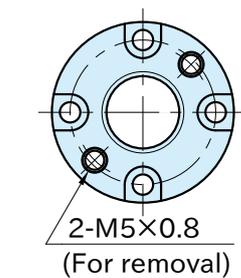
# LOCATING RECEIVERS



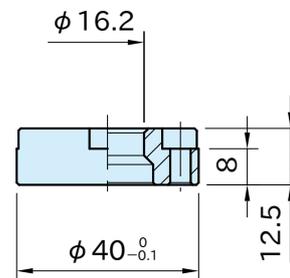
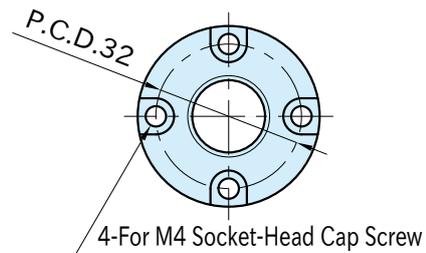
**CP745-1640L**  
(Accurate)



**CP745-1640S**  
(Standard)



**CP745-1640L**  
(Accurate)



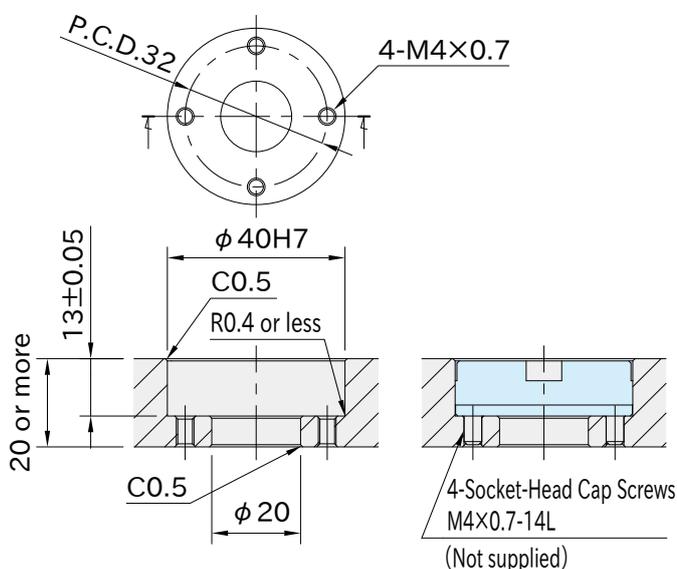
**CP745-1640S**  
(Standard)

Part Number	Type	Weight (g)
<b>CP745-1640L</b>	Accurate	81
<b>CP745-1640S</b>	Standard	83

Body
SCM440 steel Electroless nickel plated Quenched and tempered

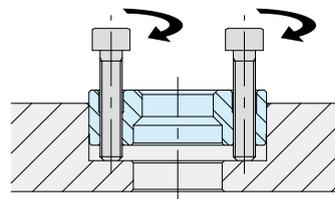
## How To Use

### ■ Mounting Hole Dimension



### ■ How to Remove

For removal, insert screws into the tapped holes and screw it.



### Related Product

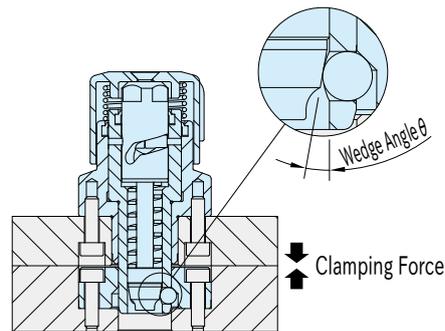
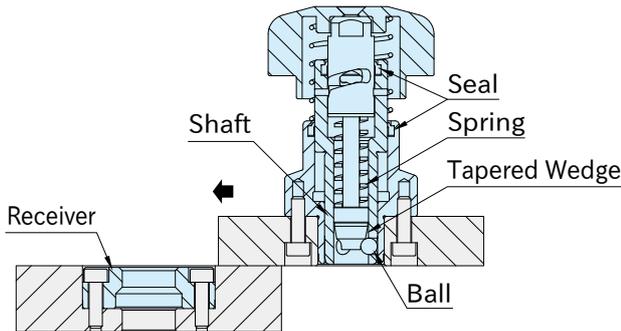
**CP740** RETRACTABLE ONE-TOUCH CLAMPING LOCATORS

### Reference

How To Use RETRACTABLE ONE-TOUCH FLEX LOCATORS

# How To Use RETRACTABLE ONE-TOUCH CLAMPING LOCATORS

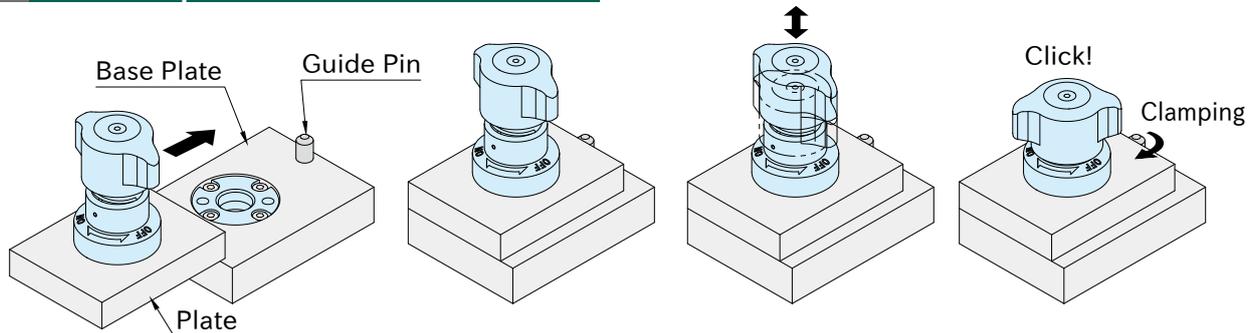
## Feature



The shaft retracts at the unclamping position to enable operations without interference with the base plate.

The wedge of the locator pushes out the balls against the tapered surface of the receiver to clamp the two plates. Provides constant clamping force with mechanical positive locking and spring force.

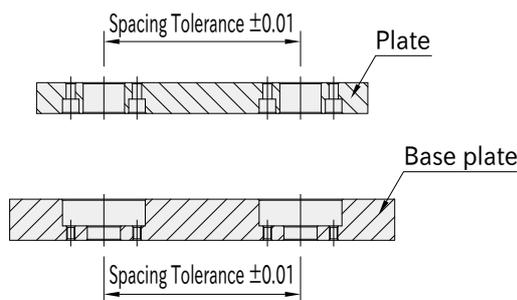
## How To Operate



1. Ensure that the knob is positioned at the "OFF" mark.
2. Slide the plate to the guide pin.
3. Insert the locator pressing the knob. The plate is located.
4. Turn the knob to the "ON" mark for clamping. The knob clicks when clamped. Turning the knob to the "OFF" position, the shaft returns automatically to the unclamping position by the spring.

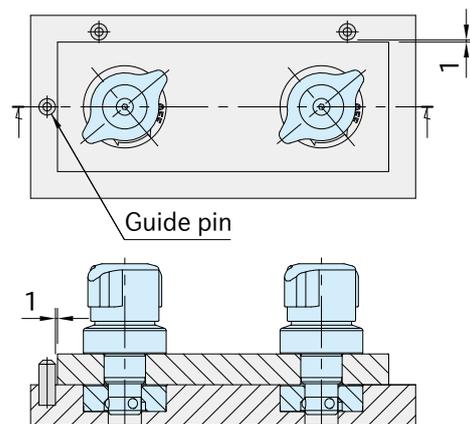
## Accuracy

### ■ Machining Accuracy



### ■ Repeatability

Repeatability 20µm

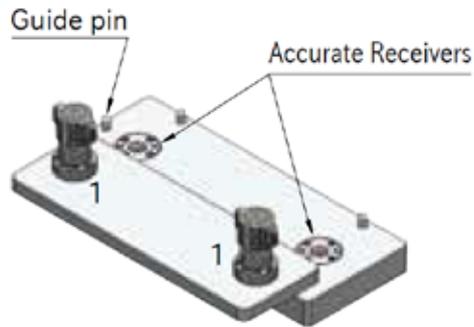


\* Use guide pins for rough locating. The clearance between guide pin and plate should be 1 mm or less.

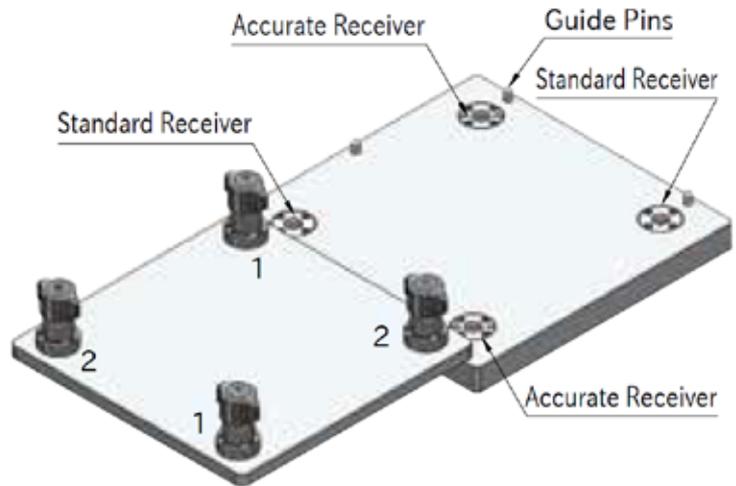
## Tightening Order

1. Ensure that the knob is positioned at the "OFF" mark. Slide the plate to the guide pins.
2. Press down the knobs marked "1" to locate the plate.
3. Turn the knob and clamp in order of 1→2.

### Use of 2 Locators



### Use of 4 Locators



# CP741

## PRECISION ONE-TOUCH CLAMPING LOCATORS



**CP741-1660L**  
(Tapered)

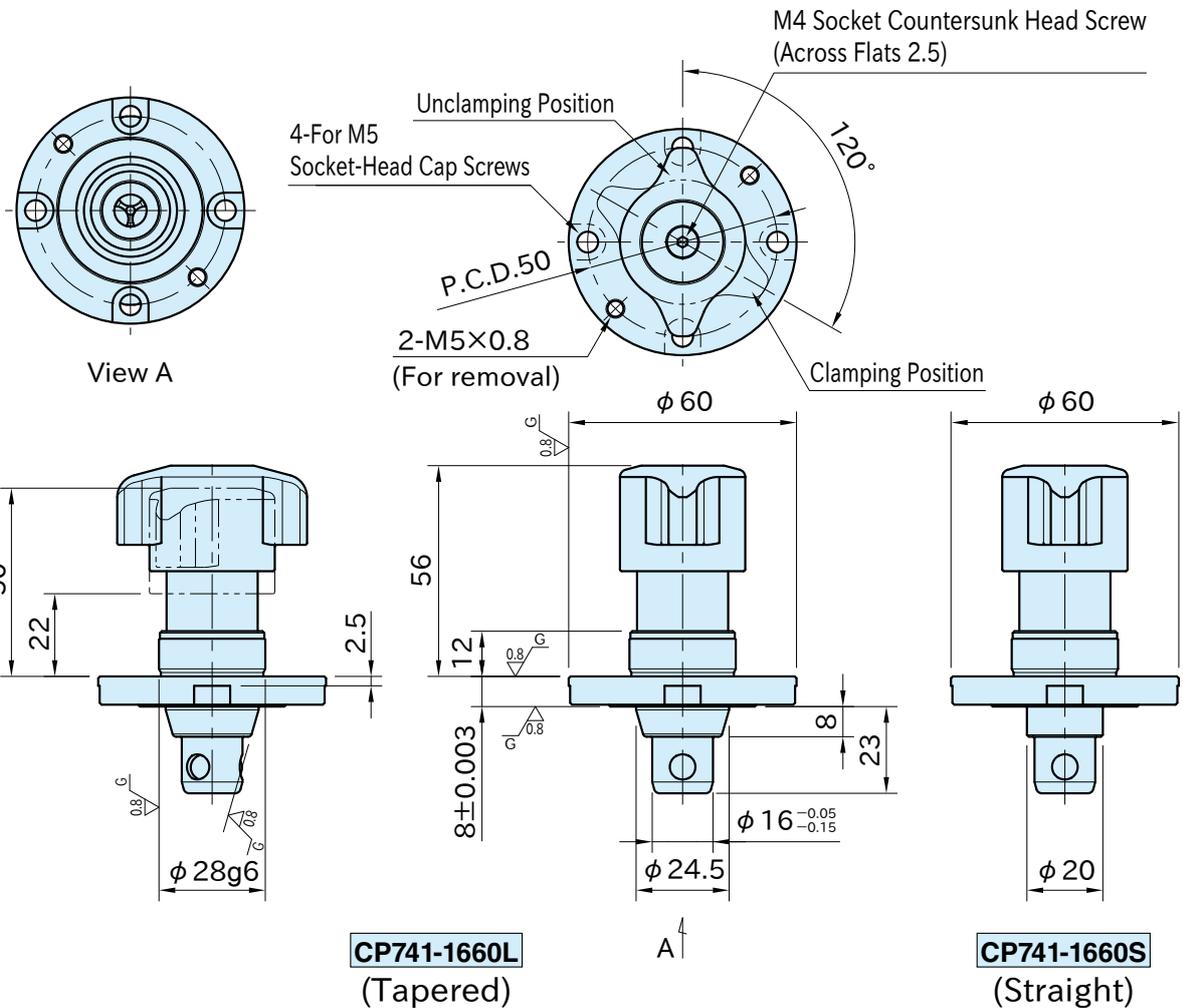


**CP741-1660S**  
(Straight)

### ★Key Point

3000N Clamping Force!  
3μm Locating Repeatability

Body	Piston	Knob
SCM440 steel Induction hardened Nitrocarburized	SUS303 stainless steel	SCS13 stainless steel (Equivalent to SUS304)
Ball	Spring	
SUS440C stainless steel	Equivalent to SWOSC-V steel	



\* The knob should be assembled after mounting the clamping locator on the plate.

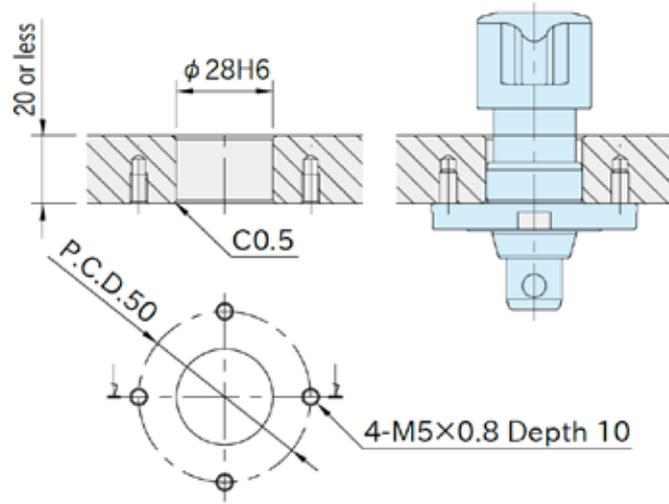
### Reference

How To Use PRECISION ONE-TOUCH CLAMPING LOCATORS

Part Number	Style	Clamping Force (N)	Weight (g)	Locating Receivers
CP741-1660L	Tapered	3000	410	AMWF40-BU-T,AMWF40-BU-D
CP741-1660S	Straight		400	AMWF40-BU-S

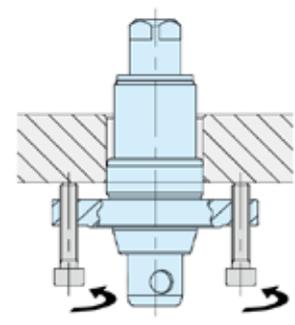
**How To Use**

**Mounting Hole Dimension**

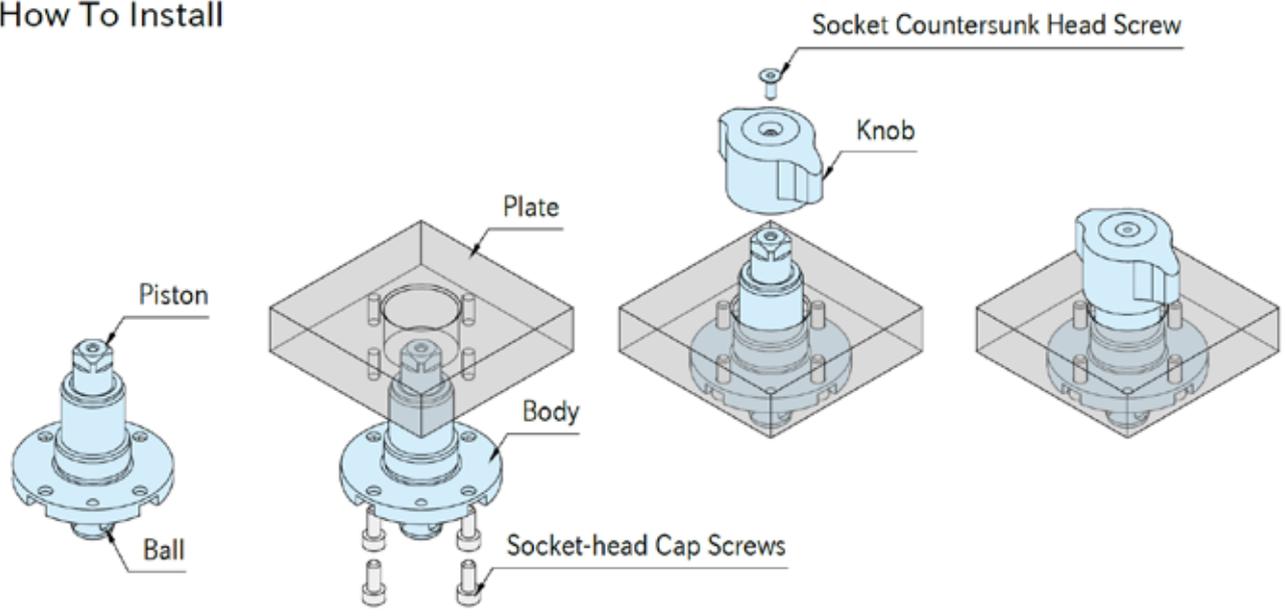


**How to Remove**

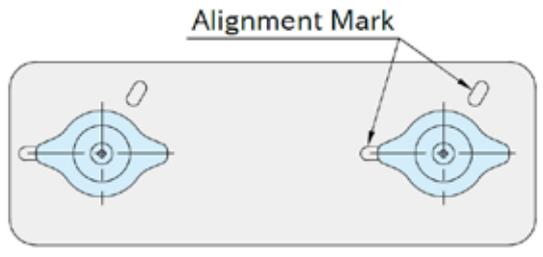
For removal, insert screws into the tapped holes and screw it.



**How To Install**



1. Ensure that the piston is in unclamping position and the balls are recessed.
2. Fix the body on the plate.
3. Assemble the knob.
4. The knob position can be changed by 90°.



Adding alignment marks at the clamping/unclamping positions helps to identify the operating status.



(Tapered Type)

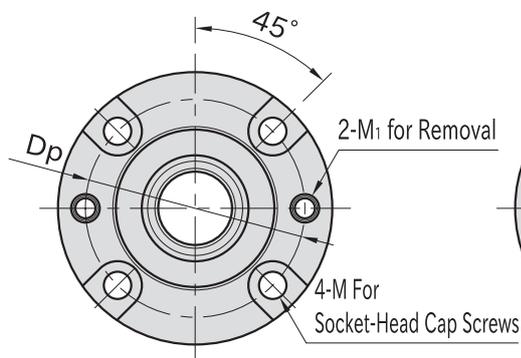
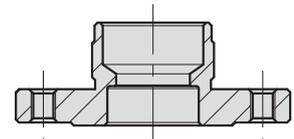
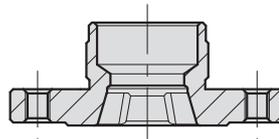
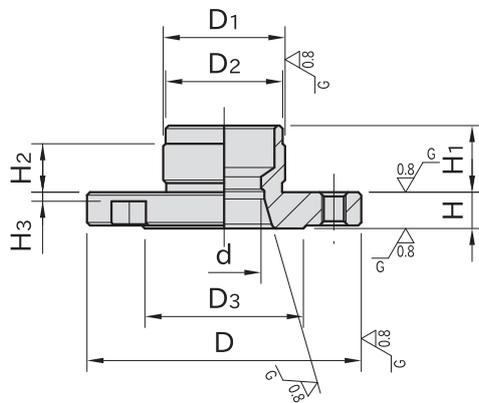


(Diamond Type)

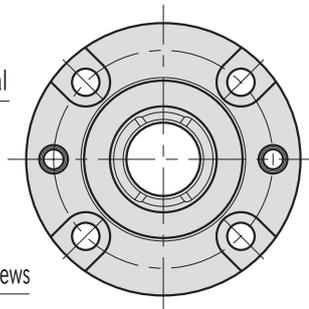


(Straight Type)

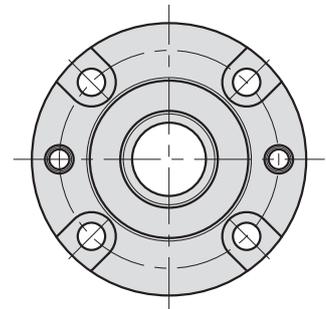
Body
SCM440 steel Quenched & tempered Black oxide finish Precision ground



**AMWF-BU-T**  
(Tapered Type)



**AMWF-BU-D**  
(Diamond Type)



**AMWF-BU-S**  
(Straight Type)

Size		D <sub>1</sub> (g6)	H <sub>2</sub>	D <sub>2</sub>	H <sub>1</sub>	M	H <sub>3</sub>	D	D <sub>3</sub>	H (±0.003)	d ( <sup>+0.15</sup> / <sub>+0.05</sub> )	M <sub>1</sub>	D <sub>p</sub>
<b>AMWF-BU-T</b>	<b>40</b>	28	10	27.5	15	M5	2.5	60	38	8	16	M5×0.8	50
<b>AMWF-BU-D</b>													
<b>AMWF-BU-S</b>	<b>50</b>	36	14	35.5	19	M6	3.5	75	48	10	20	M6×1	62

**AMWF-BU-T** (Tapered Type)

Part Number	Weight (g)
AMWF40-BU-T	160
AMWF50-BU-T	323

**AMWF-BU-D** (Diamond Type)

Part Number	Weight (g)
AMWF40-BU-D	159
AMWF50-BU-D	322

**AMWF-BU-S** (Straight Type)

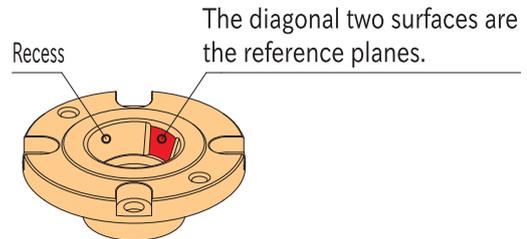
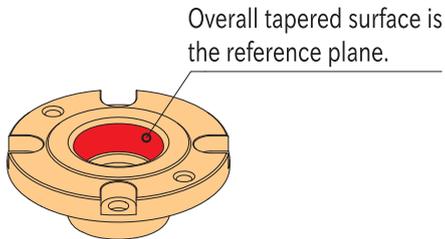
Part Number	Weight (g)
AMWF40-BU-S	163
AMWF50-BU-S	330

**Feature**

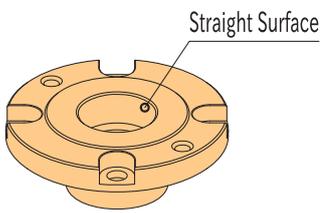
■ **Function**

Locating with Tapered Type  
For setting reference position

Locating with Diamond Type  
For locating reference at rotational direction



Clamping with Straight Type



**Related Product**

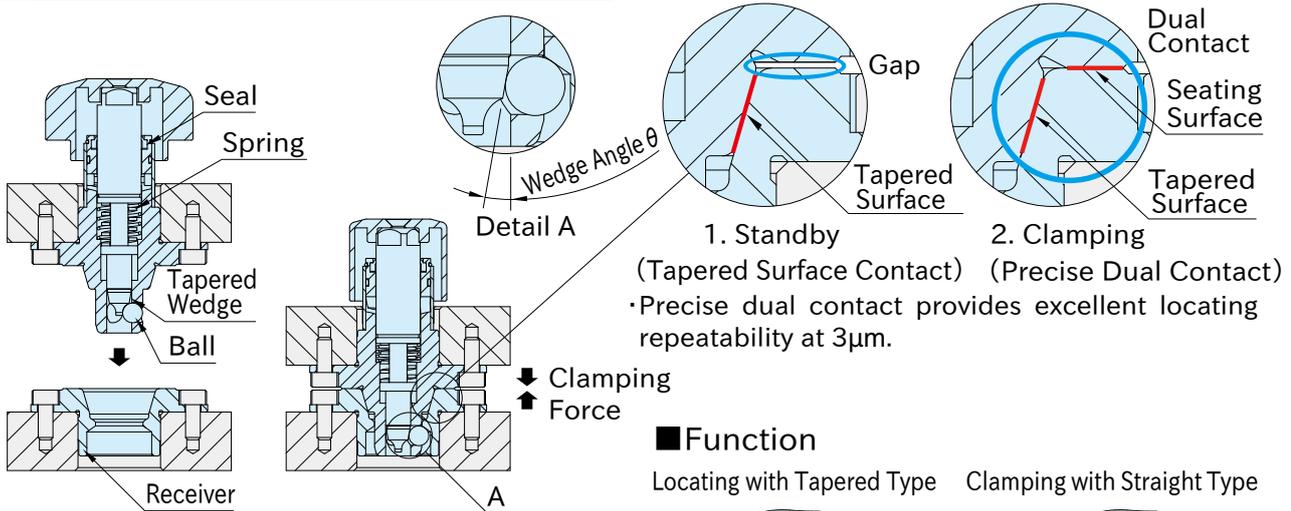
**AMWF-W** PNEUMATIC FLEX LOCATOR PINS

**Reference**

- How To Use PNEUMATIC FLEX LOCATORS
- How To Install PNEUMATIC FLEX LOCATORS

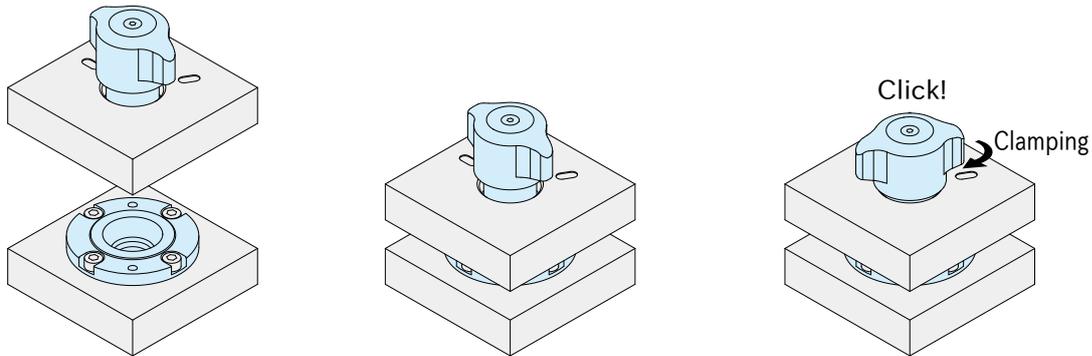
# How To Use PRECISION ONE-TOUCH CLAMPING LOCATORS

## Feature



- Positioning is achieved through the tapered fit between the pin and receiver.
  - The wedge of the locator pushes out the balls against the tapered surface of the receiver to clamp the two plates.
  - Provides constant clamping force with mechanical positive locking and spring force.
- Note: CP741-1660S does not have locating function.

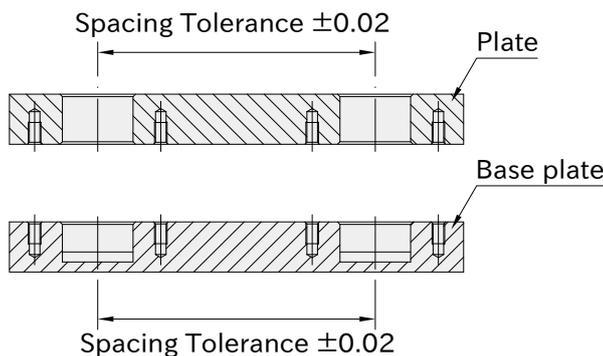
## How To Operate



1. Ensure that the knob is in the unclamping position.
2. Insert the locator in the receiver.
3. Turn the knob to the clamping position. The knob clicks when it is clamped. For unclamping, follow back these steps.

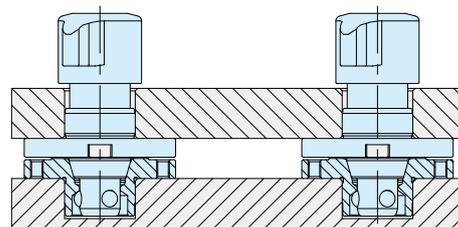
## Accuracy

### ■ Machining Accuracy



### ■ Repeatability

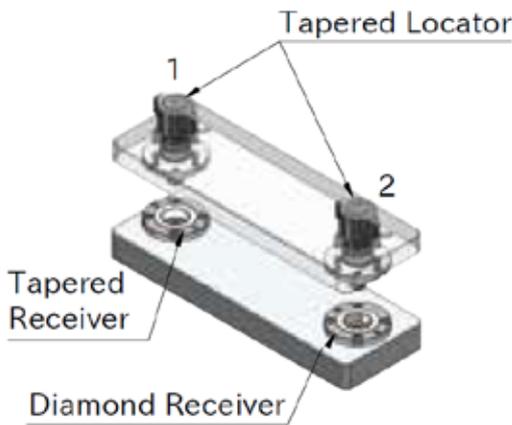
Repeatability  $3\mu\text{m}$



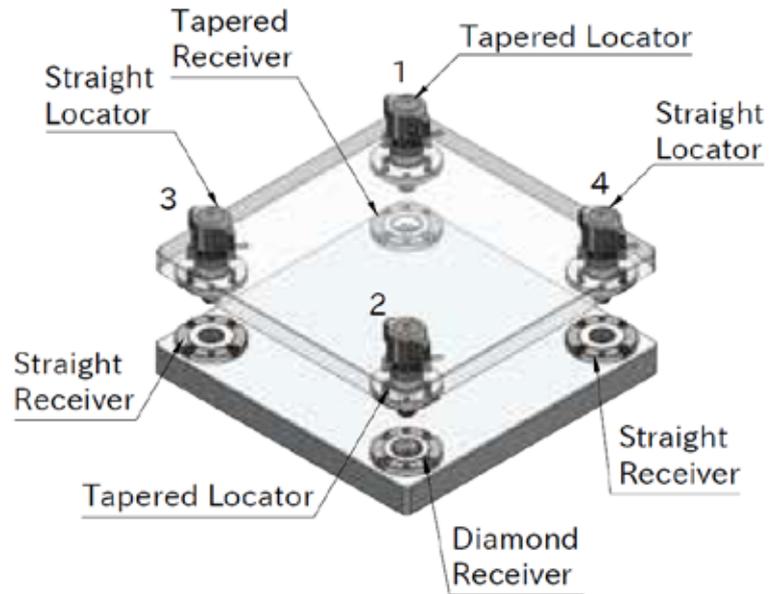
### Tightening Order

1. Ensure the knob is in the unclamping position and lower the plate.
2. Turn the knobs to the clamping position in the order of 1→2→3→4 and clamp them.

#### Use of 2 Locators



#### Use of 4 Locators



Note: Do not use the knobs to lift or lower the plate.

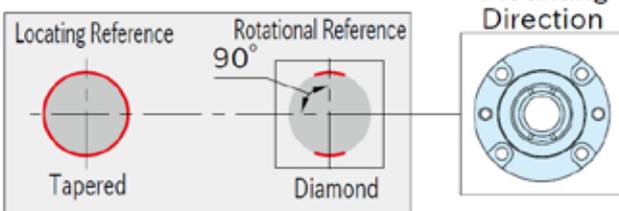
### How To Use

#### Layout of Receivers

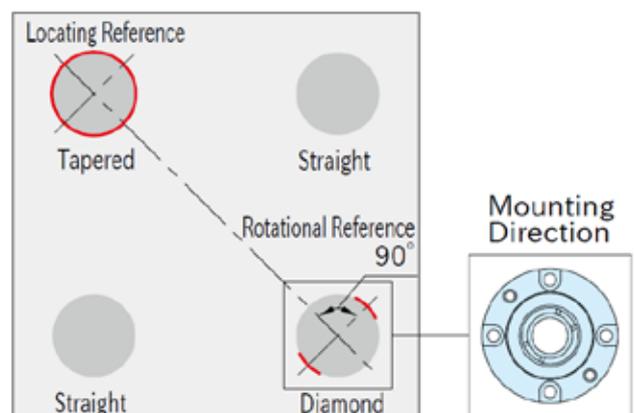
Mount the tapered receiver and diamond receiver as shown in the figure below.

The orientation of the diamond receivers changes between 2-point and 4-point clamping to ensure proper rotational positioning.

#### Use of 2 Locators



#### Use of 4 Locators



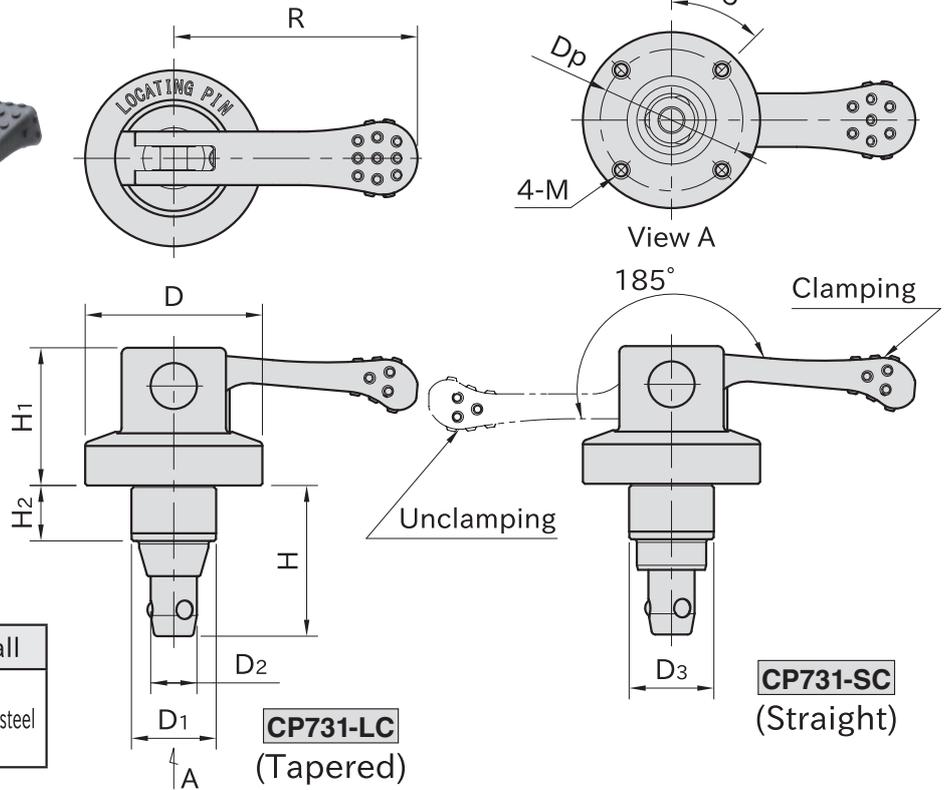
# CP731

## ONE-TOUCH FLEX LOCATOR CLAMPERS (Cam Handle)



**CP731-LC**  
(Tapered)

**CP731-SC**  
(Straight)



Body	Cam Handle	Ball
SCM440 steel Nitrocarburized	SCM440 steel Black oxide finished Quenched & tempered	SUJ2 steel

**CP731-LC**  
(Tapered)

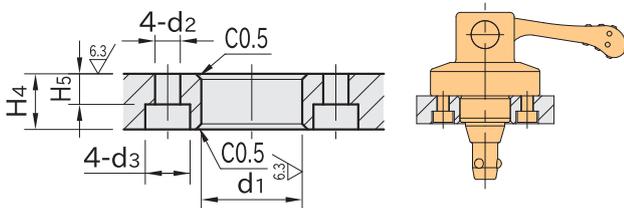
**CP731-SC**  
(Straight)

Part Number	D <sub>1</sub> (g6)	D <sub>3</sub> (-0.02/-0.06)	H <sub>2</sub>	D	H <sub>1</sub>	D <sub>2</sub>	H	M	D <sub>p</sub>	R	Cam Handle
<b>CP731-0939LC</b>	18	—	9.5	39	30	9	30	M4×0.7 Depth 6	30	50	QLCA-05
<b>CP731-0939SC</b>	—	18									
<b>CP731-1246LC</b>	22	—	14.5	46	36	40	37		63	QLCA-06	
<b>CP731-1246SC</b>	—	22									
<b>CP731-1656LC</b>	28	—	19.5	56	42	51	M5×0.8 Depth 7	45	80	QLCA-08	
<b>CP731-1656SC</b>	—	28									

Part Number	Clamping Force (N)	Operating Load (N)	Weight (g)	Proper Bushing
<b>CP731-0939LC</b>	600	60	191	CP735-0939L
<b>CP731-0939SC</b>			189	CP735-0939S
<b>CP731-1246LC</b>	1200	130	297	CP735-1246L
<b>CP731-1246SC</b>			294	CP735-1246S
<b>CP731-1656LC</b>	1800	160	654	CP735-1656L
<b>CP731-1656SC</b>			648	CP735-1656S

### How To Use

#### ■ Mounting Hole Dimension



Size	d <sub>1</sub> (H7)	H <sub>4</sub> (±0.05)	d <sub>2</sub>	H <sub>5</sub>	d <sub>3</sub>
<b>CP731-0939</b>	18	10	4.5	5	8
<b>CP731-1246</b>	22	15		10	
<b>CP731-1656</b>	28	20	5.5	14	10

### Supplied With

- **CP731-0939**: Four pieces of hex. socket-head cap screws M4×0.7-10L
- **CP731-1246**: Four pieces of hex. socket-head cap screws M4×0.7-15L
- **CP731-1656**: Four pieces of hex. socket-head cap screws M5×0.8-20L

### Reference

How To Use ONE-TOUCH FLEX LOCATORS  
(Hexagon Head / Cam Handle)

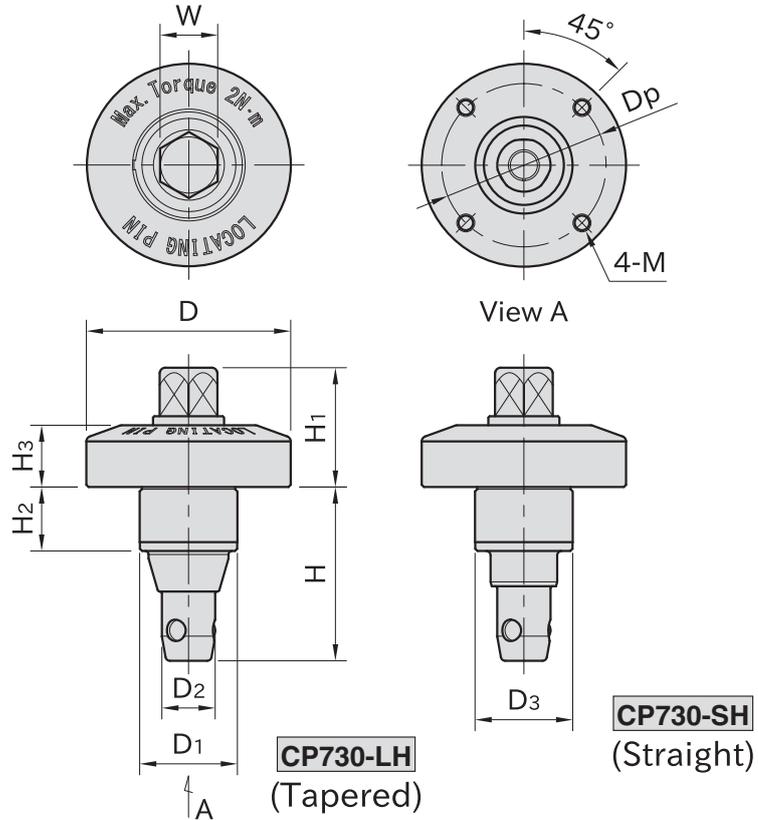
# CP730

## ONE-TOUCH FLEX LOCATOR CLAMPERS (Hexagon Head)



**CP730-LH**  
(Tapered)

**CP730-SH**  
(Straight)



Body	Clamping Screw	Ball
SCM440 steel Nitrocarburized	SCM435 steel Black oxide finished Quenched & tempered	SUJ2 steel

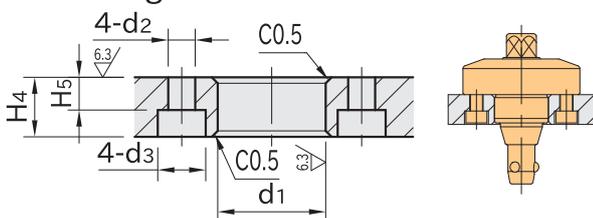
Part Number	D <sub>1</sub> (g6)	D <sub>3</sub> (-0.02/-0.06)	H <sub>2</sub>	D	H <sub>1</sub>	H <sub>3</sub>	D <sub>2</sub>	H	W	M	D <sub>p</sub>
CP730-0939LH	18	—	9.5	39	22	12	9	30	10	M4×0.7 Depth 6	30
CP730-0939SH	—	18									
CP730-1246LH	22	—	14.5	46	27	14	12	40	13		37
CP730-1246SH	—	22									
CP730-1656LH	28	—	19.5	56	34	16	16	51	17	M5×0.8 Depth 7	45
CP730-1656SH	—	28									

Part Number	Clamping Force (N)	Allowable Screw Torque (N·m)*	Weight (g)	Proper Bushing
CP730-0939LH	1700	2	134	CP735-0939L
CP730-0939SH			133	CP735-0939S
CP730-1246LH	3000	4	241	CP735-1246L
CP730-1246SH			239	CP735-1246S
CP730-1656LH	4500	7	457	CP735-1656L
CP730-1656SH			453	CP735-1656S

\*)Do not apply greater torque than allowable screw torque.  
Do not use a power tool (impact wrench etc.) to turn the hex head, for damage prevention.

### How To Use

#### ■ Mounting Hole Dimension



Size	d <sub>1</sub> (H7)	H <sub>4</sub> (±0.05)	d <sub>2</sub>	H <sub>5</sub>	d <sub>3</sub>
CP730-0939	18	10	4.5	5	8
CP730-1246	22	15		10	
CP730-1656	28	20	5.5	14	10

### Reference

How To Use ONE-TOUCH FLEX LOCATORS (Hexagon Head / Cam Handle)

### Related Product

[CP-TCW] ADJUSTABLE-TORQUE WRENCHES are available for tightening.

# CP735

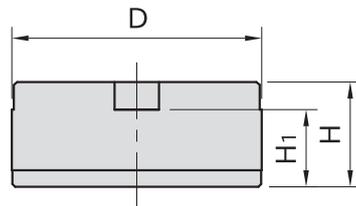
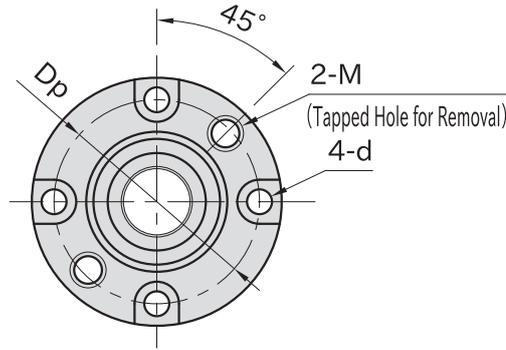
# ONE-TOUCH FLEX LOCATOR BUSHINGS



(Tapered Type)



(Straight Type)



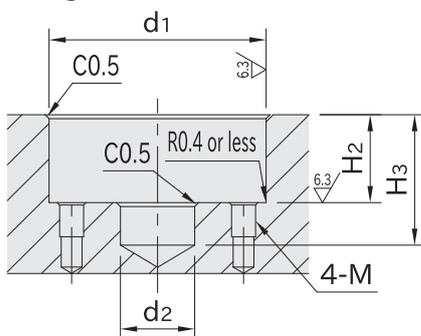
Type	Body	Tapered Bushing
CP735-L	SCM440 steel Black oxide finished	SCM440 steel Nitrocarburized
CP735-S	Quenched & tempered	—

Part Number	Type	D (g6)	H	d	H <sub>1</sub>	D <sub>p</sub>	M	Lifting Force (N)*	Weight (g)
CP735-0939L	Tapered	38	15	4.5	10	30	M5×0.8	300	100
CP735-0939S	Straight							—	101
CP735-1246L	Tapered	45	19	5.5	14	37	M6×1	450	179
CP735-1246S	Straight							—	184
CP735-1656L	Tapered	55	24	5.5	18	45	M6×1	680	337
CP735-1656S	Straight							—	341

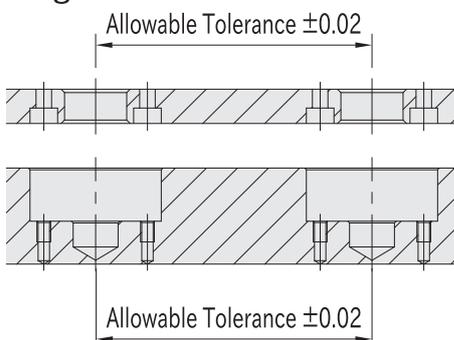
\*) The lifting force is the power of the inner spring of the body to push up the movable tapered bushing.

## How To Use

### ■ Mounting Hole Dimension



### ■ Spacing Tolerance



Size	d <sub>1</sub> (H7)	H <sub>2</sub> (±0.05)	d <sub>2</sub>	H <sub>3</sub>	M
CP735-0939	38	15.5	13	23	M4×0.7
CP735-1246	45	19.5	16	28	
CP735-1656	55	24.5	20	34	M5×0.8

## Related Product

- CP730 ONE-TOUCH FLEX LOCATOR CLAMPERS (Hexagon Head)
- CP731 ONE-TOUCH FLEX LOCATOR CLAMPERS (Cam Handle)
- CP735-P ONE-TOUCH FLEX LOCATOR (PROTECTING COVERS)

## Reference

How To Use ONE-TOUCH FLEX LOCATORS (Hexagon Head / Cam Handle)

# CP735-P

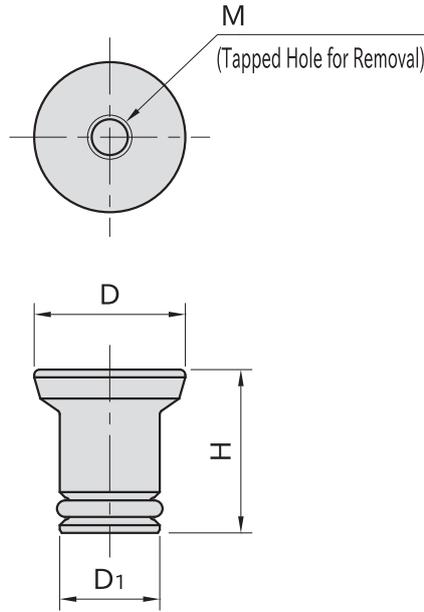
## ONE-TOUCH FLEX LOCATOR PROTECTING COVERS



One Touch

Pneumatic

Locating Element



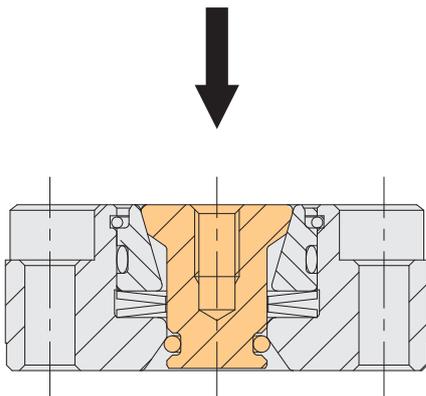
Body	O-Ring
A5052 aluminum Red	NBR nitrile rubber

Part Number	D	H	D <sub>1</sub>	M	Weight (g)	Proper Bushing	
<b>CP735-0939P</b>	13.5	15	9	M4×0.7	3	CP735-0939L	CP735-0939S
<b>CP735-1246P</b>	17	19	12			CP735-1246L	CP735-1246S
<b>CP735-1656P</b>	23	22.5	16	M5×0.8	14	CP735-1656L	CP735-1656S

### How To Use

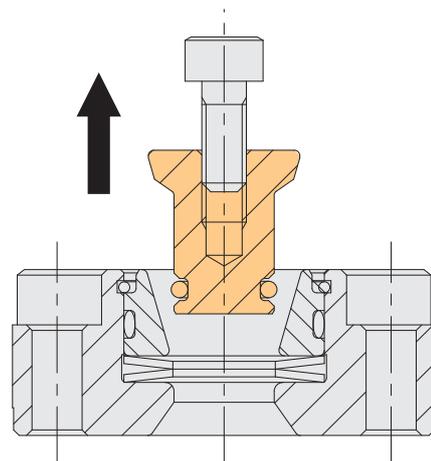
#### How to Install

Insert the product to the center hole of the Flex Locator Bushings and use it as a protective cover.



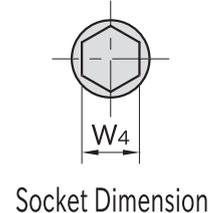
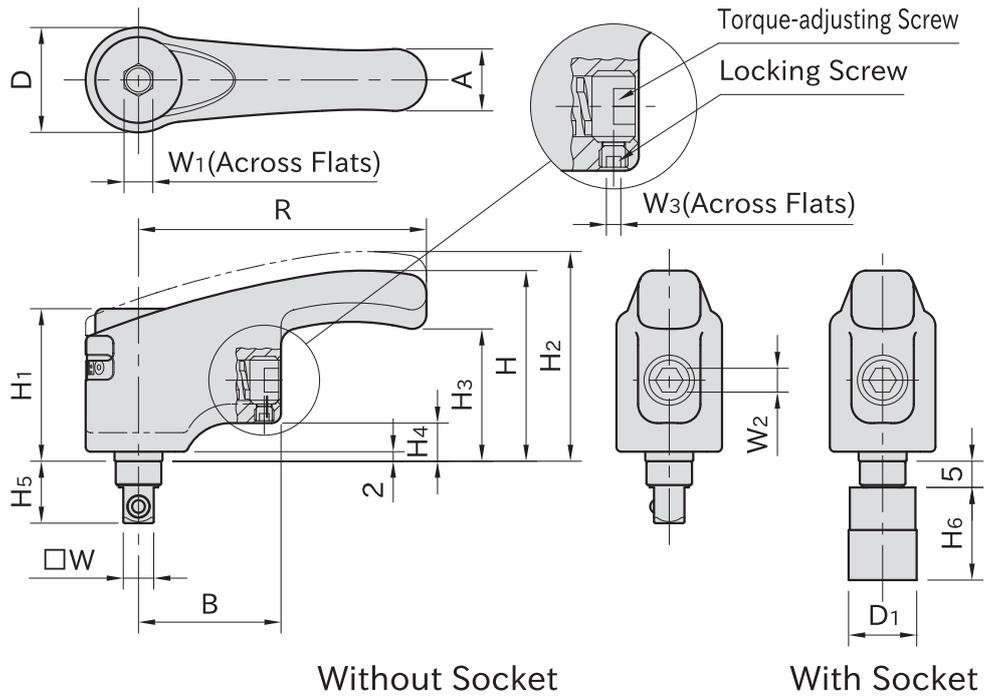
#### How to Remove

Insert a screw into the tapped hole and pull it out.



# CP-TCW

# ADJUSTABLE-TORQUE WRENCHES



Type	Handle	Ratchet	Adapter	Socket
<b>CP-TCW</b>	SCM440 steel Quenched & tempered Painted Orange	SCM415 steel Carburized-hardened Black oxide finished	SCM435 steel Quenched & tempered Black oxide finished	-
<b>CP-TCW-S</b>				Cr-V chrome-vanadium steel Chrome plated

Size	W	R	H	D	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	A	B	W <sub>1</sub>	W <sub>2</sub>	W <sub>3</sub>
<b>CP-TCW 6</b>	6.3	60	40	22	32	44	27.5	8	13	13	30	6	5	2
<b>CP-TCW 8</b>		75	48	26	38	52.5	33	9		15	37	8	6	2.5
<b>CP-TCW-S 10</b>	9.5	90	57	32	45	62.5	39.5	10.5	16.5	18	39	10		

Size	Torque Range (N·m)
<b>CP-TCW 6</b>	1~3.5
<b>CP-TCW 8</b>	2~5.4
<b>CP-TCW-S 10</b>	3~8

## Without Socket

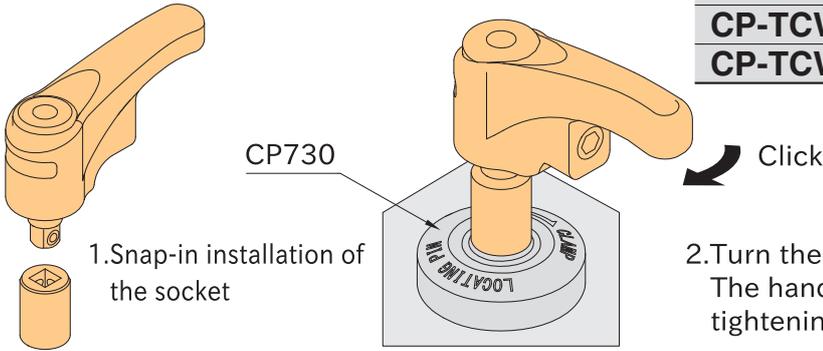
Part Number	Weight (g)
<b>CP-TCW 6</b>	166
<b>CP-TCW 8</b>	284
<b>CP-TCW10</b>	467

## With Socket

Part Number	W <sub>4</sub>	D <sub>1</sub>	H <sub>6</sub>	Weight (g)
<b>CP-TCW 6-S</b>	10	13.8	25	183
<b>CP-TCW 8-S</b>	13	17.8		314
<b>CP-TCW10-S</b>	17	23.8	30	529

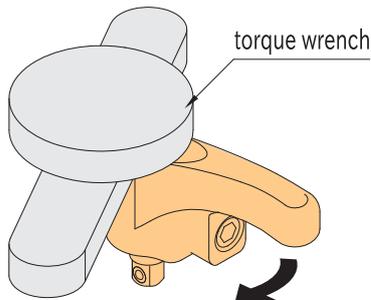
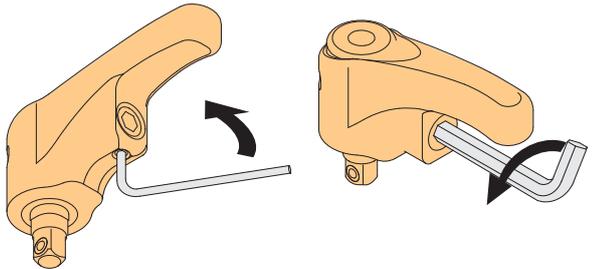
## How To Use

Can be used as a tightening tool for **CP730** ONE-TOUCH FLEX LOCATOR CLAMPERS (Hexagon Head).

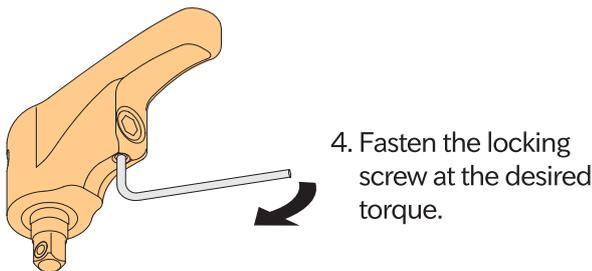


## How To Set Torque

The preset torque is roughly set to its maximum tightening torque.



- Connect a torque wrench on the Adjustable-Torque Wrench.
- Turn the handle in the tightening direction and fine adjust the depth of torque-adjusting screw to reach to the handle clicking position at desired torque.



## Reference

See **ATCL** ADJUSTABLE-TORQUE HANDLES page for further information.

## Related Product

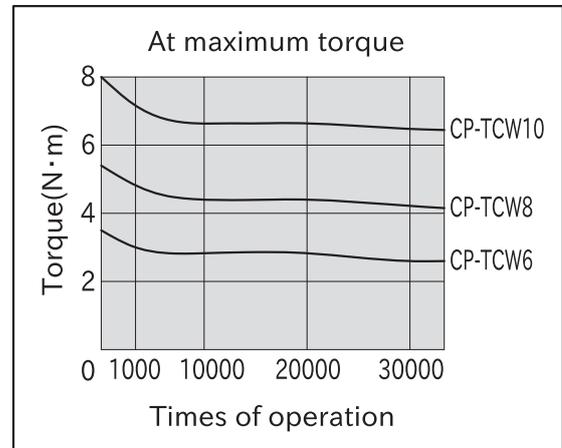
**CP730** ONE-TOUCH FLEX LOCATOR CLAMPERS (Hexagon Head)

Part Number	Proper ONE-TOUCH FLEX LOCATOR CLAMPERS	
<b>CP-TCW 6-S</b>	CP730-0939LH	CP730-0939SH
<b>CP-TCW 8-S</b>	CP730-1246LH	CP730-1246SH
<b>CP-TCW 10-S</b>	CP730-1656LH	CP730-1656SH

## Technical Information

- For initial several thousand operations, the tightening torque will decrease. (See the graph below) Measure the torque regularly, and fine adjust the depth of torque-adjusting screw as needed.
- The tightening torque can vary. (Max.  $\pm 15\%$ ) Not recommended for precise torque management.

Torque Performance Graph



## Note

- Do not overtighten or overloosen the torque-adjusting screw.

## Reference Torque Adjusting Range

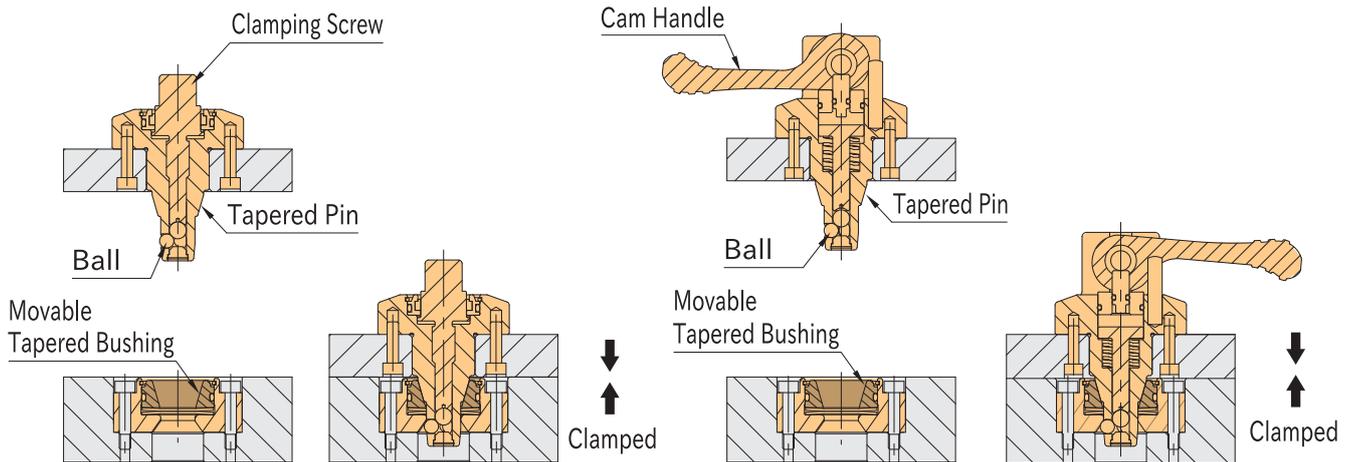
	Size	Rotation
<b>CP-TCW</b>	6	3/4
	8	1
<b>CP-TCW-S</b>	10	3/4

Minimum torque position  
tightening end with  
roughly detectable touch

- To reach approx. the min torque, loosen the torque adjusting screw to the same end surface level of the body, then tighten it until you feel light touch of stop. (Ensure that the torque adjusting screw does not protrude from the body when loosening it.)
- To reach approx. the max torque, rotate the torque adjusting screw depending on the above table from the approx. min torque as instructed previously.

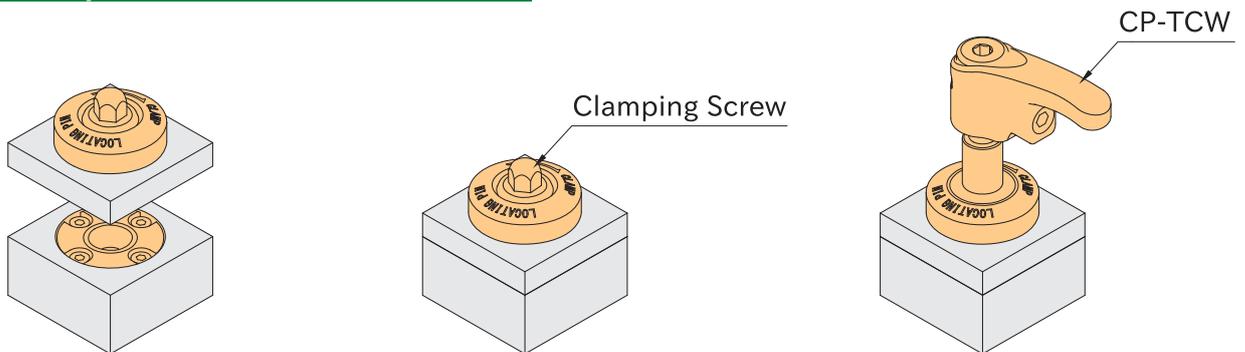
# How To Use ONE-TOUCH FLEX LOCATORS (Hexagon Head / Cam Handle)

## Feature



- The plate is located by fitting of the tapered parts.
  - When the clamping screw or the cam handle is tightened, the balls go out and the movable tapered bushing goes down. The fixture plate contacts with the base plate.
  - For clamping screw, 2 turns tightening is enough.
- Note: No locating function on the combination of straight pin and straight bushing.

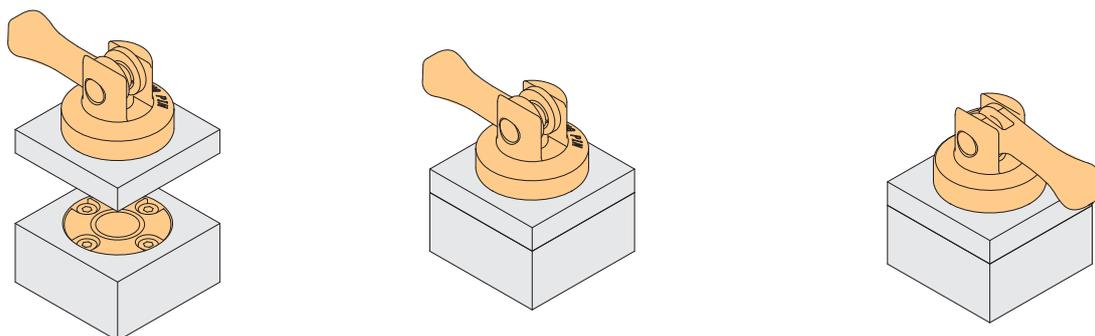
## How To Operate



1. Ensure the balls are retracted.

2. Insert the clamping screw to the bushing.

3. Tighten the clamping screw within the allowable torque.  
Note: For unclamping, follow back these steps.

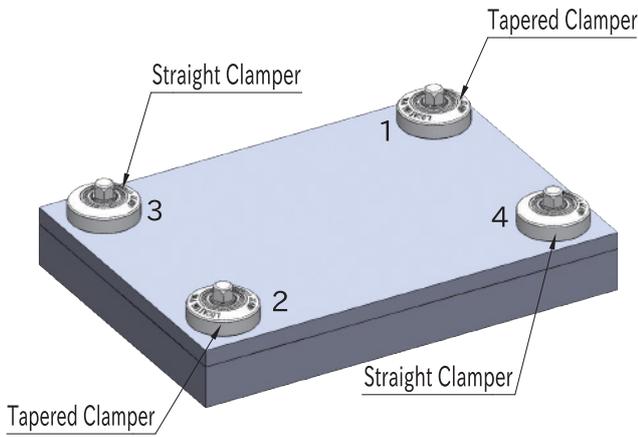


1. Ensure that the cam handle is loosened.

2. Insert the clamping screw to the bushing.

3. Tighten the cam handle.  
Note: For unclamping, follow back these steps.

## Tightening Order



### CP730

1. Ensure that each plate is in close contact. \*)
  2. Tighten the screws temporarily in order of 1→2→3→4. For temporary tightening, the tightening torque should be approximately 50% of the final tightening.
  3. Tighten the screws finally in order of 1→2→3→4.
- \*) The fixture plate may be pushed up by the lifting force of the tapered bushing. In such cases, tighten the screws loosely in order of 1→2→3→4, and make the each plate be in close contact with each other. Then tighten the screws temporarily. For the lifting force, see the measurement table of [CP735](#) ONE-TOUCH FLEX LOCATOR BUSHINGS.

### CP731

- Tighten the cam handles in order of 1→2→3→4.

If the screws are not tightened in the correct order, the locating repeatability may exceed  $8 \mu\text{m}$ .

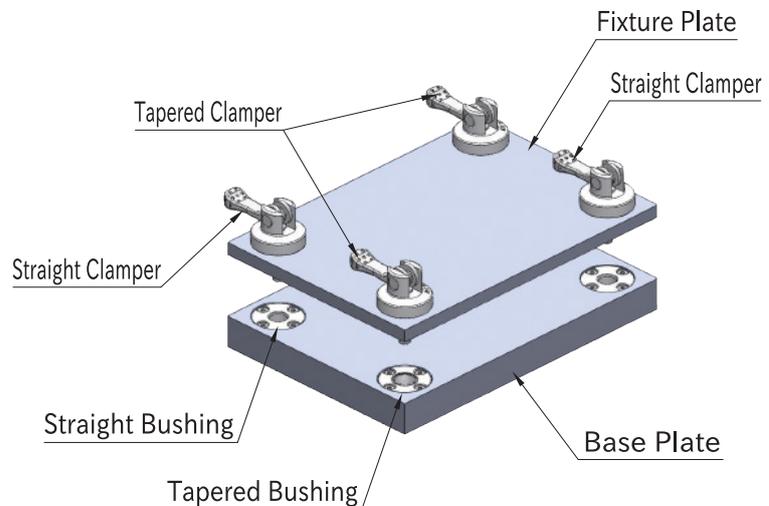
## How To Use

### Horizontal Assembly

Two sets of tapered pin and straight pin

Use tapered or straight pin and bush as a set.

Note: Ensure not to lift the fixture plate up and down with gripping the cam handle of the clampers.



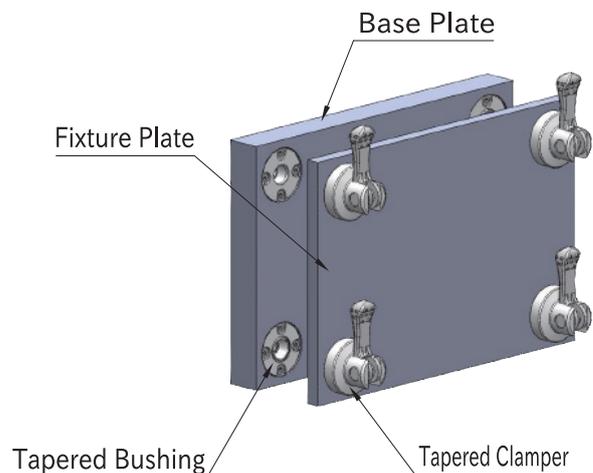
### Vertical Assembly

In vertical assembly, the locating repeatability is  $10 \mu\text{m}$ .

Size		Max. Loading Weight(kg)
CP730	0939	40
	1246	60
CP735	1656	100

Size		Max. Loading Weight(kg)
CP731	0939	25
	1246	40
CP735	1656	60



Note: The maximum loading weight is the entire sum of the weight of fixture plates, fixtures and workpieces.

Note: The maximum loading weight shown is the value when two sets of tapered clamper and tapered bushing are used.

# CP780

## PRECISION LOCATING RECEIVERS



**CP780-L**  
(Round)

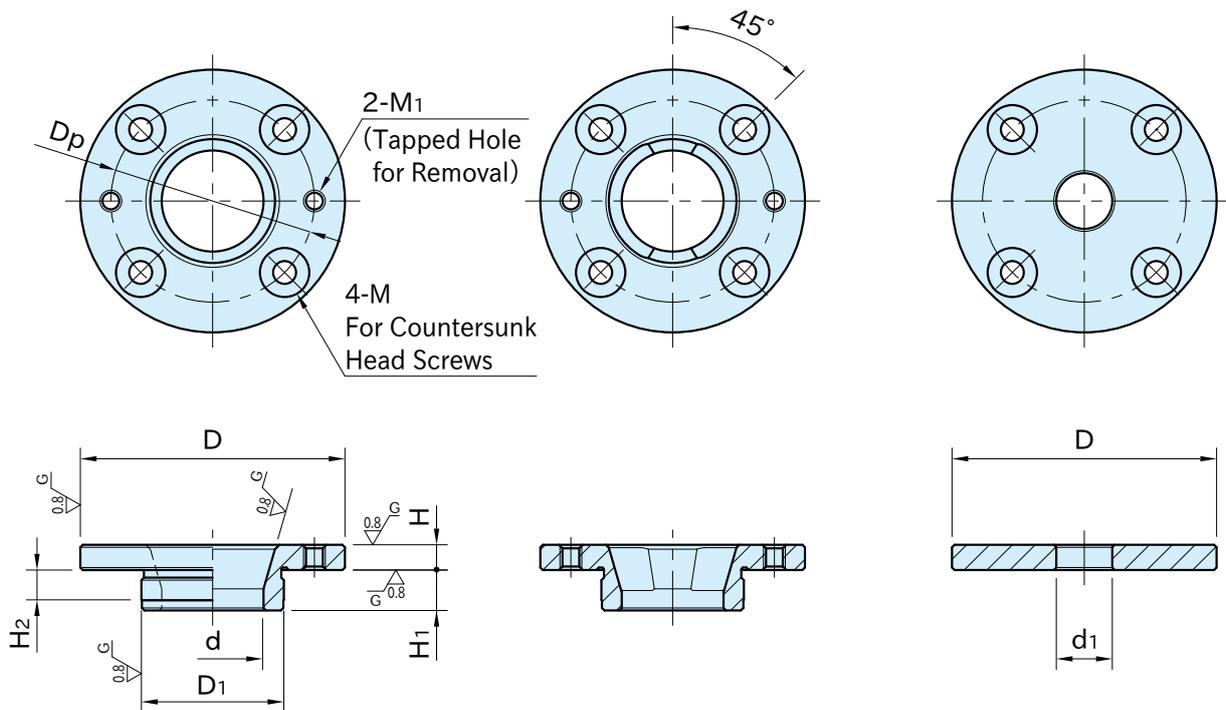


**CP780-D**  
(Diamond)



**CP780-W**  
(Spacer)

Body
SCM440 steel
Quenched & tempered
Black oxide finished
Precision ground



**CP780-L**  
(Round)

**CP780-D**  
(Diamond)

**CP780-W**  
(Spacer)

Size	D <sub>1</sub> (g6)	H <sub>2</sub>	H <sub>1</sub>	M	D	H (±0.005)	d	d <sub>1</sub>	M <sub>1</sub>	D <sub>p</sub>	Tapered Pins	
<b>CP780-L</b>	<b>20038</b>	20	4.5	6	M3	38	4	13	7	M3×0.5	28	CP157-08001L
	<b>28052</b>	28	6	8	M4	52	5	20	11	M4×0.7	40	CP157-12001L
<b>CP780-D</b>	<b>36065</b>	36	7	10	M5	65	6	26	13	M5×0.8	50	CP157-16001L
<b>CP780-W</b>	<b>50085</b>	50	8	12	M6	85	8	36	17	M6×1	66	CP157-20001L

**CP780-L (Round)**

Part Number	Weight (g)
CP780-20038L	35
CP780-28052L	75
CP780-36065L	145
CP780-50085L	325

**CP780-D (Diamond)**

Part Number	Weight (g)
CP780-20038D	35
CP780-28052D	75
CP780-36065D	145
CP780-50085D	325

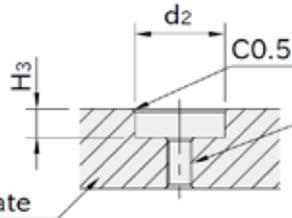
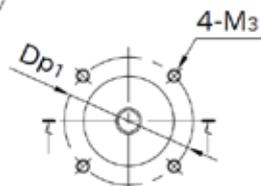
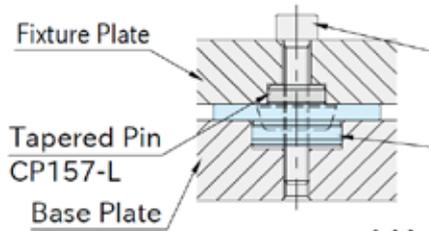
**CP780-W (Spacer)**

Part Number	Weight (g)
CP780-20038W	32
CP780-28052W	75
CP780-36065W	140
CP780-50085W	325

**How To Use**

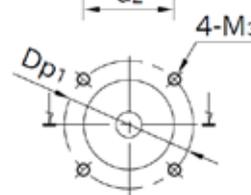
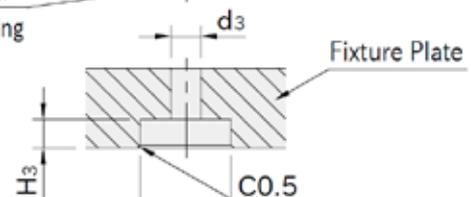
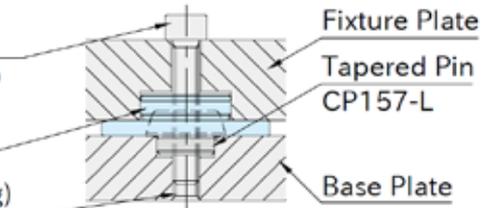
**Mounting Hole Dimension**

Mounting on Base Plate



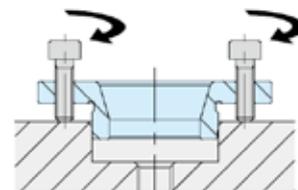
M2(Tapped Hole for Clamping)  
See [CP157](#) datasheet for machining dimensions of the base plate.

Mounting on Fixture Plate



**How to Remove**

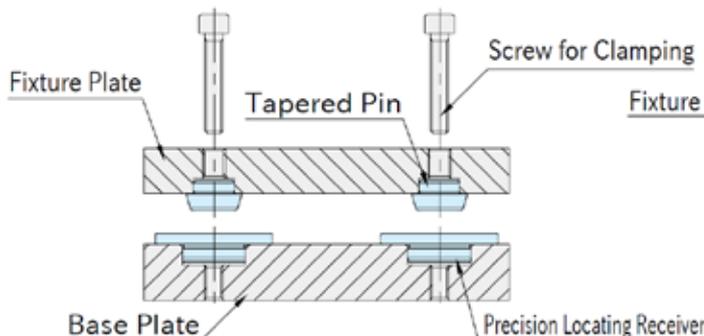
For removal, insert a screw into the tapped hole and screw it.



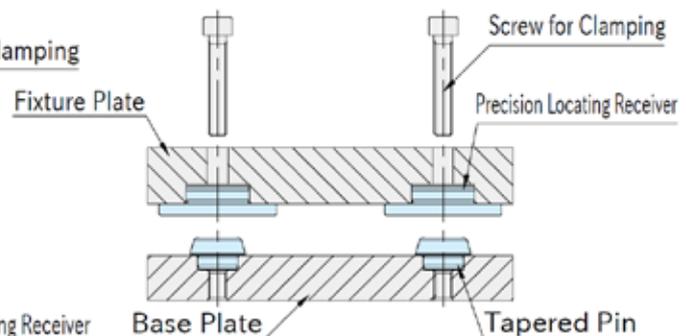
Size	d <sub>2</sub> (H7)	H <sub>3</sub>	M <sub>2</sub>	M <sub>3</sub>	d <sub>3</sub>	Dp <sub>1</sub>
CP780-20038	20	6.5	M 6x1	M3x0.5	6.5	28
CP780-28052	28	8.5	M 8x1.25	M4x0.7	9	40
			M10x1.5		11	
CP780-36065	36	10.5	M12x1.75	M5x0.8	13	50
CP780-50085	50	12.5	M16x2	M6x1	17	66

**Mounting Layouts**

Pins on the fixture plate / Receivers on the base



Receivers on the fixture plate / Pins on the base

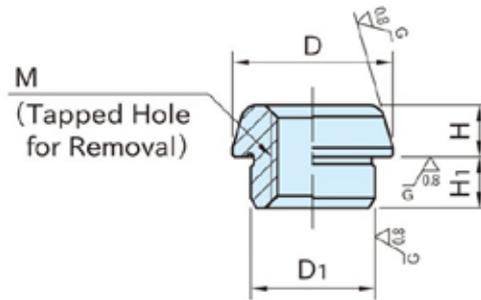


**Reference**

How To Use PRECISION FLEX LOCATORS

# CP157

# TAPERED PINS



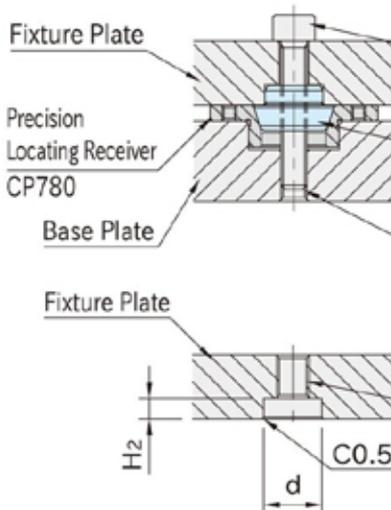
Body
S45C steel Black oxide finished Precision ground

Part Number	D <sub>1</sub> (g6)	D	H	H <sub>1</sub>	M	Weight (g)	Precision Locating Receivers
CP157-08001L	12	15.5	5	5	M 8×1.25	8	CP780-20038L, CP780-20038D
CP157-12001L	18	24.5	8	6	M12×1.75	27	CP780-28052L, CP780-28052D
CP157-16001L	22	31.5	10	7.5	M16×2	51	CP780-36065L, CP780-36065D
CP157-20001L	30	44.2	13	7.5	M20×2.5	134	CP780-50085L, CP780-50085D

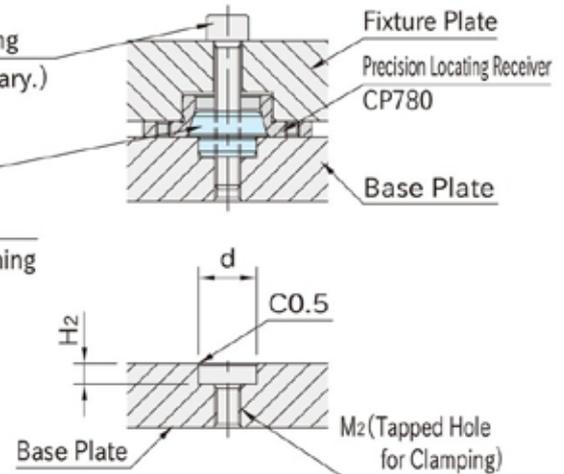
## How To Use

### Mounting Hole Dimension

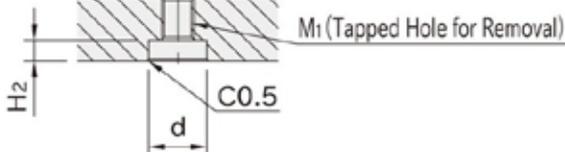
Mounting on Fixture Plate



Mounting on Base Plate



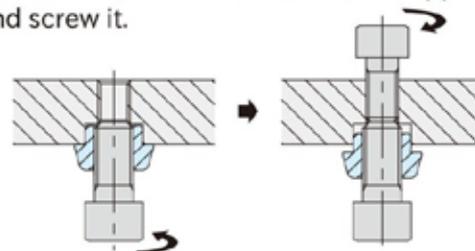
M<sub>2</sub> (Tapped Hole for Clamping)  
See CP780 datasheet for machining dimensions of the base plate.



Part Number	d <sub>(-0.02)</sub>	H <sub>2</sub>	M <sub>1</sub>	M <sub>2</sub>
CP157-08001L	12	5.5	M 8×1.25	M 6×1
CP157-12001L	18	6.5	M10×1.5	M 8×1.25
			M14×1.5	M10×1.5
CP157-16001L	22	8		M12×1.75
CP157-20001L	30	8	M18×1.5	M16×2

### How to Remove

For removal, insert a screw into the tapped hole and screw it.

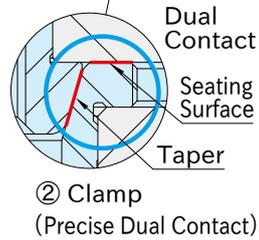
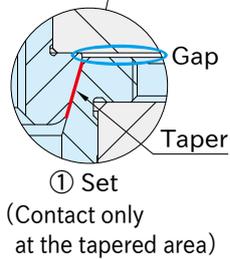
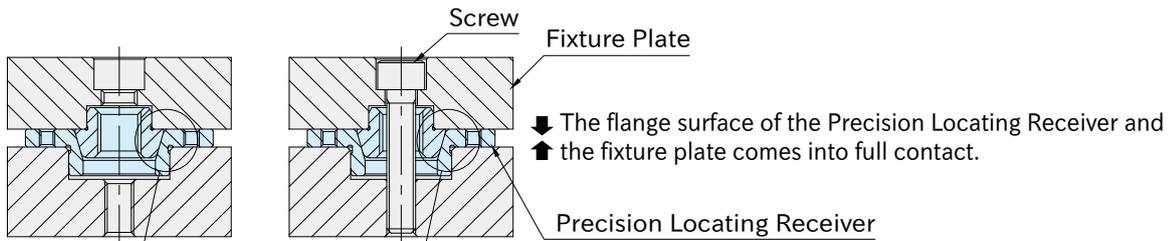


## Reference

How To Use PRECISION FLEX LOCATORS

# How To Use PRECISION FLEX LOCATORS

## Feature

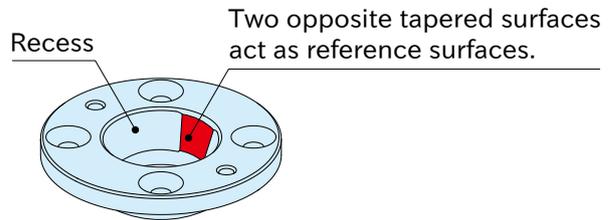
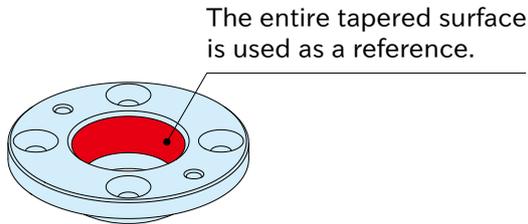


- When the fixture plate is lowered, the tapered surfaces make contact.
- By tightening the screws, the seating surfaces of the fixture plate and the flange of the Precision Locating Receiver come into full contact.
- The dual contact between the tapered and seating surfaces ensures high locating repeatability.

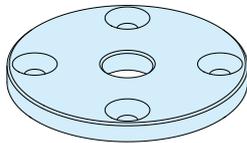
## Function

Round Receiver – Used for reference positioning  
Locating with Round Receiver for full-surface reference

Diamond Receiver – Used for rotational positioning  
Locating with Diamond Receiver for directional positioning

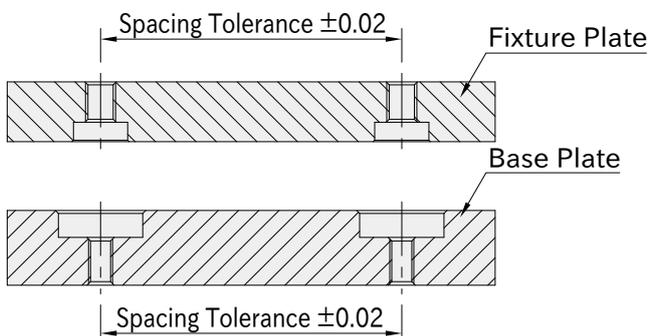


Spacer Type – Used where no locating is required  
Supporting with Spacer Receiver



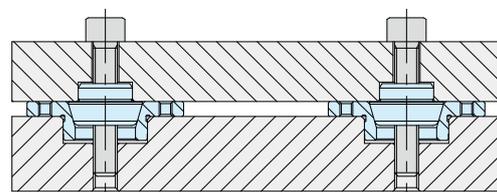
## Accuracy

### Machining Accuracy



### Repeatability

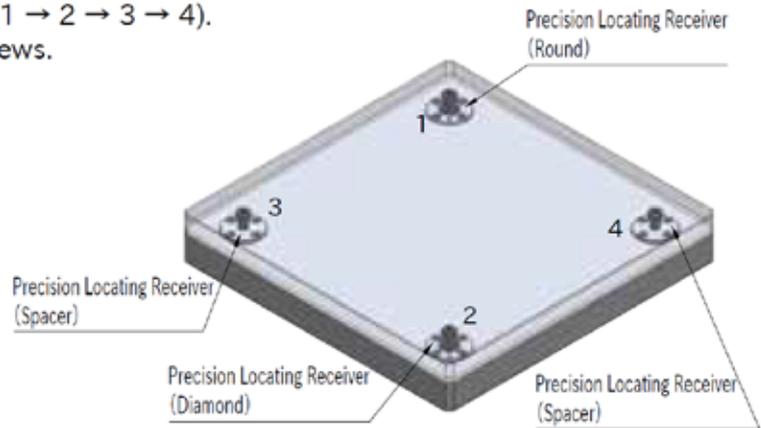
Repeatability: 5 µm



### Tightening Order

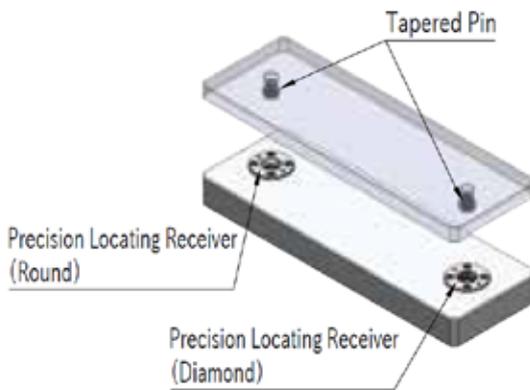
- ① Temporarily tighten the screws in the order of 1 → 2 → 3 → 4 using the minimum tightening torque.
- ② Perform final tightening in the same order (1 → 2 → 3 → 4). Make sure to apply torque evenly to all screws.

Size	Screw Size	Minimum Tightening Torque (N·m)	
	20038	M 6	5
CP780-L	28052	M 8	15
CP780-D		M10	20
CP780-W	36065	M12	40
	50085	M16	70

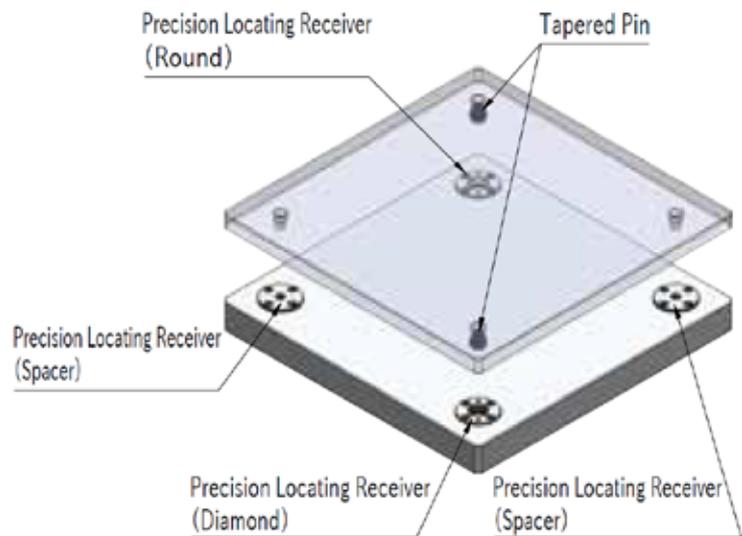


### Application Example

Use of 2 Locators



Use of 4 Locators

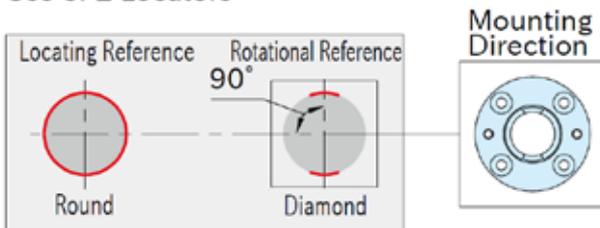


### Layout of Receivers

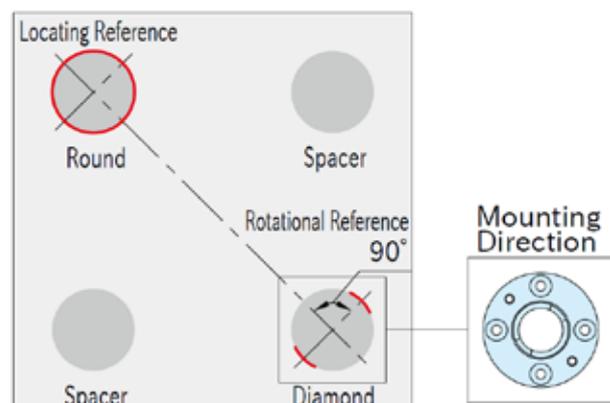
Mount the round receiver and diamond receiver as shown in the figure below.

The orientation of the diamond receivers changes between 2-point and 4-point locating to ensure proper rotational positioning.

Use of 2 Locators

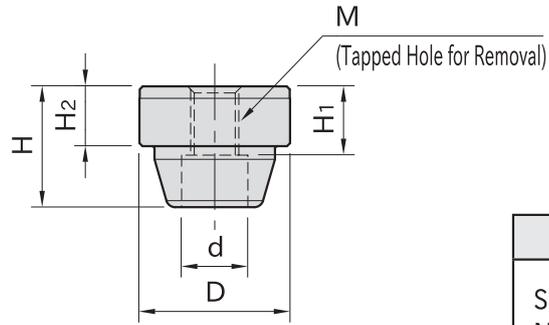


Use of 4 Locators



# CP720

# FLEX LOCATOR PINS

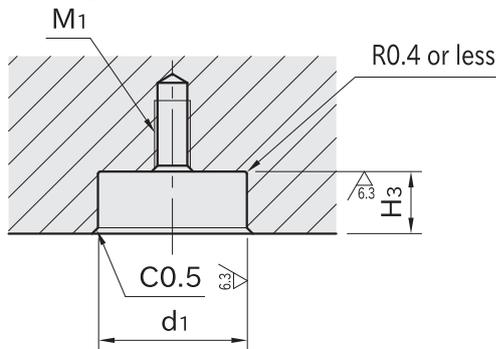


Body
SCM440 steel Nitrocarburized

Part Number	D (g6)	H <sub>2</sub>	H	M	H <sub>1</sub>	d	Weight (g)	Proper Flex Locator Bushings
CP720-16032	16	5.5	11.5	M 5×0.8 (Prepared Hole φ 4.2)	6	8	18	CP725-16032
CP720-25050	25	10	20	M 8×1.25 (Prepared Hole φ 6.8)	11.5	11	49	CP725-25050
CP720-38070	38	15	29.5	M10×1.5 (Prepared Hole φ 8.5)	18	14	176	CP725-38070
CP720-56095	56	22	43.5	M16×2 (Prepared Hole φ 14)	28.5	20	569	CP725-56095

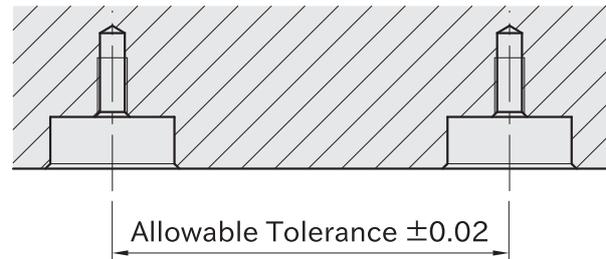
## How To Use

### ■ Mounting Hole Dimension

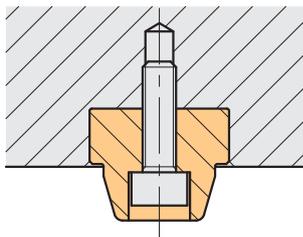


Part Number	d <sub>1</sub> (H7)	H <sub>3</sub> (±0.05)	M <sub>1</sub>
CP720-16032	16	6	M 4×0.7
CP720-25050	25	10.5	M 6×1
CP720-38070	38	15.5	M 8×1.25
CP720-56095	56	22.5	M12×1.75

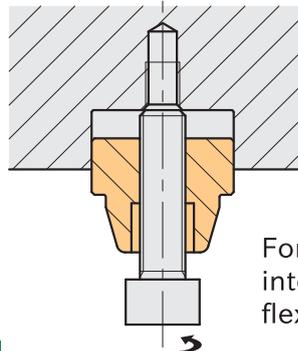
### ■ Spacing Tolerance



### ■ How to Install and Remove



Use a socket-head cap screw to fix the flex locator pin.



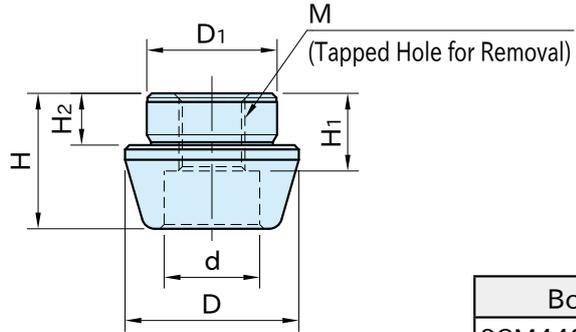
For removal, insert a screw into the tapped hole of the flex locator pin and screw it.

## Reference

- How To Install FLEX LOCATORS (Blind)
- How To Use FLEX LOCATORS (Blind)

# CP720-N

# FLEX LOCATOR PINS



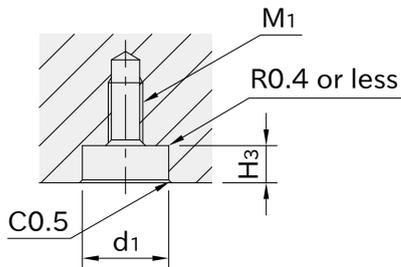
Body
SCM440 steel Nitrocarburized

★ **Key Point**  
Easier mounting hole preparation

Part Number	D <sub>1</sub> ( <sub>-0.02</sub> )	H <sub>2</sub>	D	H	M	H <sub>1</sub>	d	Weight (g)	Locating Receivers
CP720-10032N	10	4.5	13	10	M 5×0.8 (Prepared Hole φ 4.2)	6	8	5	CP725-16032
CP720-15050N	15	6	20	15.7	M 8×1.25 (Prepared Hole φ 6.8)	9	11	20	CP725-25050
CP720-20070N	20	8	30	22.1	M10×1.5 (Prepared Hole φ 8.5)	13	14	66	CP725-38070
CP720-30095N	30	10	45	31	M16×2 (Prepared Hole φ 14 )	17	20	211	CP725-56095

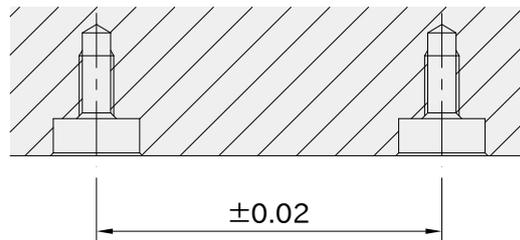
## How To Use

### ■ Mounting Hole Dimension

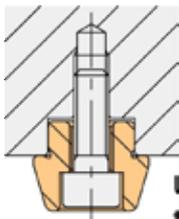


Part Number	d <sub>1</sub> (H7)	H <sub>3</sub>	M <sub>1</sub>
CP720-10032N	10	5	M 4×0.7
CP720-15050N	15	6.5	M 6×1
CP720-20070N	20	8.5	M 8×1.25
CP720-30095N	30	10.5	M12×1.75

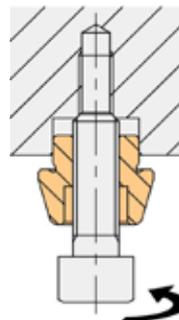
### ■ Spacing Tolerance



### ■ Installation and Removal



Use a socket-head cap screw to fix the Flex Locating Pin.



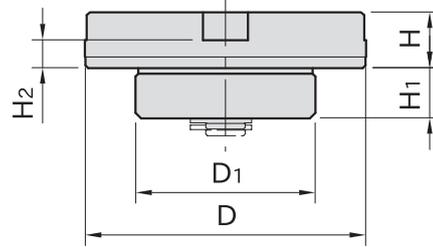
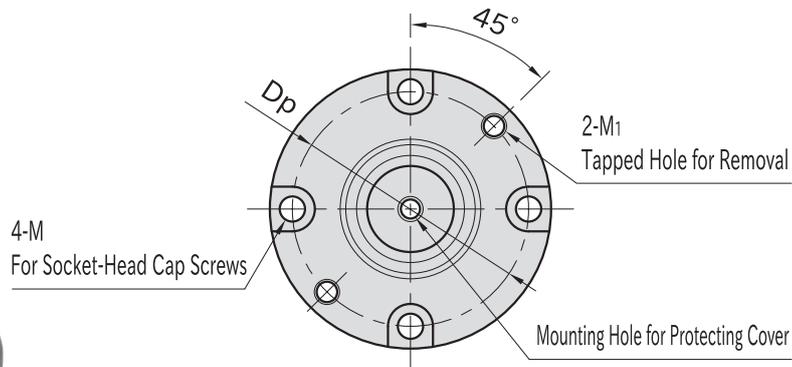
For removal, insert a screw into the tapped hole and screw it.

## Reference

- How To Install FLEX LOCATORS (Blind)
- How To Use FLEX LOCATORS (Blind)

# CP725

# FLEX LOCATOR BUSHINGS (Blind)



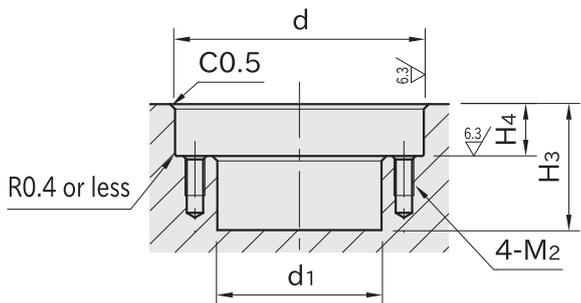
Body	Tapered Bushing
SCM440 steel Black oxide finished	SCM440 steel Nitrocarburized

Part Number	D (g6)	H	D <sub>1</sub>	H <sub>1</sub>	M	H <sub>2</sub>	M <sub>1</sub>	D <sub>p</sub>	Lifting Force (N)*	Weight (g)
<b>CP725-16032</b>	32	6.5	20	7	M3	3	M3×0.5	25.5	110	60
<b>CP725-25050</b>	50	10	32	9	M4	5	M4×0.7	42	180	160
<b>CP725-38070</b>	70	15	48	14	M5	9	M5×0.8	60	400	508
<b>CP725-56095</b>	95	22	70	21	M6	15	M6×1	84	690	1451

\*) The lifting force is the power of the inner spring of the body to push up up the movable tapered bushing.

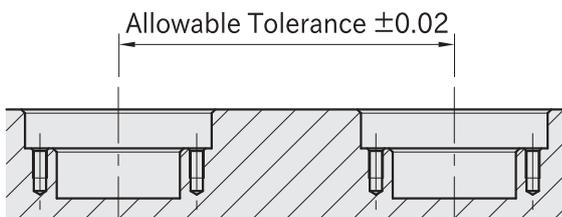
## How To Use

### ■ Mounting Hole Dimension

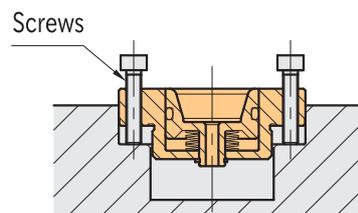


Part Number	d (H7)	H <sub>4</sub> (±0.05)	d <sub>1</sub>	H <sub>3</sub>	M <sub>2</sub>
<b>CP725-16032</b>	32	7	21	18	M3×0.5
<b>CP725-25050</b>	50	10.5	33	24	M4×0.7
<b>CP725-38070</b>	70	15.5	49	35	M5×0.8
<b>CP725-56095</b>	95	22.5	71	51	M6×1

### ■ Spacing Tolerance



### ■ How to Remove



For removal, insert screws into the tapped holes and screw it.

## Reference

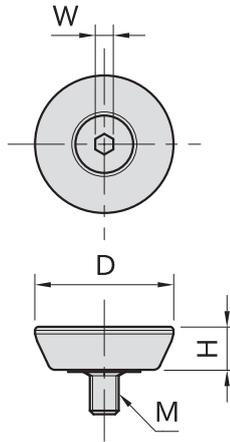
- How To Install FLEX LOCATORS (Blind)
- How To Use FLEX LOCATORS (Blind)

## Related Product

**CP720** FLEX LOCATOR PINS

# CP725-P

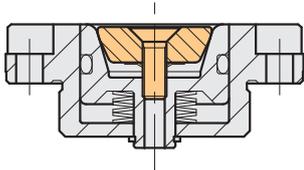
# FLEX LOCATOR PROTECTING COVERS



Body	Screw
A5056 aluminum Red	SCM435 steel Black oxide finished

Part Number	D	H	M	W	Weight (g)	Proper Flex Locator Bushings
CP725-16032P	12	4	M3X0.5	2	3	CP725-16032
CP725-25050P	19	6	M4X0.7	2.5	5	CP725-25050
CP725-38070P	29	7	M5X0.8	3	14	CP725-38070
CP725-56095P	44	8	M6X1	4	35	CP725-56095

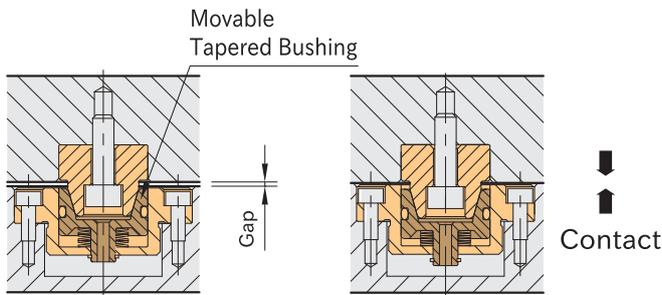
## How to Install



Mount on Flex Locator Bushings onto the tapped hole as a protective cover.

## How To Install FLEX LOCATORS (Blind)

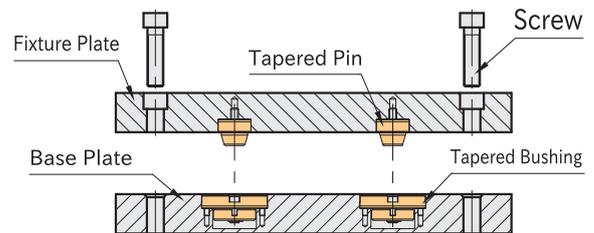
### Feature



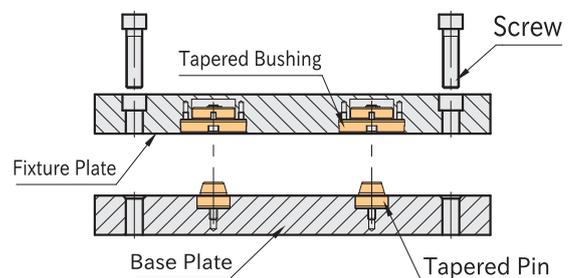
- Fixture plate is lifted down, and tapered pin engages with tapered bushing.
- Movable tapered bushing goes down, and fixture plate contacts with base plate.

### How To Install

#### Bushings on Base Plate



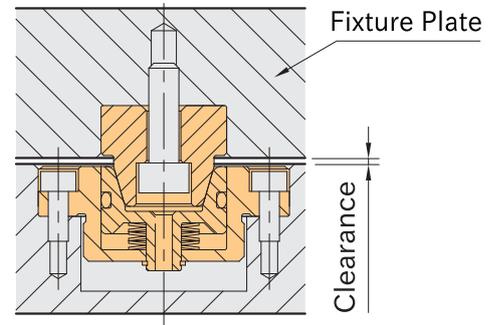
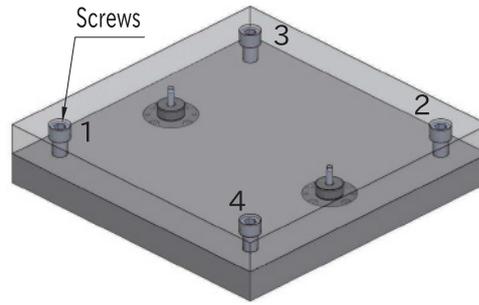
#### Pins on Base Plate



# How To Use FLEX LOCATORS (Blind)

## Tightening Order

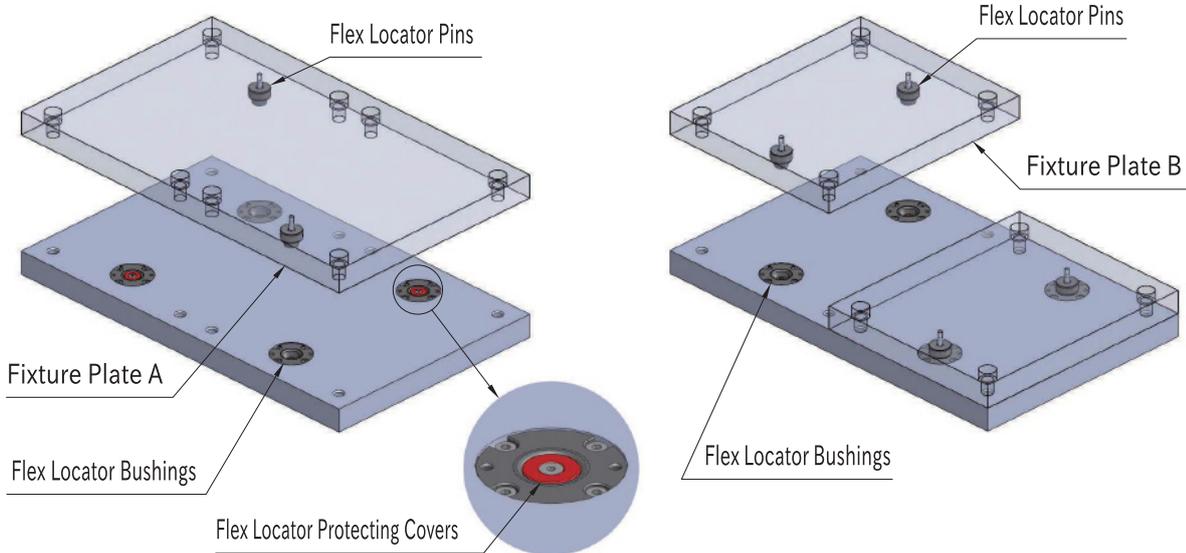
1. Ensure that each plate is in close contact.\*)
  2. Tighten the screws temporarily in order of 1→2→3→4.  
For temporary tightening, the tightening torque should be approximately 50% of the final tightening.
  3. Tighten the screws finally in order of 1→2→3→4.
- \*) The fixture plate may be pushed up by the lifting force of **CP725** Flex Locator Bushings.  
In such cases, tighten the screws loosely in order of 1→2→3→4, and make the each plate be in close contact with each other.  
Then tighten the screws temporarily.  
For the lifting force, see the measurement table of **CP725** Flex Locator Bushings.



If the screws are not tightened in the correct order, the locating repeatability may exceed  $10\ \mu\text{m}$ .

## How To Use

### Horizontal Assembly of Base Plate and Fixture Plate



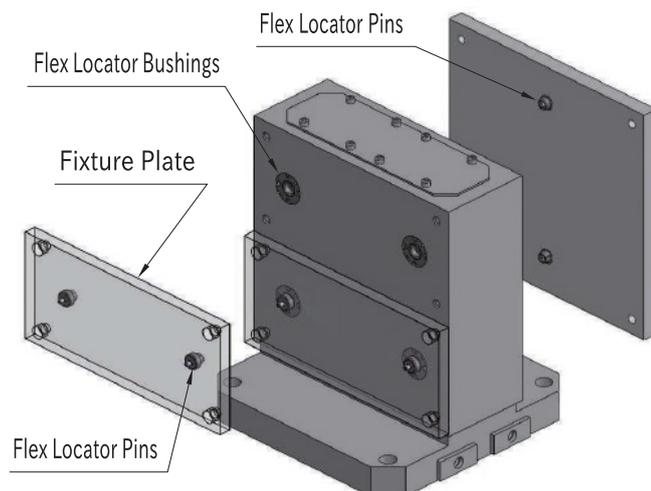
### Vertical Assembly of Tooling Block and Fixture Plate

If the total weight exceeds the maximum loading weight, the locating repeatability may exceed  $10\ \mu\text{m}$ .

Size	Max. Loading Weight(kg)
<b>16032</b>	80
<b>CP720 25050</b>	120
<b>CP725 38070</b>	200
<b>56095</b>	220

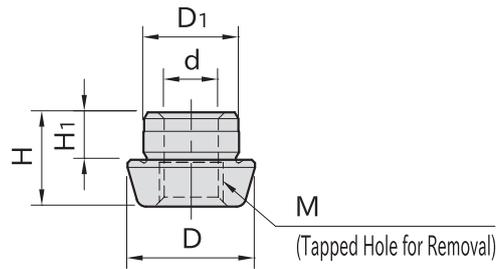
Note: The maximum loading weight is the entire sum of the weight of fixture plates, fixtures and workpieces.

Note: The maximum loading weight shown is the value when two sets of **CP720** Flex Locator Pins and **CP725** Flex Locator Bushings are used.



# CP721

# FLEX LOCATOR PINS



Body
SCM440 steel Nitrocarburized

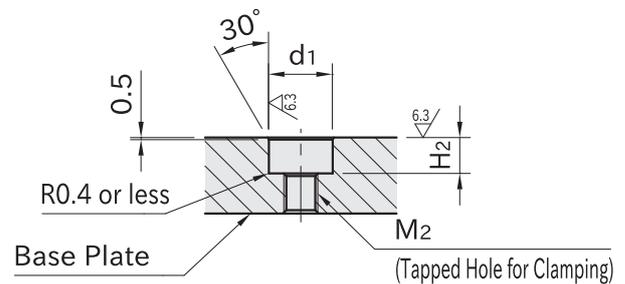
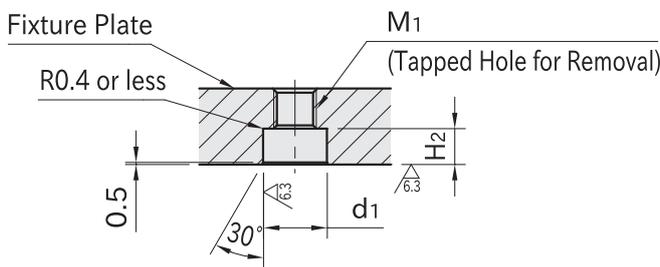
Part Number	D <sub>1</sub> (p6)	H <sub>1</sub>	D	H	M	d	Weight (g)	Proper Flex Locator Bushings
<b>CP721-12025</b>	12	4.5	15	10	M10X1.5 Depth 3.5	8.5	6	CP726-12025
<b>CP721-15032</b>	15	7.5	20	15	M12X1.75Depth 4.5	10.2	16	CP726-15032
<b>CP721-20045</b>	20	10	30	20	M16X2 Depth 5.5	14	47	CP726-20045

## How To Use

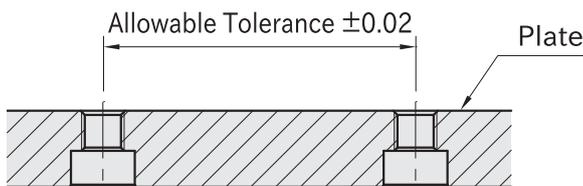
### ■ Mounting Hole Dimensions for Press Fit

Installation of the Flex Locator Pins on the Fixture Plate

Installation of the Flex Locator Pins on the Base Plate



### ■ Spacing Tolerance



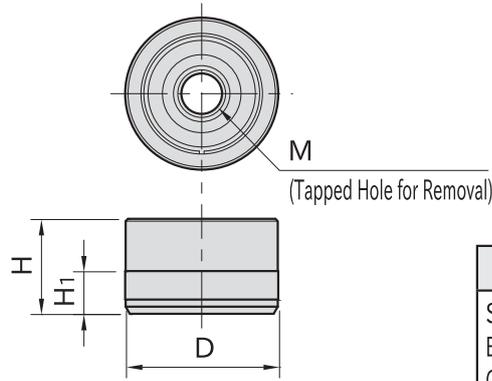
Part Number	d <sub>1</sub> (H6)	H <sub>2</sub>	M <sub>1</sub>	M <sub>2</sub>
<b>CP721-12025</b>	12	5.5	M 8X1.25	M 6X1
<b>CP721-15032</b>	15	8.5	M10X1.5	M 8X1.25
<b>CP721-20045</b>	20	11	M14X1.5	M10X1.5 M12X1.75

## Reference

- How To Install FLEX LOCATORS (Through)
- How To Use FLEX LOCATORS (Through)

# CP726

# FLEX LOCATOR BUSHINGS (Through)



Body	Tapered Bushing
SCM440 steel Black Oxide Finished Quenched & Tempered	SCM440 steel Nitrocarburized

Part Number	D	H	H <sub>1</sub>	M	Lifting Force (N)*	Weight (g)
<b>CP726-12025</b>	25 <sup>(+0.028)</sup> / <sub>(+0.018)</sub>	16	8	M 8×1.25(Prepared Hole φ 6.8)	540	46
<b>CP726-15032</b>	32 <sup>(+0.031)</sup> / <sub>(+0.021)</sub>	20	9	M10×1.5 (Prepared Hole φ 8.5)	600	92
<b>CP726-20045</b>	45 <sup>(+0.031)</sup> / <sub>(+0.021)</sub>	26	11	M14×1.5 (Prepared Hole φ 12.5)	780	230

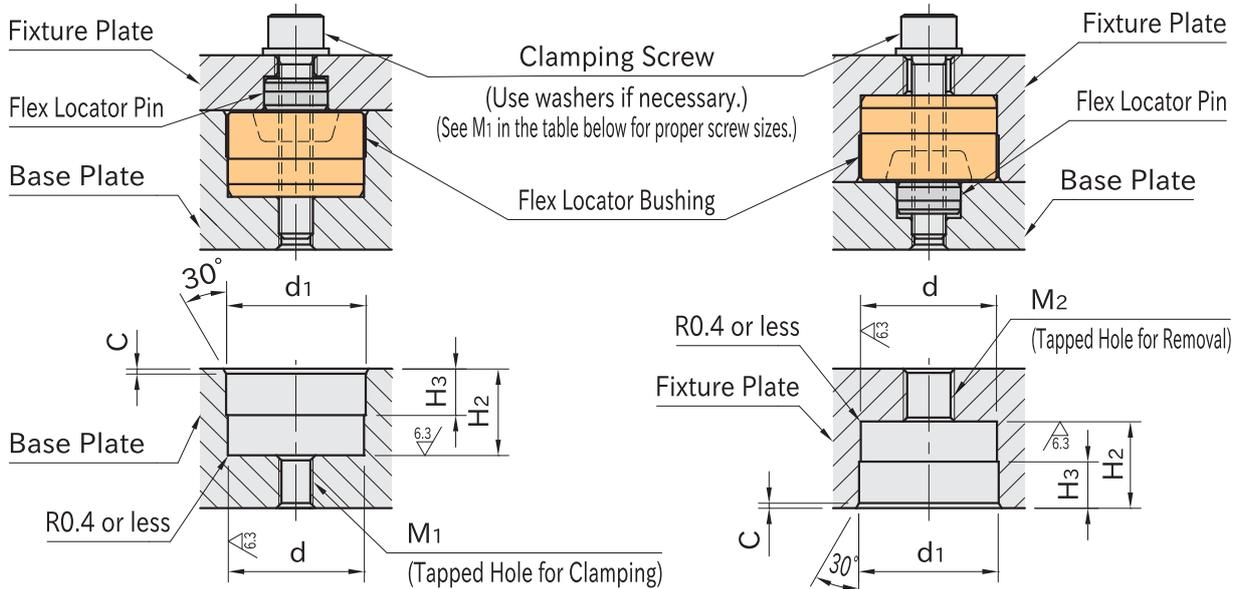
\*) The lifting force is the power of the inner spring of the body to push up the movable tapered bushing.

## How To Use

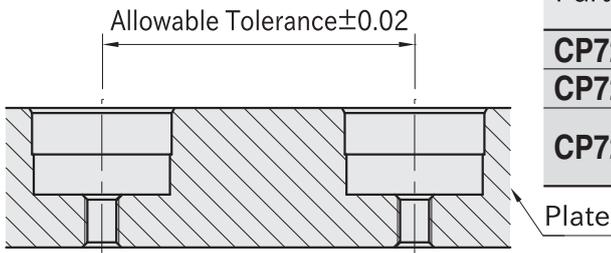
### Mounting Hole Dimension for Press Fit

Installation of the Bushings on the Base Plate

Installation of the Bushings on the Fixture Plate



### Spacing Tolerance



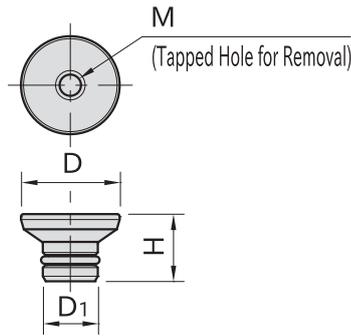
Part Number	d (H6)	H <sub>2</sub> (±0.05)	d <sub>1</sub>	H <sub>3</sub>	C	M <sub>1</sub>	M <sub>2</sub>
<b>CP726-12025</b>	25	16.5	25.2	8	1	M 6×1	M10×1.5
<b>CP726-15032</b>	32	20.5	32.2	11	1.2	M 8×1.25	M12×1.75
<b>CP726-20045</b>	45	26.5	45.2	15	1.5	M10×1.5 M12×1.75	M16×2

## Reference

- How To Install FLEX LOCATORS (Through)
- How To Use FLEX LOCATORS (Through)

# CP726-P

# FLEX LOCATOR PROTECTING COVERS



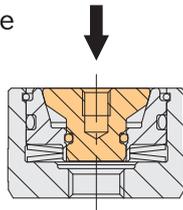
Body	O-Ring
A5056 aluminum Red	NBR nitrile rubber

Part Number	D	H	D <sub>1</sub>	M	Weight (g)	Proper Flex Locator Bushings
<b>CP726-12025P</b>	15	10	9	M4×0.7	2	CP726-12025
<b>CP726-15032P</b>	19	13	11	M5×0.8	5	CP726-15032
<b>CP726-20045P</b>	29	18	16	M6×1	17	CP726-20045

## How To Use

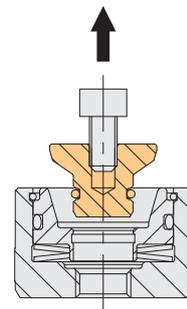
### How to Install

Insert the product to the center hole of the Flex Locator Bushings and use it as a protective cover.



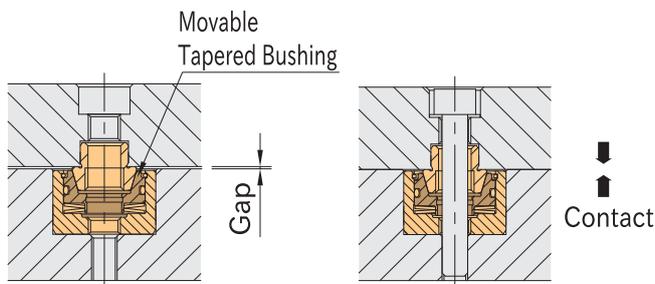
### How to Remove

Insert a screw into the tapped hole and pull it out.



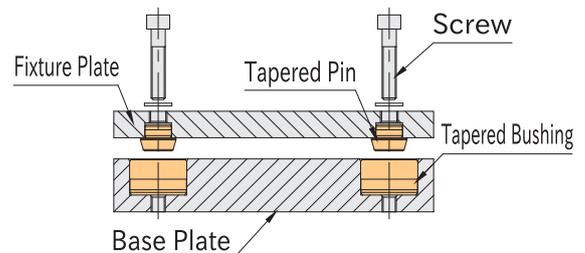
## How To Install FLEX LOCATORS (Through)

### Feature

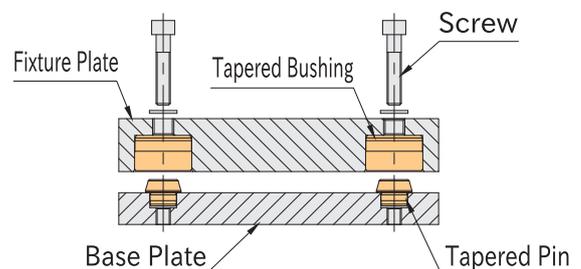


### How To Install

#### Bushings on Base Plate



#### Pins on Base Plate



- When the fixture plate is lifted down, the tapered pin engages with the tapered receiver bushing.
- The movable tapered receiver bushing goes down by screwing the clamping screw and the fixture plate contacts with the base plate.

# How To Use FLEX LOCATORS (Through)

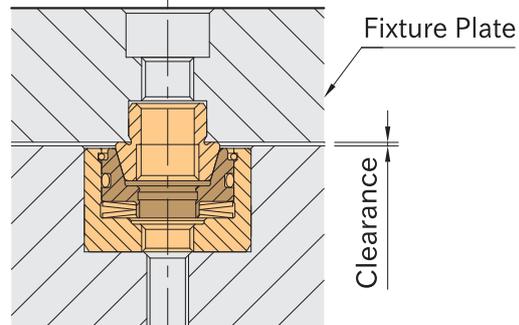
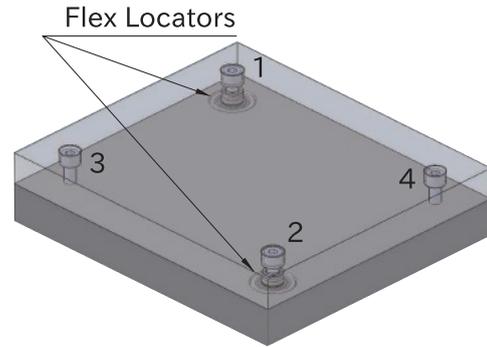
## Tightening Order

1. Ensure that each plate is in close contact. \*)
2. Tighten the screws temporarily in order of 1→2→3→4.  
For temporary tightening, the tightening torque should be approximately 50% of the final tightening.
3. Tighten the screws finally in order of 1→2→3→4.

\*) The fixture plate may be pushed up by the lifting force of **CP726** Flex Locator Bushings.

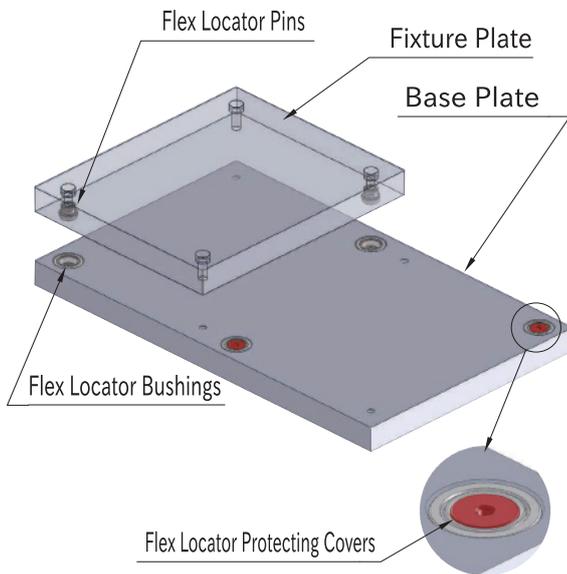
In such cases, tighten the screws loosely in order of 1→2→3→4, and make the each plate be in close contact with each other. Then tighten the screws temporarily. For the lifting force, see the measurement table of **CP726** Flex Locator Bushings.

If the screws are not tightened in the correct order, the locating repeatability may exceed  $10\ \mu\text{m}$ .

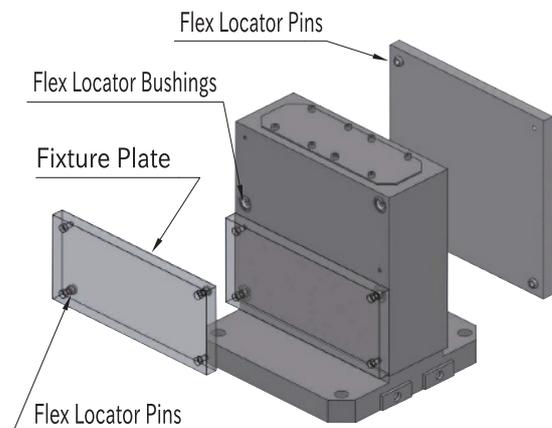


## How To Use

### Horizontal Assembly of Base Plate and Fixture Plate



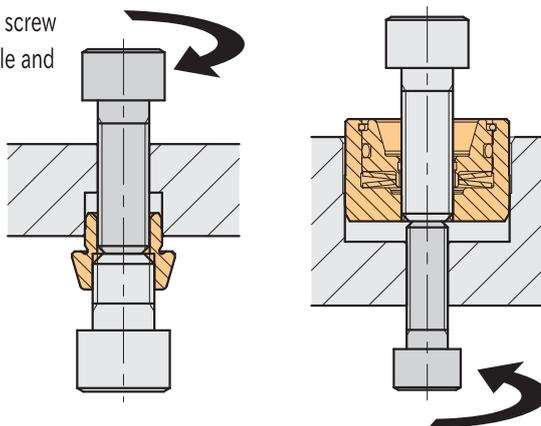
### Vertical Assembly of Base Plate and Fixture Plate



In vertical assembly, the locating repeatability may exceed  $10\ \mu\text{m}$  if the total weight exceeds the maximum loading weight.

### How to Remove

For removal, insert screw into the tapped hole and screw it.



Flex Locator Pin      Flex Locator Bushing

	Size	Max. Loading Weight(kg)
<b>CP721</b>	<b>12025</b>	150
<b>CP726</b>	<b>15032</b>	200
	<b>20045</b>	240

Note: The maximum loading weight is the entire sum of the weight of fixture plates, fixtures and workpieces.

Note: The maximum loading weight shown is the value when two sets of **CP721** Flex Locator Pins and **CP726** Flex Locator Bushings are used.



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