

# QCTH / QCTHL / QCTHH QUARTER-TURN CLAMPS



Stainless Steel



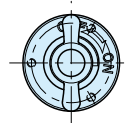
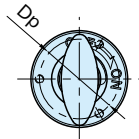
## ★Key Point

Easy-to-read ON/OFF position



**QCTH**

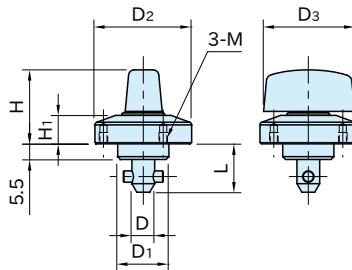
(Plastic Knob)



Stainless Steel

**QCTH-SUS**

(Stainless Steel)

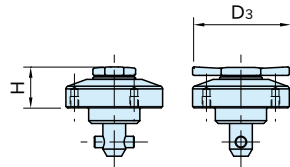


**QCTH**

(Plastic Knob)

**QCTH-SUS**

(Stainless Steel)



**QCTHL-SUS**

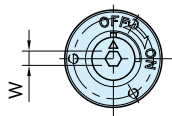
(Low-height Knob, Stainless Steel)



Stainless Steel

**QCTHL-SUS**

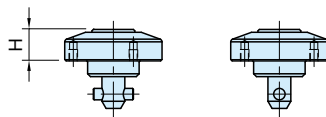
(Low-height Knob, Stainless Steel)



Stainless Steel

**QCTHH-SUS**

(Hex. Socket Head, Stainless Steel)



**QCTHH-SUS**

(Hex. Socket Head, Stainless Steel)

## Supplied With

• **QCTH** **QCTH-SUS** **QCTHL-SUS**  
**QCTHH-SUS** 0525-10:

3 of socket-head cap screws (stainless steel), M2×0.4-5L

• **QCTH** **QCTH-SUS** **QCTHL-SUS**  
**QCTHH-SUS** 0834-14, 0834-20:

3 of socket-head cap screws (stainless steel), M3×0.5-6L

| Type             | Body, Shank            | Pin                    | Knob                                         | Spring                      |
|------------------|------------------------|------------------------|----------------------------------------------|-----------------------------|
| <b>QCTH</b>      | SUS303 stainless steel | SUS304 stainless steel | Polyamide (glass-fiber reinforced) Black     | Equivalent to SWOSC-V steel |
| <b>QCTH-SUS</b>  |                        |                        | SCS13 stainless steel (Equivalent to SUS304) | SUS304 stainless steel      |
| <b>QCTHL-SUS</b> |                        |                        | —                                            |                             |
| <b>QCTHH-SUS</b> |                        |                        | —                                            |                             |

| Size                                       |         | Plate Thickness | D<br>( $\pm 0.04$<br>(-0.08) | D <sub>1</sub><br>(h9) | D <sub>2</sub> | L    | H <sub>1</sub> | M                 | D <sub>p</sub> | Clamping Force (N) | Holding Force (N) **) | Cam Receptacles                                          |
|--------------------------------------------|---------|-----------------|------------------------------|------------------------|----------------|------|----------------|-------------------|----------------|--------------------|-----------------------|----------------------------------------------------------|
| QCTH<br>QCTH-SUS<br>QCTHL-SUS<br>QCTHH-SUS | 0525-10 | 3~10<br>(*)     | 5                            | 14                     | 25             | 15.5 | 6.5            | M2×0.4<br>Depth 3 | 21             | 60                 | 60                    | QCTH0525-N, QCTH0525-B<br>QCTH0525-N-SUS, QCTH0525-B-SUS |
|                                            |         | 3~14<br>(*)     | 8                            | 18                     | 34             | 17   | 10             | M3×0.5<br>Depth 4 | 28             | 90                 | 90                    | QCTH0834-N, QCTH0834-B<br>QCTH0834-N-SUS, QCTH0834-B-SUS |
|                                            | 0834-14 |                 |                              |                        |                |      |                |                   |                |                    |                       |                                                          |
|                                            | 0834-20 | 12~20           |                              |                        |                | 23   |                |                   |                |                    |                       |                                                          |

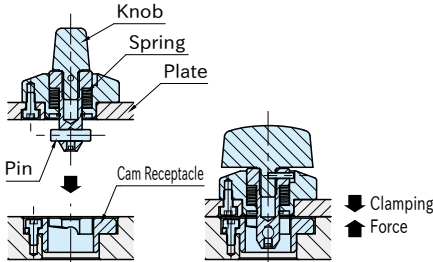
\*) Spacer [QCASP] is required for thinner plate than 6mm.

\*\*) Exceeding the holding force creates a gap of greater than 0.1mm between plates.

| QCTH (Plastic Knob) |                |    |            | QCTH-SUS (Stainless Steel) |                |      |            |
|---------------------|----------------|----|------------|----------------------------|----------------|------|------------|
| Part Number         | D <sub>3</sub> | H  | Weight (g) | Part Number                | D <sub>3</sub> | H    | Weight (g) |
| QCTH0525-10         | 20             | 19 | 35         | QCTH0525-10-SUS            | 20             | 19   | 40         |
| QCTH0834-14         | 32             | 26 | 105        | QCTH0834-14-SUS            | 32             | 25.5 | 130        |
| QCTH0834-20         |                |    | 110        | QCTH0834-20-SUS            |                |      | 135        |

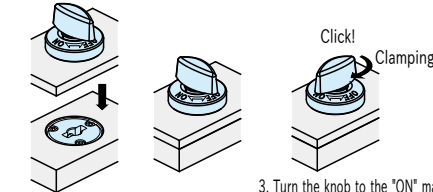
| QCTHL-SUS (Low-height Knob, Stainless Steel) |                |      |            | QCTHH-SUS (Hex. Socket Head Stainless Steel) |    |   |            |
|----------------------------------------------|----------------|------|------------|----------------------------------------------|----|---|------------|
| Part Number                                  | D <sub>3</sub> | H    | Weight (g) | Part Number                                  | H  | W | Weight (g) |
| QCTHL0525-10-SUS                             | 25             | 11.5 | 35         | QCTHH0525-10-SUS                             | 8  | 4 | 30         |
| QCTHL0834-14-SUS                             | 34             | 15.5 | 83         | QCTHH0834-14-SUS                             | 11 | 5 | 75         |
| QCTHL0834-20-SUS                             |                |      | 85         | QCTHH0834-20-SUS                             |    |   | 77         |

## Feature



When the pin contacts the cam in the Cam Receptacle, the spring gets compressed to press down the plate.

## How To Use

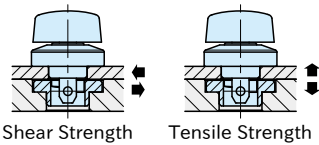


1. Ensure that the knob is positioned at the "OFF" mark.

2. Insert the Quarter-Turn Clamp.

3. Turn the knob to the "ON" mark for clamping. The knob clicks when it is clamped/unclamped. Note: For unclamping, follow back these steps.

## Mechanical Strength



| Part Number |         | Heatresistant Temperature(°C) | Shear Strength (N) | Tensile Strength (N) |
|-------------|---------|-------------------------------|--------------------|----------------------|
| QCTH        | 0525-10 | 130                           | 1800               | 1200                 |
|             | 0834-14 |                               | 3200               | 2600                 |
|             | 0834-20 |                               |                    |                      |
| QCTH-SUS    | 0525-10 | 180                           | 1800               | 1200                 |
|             | 0834-14 |                               | 3200               | 2600                 |
|             | 0834-20 |                               |                    |                      |

Shear and tensile strength is allowable load and the fastener could break when it receives bigger load.

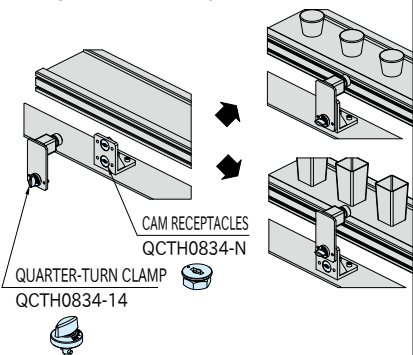
## QCTH-N / QCTH-B CAM RECEPTACLES



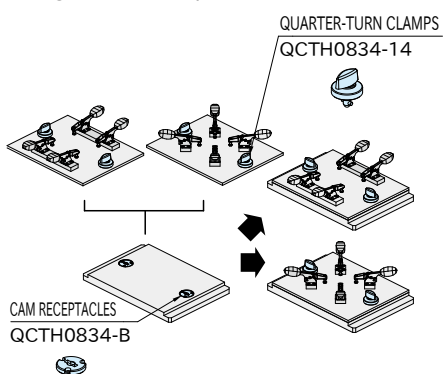
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## Application Example

### Changes of camera positions



### Changes of fixture plates



## How To Install

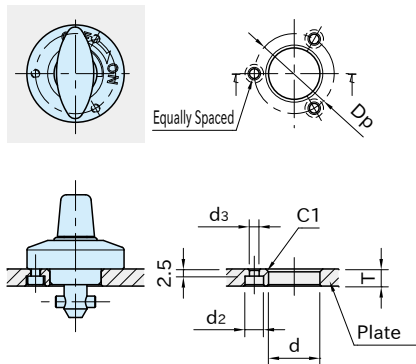


Figure A

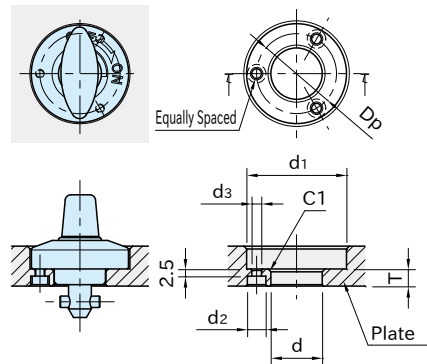


Figure B

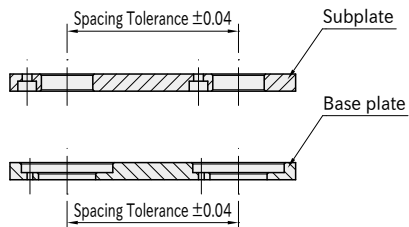
| Part Number                                                                   |         | Plate Thickness     | Figure                               | d<br>(+0.10<br>+0.05) | d <sub>1</sub> | T<br>(±0.2) | d <sub>2</sub> | d <sub>3</sub> | Dp |
|-------------------------------------------------------------------------------|---------|---------------------|--------------------------------------|-----------------------|----------------|-------------|----------------|----------------|----|
| <div>QCTH</div> <div>QCTH-SUS</div> <div>QCTHL-SUS</div> <div>QCTHH-SUS</div> | 0525-10 | 3 or more, under 6  | Spacer <div>QCASP</div> is required. |                       |                |             |                |                |    |
|                                                                               |         | 6                   | A                                    | 14                    | —              | 6           | 4.4            | 2.4            | 21 |
|                                                                               |         | Over 6, 10 or less  | B                                    |                       | 26             |             |                |                |    |
|                                                                               | 0834-14 | 3 or more, under 6  | Spacer <div>QCASP</div> is required. |                       |                |             |                |                |    |
|                                                                               |         | 6                   | A                                    | 18                    | —              | 6           | 6.5            | 3.4            | 28 |
|                                                                               |         | Over 6, 14 or less  | B                                    |                       | 35             |             |                |                |    |
|                                                                               | 0834-20 | 12                  | A                                    |                       | —              | 12          |                |                |    |
|                                                                               |         | Over 12, 20 or less | B                                    |                       | 35             |             |                |                |    |

## QCASP SPACERS



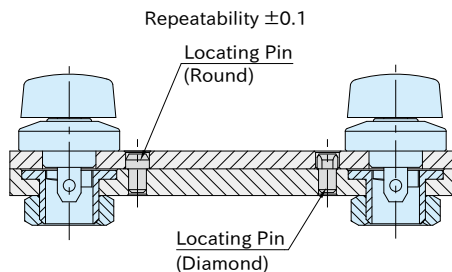
## Accuracy

### ■ Machining Accuracy



Spacing tolerance on both the subplate and the base plate should be  $\pm 0.04$ .

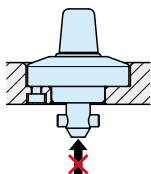
### ■ Repeatability



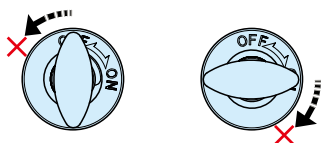
For higher accurate locating, use locating pins.

### ⚠ Caution

- Note the following cautions using **QCTH**  
**QCTH-SUS** **QCTHL-SUS** **QCTHH-SUS** 0525-10
- Any force over 600N or more on the tip of the shaft from any direction can damage the pin.



- The knob operating torque is 0.4 N·m. Note that the excessive operating torque over 2 N·m can damage the pin.



### Reference

- "How To Install" of **QCTH-N**/**QCTH-B**  
**QCTH-N-SUS** **QCTH-B-SUS** Cam Receptacles
- Spacer **QCASP** is required for 3mm or more, under 6mm plate thickness.