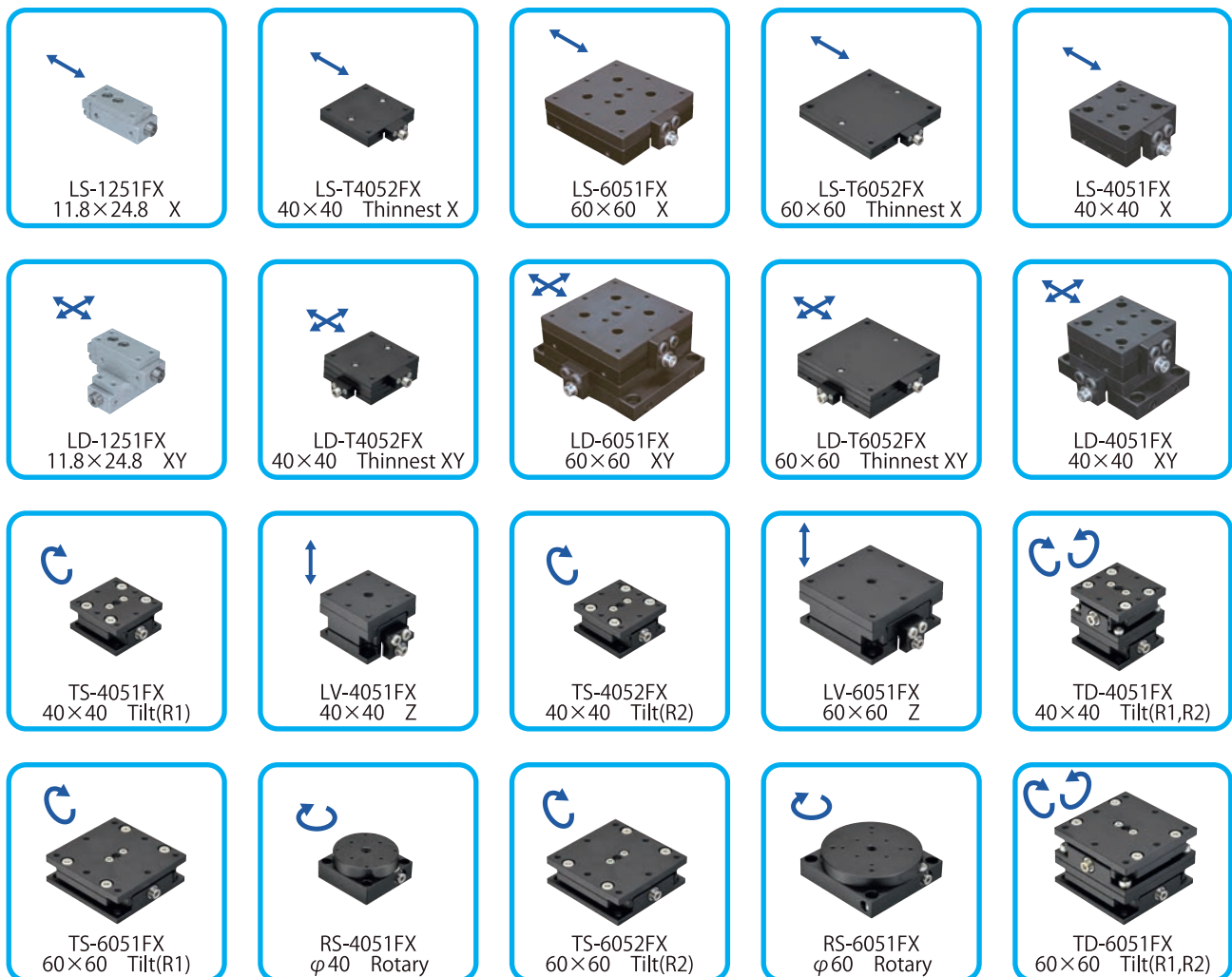


# Fix Stage NEW Series

X / XY / Z / Rotary / Tilt / Two axes tilt

6-axis Fix Stage is now configurable with new line-up.



中央精機株式会社

CHUO PRECISION INDUSTRIAL CO., LTD.

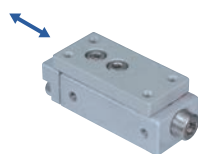
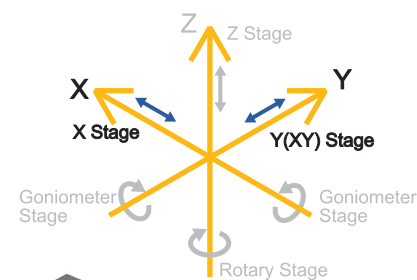
## Fix Stage

X / XY

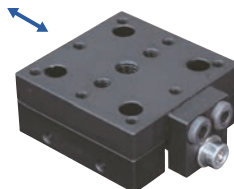
11.8×24.8

40×40

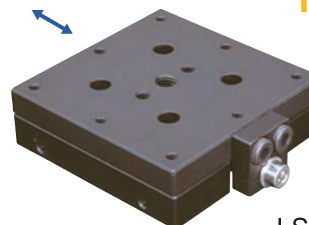
60×60



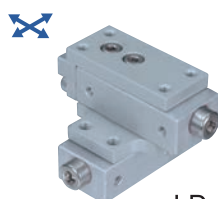
LS-1251FX



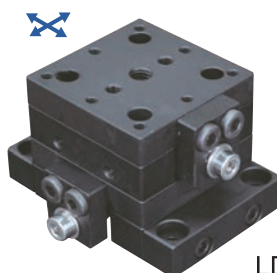
LS-4051FX



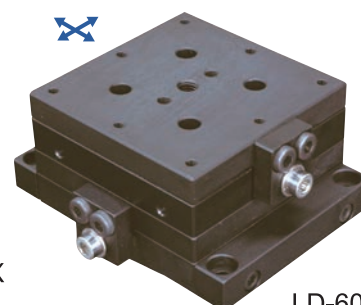
LS-6051FX



LD-1251FX



LD-4051FX



LD-6051FX

## Features

- No clamp mechanism and cannot be moved after positioning.
- Remarkably small backlash by self-locking mechanism.
- Positioning by hexagonal wrench.
  - \*)Hexagonal wrench is not standard accessory. To be provided by user.
- Suitable for applications with infrequent position changes, i.e. cameras and/or sensors.
- May not only be used for horizontal but also for vertical and ceiling installation.
  - \*)Patented technology.
  - \*)Allowable load capacity depends on installation position. Please inquire for details.

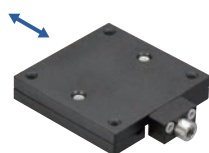
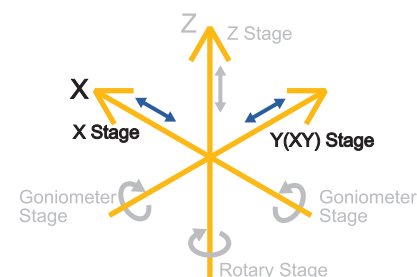
|                                |                        |                    |             |                         |                    |             |
|--------------------------------|------------------------|--------------------|-------------|-------------------------|--------------------|-------------|
| Product number                 | LS-1251FX              | LS-4051FX          | LS-6051FX   | LD-1251FX               | LD-4051FX          | LD-6051FX   |
| Product name                   | X axis Fix Stage       |                    |             | XY axes Fix Stage       |                    |             |
| Direction of travel            | X axis, one-direction  |                    |             | XY axes, two-directions |                    |             |
| Stage size                     | 11.8mm×24.8mm          | 40mm×40mm          | 60mm×60mm   | 11.8mm×24.8mm           | 40mm×40mm          | 60mm×60mm   |
| Clamp method                   | Self-locking mechanism |                    |             |                         |                    |             |
| Transfer mechanism             | Feed screw P=0.5mm     | Feed screw P=0.7mm |             | Feed screw P=0.5mm      | Feed screw P=0.7mm |             |
| Travel                         | ±1.5mm                 | ±3.5mm             | ±5.5mm      | ±1.5mm                  | ±3.5mm             | ±5.5mm      |
| Travel / feed screw revolution | Approx. 0.5mm          | Approx. 0.7mm      |             | Approx. 0.5mm           | Approx. 0.7mm      |             |
| Guiding method                 | Slide guide            |                    |             |                         |                    |             |
| Parallelism                    | 0.05mm                 |                    |             | 0.075mm                 |                    |             |
| Load capacity                  | 4.9N(0.5kgf)           | 39.2N(4kgf)        | 58.8N(6kgf) | 4.9N(0.5kgf)            | 39.2N(4kgf)        | 58.8N(6kgf) |
| Weight                         | 0.01kg                 | 0.09kg             | 0.19kg      | 0.02kg                  | 0.19kg             | 0.41kg      |
| RoHS                           | Compliant              |                    |             |                         |                    |             |

## Thinnest Fix Stage

X / XY

40×40

60×60



LS-T4052FX



LS-T6052FX



LD-T4052FX



LD-T6052FX

### Features

- No clamp mechanism and cannot be moved after positioning.
- Remarkably small backlash by self-locking mechanism.
- Positioning by hexagonal wrench.
  - \*)Hexagonal wrench is not standard accessory. To be provided by user.
- Suitable for applications with infrequent position changes, i.e. as cameras and / or sensors.
- One axis positioning stage as thin as mounting plate (8mm).
- Head of feed screw is located at the center of the stage and designed flush. Suitable for narrow spaces.
- May not only be used for horizontal but also for vertical and ceiling installation.

\*)Patented technology.

\*)Allowable load capacity depends on installation position. Please inquire for details.

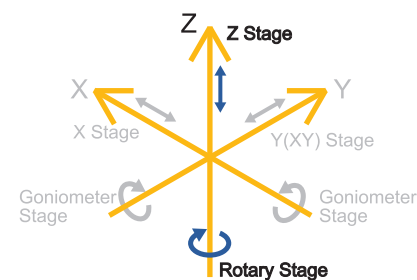
|                                |                                    |                                    |                                     |                                     |
|--------------------------------|------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Product number                 | LS-T4052FX                         | LS-T6052FX                         | LD-T4052FX                          | LD-T6052FX                          |
| Product name                   | Thinnest X axis Fix Stage<br>40×40 | Thinnest X axis Fix Stage<br>60×60 | Thinnest XY axes Fix Stage<br>40×40 | Thinnest XY axes Fix Stage<br>60×60 |
| Direction of travel            | X axis, one-direction              |                                    | XY axes, two-directions             |                                     |
| Stage size                     | 40mm×40mm                          | 60mm×60mm                          | 40mm×40mm                           | 60mm×60mm                           |
| Height                         | 8mm                                |                                    | 16mm                                |                                     |
| Clamp method                   | Self-locking mechanism             |                                    |                                     |                                     |
| Transfer mechanism             | Feed screw P=0.7mm                 |                                    |                                     |                                     |
| Travel                         | ±3.5mm                             | ±5.5mm                             | ±3.5mm                              | ±5.5mm                              |
| Travel / feed screw revolution | Approx. 0.7mm                      |                                    |                                     |                                     |
| Guiding method                 | Slide guide                        |                                    |                                     |                                     |
| Parallelism                    | 0.1mm                              |                                    | 0.2mm                               |                                     |
| Load capacity                  | 24.5N(2.5kgf)                      |                                    |                                     |                                     |
| Weight                         | 0.04kg                             | 0.08kg                             | 0.16kg                              |                                     |
| Material / Surface treatment   | Aluminum alloy / Black alumite     |                                    |                                     |                                     |
| RoHS                           | Compliant                          |                                    |                                     |                                     |

## Z Fix Stage

Z Vertical    40×40    60×60

## Rotary Fix Stage

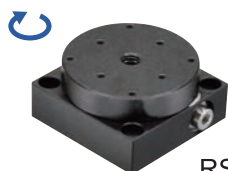
Rotary    φ40    φ60



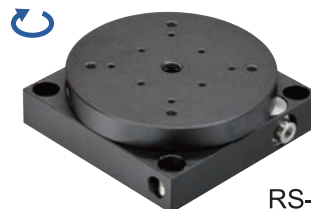
LV-4051FX



LV-6051FX



RS-4051FX



RS-6051FX

## Features

- No clamp mechanism and cannot be moved after positioning.
- Remarkably small backlash by self-locking mechanism.
- Positioning by hexagonal wrench.
  - \*)Hexagonal wrench is not standard accessory. To be provided by user.
- Suitable for applications with infrequent position changes, i.e. as cameras and / or sensors.
- May not only be used for horizontal but also for vertical and ceiling installation.
  - \*)Patented technology.
  - \*)Allowable load capacity depends on installation position. Please inquire for details.

|                                |                                |                        |                       |                       |
|--------------------------------|--------------------------------|------------------------|-----------------------|-----------------------|
| Product number                 | LV-4051FX                      | LV-6051FX              | RS-4051FX             | RS-6051FX             |
| Product name                   | Z axis Fix Stage 40×40         | Z axis Fix Stage 60×60 | Rotary Fix Stage φ 40 | Rotary Fix Stage φ 60 |
| Direction of travel            | Z axis, one-direction          |                        | Rotation              |                       |
| Stage size                     | 40mm×40mm                      | 60mm×60mm              | φ 39mm                | φ 60mm                |
| Height                         | 30mm                           |                        | 20mm                  |                       |
| Clamp method                   | Self-locking mechanism         |                        |                       |                       |
| Transfer mechanism             | Feed screw P=0.7mm             |                        |                       |                       |
| Travel                         | 0 to 1mm                       |                        | ±3°                   |                       |
| Travel / feed screw revolution | Approx. 0.1mm                  |                        | Approx. 4.7°          | Approx. 2.7°          |
| Guiding method                 | Slide guide                    |                        |                       |                       |
| Parallelism                    | 0.1mm                          |                        |                       |                       |
| Load capacity                  | 24.5N(2.5kgf)                  |                        |                       |                       |
| Weight                         | 0.13kg                         | 0.28kg                 | 0.10kg                | 0.17kg                |
| Material / Surface treatment   | Aluminum alloy / Black alumite |                        |                       |                       |
| RoHS                           | Compliant                      |                        |                       |                       |

## Tilt (Goniometer) Fix Stage

Tilt

40×40

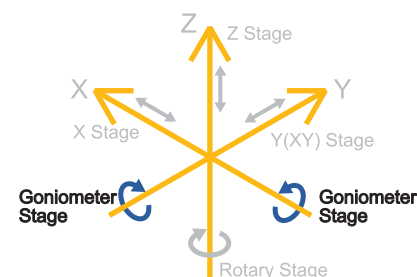
60×60

## Two axes Tilt (Goniometer) Fix Stage

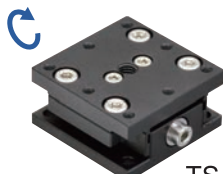
Two axes Tilt

40×40

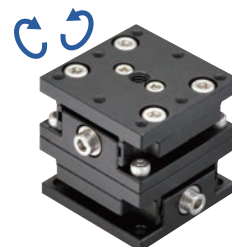
60×60



TS-4051FX



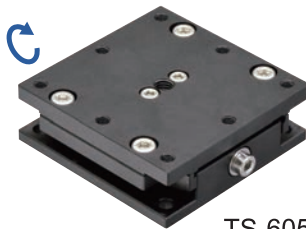
TS-4052FX



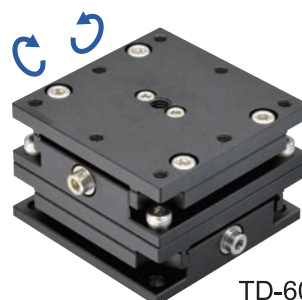
TD-4051FX



TS-6051FX



TS-6052FX



TD-6051FX

### Features

- No clamp mechanism and cannot be moved after positioning.
- Remarkably small backlash by self-locking mechanism.
- Positioning by hexagonal wrench.
  - \*)Hexagonal wrench is not standard accessory. To be provided by user.
- Suitable for applications with infrequent position changes, i.e. as cameras and / or sensors.
- Two types of tilt stages are available, with rotation centers located at different heights.
- The combination of these two tilt stages provides for a two-axes tilt stage with a single rotation center.
- May not only be used for horizontal but also for vertical and ceiling installation.

\*)Patented technology.

\*)Allowable load capacity depends on installation position. Please inquire for details.

|                                |                                  |                |                                  |                |  |  |
|--------------------------------|----------------------------------|----------------|----------------------------------|----------------|--|--|
| Product number                 | TS-4051FX                        | TS-4052FX      | TS-6051FX                        | TS-6052FX      | TD-4051FX                                    | TD-6051FX                                  |
| Product name                   | Tilt(goniometer) Fix Stage 40×40 |                | Tilt(goniometer) Fix Stage 60×60 |                | Two axes tilt (goniometer) Fix Stage 40×40   | Two axes tilt (goniometer) Fix Stage 60×60 |
| Direction of travel            | Tilt, one-direction              |                |                                  |                | Tilt, two-directions                         |  |
| Stage size                     | 40mm×40mm                        |                | 60mm×60mm                        |                | 40mm×40mm                                    | 60mm×60mm                                  |
| Height                         | 20mm                             |                |                                  |                | 40mm   |  |
| Rotation center distance       | 60mm                             | 40mm           | 60mm                             | 40mm           | 40mm   |  |
| Clamp method                   | Self-locking mechanism           |                |                                  |                |  |  |
| Transfer mechanism             | Feed screw P=0.7mm               |                |                                  |                |  |  |
| Travel                         | ±3°                              |                |                                  |                |  |  |
| Travel / feed screw revolution | Approx. 33'25"                   | Approx. 46'16" | Approx. 33'25"                   | Approx. 46'16" | Upper Approx. 46'16"<br>Lower Approx. 33'25" |  |
| Guiding method                 | Slide guide                      |                |                                  |                |  |  |
| Load capacity                  | 24.5N(2.5kg)                     |                |                                  |                |  |  |
| Weight                         | 0.08kg                           |                | 0.17kg                           |                | 0.16kg                                       | 0.34kg                                     |
| Material / Surface treatment   | Aluminum alloy / Black alumite   |                |                                  |                |  |  |
| RoHS                           | Compliant                        |                |                                  |                |  |  |

Fix Stage cannot be moved after positioning.

"Cannot be moved after positioning" means:

- A hexagonal wrench is required to move the Fix Stage.
- The stage can hardly be pushed or pulled.
- Therefore no clamp is necessary.

Have you made the experiences described below?

Carefully aligning the position of a component (such as a sensor) takes a long time; obtaining acceptance by a customer needs great effort. Eventually fixing the position requires clamping – however, the component shifts and the position has to be realigned.

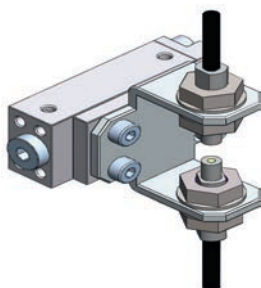
How can misalignment by clamping be avoided?

Fix Stage fixes the problem.

## Features

- No clamp mechanism, cannot be moved after positioning.
- Remarkably small backlash by self-locking mechanism.
- Positioning by hexagonal wrench.
  - \*)Hexagonal wrench is not standard accessory. To be provided by user.
- Suitable for applications with infrequent position changes, i.e. cameras and/or sensors.
- May not only be used for horizontal but also for vertical and ceiling installation.
  - \*)Patented technology.
  - \*)Allowable load capacity depends on installation position. Please inquire for details.

Example of use  
Positioning of fiber sensor



Example of use  
Positioning of micro zoom lens



Example of use  
positioning of CCTV lens



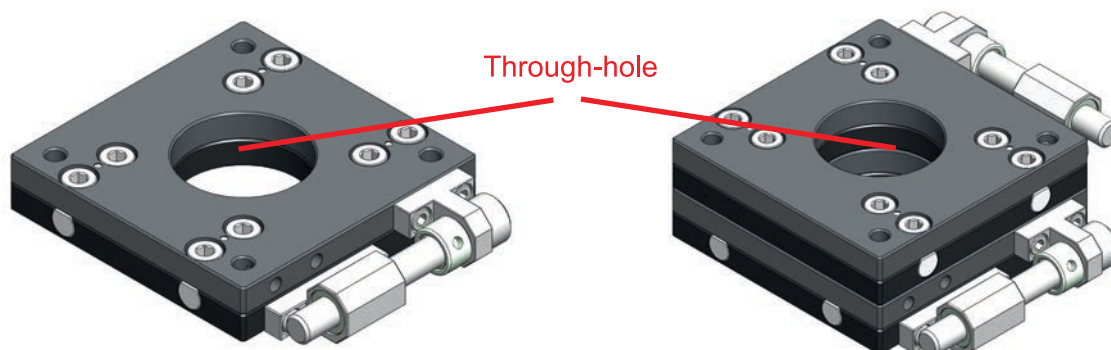
Please find a video of Fix Stage at [www.chuo.co.jp](http://www.chuo.co.jp)  
You can find it also on YouTube. Please search "CHUOSEIKI"



# Please contact us if you need a specialized solution.

## Example of customized design (4)

Through-hole in the stage



Please provide size of through-hole required.

## Example of customized design (5)

Cylindrical shape feed screw (with scale)



Feed screw with same advantage as Fix Stage (with scale).

## Example of customized design (6)

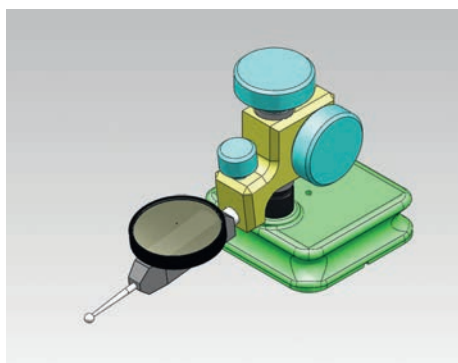
Cylindrical shape feed screw



Feed screw with same advantage as Fix Stage.

## Example of customized design (7)

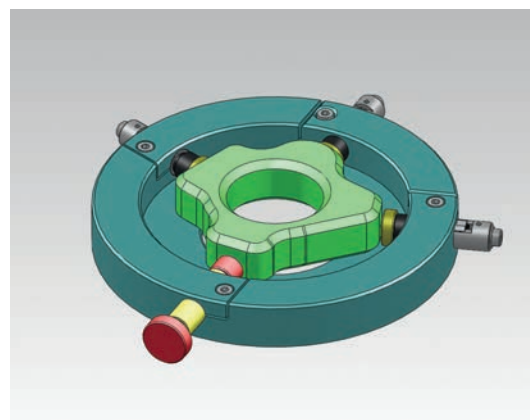
Precision fine adjustment tool for dial indicator height



Height of a dial indicator can be fine-adjusted precisely and stably.

## Example of customized design (8)

Centering holder



Specialized holder for centering of through hole.

We provide customized fix stage upon request.

Example of customized design (1)

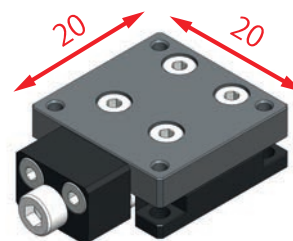
Special screw head



Special screw head can only be moved by authorized operator.

Example of customized design (2)

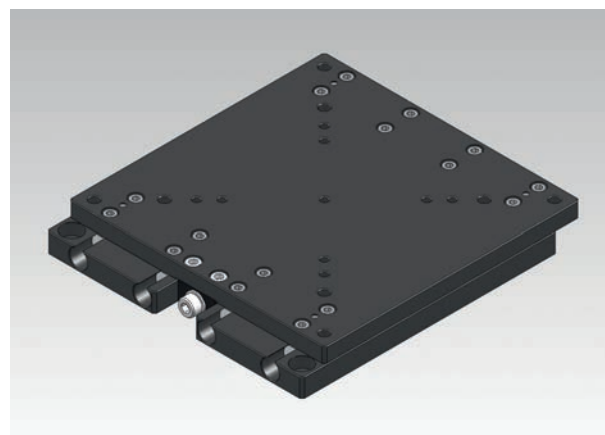
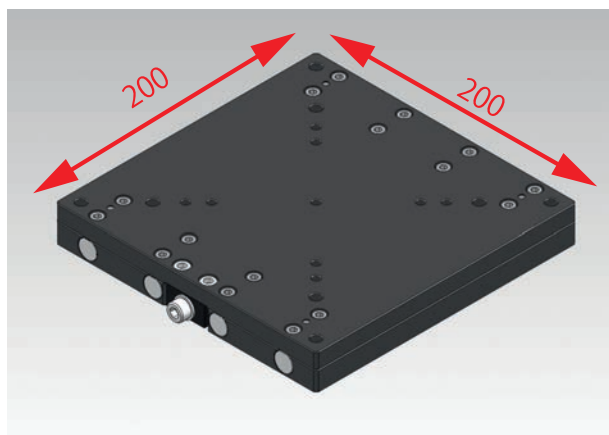
Smaller size (20×20)



Suitable for narrow spaces.

Example of customs design (3)

Larger size (200×200)



Good for bigger or heavier work.

**Japan:**

 **中央精機株式会社**

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