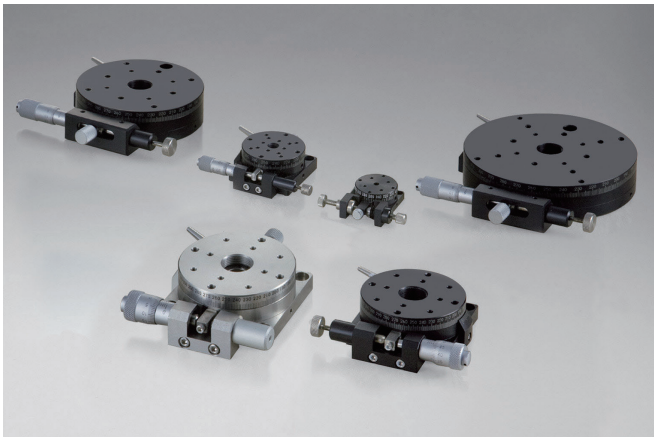
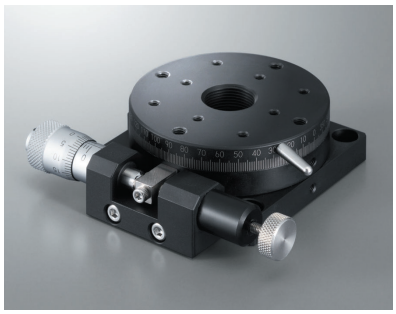
# Manual Rotary Stage Guidance



Can be positioned a sample rotation from coarse to fine adjustment.
Available angle scales on the side for repeatility positioning.
(Square type excluded.)

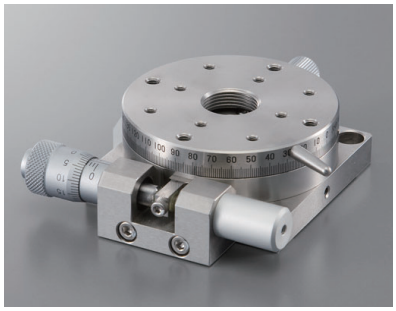
## Features



### Fitting type B43 P.2-171～

Fitting stage allows coarse 360 degree rotation and fine-control (micrometer head).
Can be widely used for R&D and integration in devices.

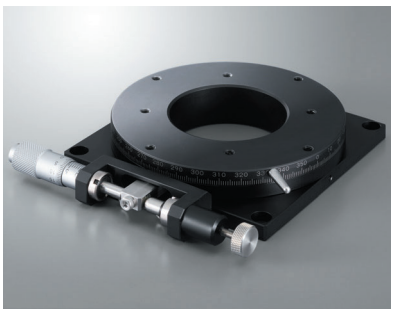
| Stage size | ϕ24mm | ϕ38mm | ϕ60mm | ϕ85mm | ϕ110mm |
|---|---|---|---|---|---|



### Cross roller bearing type B44/BS43 P.2-173～

Stages that use crossed roller bearing allows coarse 360 degree rotation and fine-control(micrometer head).
The rigidity is higher than a fitting type.
Selectable stages made of aluminum or stainless steel.

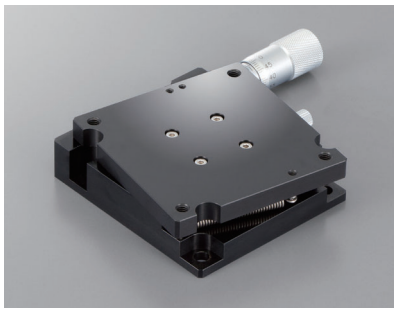
| Stage size | ϕ60mm |
|---|---|



### Transmission hole type B47 P.2-173

Stage that use crossed roller bearing allows coarse 360 degree rotation and fine-control (micrometer head). There is a transmission hole in the center of the stage for passing laser beam and organization of the wires.

| Stage size | ϕ100mm |
|---|---|



### Square type BRE P.2-169～

A square rotary stage that can be readity conbined with a square linear stage and goniometer.

| Stage size | 40×40mm | 60×60mm |
|---|---|---|

## For use correctly

### ▽How to mount

●Plate type……Fix by supplied screw to the 4 places hole on the lower plate.

●Non-plate type…… Move the bolt hole on the top surface roughly to align it with bolt holes on the lower surface of the stage.

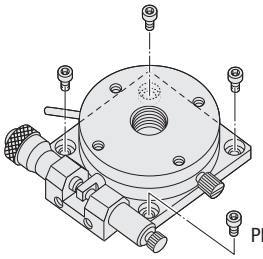
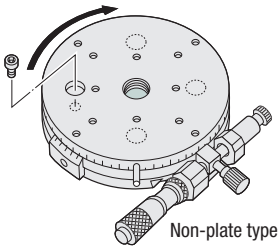


Plate type

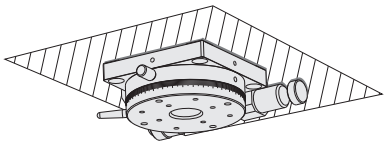

Non-plate type

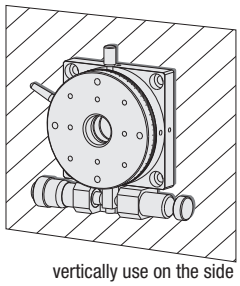
### ▽About object on the upper or lower stage.

Stage surface might be deformed and mounting unflat object and set to the unflat place can affect to be deformed stage surface and decreasing accuracy.

### ▽Position of stage mounting

All products SPEC shows must be shown flat setting condition.
Pay attention to mount such as up side down, vertical on the side and horizontal on the side.
Load capacity and accuracy might be changed by the posioning.
Please feel free to ask us for more information.


Ceiling-hung, mounted


vertically use on the side

・Posture characteristic list for each products

| Travel guide | Inverted and reversed | Side horizontal | vertically use on the side |
|---|---|---|---|
| Fitting | △ | △ | △ |
| Cross roller | ○ | △ | △ |
| Ball bearing | × | × | × |

○:Available under limit of load or moment
△:Accuracy might be decreased under limit of load or moment
×:Not available

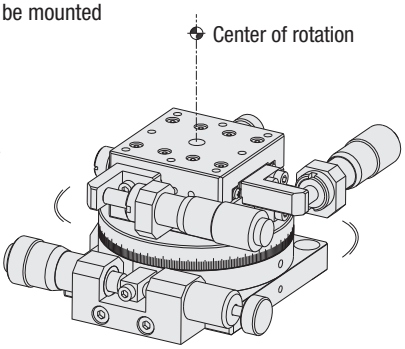
## How to align rotating center axis

The stage deliver their inherent performance by aligning the center axis of another device or work to be mounted as much as possible.

We recommend that you align the center axis using the method shown below.

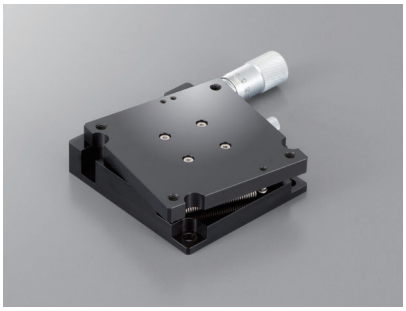
- Determine the position in which the center deviation becomes the smallest using the dial gauge by rotating the rotary stage.
- Fix the stage or work. The center of axis can be fine-adjusted easily by combining XY stages.

※No mounting reference surface on stage main body.



# Rotary Stage BRE Series □40□60: BRE04020/BRE06020

BRE04020



BRE06020

RoHS

1 Model

**BRE04020**

1 2

1 Stage table size

| | |
|---|---|
| 04 | 40mm |
| 06 | 60mm |

2 Travel distance

| | |
|---|---|
| 020 | 20° |

| SPEC | | |
|---|---|---|
| Model | BRE04020 | BRE06020 |
| Stage table size | 40×40mm | 60×60mm |
| Travel distance | ±10° | ±10° |
| Minimum reading of micrometer | ≒1′51″ | ≒1′12″ |
| Travel guide | Fitting method | Fitting method |
| Load capacity | 1kgf [9.8N] | 3kgf [29.4N] |
| Parallelism | 50μm | 50μm |
| Weight | 0.14kg | 0.26kg |
| Main material—Surface finishing | Aluminum–Black alumite processing | Aluminum–Black alumite processing |
| Provided screws (Hex socket screws) | 3 of M3—6 | 3 of M4—8 |

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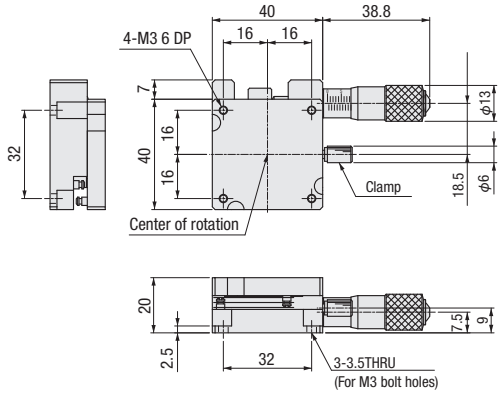
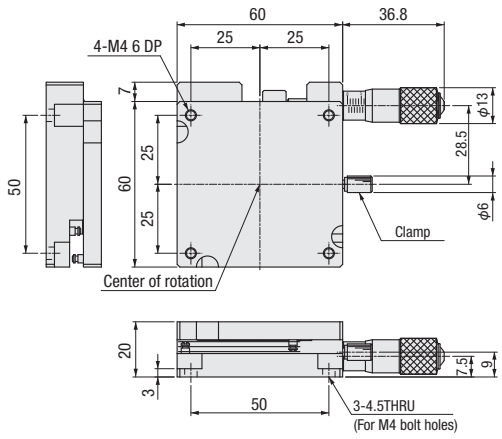
Dimensional outline drawings

## BRE04020



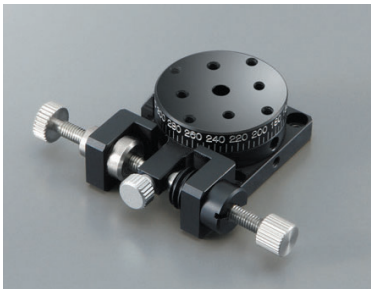

## BRE06020



# Rotary Stage (Fitting Type) ϕ24～110: B43 Series

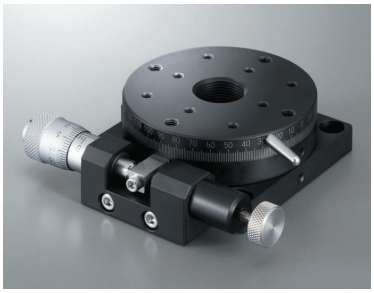


B43-25



B43-38N

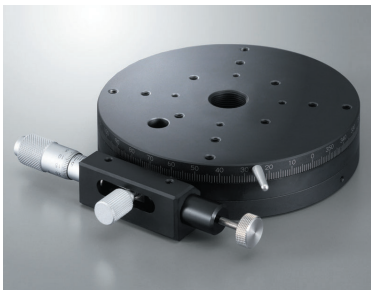
B43-60N



RoHS

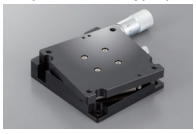
B43-85N

B43-110N



■Cross roller bearing stage that is available a rough motion 360 deg. rotation and micromotion (micrometer head).
Low price.
Ideal for use in R&D, integrating device and much more.

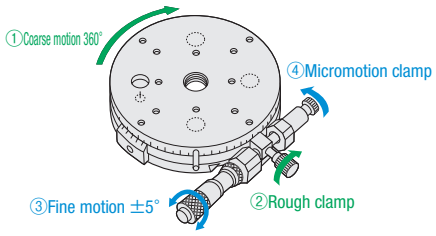
• Square rotation type (BRE series)



P.2-169～

How to use a rotary stage

Micromotion positioning after rough positioning
①A rough adjustment to the target angle with feeding knob
②Squeeze a rough clamp and fix.
③A micromotion adjustment to the target angle with micrometer.
④Squeeze a micromotion clamp and fix.




| SPEC | | | | | |
|---|---|---|---|---|---|
| Model | B43-25 | B43-38N | B43-60N | B43-85N | B43-110N |
| (Opposite hand) | B43-25R | B43-38NR | B43-60NR | B43-85NR | B43-110NR |
| Stage table size | ϕ24mm | ϕ38mm | ϕ60mm | ϕ85mm | ϕ110mm |
| Travel distance | Coarse motion 360° Fine motion ±3° | Coarse motion 360° Fine motion ±5° | | | |
| Vernier minimum reading | Vernier scale 0.5° | Vernier scale0.2° | | Vernier scale0.1° | |
| Minimum reading capability | ≒1.50°/Rotation | ≒1′26″/Scale | ≒55″/Scale | ≒43″/Scale | ≒34″/Scale |
| Guide | Fitting method | | | | |
| Load capacity | 1.0kgf [9.8N] | | 3.0kgf [29.4N] | 4.0kgf [39.2N] | 5.0kgf [49.0N] |
| Allowable load for moment | 0.12N・m | 0.3N・m | 0.7N・m | 1.2N・m | 1.5N・m |
| Moment rigidity | 8.11″/N・cm | 3.56″/N・cm | 0.41″/N・cm | 0.22″/N・cm | 0.17″/N・cm |
| Parallelism | 50μm | 20μm | | | |
| Eccentricity amount | 50μm | 50μm | | | |
| Runout amount | 20μm | 20μm | | | |
| Weight | 0.03kg | 0.09kg | 0.28kg | 0.48kg | 0.75kg |
| Main material—Surface finishing | Aluminum–Black alumite processing | | | | |
| Provided screws (Hex socket screws) | 4 of M2—6 | 4 of M3—8 | 4 of M4—10 | 4 of M4—8 | 4 of M4—8 |

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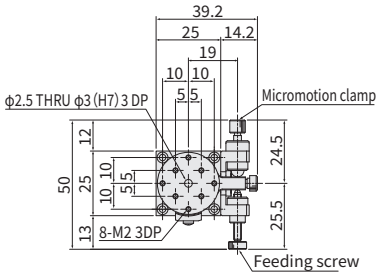
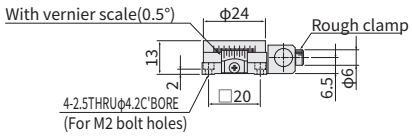
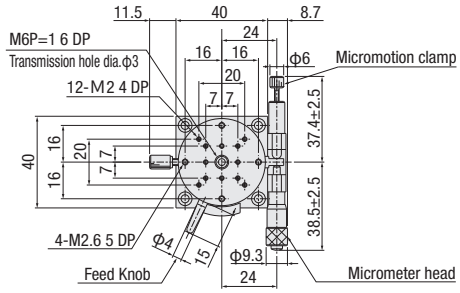
Dimensional outline drawings

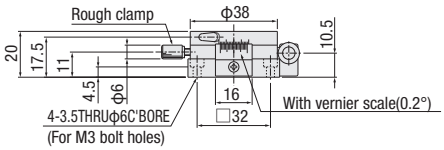
## B43-25



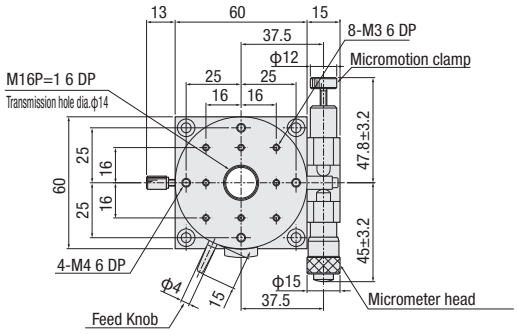



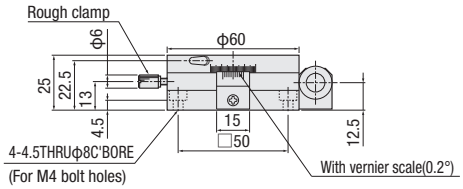

## B43-38N



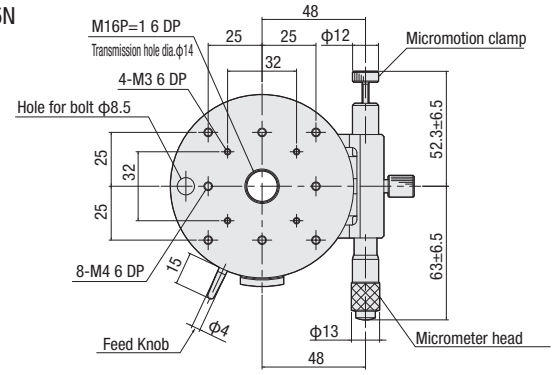



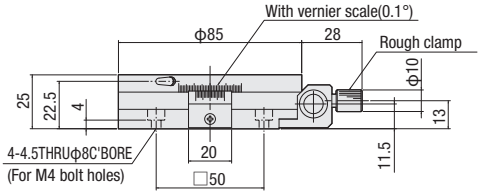

## B43-60N



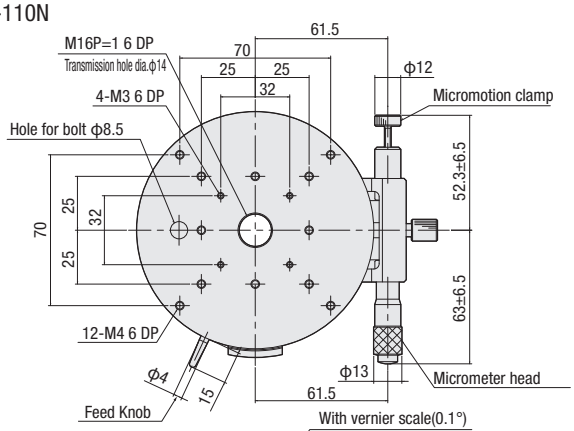



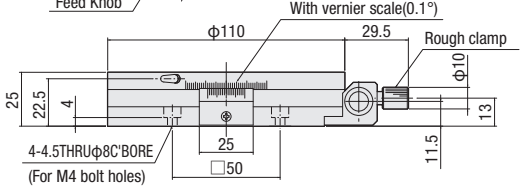

## B43-85N




## B43-110N

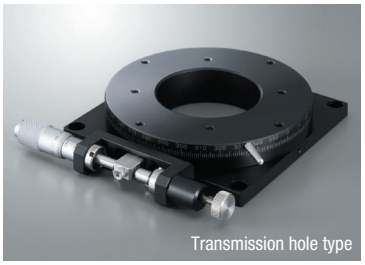


# Rotary Stage (Cross Roller Bearing Type) ϕ85•100: B44/B47 Series

B44-85N

B47-100AN




■Available coarse motion 360degree and fine motion(micrometer head).
Rigidity is better than fitting type.

RoHS

• Transmission hole XY-axis cross roller guide
B27 series P.2-077～

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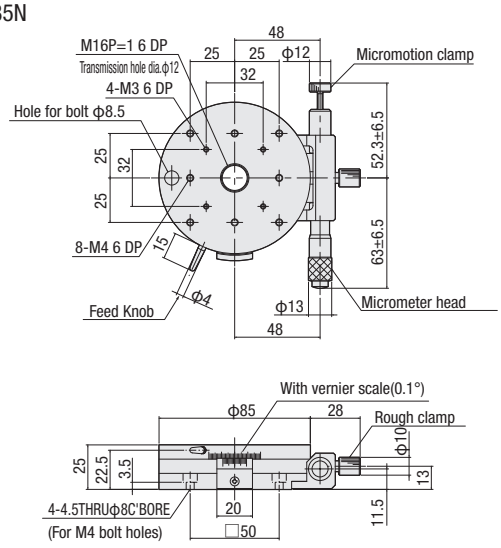
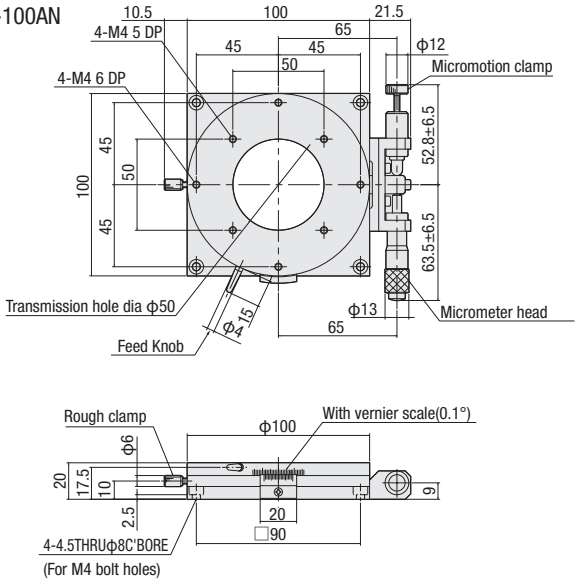
Dimensional outline drawings

B44-85N

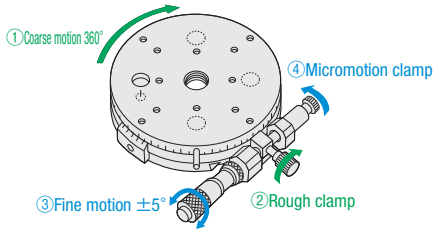



B47-100AN




How to use a rotary stage

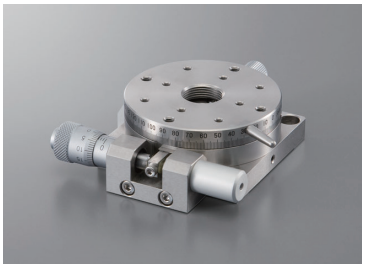
Micromotion positioning after rough positioning
①A rough adjustment to the target angle with feeding knob
②Squeeze a rough clamp and fix.
③A micromotion adjustment to the target angle with micrometer.
④Squeeze a micromotion clamp and fix.




| SPEC | | |
|---|---|---|
| Model | B44-85N | B47-100AN |
| (Opposite hand) | B44-85NR | B47-100ANR |
| Stage table size | ϕ85mm | ϕ100mm |
| Travel distance | Coarse motion 360° Fine motion ±5° | |
| Vernier minimum reading | Vernier scale0.1° | |
| Minimum reading of micrometer | ≒43″/Scale | ≒32″/Scale |
| Guide | Cross roller bearing | |
| Load capacity | 6.0kgf [58.8N] | |
| Allowable load for moment | 5.0N・m | |
| Moment rigidity | 0.36″/N・cm | 0.13″/N・cm |
| Parallelism | 50μm | |
| Eccentricity amount | 50μm | |
| Runout amount | 20μm | |
| Weight | 0.43kg | 0.45kg |
| Main material—Surface finishing | Aluminum–Black alumite processing | |
| Provided screws (Hex socket screws) | 4 of M4—8 | 4 of M4—6 |

# Rotary Stage (Cross Roller Bearing Type (Stainless Type)) ϕ60: BS43 Series

BS43-60



RoHS

■Available coarse motion 360degree and fine motion(micrometer head).
High rigidity of materials because of stainless made.

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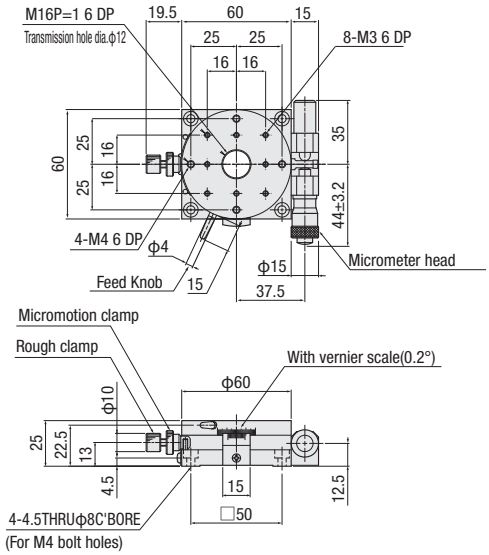
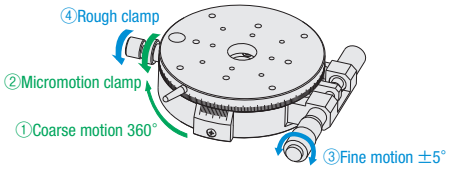
## BS43-60




How to use a rotary stage

Micromotion positioning after rough positioning
①A rough adjustment to the target angle with feeding knob
②Squeeze a rough clamp and fix.
③A micromotion adjustment to the target angle with micrometer.
④Squeeze a micromotion clamp and fix.




| SPEC | |
|---|---|
| Model | BS43-60 |
| (Opposite hand) | BS43-60R |
| Stage table size | ϕ60mm |
| Travel distance | Coarse motion 360° Fine motion ±5° |
| Vernier minimum reading | Vernier scale0.2° |
| Minimum reading of micrometer | ≒55″/Scale |
| Guide | Cross roller bearing |
| Load capacity | 5.0kgf [49.0N] |
| Allowable load for moment | 5.0N・m |
| Moment rigidity | 0.15″/N・cm |
| Parallelism | 50μm |
| Eccentricity amount | 50μm |
| Runout amount | 20μm |
| Weight | 0.58kg |
| Main material—Surface finishing | Stainless |
| Provided screws (Hex socket screws) | 4 of M4—8 |