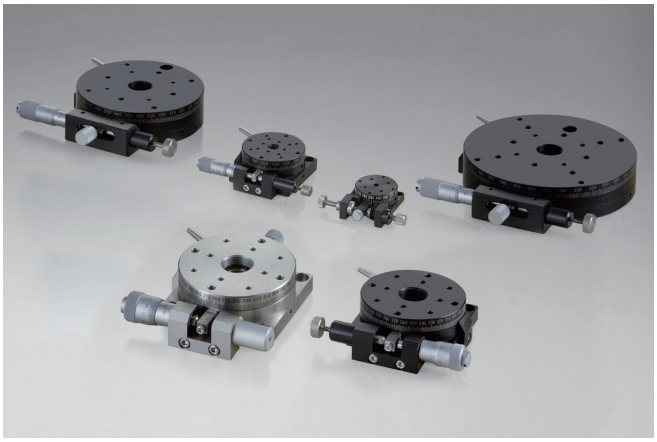
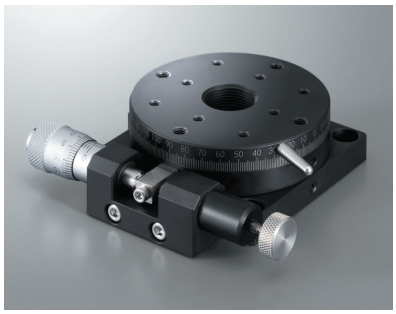
Manual Rotary Stage Guidance



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

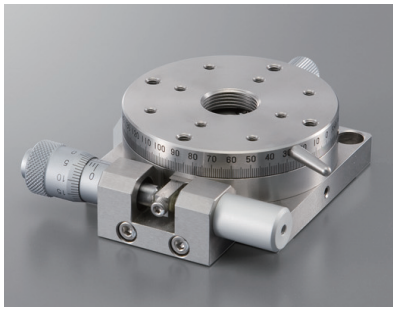
Features



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.

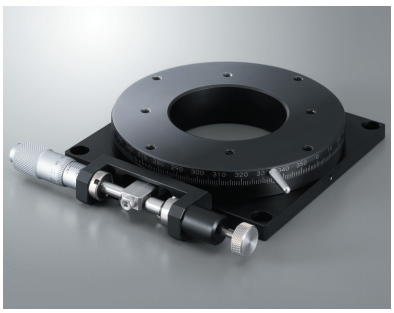
Stage size	ϕ24mm	ϕ38mm	ϕ60mm	ϕ85mm	ϕ110mm



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.

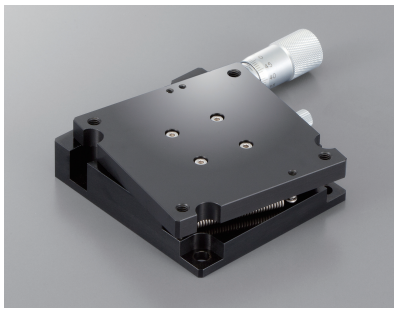
Stage size	ϕ60mm



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.

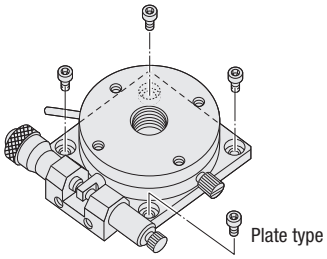
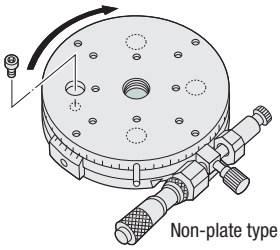


Plate type

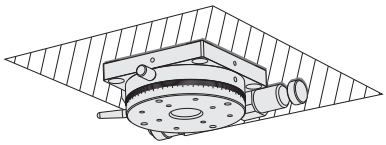

Non-plate type

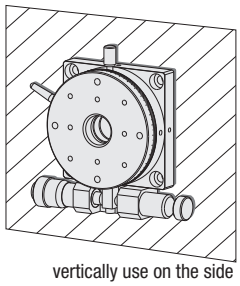
▽About object on the upper or lower stage.

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

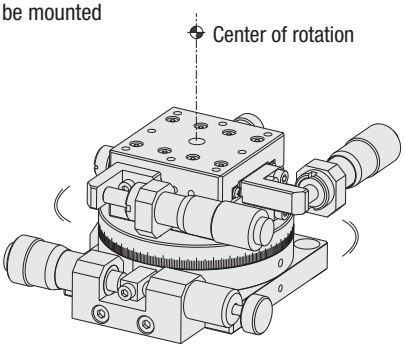
The stage deliver their inherent performance by aligning the center axis of another device or work to be mounted as much as possible.

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.

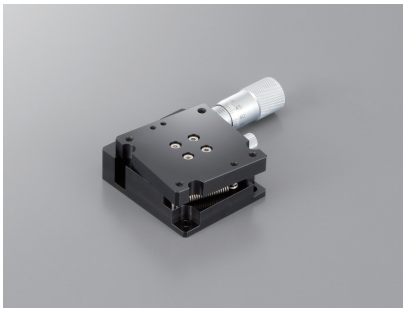
・Fix the stage or work. The center of axis can be fine-adjusted easily by combining XY stages.

※No mounting reference surface on stage main body.

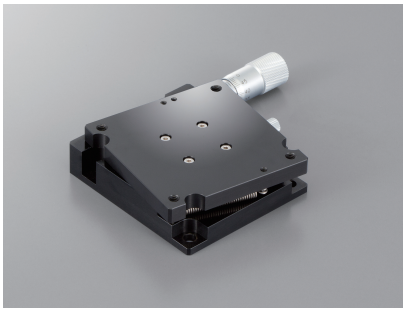


Rotary Stage BRE Series □40□60: BRE04020/BRE06020

RoHS



BRE04020



BRE06020

1 Model

BRE04020

1 2

1 Stage table size

04	40mm
06	60mm

2 Travel distance

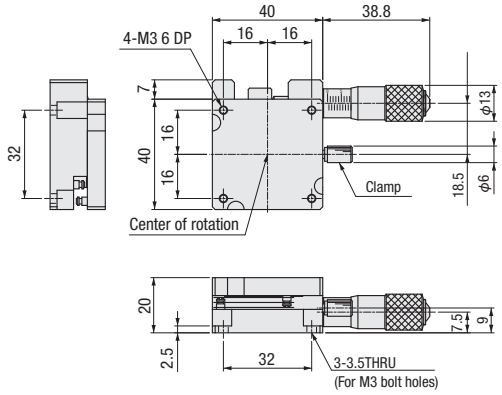
020	20°

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

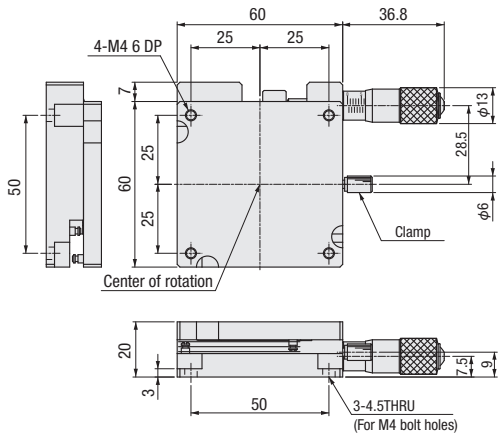
SURUGA SEIKI CAD 3D・2D

Dimensional outline drawings

BRE04020



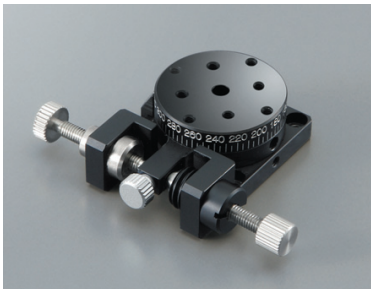
BRE06020



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

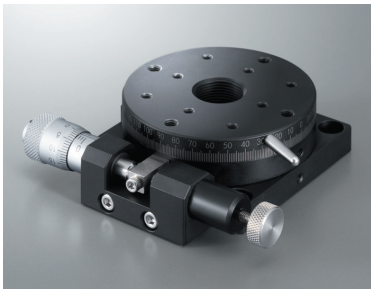
RoHS

B43-25



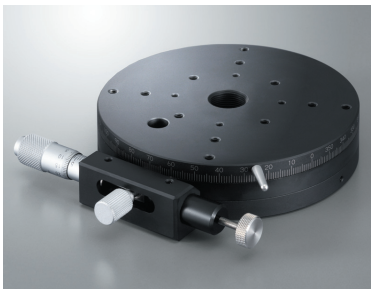
B43-38N

B43-60N



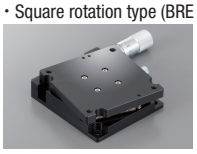
B43-85N

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.

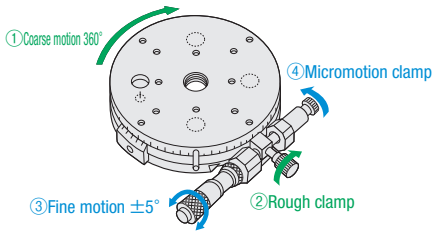
・Square rotation type (BRE series)



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.

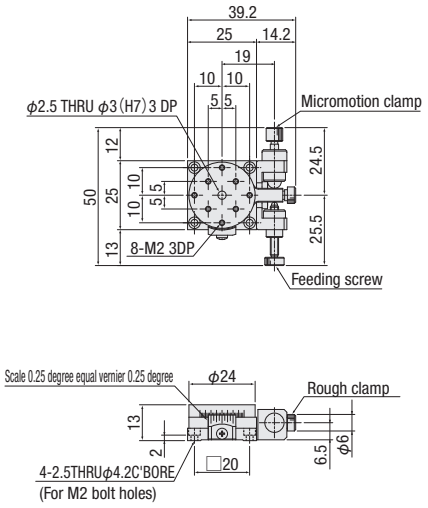


SPEC					
Model	**B43-25**	**B43-38N**	**B43-60N**	**B43-85N**	**B43-110N**
(Opposite hand)	**B43-25R**	**B43-38NR**	**B43-60NR**	**B43-85NR**	**B43-110NR**
Stage table size	ϕ24mm	ϕ38mm	ϕ60mm	ϕ85mm	ϕ110mm
Travel distance	Coarse motion 360° Fine motion ±3°	Coarse motion 360° Fine motion ±5°			
Vernier minimum reading	Vernier scale0.25°	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

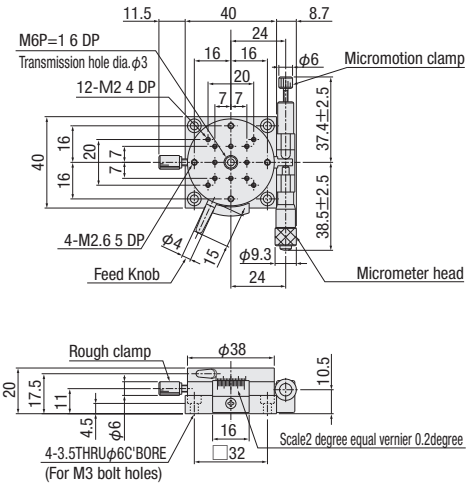
SURUGA SEIKI CAD 3D・2D

Dimensional outline drawings

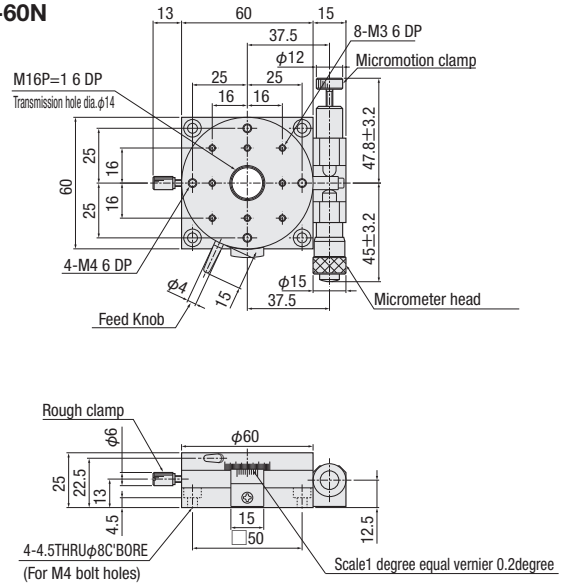
B43-25



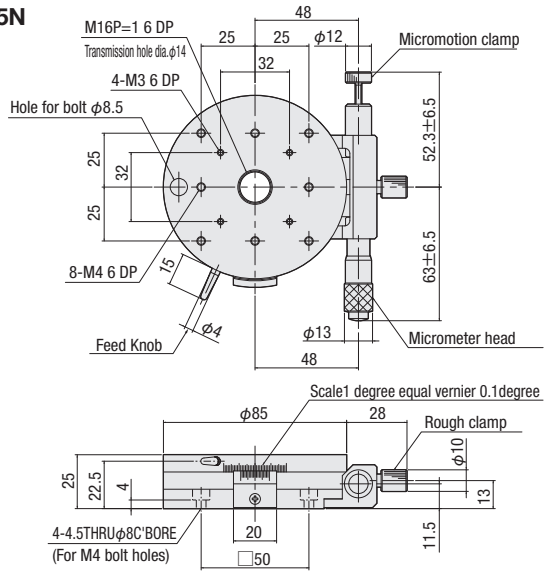
B43-38N



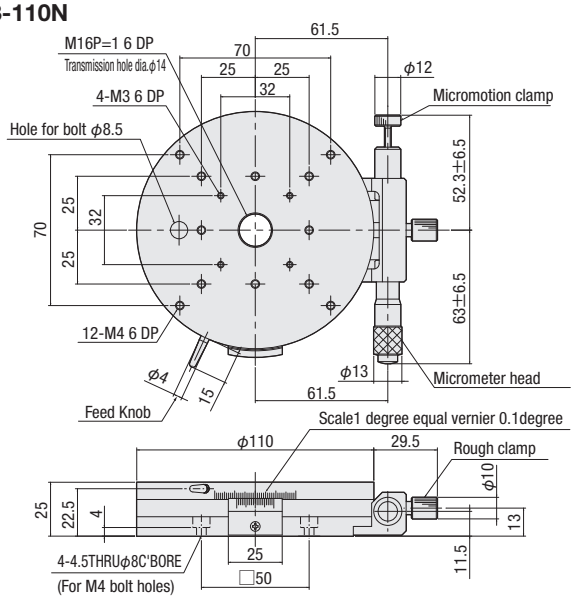
B43-60N



B43-85N

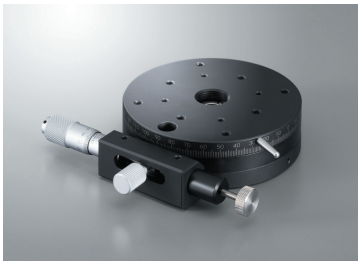


B43-110N



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.**

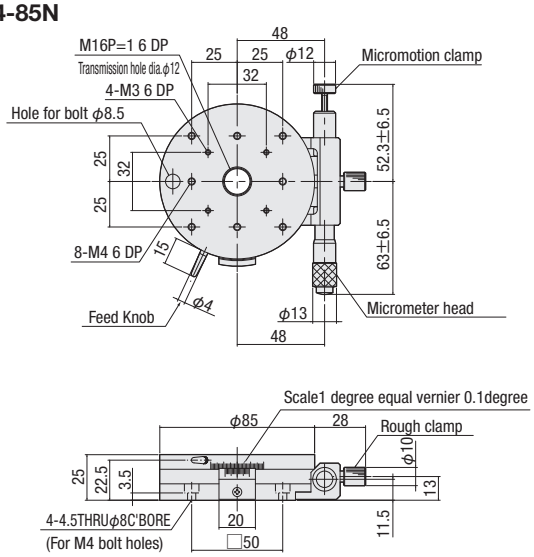
RoHS

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

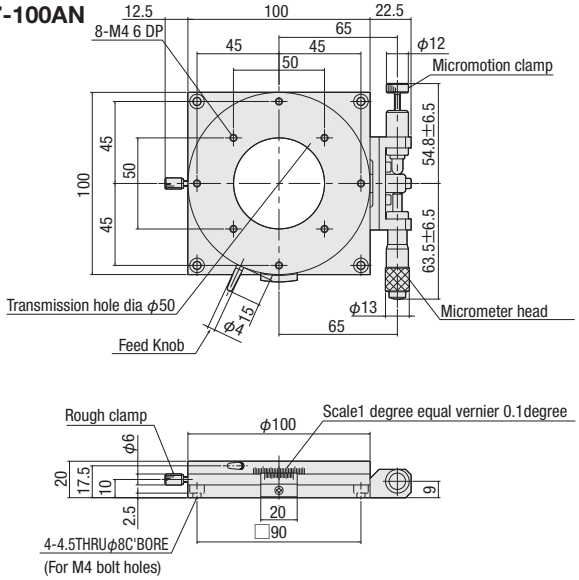
SURUGA SEIKI CAD 3D・2D

Dimensional outline drawings

B44-85N



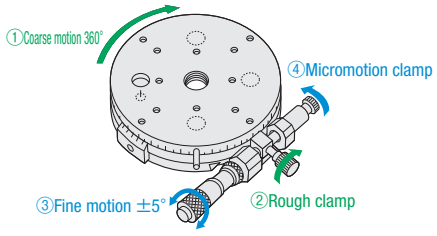
B47-100AN



How to use a rotary stage

Micromotion positioning after rough positioning

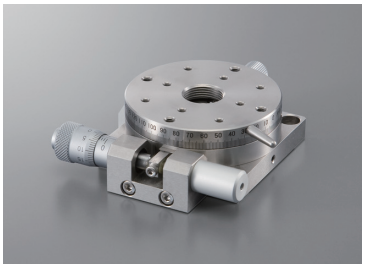
①A rough adjustment to the target angle with feeding knob
②Squeeze a rough clamp and fix.
③A micromotion adjustment to the target angle with micrometer.
④Squeeze a micromotion clamp and fix.



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

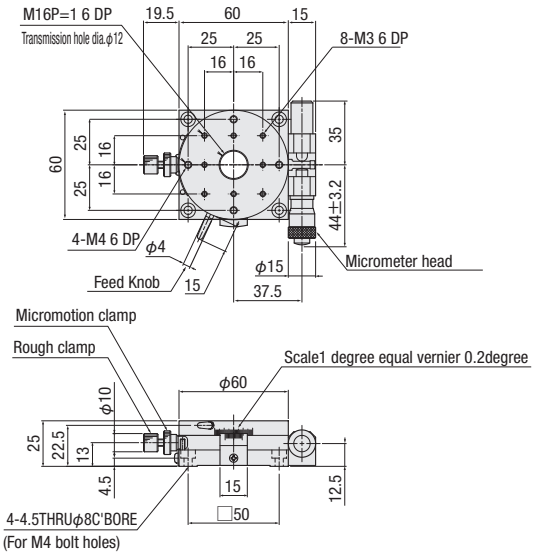


RoHS

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

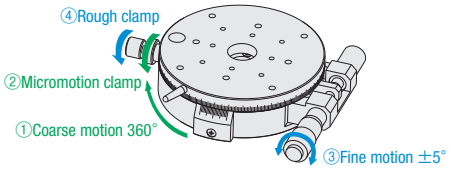
SURUGA SEIKI CAD 3D·2D

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