

## Manual Goniometer Stage Guidance



There are circular arc drive stages with a center of rotation on the center perpendicular of the table surface. These stages are ideal for angle adjustment and postural alignment. We provide a wide range of advanced stages for jigs, production equipment and devices.

### ■Application

- Devices for assembling, adjusting optical pickups and camera angles.
- Sensor tilt adjustment etc.

## Features



### Dovetail goniometer stage B54/B55 ▶ P.2-137~

A dovetail goniometer stage which is applied a dovetail method for travel guide and worm gear for feeding mechanism.

Can be used for R&D, installation in devices and jigs.

Stage size	25×25mm	30×30mm	40×40mm	50×50mm	60×60mm	80×80mm
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### Crossed roller goniometer stage Worm type B56/B57 ▶ P.2-149~

A high accuracy goniometer stage which is applied a crossed roller guide for travel guide and worm gear for feeding mechanism.

Good operation feeling. It is ideal for repeating drive frequency.

Stage size	50×50mm	60×60mm	70×70mm
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### Crossed roller goniometer stage Micro meter

A high resolution and high accuracy goniometer stage which is applied a crossed roller guide for travel guide and micrometer for feeding mechanism.

#### ■Center pushing type B58-A ▶ P.2-155~

Can save space around the stage.

Stage size	50×50mm	60×60mm	70×70mm
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#### ■Side pushing type B58-C ▶ P.2-159~

Ideal for use in applications where space is limited.

Stage size	40×40mm	50×50mm	60×60mm	70×70mm
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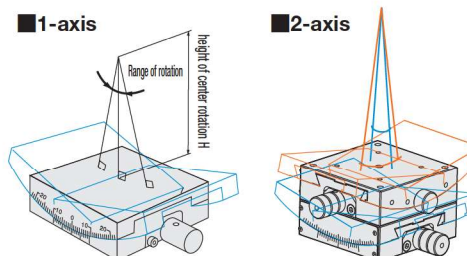
## Center of rotation precision • Center of rotation height

### ▽Center of rotation precision

Put a perfect circle ball to the center of rotation (on the actual center of rotation) height, and we recognized center of rotation tilt accuracy that amount of a perfect circle ball tilt (X.Y.Z) that occurs at the full-stroke.

### ▽Heights of the center of rotation (Work-distance)

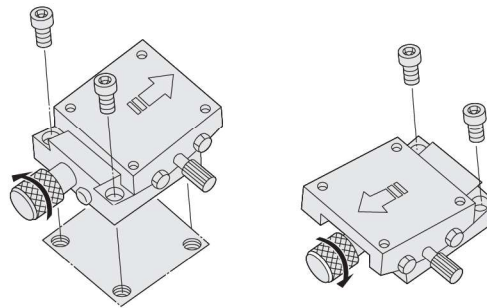
The center of rotation height becomes the height from the stage top surface to the perfect circle ball center.



## For use correctly

### ▽How to mount

By rotating feeding screw in clockwise, you can find two bolt holes. You will find two more bolt holes by rotating it in counter clockwise. Use these holes to fix a stage with accessory screws.



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

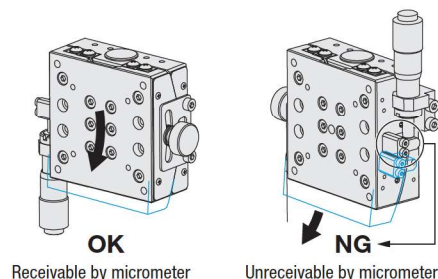
Stage surface might be deformed and mounting unflat object and set to the unflat place can affect to be deformed stage surface and decreasing accuracy.

[Flatness guideline: within 10μm]

### ▽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 positioning.

Please feel free to ask us for more information.



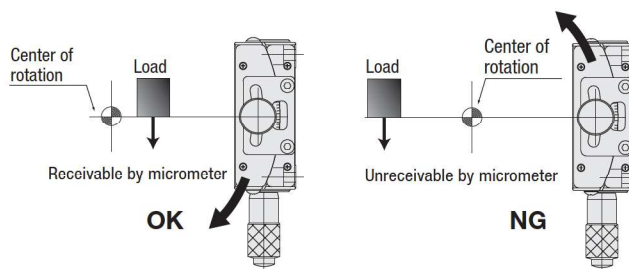
### ▼Posture characteristic list for each products

Travel guide [Feeding Type]	Inverted and reversed	Side horizontal	vertically use on the side
Dovetail [Worm gear]	○	○	○
Cross roller [Worm gear]	○	○	○
Cross roller [Micrometer]	○	○	△

○: Available under limit of load or moment

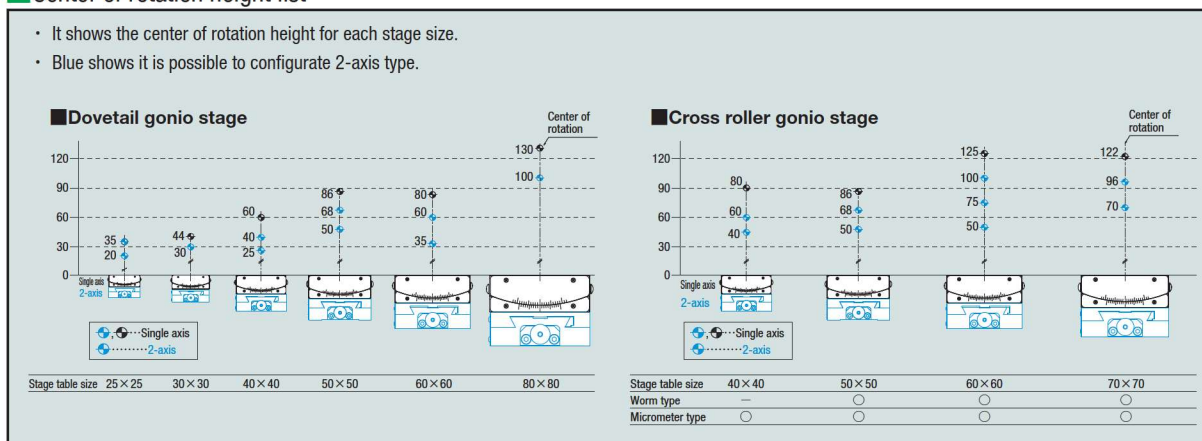
△: Accuracy might be decreased under limit of load or moment

In case of vertically use on the side, it might be not able to use due to load position.



## Center of rotation height list

- It shows the center of rotation height for each stage size.
- Blue shows it is possible to configure 2-axis type.



## Dovetail Goniometer Stage □25: B54/B55-25 Series

Manual goniometer stage

X

XY

Z

Horizontal  
Z

XZ

Horizontal  
XZ

XYZ

Horizontal  
XYZ

Goniometer

Rotary

Unit

Accessories

Dovetail

Cross  
Roller

### 1-axis

B54-25 series B54-25LN



B54-25R series B54-25LNR



RoHS

### 2-axis

B55-25N



B55-25NR



■ High cost performance gonio stage which dovetail system is adapted for a travel guide, and worm gear system is adapted for feeding mechanism.  
Ideal for use in R&D, integrating device and much more.

### Other 25×25mm stage

• Linear-motion stage



X-axis SS stage  
BSS16-25 series  
P.2-017~

• Rotation stage



B43-25 series  
P.2-171~

• Horizontal Z-axis stage



B33-25A  
P.2-082~

□25

□30

□40

□50

□60

□70

□80

□100

□120

Other

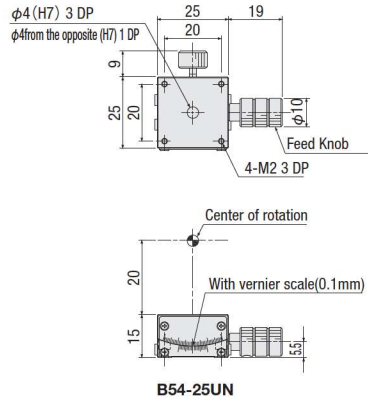
2  
137

SPEC			
Axis	1-axis		2-axis
Model	B54-25UN	B54-25LN	B55-25N
(Opposite hand)	B54-25UNR	B54-25LNR	B55-25NR
Stage table size	25×25mm		
Heights of the center of rotation	20mm	35mm	20mm
Travel distance	±15°	±10°	(Up) ±15° (Down) ±10°
Vernier minimum reading	Vernier scale 0.1°		
Travel per Knob	≒2.0°		
Guide	Dovetail		
Load capacity	2.0kgf [19.6N]		
Allowable load for moment	Pitch	0.3N · m	
	Yaw	0.3N · m	
	Roll	0.3N · m	
Weight	0.07kg		0.14kg
Main material—Surface finishing	Brass—Black paint		
Provided screws (Hex socket screws)	4 of M2—6		

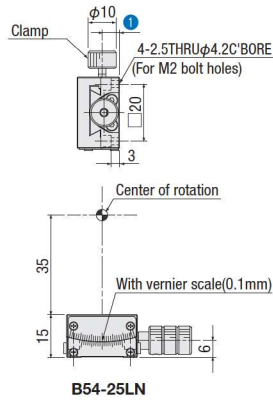


Dimensional outline drawings(1-axis)

**B54-25 series**



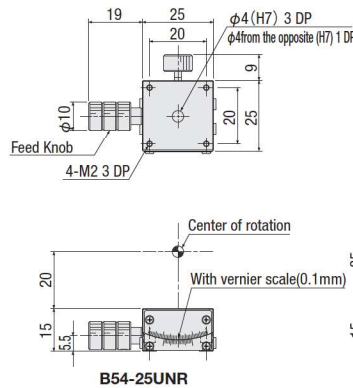
**B54-25UN**



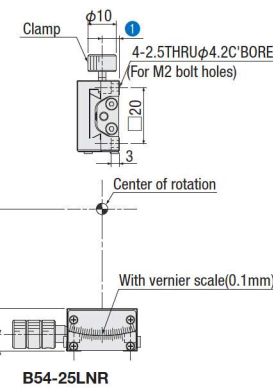
**B54-25LN**

Model	WD (mm)	① (mm)
<b>B54-25UN</b>	20	6.2
<b>B54-25LN</b>	35	7.7

**B54-25R series**



**B54-25UNR**

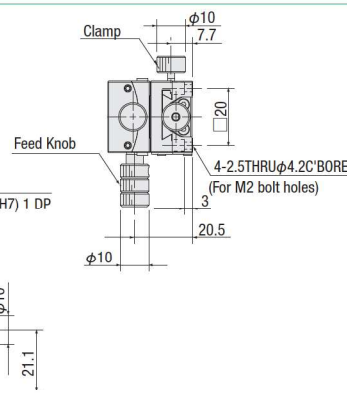
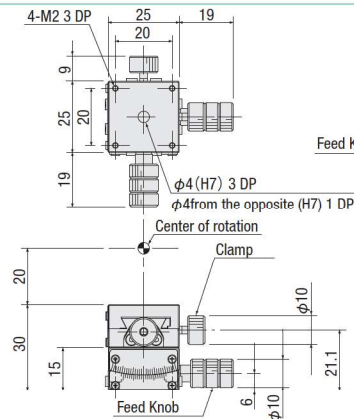


**B54-25LNR**

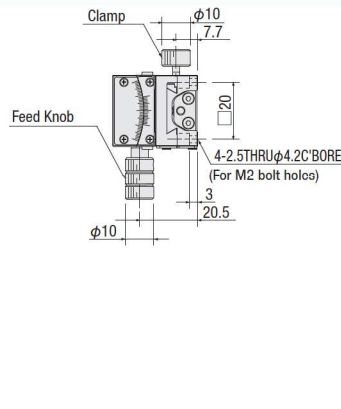
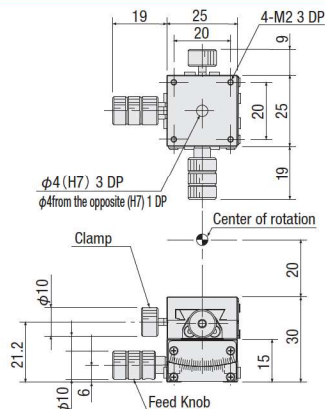
Model	WD (mm)	① (mm)
<b>B54-25UNR</b>	20	6.2
<b>B54-25LNR</b>	35	7.7

Dimensional outline drawings(2-axis)

**B55-25N**



**B55-25NR**



Manual goniometer stage

X

XY

Z

Horizontal  
Z

XZ

Horizontal  
XZ

XYZ

Horizontal  
XYZ

Goniometer

Rotary

Unit

Accessories

Dovetail

Cross  
Roller

25

30

40

50

60

70

80

100

120

Other

2

138

## Dovetail Goniometer Stage□30: B54/B55-30 Series

Manual goniometer stage

X

XY

Z

Horizontal  
Z

XZ

Horizontal  
XZ

XYZ

Horizontal  
XYZ

Goniometer

Rotary

Unit

Accessories

Dovetail

Cross  
Roller

### 1-axis

B54-30 series B54-30L



B54-30R series B54-30LR



RoHS

### 2-axis

B55-30U



B55-30UR



■ High cost performance gonio stage which dovetail system is adapted for a travel guide, and worm gear system is adapted for feeding mechanism. Ideal for use in R&D, integrating device and much more.

□25

□30

□40

□50

□60

□70

□80

□100

□120

Other

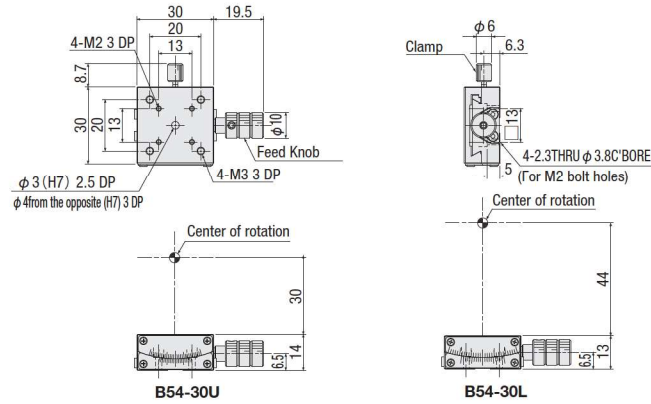
2

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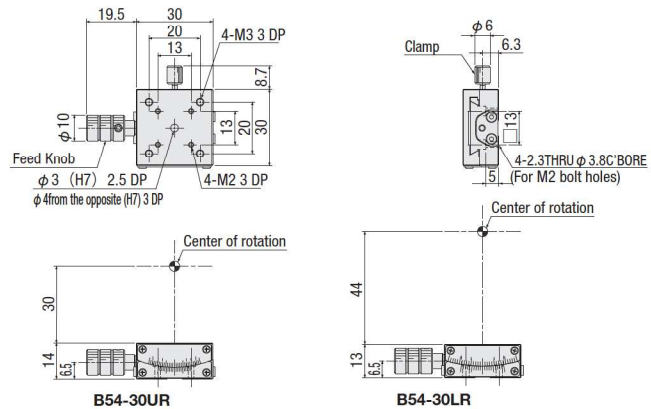
SPEC			
Axis	1-axis		2-axis
Model	B54-30U	B54-30L	B55-30U
(Opposite hand)	B54-30UR	B54-30LR	B55-30UR
Stage table size	30×30mm		
Heights of the center of rotation	30mm	44mm	30mm
Travel distance	±10°		
Vernier minimum reading	Vernier scale 0.1°		
Travel per Knob	≒2.06°	≒1.5°	(Up) ≒2.06° (Down) ≒1.5°
Guide	Dovetail		
Load capacity	1.0kgf [9.8N]		
Allowable load for moment	Pitch	0.5N · m	
	Yaw	0.5N · m	
	Roll	0.5N · m	
Weight	0.10kg		0.20kg
Main material—Surface finishing	Brass—Black coating finish		
Provided screws (Hex socket screws)	4 of M2—8		

Dimensional outline drawings(1-axis)

**B54-30 series**

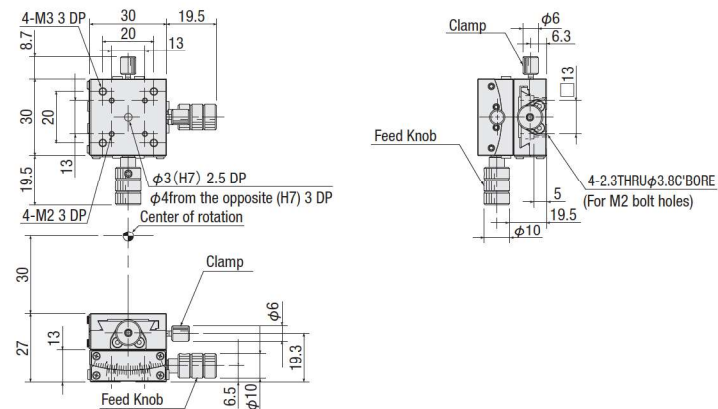


**B54-30R series**

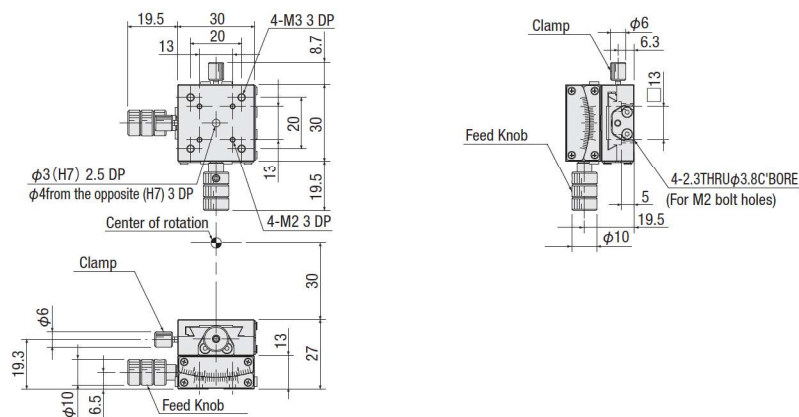


Dimensional outline drawings(2-axis)

**B55-30U**



**B55-30UR**



Manual goniometer stage

X

XY

Z

Horizontal  
Z

XZ

Horizontal  
XZ

XYZ

Horizontal  
XYZ

Goniometer

Rotary

Unit

Accessories

Dovetail

Cross  
Roller

☐ 25

☒ 30

☐ 40

☐ 50

☐ 60

☐ 70

☐ 80

☐ 100

☐ 120

Other

2

140