

# Technical Information (2)

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# [Standard] Dovetail Slide, Feed Screw

■ Other Information about Stages	
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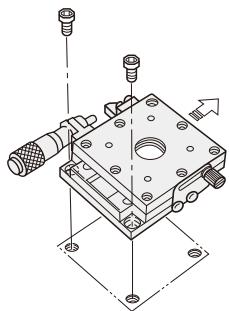
## ■ Stage Operating Environment

Operating Environment: 10~50°C, 20~70% RH (No Condensation)  
Recommended Operating Environment: 22±5°C, 20~70%RH (No Condensation)

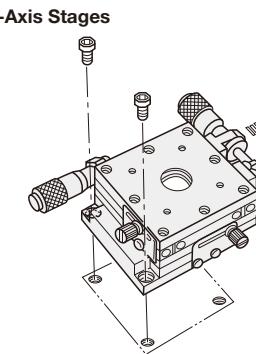
## ■ Stage Installation Method

To mount a stage on the base surface, move the top plate to access mounting holes as shown below.

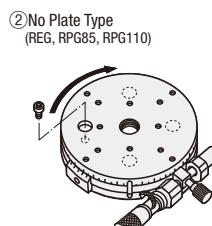
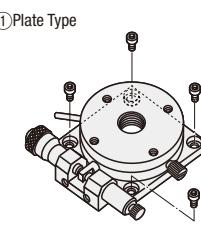
### X-Axis Stages



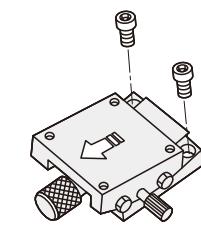
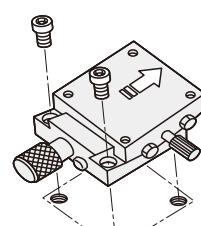
### XY-Axis Stages



### Rotary Stages



### Goniometer Stages



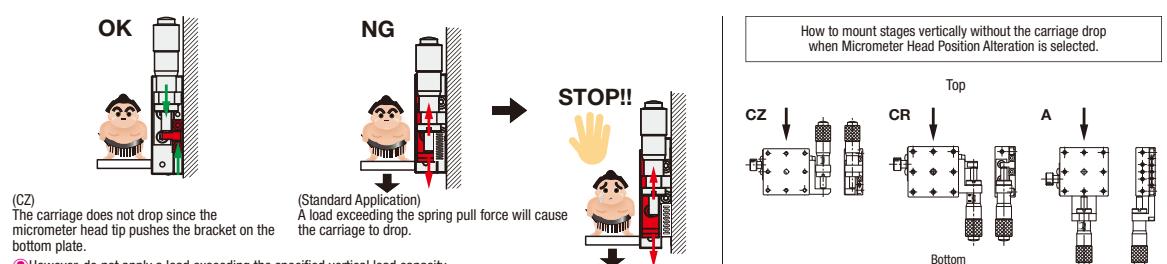
## ■ Notes on Mounting Surface Accuracies

Intended product performances may not be achieved if the stage mounting surface or the carried object's mounting surface do not have sufficient flatness.  
(General Flatness Guideline: 10µm or better)

## ■ Vertical Use of X-Axis Stages

When mounting a stage in vertical orientation, note the directions of the feed mechanisms and springs.

When installing Linear Ball Slide Stages and Cross Roller Stages, do not select the micrometer head position CR or A with the micrometer head pointing down since the carriage may drop. For the use of the micrometer head pointing down, select CZ to prevent the carriage from falling down.



## Standard Stages

### ■ About Holding Force (Ref.)

Holding Force is the (reference) value to hold the stage top surface rest when clamped.

### ■ Measured Holding Force

<Test Conditions> Clamp screws are tightened with the tightening torque below and pressed with the test instrument (F in the diagram).

The max. holding force is the load measured where the stage top surface starts to move.

- Tightening Torque (Standard) (a) XDTS (Standard, Dovetail Slide, Rack & Pinion) Size 50 and 60: 0.1N·m; Size 90: 0.15N·m  
(b) XDTSC (Standard, Dovetail Slide, Low Profile, Rack & Pinion) Size 50 and 60: 0.1N·m; Size 90: 0.15N·m  
(c) XCRS (Standard, Cross Roller): 0.15N·m

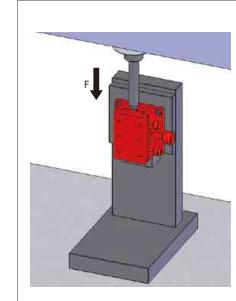
### <Max. Holding Force (Ref.)>

Type	Max. Holding Force (Ref.)
(a) XDTS	50 30N
	60 60N
	90 70N
(b) XDTSC	50 10N
	60 20N
	90 40N
(c) XCRS	40 60N
	60 60N
	80 70N

### <Max. Holding Force (Ref.) depending on Tightening Torque>

Type	Tightening Torque (Standard at 100%)
XDTS60	50N 60N 90N
XCRS60	40N 60N 100N

### <Testing Method>



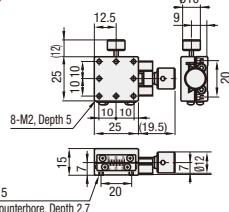
• Max. Holding Force (Ref.) will vary depending on the tightening torque variations. Ensure adequate safety margins for design.

## ■ Feature: Stages with 0.5mm fine lead. Existing Products: XEG, XYEG (P.1677, 1693)

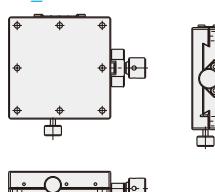
### X-Axis



### XFES25

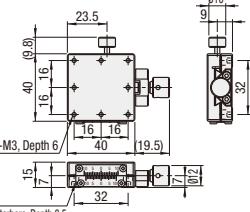


### XFES - R (Reversed)

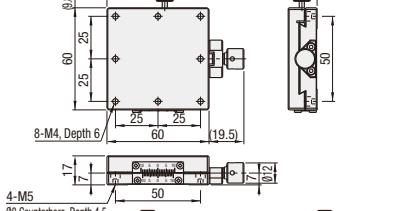


• See the CAD data for the details.

### XFES40



### XFES60



### X-Axis Stages (High Precision Stage Existing Product: XEG (P.1677))

Part Number	Type	No.	Clamp Position	Stage Surface (mm)	Travel Distance (mm)	Travel per Knob Rotation (mm)	Load Capacity (N) Horizontal	Load Capacity (N) Vertical	Travel Accuracy Straightness	Weight (kg)	Unit Price 1-9 pc(s).
XFES	25		Not Specified (Standard)	25x25	±5	0.5	29.4	9.8	50µm	0.04	
	40			40x40	±7		39.2	19.6		0.08	
	60			60x60	±8					0.18	

• Resolution (Vernier Scale Indication): 0.1mm/division

• Knob Extension Cover HDEXT12- (Sold Separately): Ø12 knobs can be extended by installing the cover. P.1683

(Caution) Please note that increased knob diameter may interfere with the stage mounting base surfaces.

Ordering Example: XFES40 Days to Ship

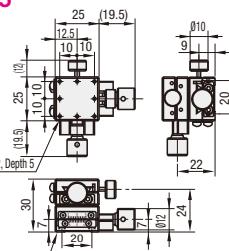
Configure Online

Price Configure Online

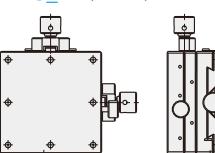
### XY-Axis



### XYFES25



### XYFES - R (Reversed)



### XY-Axis Stages (High Precision Stage Existing Product: XYEG (P.1693))

Part Number	Type	No.	Clamp Position	Stage Surface (mm)	Travel Distance (mm)	Travel per Knob Rotation (mm)	Load Capacity (N)	Travel Accuracy Straightness	Weight (kg)	Unit Price 1-9 pc(s).
XYFES	25		Not Specified (Standard)	25x25	±5	0.5	27.4	50µm	0.09	
	40			40x40	±7		33.3		0.16	
	60			60x60	±8				0.36	

• Resolution (Vernier Scale Indication): 0.1mm/division

• Knob Extension Cover HDEXT12- (Sold Separately): Ø12 knobs can be extended by installing the cover. P.1683

(Caution) Please note that increased knob diameter may interfere with the stage mounting base surfaces.

Ordering Example: XYFES40 Days to Ship

Configure Online

Price Configure Online