

# Technical Information

# [Simplified Adjustments] X-Axis, Feed Screw, Compact / Stroke Selectable

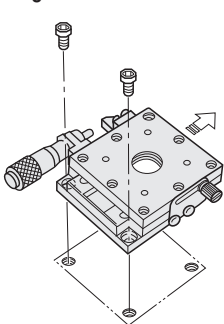
## Stage Operating Environment

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

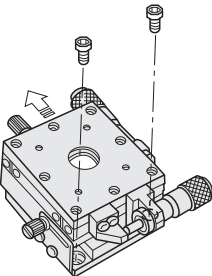
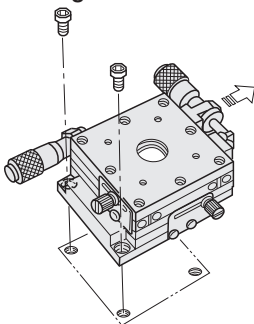
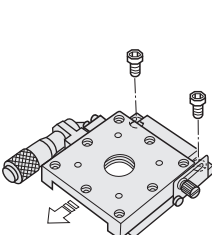
## Stage Installation Method

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

### X-Axis Stages

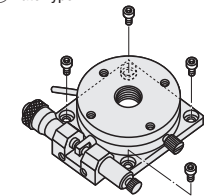


### XY-Axis Stages

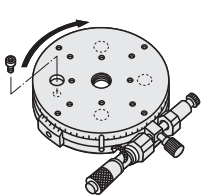


### Rotary Stages

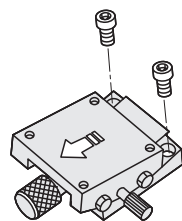
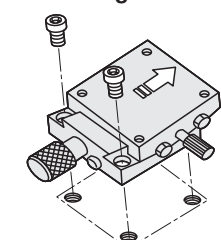
① Plate Type



② No Plate Type  
(REG, RPG85, RPG110)



### 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.

NG	OK
A load exceeding the spring pull force will cause the carriage to drop.	CZ: The carriage does not drop since the micrometer head tip pushes the bracket on the bottom plate. Standard, CR, A: The stage does not move down when the micrometer head is mounted pointing up.

However, do not apply a load exceeding the specified vertical load capacity.

## Standard Stages

### Holding Force

Holding Force (Reference) 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)
- ① XDTS (Standard, Dovetail Slide, Rack & Pinion) Size 50 and 60: 0.1N·m; Size 90: 0.15N·m
- ② XDTS (Standard, Dovetail Slide, Low Profile, Rack & Pinion) Size 50 and 60: 0.1N·m; Size 90: 0.15N·m
- ③ XCRS (Standard, Cross Roller) 0.15N·m

<Max. Holding Force (Ref.)>

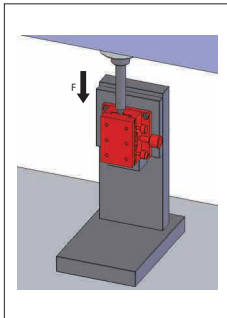
Type	Max. Holding Force (Ref.)
a) XDTS	50 30N
	60 60N
	90 70N
b) XDTS	50 10N
	60 20N
	90 40N
c) XCRS	40 60N
	60 60N
	80 70N

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

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

Type	Tightening Torque (Standard at 100%)
XDTS60	50% 50N
	100% 60N
	150% 90N
XCRS60	50% 40N
	100% 60N
	150% 100N

<Testing Method>



Features: Eliminates frustrations when positions are lost at the final one turn of screws in slotted holes. The low profile of 9.5mm is effective in narrow spaces.

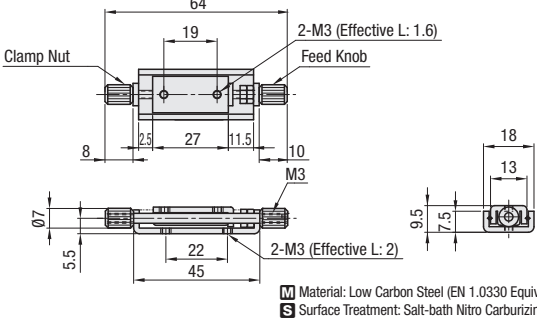
## X-Axis Compact Type

### XSEN

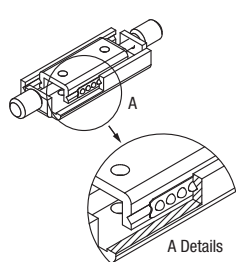


Travel per Rotation: 0.5mm

RoHS10



Slides smoothly with ball guides on each side.



Part Number	Stage Surface	Travel Distance	Load Capacity (N)	Weight (kg)	Unit Price
Type	No.	(mm)	(mm)		
XSEN	5	13x27	±2.5	19.6	0.03

Travel per Rotation: 0.5mm

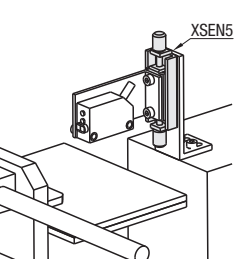


Ordering Example

Part Number  
XSEN5

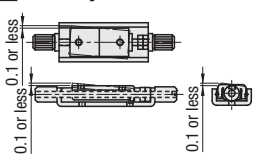


Example



Fine Adjustments of Product Counter Sensors.

## Accuracy Standards



There are some mechanical clearances as shown above, and not recommended for positioning applications requiring accuracies.

Features: Five stroke lengths from 60mm to 200mm are offered, mainly for sensor adjustments during setup changes.

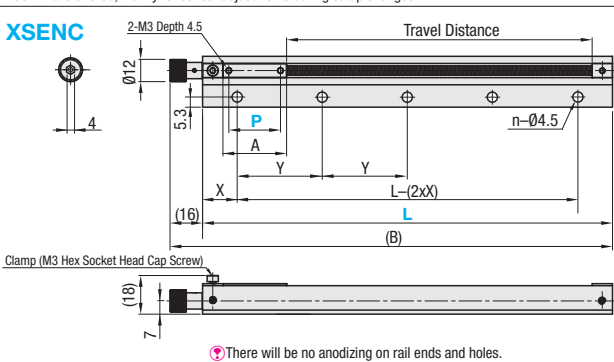
## X-Axis Stroke Selectable Type

### XSENC



Travel per Rotation: 0.8mm

RoHS10



Material: Aluminum Alloy  
Surface Treatment: Clear Anodize  
Accessory Hex Socket Head Cap Screw (P-174 SCB4-6) 2 pcs.

Stage Surface (mm)	P	A
10	16	
12	18	
19	25	
25.4	31.4	

Part Number		P	X	Y	Number of Holes	(B)	Distance between End Taps	Travel Distance	Load Capacity (N)	Unit Price
Type	L	(Selection)		(When 150Y and 200Y)			L-(2xX)			
XSENC	60	10 12 19 25.4	10	-	2	76	40	L-A-23	9.8	
	70		14	-	2	86	42	L-A-25		
	80		18	-	2	96	44			
	150		20	-	2	166	110			
	150Y (*)		15	40	4		120	L-A-30		
	200		22	-	2	216	156			
	200Y (*)		20	40	5		160			

Models denoted by (\*) will have added holes on the mounting surface.

Travel per Rotation: 0.8mm

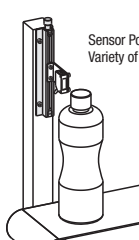


Ordering Example

Part Number - P  
XSENC150 - 25.4

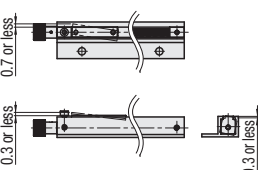


Example



Sensor Position Adjustments for Large Variety of Manufacturing Schemes

## Accuracy Standards



There are some mechanical clearances as shown above, and not recommended for positioning applications requiring accuracies.

## One Point

Long stroke moves can be made easily with use of a ball-point hex wrench.

