

XYZ Axis Steel Extended Contact Translation Stages

TSD-255 Stage Size 25 × 25 mm

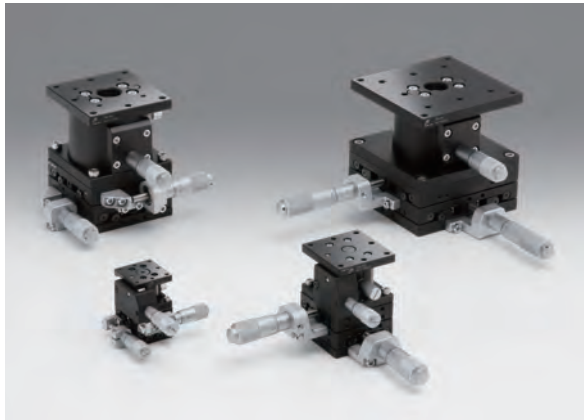
RoHS

TSD-405 Stage Size 40 × 40 mm

RoHS

This XYZ assembly incorporates an integrated (XY) axis steel linear stage and a (Z) vertical axis steel stage with a horizontal flat top plate.

There are options for micrometer position and fine pitch screws.



Guide

- ▶ Vacuum-compatible stainless steel stages (TSDS-255/405) are also available. [Reference](#) E216 [Catalog Code](#) W7076

Attention

- ▶ This translation stage type is not suitable for inverted use. In this condition, all load would be pulling against the spring.
- ▶ These stages use a pivot mechanism to transfer horizontal motion to vertical motion. This mechanism induces a small non-linearity between the distance the micrometer moves and the distance the stage platform moves. Contact our Sales Division for more information.

Specifications

Guide	METRIC	TSD-255C	TSD-255S	TSD-405C	TSD-405S	
Part Number	INCH	—	—	TSD-405CUU	TSD-405SUU	
X Axis Stages	METRIC	—	TSD-255SR	—	TSD-405SR	
XY Axis Stages	INCH	—	—	—	TSD-405SRUU	
Z Axis Stages	Stage Size [mm]	25×25	25×25	40×40	40×40	
XZ Axis Stages	Axes of Travel	XYZ axis				
XYZ Axis Stages	Micrometer Position	Center	Side	Center	Side	
Rotation Stages	Travel [mm]	XY axis ±3 Z axis ±3	XY axis ±3 Z axis ±3	XY axis ±6.5 Z axis ±3	XY axis ±6.5 Z axis ±3	
Goniometer	Lead of Actuator [mm/rotation]	0.5	0.5	0.5	0.5	
Tilt Stages	Micrometer Readable Resolution [mm]	0.01	0.01	0.01	0.01	
Vacuum	Guide Method	Extended contact ball bearing guide				
Ball Bearing Guide	Primary Material	Steel				
Crossed Roller	Finish	Super black chrome + Black matte				
Dovetail	Load Capacity [N]	29.4 (3.0kgf)	29.4 (3.0kgf)	88.3 (9.0kgf)	88.3 (9.0kgf)	
Lapping	Travel Accuracy	Straightness [μm]	5	5	2.5	2.5
V Groove Screw	Max. Moment Capacity	Pitch [N·m]	1.0	1.0	3.9	3.9
Ohters		Roll [N·m]	1.0	1.0	3.9	3.9
15 × 15 mm	Moment Stiffness	Pitch [°/N·cm]	10.55	10.55	2.34	2.34
25 × 25 mm		Roll [°/N·cm]	10.55	10.55	2.34	2.34
40 × 40 mm	Parallelism [μm]	130	130	130	130	
60 × 60 mm	Options	FP	FP	FP	FP	
65 × 65 mm	Weight [kg]	0.2	0.2	0.55	0.55	
80 × 80 mm						
100 × 100 mm						
120 × 120 mm						
Ohters						

Option for □25mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-42525	0.25	—	E008

Option for □40mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	XY axis: FPSA-62540 Z axis: FPSA-42525	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The load capacity of the FP type is 39.2N (4.0kgf). (40 × 40mm)

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010 [Catalog Code](#) W8008

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Dovetail

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Ohters

15 × 15 mm

25 × 25 mm

40 × 40 mm

60 × 60 mm

65 × 65 mm

80 × 80 mm

100 × 100 mm

120 × 120 mm

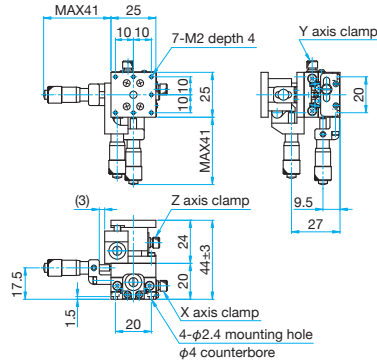
Ohters



Outline Drawing

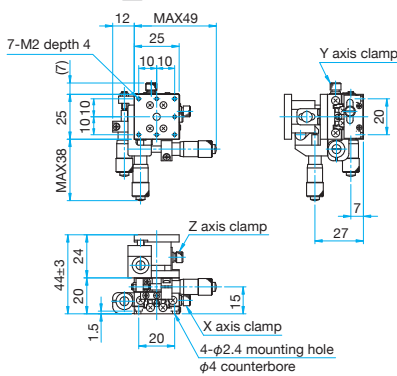
TSD-255C

Hexagonal socket head cap screw M2x4...4 screws



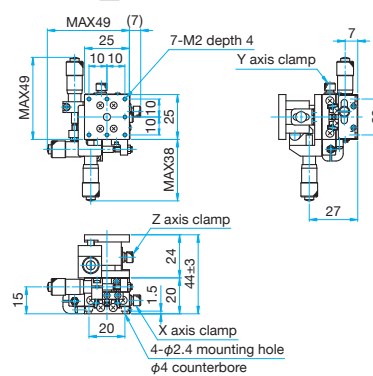
TSD-255S

Hexagonal socket head cap screw M2x4...4 screws



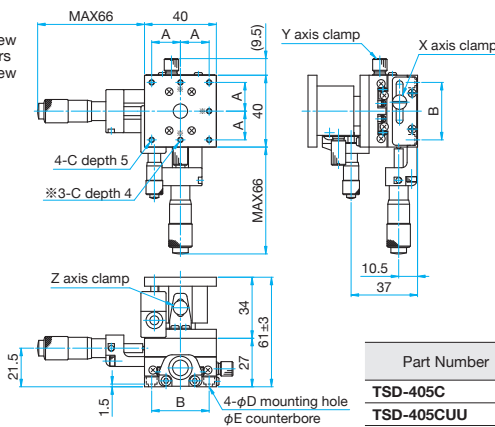
TSD-255SR

Hexagonal socket head cap screw M2x4...4 screws



TSD-405C/405CUU

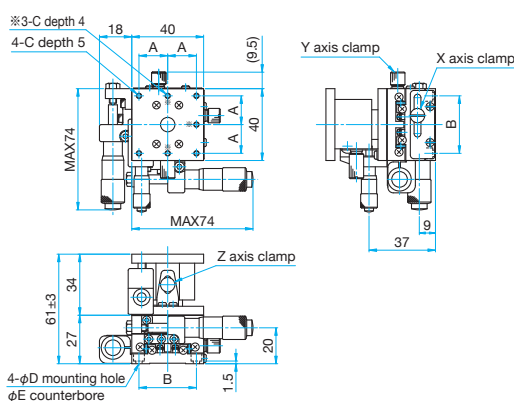
Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-405C	16	32	M3	3.5	6
TSD-405CUU	15.875	31.75	6-32UNC	4	6.5

TSD-405S/405SUU

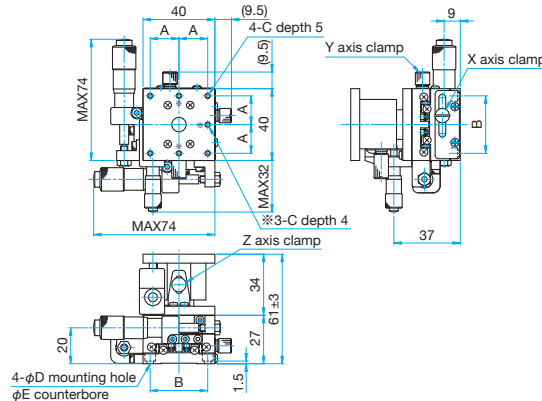
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Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-405S	16	32	M3	3.5	6
TSD-405SUU	15.875	31.75	6-32UNC	4	6.5

TSD-405SR/405SRUU

Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-405SR	16	32	M3	3.5	6
TSD-405SRUU	15.875	31.75	6-32UNC	4	6.5

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Ohters

15 x 15 mm

25 x 25 mm

40 x 40 mm

60 x 60 mm

65 x 65 mm

80 x 80 mm

100 x 100 mm

120 x 120 mm

Others