

Low-Profile X Axis Steel Translation Stages

Stage Size 40 × 40 mm / 60 × 60 mm

TSDT-401/601

RoHS

Ultra thin steel stages (10mm) provide high stiffness and load capacity in a very low profile. Stage heights are 40% lower and the overall weight is 35% lighter than standard TSD stages.

- Opposed locking clamp to maximize locking strength.
- Low-profile is ideal for assembling into systems with limited space or optical applications that require low beam heights.



Guide

- ▶ The part number suffix FP indicates products with fine-pitch screws instead of standard micrometers.
- ▶ Fine Pitch screws have a screw pitch of 0.25mm and require a hex wrench or the optional hex wrench with knob (KCL) for adjustment.

Reference F010



	TSD-601S		TSDT-601S
Stage Thickness	18mm	→	10mm
Weight	0.5kg	→	0.28kg

Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motorized Stages

Light Sources & Laser Safety

Index

Guide

X Axis Stages

XY Axis Stages

Z Axis Stages

XZ Axis Stages

XYZ Axis Stages

Rotation Stages

Goniometer

Tilt Stages

Vacuum

Ball Bearing Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15 × 15 mm

25 × 25 mm

40 × 40 mm

60 × 60 mm

65 × 65 mm

80 × 80 mm

100 × 100 mm

120 × 120 mm

Others

Specifications

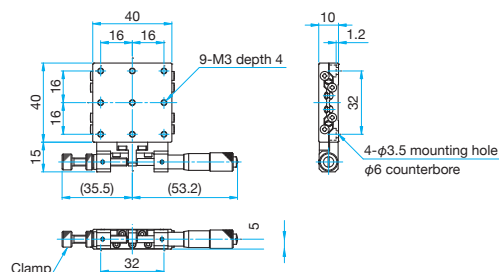
Part Number		TSDT-401S	TSDT-401SFP	TSDT-601S	TSDT-601SFP
(Opposite Model)		TSDT-401SR	TSDT-401SRFP	TSDT-601SR	TSDT-601SRFP
Stage Size [mm]		40×40	40×40	60×60	60×60
Axes of Travel		X axis			
Micrometer Position		Side	Side	Side	Side
Travel [mm]		±6.5	±6.5	±6.5	±6.5
Lead of Actuator [mm/rotation]		0.5	0.25	0.5	0.25
Micrometer Readable Resolution [mm]		0.01	—	0.01	—
Guide Method		Extended contact ball bearing guide			
Primary Material		Steel			
Finish		Super black chrome			
Load Capacity [N]		147 (15.0kgf)	147 (15.0kgf)	343 (35.0kgf)	343 (35.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch ["]	30	30	25	25
	Yaw ["]	25	25	15	15
Max. Moment Capacity	Pitch [N·m]	3.9	3.9	6.4	6.4
	Roll [N·m]	3.9	3.9	6.4	6.4
	Yaw [N·m]	2.9	2.9	4.9	4.9
Moment Stiffness	Pitch ["/N·cm]	0.36	0.36	0.2	0.2
	Roll ["/N·cm]	0.3	0.3	0.2	0.2
	Yaw ["/N·cm]	0.36	0.36	0.2	0.2
Parallelism [μm]		30	30	30	30
Running Parallelism [μm]		10	10	10	10



Outline Drawing

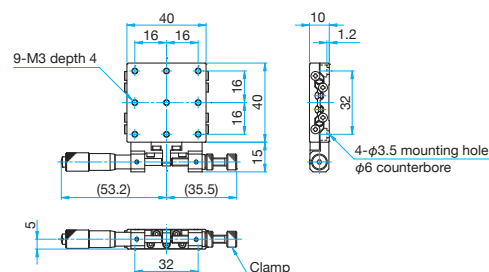
TSDT-401S

Low head hexagon socket head cap screw M3×5...4 screws



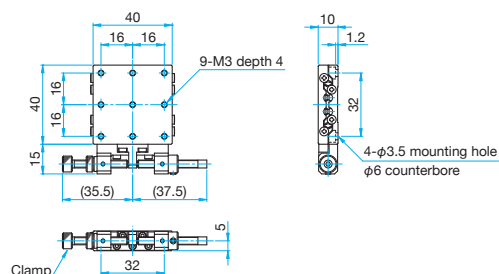
TSDT-401SR

Low head hexagon socket head cap screw M3×5...4 screws



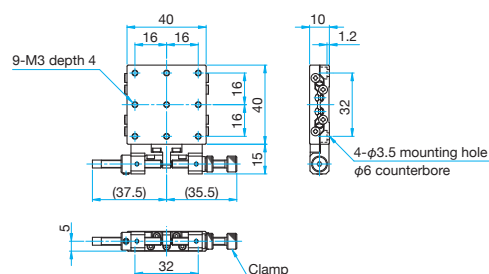
TSDT-401SFP

Low head hexagon socket head cap screw M3×5...4 screws 2mm



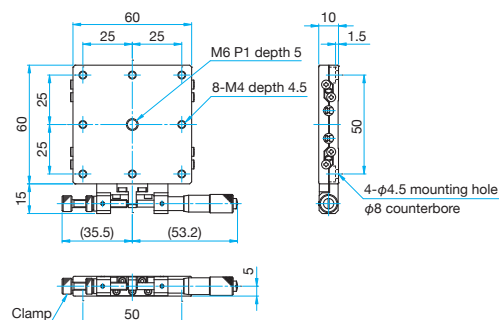
TSDT-401SRFP

Low head hexagon socket head cap screw M3×5...4 screws 2mm



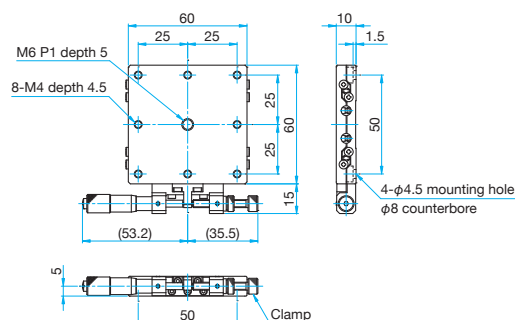
TSDT-601S

Low head hexagon socket head cap screw M4×6...4 screws



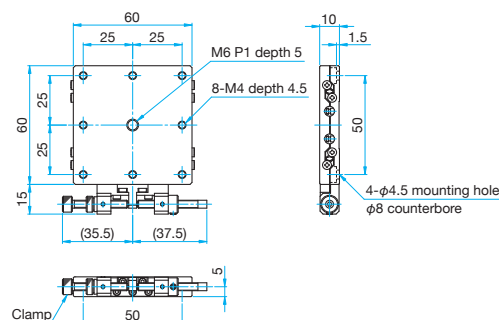
TSDT-601SR

Low head hexagon socket head cap screw M4×6...4 screws



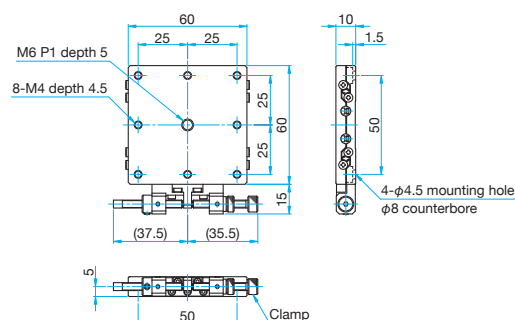
TSDT-601SFP

Low head hexagon socket head cap screw M4×6...4 screws 2mm



TSDT-601SRFP

Low head hexagon socket head cap screw M4×6...4 screws 2mm



Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

Motorized Stages

Light Sources & Laser Safety

Index

Guide

X Axis Stages

XY Axis Stages

Z Axis Stages

XZ Axis Stages

XYZ Axis Stages

Rotation Stages

Goniometer

Tilt Stages

Vacuum

Ball Bearing Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15 × 15 mm

25 × 25 mm

40 × 40 mm

60 × 60 mm

65 × 65 mm

80 × 80 mm

100 × 100 mm

120 × 120 mm

Others