

X Axis Steel Extended Contact Translation Stages

X Axis Steel Extended Contact Translation Stages (Coarse/Fine Resolution)

TSD
TSD-SDM

RoHS

Hardened steel linear translation stages with integrated bearing ways and a black chrome finish. Our “Extended Contact” technology yields superior stability, stiffness, accuracy, and durability.

- Rectangular shape minimizes the footprint while providing longer travel.
- Unique coarse/fine feature uses a 5mm lead screw on one end, enabling fast translation, and a micrometer on the opposite end for fine adjustments.



Attention

- ▶ Micrometer brackets may extend above the top surface of some stages. Check drawings for detailed information.
- ▶ Note that based upon payload size, rated travel could be reduced.

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XYZ Axis Stages

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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

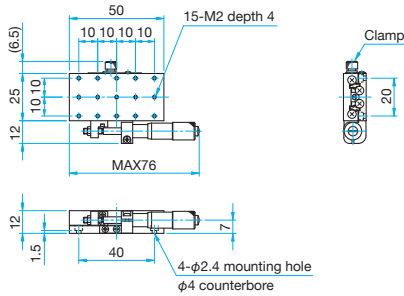
Specifications

Part Number	METRIC	TSD-25501S	TSD-40801S	TSD-60121S	TSD-60161SDM
	INCH	—	TSD-40801SUU	—	—
(Opposite Model)	METRIC	TSD-25501SR	TSD-40801SR	TSD-60121SR	—
Stage Size [mm]		25×50	40×80	60×120	60×160
Axes of Travel		X axis			
Micrometer Position		Side	Side	Side	Side
Travel [mm]		±6.5	±12.5	±20	Coars: ±35 Fine: ±3
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	Coars: 5 Fine: 0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	Coars: — Fine: 0.01
Guide Method		Extended contact ball bearing guide			
Primary Material		Steel			
Finish		Super black chrome			
Load Capacity [N]		49 (5.0kgf)	196 (20.0kgf)	392 (40.0kgf)	490 (50.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch [″]	30	30	25	25
	Yaw [″]	25	30	15	15
Max. Moment Capacity	Pitch [N·m]	3.9	7.9	19.6	29.4
	Roll [N·m]	2.5	3.9	9.8	9.8
	Yaw [N·m]	2.0	4.9	9.8	14.7
Moment Stiffness	Pitch [″/N·cm]	1.2	0.2	0.1	0.07
	Roll [″/N·cm]	1.6	0.3	0.2	0.2
	Yaw [″/N·cm]	1.2	0.2	0.1	0.09
Parallelism [μm]		30	30	50	50
Running Parallelism [μm]		10	10	12	15
Weight [kg]		0.1	0.4	1.0	1.3

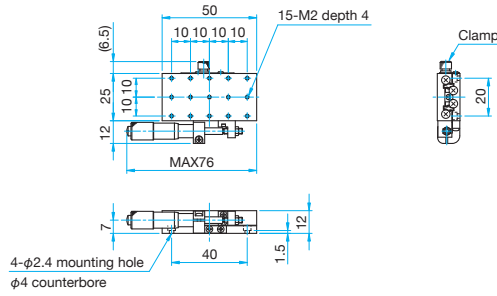


Outline Drawing

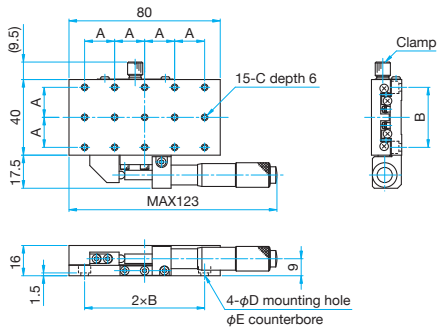
TSD-25501S Hexagonal socket head cap screw M2x4...4 screws



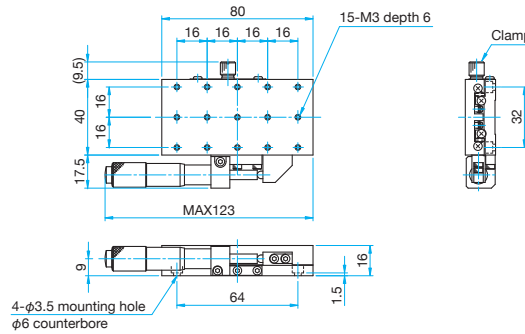
TSD-25501SR Hexagonal socket head cap screw M2x4...4 screws



TSD-40801S/40801SUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers

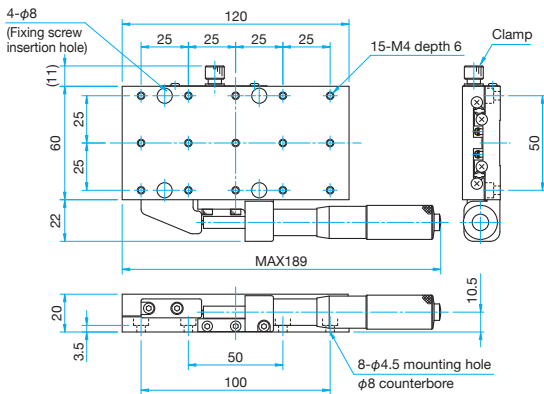


TSD-40801SR Hexagonal socket head cap screw M3x6...4 screws, Spring washers

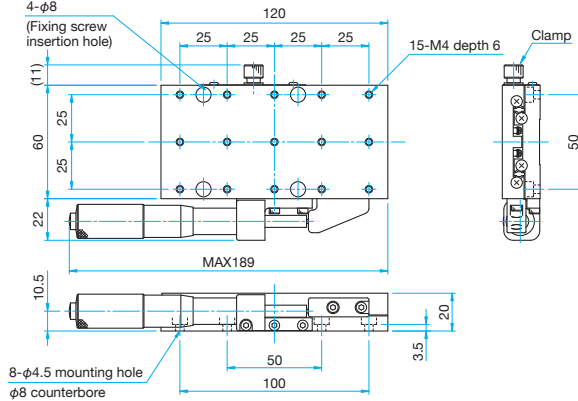


Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-40801S	16	32	M3	3.5	6
TSD-40801SUU	15.875	31.75	6-32UNC	4	6.5

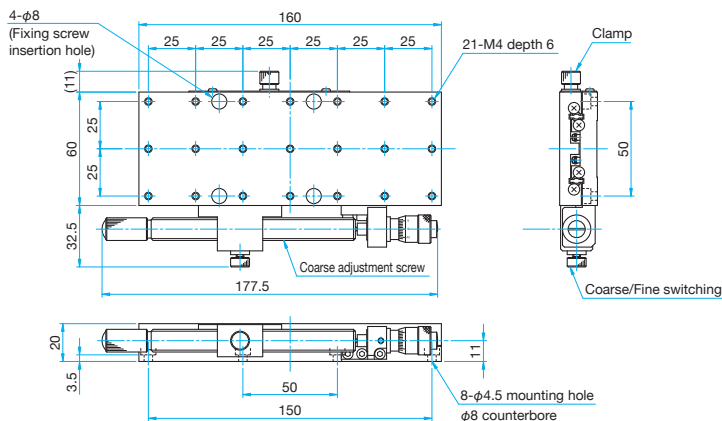
TSD-60121S Hexagonal socket head cap screw M4x8...4 screws



TSD-60121SR Hexagonal socket head cap screw M4x8...4 screws



TSD-60161SDM Hexagonal socket head cap screw M4x8...4 screws



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