

X Axis Stainless Steel Extended Contact Translation Stages

Stage Size 25 × 25 mm / 40 × 40 mm / 60 × 60 mm / 65 × 65 mm

TSDS-1

RoHS

Stainless Steel Linear Stages suitable for hard vacuum and clean room applications.
Same design and performance as TSD stages.
Completely made of stainless steel for excellent corrosion resistance.
Both the stage and the stainless steel micrometer head are lubricated with a high grade vacuum grease (YVAC2).



Guide

- ▶ The TSDS series stages are suitable for use in clean rooms or vacuum applications.
Reference ▶ Vacuum measurement data E205
 Also ideal for use in airtight spaces that have to avoid outgassing.

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.

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

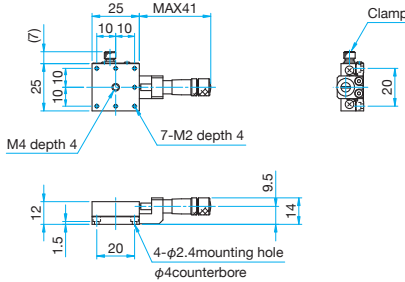
Others

Specifications									
Part Number	METRIC	TSDS-251C	TSDS-251S	TSDS-401C	TSDS-401S	TSDS-601C	TSDS-601S	TSDS-651C-M6	TSDS-651S-M6
	INCH	—	—	TSDS-401CUU	TSDS-401SUU	—	—	TSDS-651CUU	TSDS-651SUU
Stage Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		X axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		±3	±3	±6.5	±6.5	±6.5	±6.5	±6.5	±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Guide Method		Extended contact ball bearing guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	147 (15.0kgf)	147 (15.0kgf)	343 (35.0kgf)	343 (35.0kgf)	343 (35.0kgf)	343 (35.0kgf)
Travel Accuracy	Straightness [μm]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Pitch [″]	30	30	30	30	25	25	25	25
	Yaw [″]	25	25	25	25	15	15	15	15
Max. Moment Capacity	Pitch [N·m]	3.0	3.0	3.9	3.9	6.4	6.4	8.8	8.8
	Roll [N·m]	3.7	3.7	3.9	3.9	6.4	6.4	9.8	9.8
	Yaw [N·m]	1.5	1.5	2.5	2.5	4.9	4.9	4.9	4.9
Moment Stiffness	Pitch [°/N·cm]	1.8	1.8	0.36	0.36	0.2	0.2	0.2	0.2
	Roll [°/N·cm]	1.6	1.6	0.3	0.3	0.2	0.2	0.2	0.2
	Yaw [°/N·cm]	2.0	2.0	0.4	0.4	0.2	0.2	0.2	0.2
Parallelism [μm]		30	30	15	15	15	15	30	30
Running Parallelism [μm]		10	10	10	10	10	10	10	10
Weight [kg]		0.07	0.07	0.2	0.2	0.5	0.5	0.55	0.55

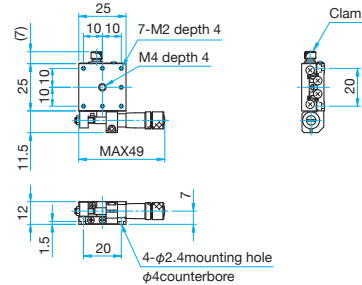


Outline Drawing

TSDS-251C Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws

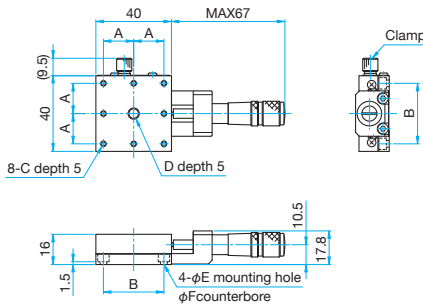


TSDS-251S Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws



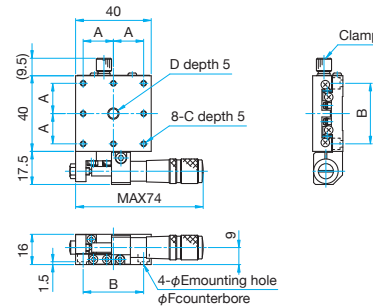
TSDS-401C/401CUU

Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



TSDS-401S/401SUU

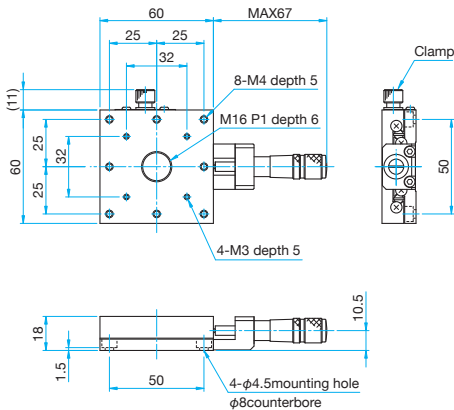
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



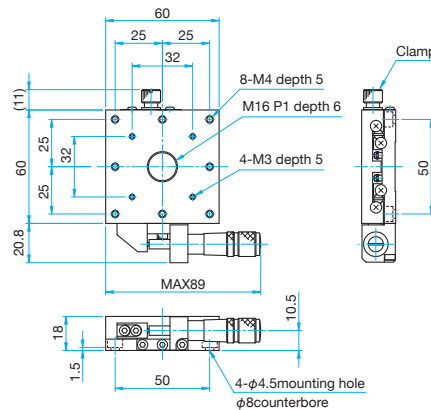
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-401C	16	32	M3	M6 P1	3.5	6
TSDS-401CUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-401S	16	32	M3	M6 P1	3.5	6
TSDS-401SUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSDS-601C Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws

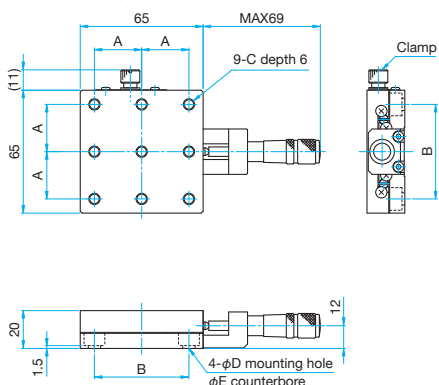


TSDS-601S Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws



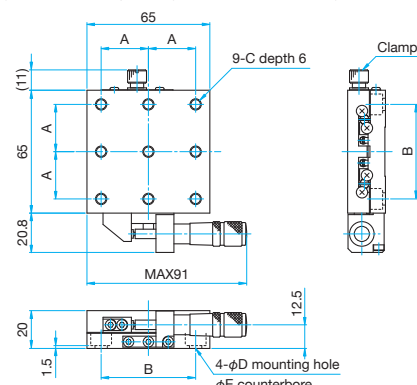
TSDS-651C-M6/651CUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



TSDS-651S-M6/651SUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-651C-M6	25	50	M6 P1	6.5	11
TSDS-651CUU	25.4	50.8	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-651S-M6	25	50	M6 P1	6.5	11
TSDS-651SUU	25.4	50.8	1/4-20UNC	7	12

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

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

Others