

Z Axis Stainless Steel Extended Contact Translation Stages

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

TSDS-3

RoHS

Catalog Code W7043

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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

Stainless Steel Linear Stages suitable for hard vacuum and clean room applications. Made entirely of stainless steel, they yield excellent corrosion resistance. The stage bearingways and the stainless steel micrometer heads 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.

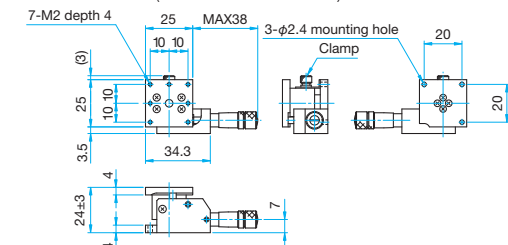
Attention

- ▶ 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.
- ▶ Regarding 25 × 25mm and 40 × 40mm size stages, please do not apply heavy load toward the rotating ('yawing') direction, as it may damage the stage.

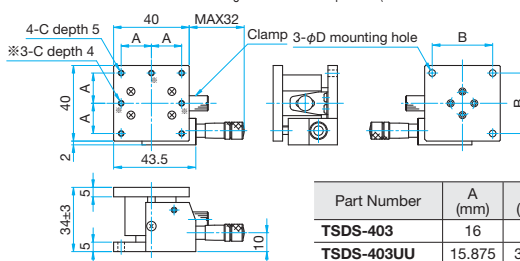


Outline Drawing

TSDS-253 Hexagon socket head cap screw (stainless steel construction) M2×6...3 screws

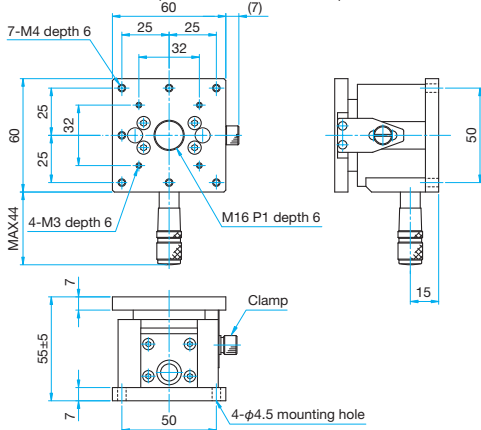


TSDS-403/403UU Hexagon socket head cap screw (stainless steel construction) M3×8...3 screws
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/8...3 screws (UU)

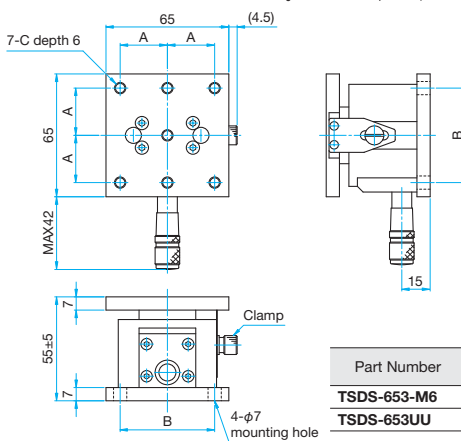


Part Number	A (mm)	B (mm)	C	D (mm)
TSDS-403	16	32	M3	3.5
TSDS-403UU	15.875	31.75	6-32UNC	4

TSDS-603 Hexagon socket head cap screw (stainless steel construction) M4×12...4 screws



TSDS-653-M6/653UU Hexagon socket head cap screw (stainless steel construction) M6×12...3 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/2...4 screws (UU)



Part Number	A (mm)	B (mm)	C
TSDS-653-M6	25	50	M6 P1
TSDS-653UU	25.4	50.8	1/4-20UNC

Specifications

Part Number	METRIC	TSDS-253	TSDS-403	TSDS-603	TSDS-653-M6
	INCH	—	TSDS-403UU	—	TSDS-653UU
Stage Size [mm]		25×25	40×40	60×60	65×65
Axes of Travel		Z axis			
Travel [mm]		±3	±3	±5	±5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Guide Method		Extended contact ball bearing guide			
Primary Material		Stainless steel			
Finish		None			
Load Capacity [N]		29.4 (3.0kgf)	88.3 (9.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Travel Accuracy	Straightness [μm]	5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [N·m]	1	3.9	6.9	6.9
	Roll [N·m]	1	3.9	6.9	6.9
Moment Stiffness	Pitch ["/N·cm]	7.14	1.84	0.51	0.51
	Roll ["/N·cm]	7.15	1.84	0.51	0.51
Parallelism [μm]		80	80	80	80
Running Parallelism [μm]		15	20	25	25
Weight [kg]		0.1	0.25	1.0	1.1