

X Axis General-Purpose Stainless Steel Translation Stages

XY Axis General-Purpose Stainless Steel Translation Stages

TSDH-251

TSDH-252W

Stage Size 25 x 25 mm

RoHS

High precision stainless steel translation stages with “Extended Contact” bearing ways. High stiffness. Not intended for vacuum applications.

- Stage body consists of stainless steel (440C). To prevent rusting, the finish has been processed with electro less nickel plating.



Guide

- ▶ Also available with a super black chrome surface finish. Please contact sales for more information.

Attention

- ▶ Micrometer brackets may extend above the top surface of some stages. Check drawings for detailed information.

Specifications

Part Number	METRIC	TSDH-251C	TSDH-251S	TSDH-252WC	TSDH-252WS
(Opposite Model)	METRIC	—	TSDH-251SR	—	TSDH-252WSR
Stage Size [mm]		25×25	25×25	25×25	25×25
Axes of Travel		X axis		XY axis	
Micrometer Position		Center	Side	Center	Side
Travel [mm]		±3	±3	±3	±3
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		SUS440C quench hardened			
Finish		Electroless nickel			
Load Capacity [N]		59.8 (6.0kgf)	59.8 (6.0kgf)	59.8 (6.0kgf)	59.8 (6.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch [″]	30	30	30	30
	Yaw [″]	25	25	25	25
Max. Moment Capacity	Pitch [N·m]	4.0	4.0	4.0	4.0
	Roll [N·m]	5.0	5.0	4.0	4.0
	Yaw [N·m]	2.0	2.0	2.0	2.0
Moment Stiffness	Pitch [°/N·cm]	1.8	1.8	3.4	3.4
	Roll [°/N·cm]	1.6	1.6	3.4	3.4
	Yaw [°/N·cm]	2.0	2.0	3.2	3.2
Parallelism [μm]		30	30	50	50
Running Parallelism [μm]		10	10	20	20
Orthogonality [μm]		—	—	10	10
Options		FP/DL	FP	FP/DL	FP
Weight [kg]		0.07	0.07	0.14	0.14

Option

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
DL	Differential Micrometer Heads	MDC-6.5	0.5	0.01	

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

* Installation may not be possible depending on the direction of DL.

* The suffix “-C” type uses adhesive for fixing the micrometer. Please contact our International Sales Division for more information on replacement.

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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

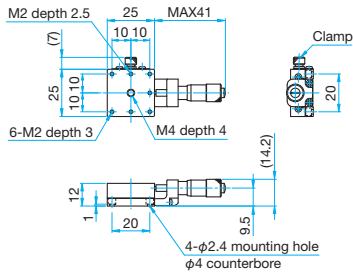
120 × 120 mm

Others

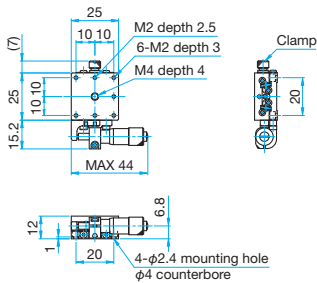


Outline Drawing

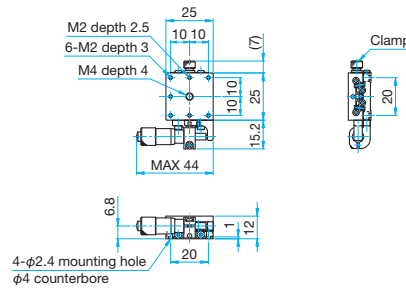
TSDH-251C Hexagonal socket head cap screw (stainless steel construction) M2×4...4 screws



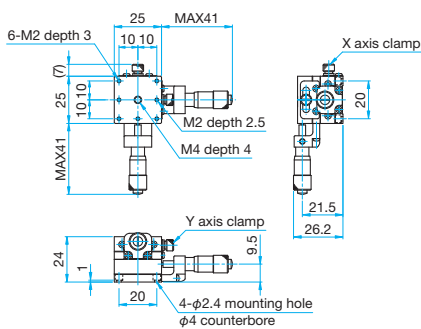
TSDH-251S Hexagonal socket head cap screw (stainless steel construction) M2×4...4 screws



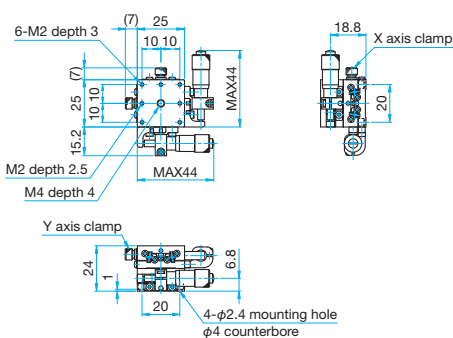
TSDH-251SR Hexagonal socket head cap screw (stainless steel construction) M2×4...4 screws



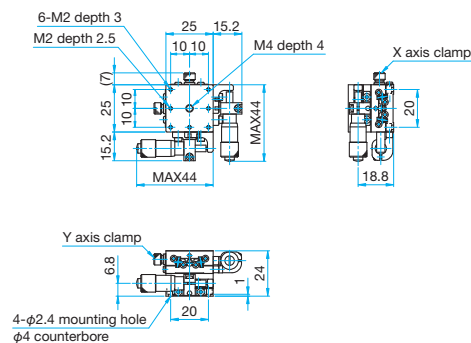
TSDH-252WC Hexagonal socket head cap screw (stainless steel construction) M2×4...4 screws



TSDH-252WS Hexagonal socket head cap screw (stainless steel construction) M2×4...4 screws



TSDH-252WSR Hexagonal socket head cap screw (stainless steel construction) M2×4...4 screws



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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

X Axis General-Purpose Stainless Steel Translation Stages

XY Axis General-Purpose Stainless Steel Translation Stages

TSDH-401

Stage Size 40 x 40 mm

RoHS

TSDH-402W

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Others

15 x 15 mm

25 x 25 mm

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120 x 120 mm

Others

High precision stainless steel translation stages with “Extended Contact” bearing ways. High stiffness. Not intended for vacuum applications.

- Stage body consists of stainless steel (440C). To prevent rusting, the finish has been processed with electro less nickel plating.



Guide

- ▶ Also available with a super black chrome surface finish. Please contact sales for more information.
- ▶ For the TSDH series, you can select opposite side locking by specifying the option code (suffix: OC).

Option Code	Products Name
OC	opposite clamp



Attention

- ▶ Micrometer brackets may extend above the top surface of some stages. Check drawings for detailed information.

Specifications					
Part Number	METRIC	TSDH-401C	TSDH-401S	TSDH-402WC	TSDH-402WS
(Opposite Model)	METRIC	—	TSDH-401SR	—	TSDH-402WSR
Stage Size [mm]		40x40	40x40	40x40	40x40
Axes of Travel		X axis		XY axis	
Micrometer Position		Center	Side	Center	Side
Travel [mm]		±6.5	±6.5	±6.5	±6.5
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		SUS440C quench hardened			
Finish		Electroless nickel			
Load Capacity [N]		196 (20kgf)	196 (20kgf)	196 (20kgf)	196 (20kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch [′]	30	30	30	30
	Yaw [′]	25	25	25	25
Max. Moment Capacity	Pitch [N·m]	7.8	7.8	7.8	7.8
	Roll [N·m]	7.8	7.8	7.8	7.8
	Yaw [N·m]	5	5	5	5
Moment Stiffness	Pitch [′/N·cm]	0.3	0.3	0.66	0.66
	Roll [′/N·cm]	0.2	0.2	0.66	0.66
	Yaw [′/N·cm]	0.23	0.23	0.6	0.6
Parallelism [μm]		30	30	50	50
Running Parallelism [μm]		10	10	20	20
Orthogonality [μm]		—	—	10	10
Options		FP/DL	FP/DL	FP/DL	FP
Weight [kg]		0.2	0.2	0.4	0.4

Option					
Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008
DL	Differential Micrometer Heads	MDC-13	0.5	0.01	

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

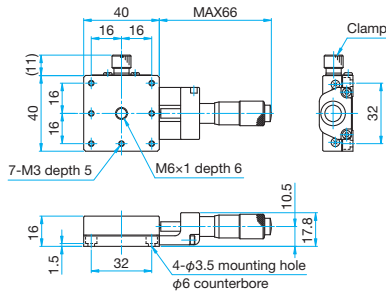
* Installation may not be possible depending on the direction of DL.

* Replacement work requires a special tool (MNS). [Reference](#) F006 [Catalog Code](#) W8005

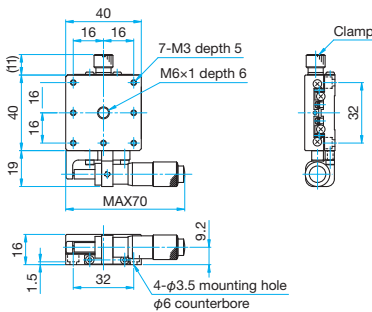


Outline Drawing

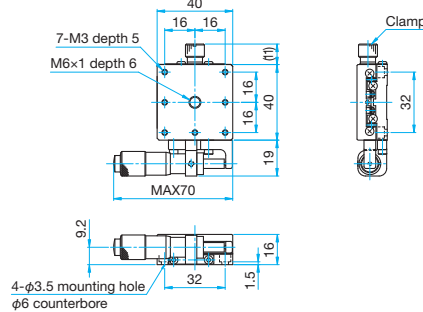
TSDH-401C Hexagonal socket head cap screw (stainless steel construction)
M3x6...4 screws, Spring washers



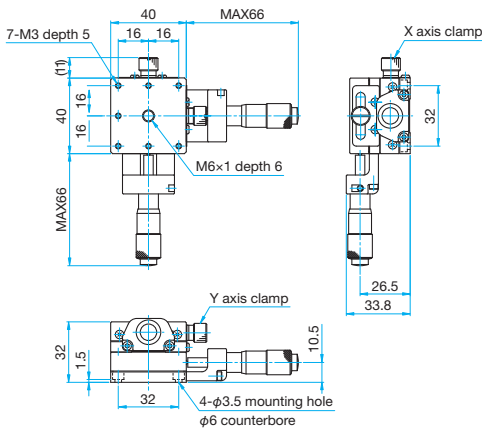
TSDH-401S Hexagonal socket head cap screw (stainless steel construction)
M3x6...4 screws, Spring washers



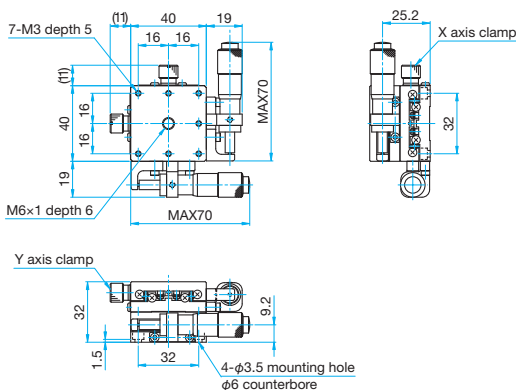
TSDH-401SR Hexagonal socket head cap screw (stainless steel construction)
M3x6...4 screws, Spring washers



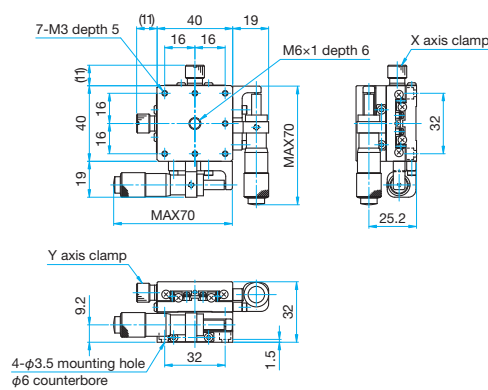
TSDH-402WC Hexagonal socket head cap screw (stainless steel construction)
M3x6...4 screws, Spring washers



TSDH-402WS Hexagonal socket head cap screw (stainless steel construction)
M3x6...4 screws, Spring washers



TSDH-402WSR Hexagonal socket head cap screw (stainless steel construction)
M3x6...4 screws, Spring washers



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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

X Axis General-Purpose Stainless Steel Translation Stages

XY Axis General-Purpose Stainless Steel Translation Stages

TSDH-601

Stage Size 60 x 60 mm

TSDH-602

RoHS

High precision stainless steel translation stages with “Extended Contact” bearing ways. High stiffness. Not intended for vacuum applications.

- Stage body consists of stainless steel (440C). To prevent rusting, the finish has been processed with electro less nickel plating.



Guide

- ▶ Also available with a super black chrome surface finish. Please contact sales for more information.
- ▶ For the TSDH series, you can select opposite side locking by specifying the option code (suffix: OC).

Option Code	Products Name
OC	opposite clamp



Attention

- ▶ Micrometer brackets may extend above the top surface of some stages. Check drawings for detailed information.

Specifications

Part Number	METRIC	TSDH-601C	TSDH-601S	TSDH-602C	TSDH-602S
(Opposite Model)	METRIC	—	TSDH-601SR	—	TSDH-602SR
Stage Size [mm]		60×60	60×60	60×60	60×60
Axes of Travel		X axis		XY axis	
Micrometer Position		Center	Side	Center	Side
Travel [mm]		±6.5	±6.5	±6.5	±6.5
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		SUS440C quench hardened			
Finish		Electroless nickel			
Load Capacity [N]		343 (35kgf)	343 (35kgf)	343 (35kgf)	343 (35kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch [′]	25	25	25	25
	Yaw [′]	15	15	15	15
Max. Moment Capacity	Pitch [N·m]	13.2	13.2	13.2	13.2
	Roll [N·m]	14.7	14.7	13.2	13.2
	Yaw [N·m]	9.8	9.8	9.8	9.8
Moment Stiffness	Pitch [′/N·cm]	0.2	0.2	0.38	0.38
	Roll [′/N·cm]	0.13	0.13	0.37	0.37
	Yaw [′/N·cm]	0.16	0.16	0.39	0.39
Parallelism [μm]		30	30	50	50
Running Parallelism [μm]		10	10	20	20
Orthogonality [μm]		—	—	10	10
Options		FP/DL	FP/DL	FP/DL	FP
Weight [kg]		0.45	0.45	0.9	0.9

Option

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008
DL	Differential Micrometer Heads	MDC-13	0.5	0.01	

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

* Installation may not be possible depending on the direction of DL.

* Replacement work requires a special tool (MNS). [Reference](#) F006 [Catalog Code](#) W8005

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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

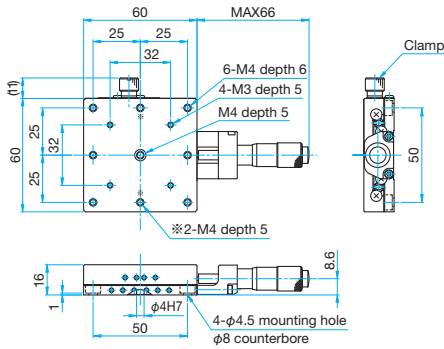
120 × 120 mm

Others

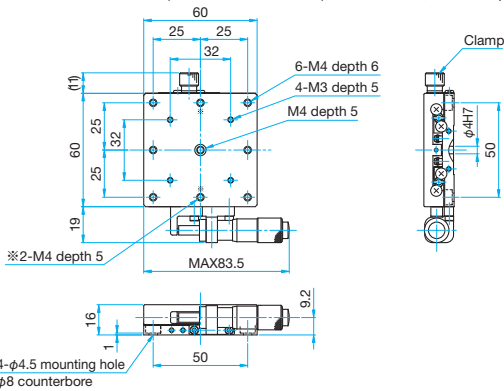


Outline Drawing

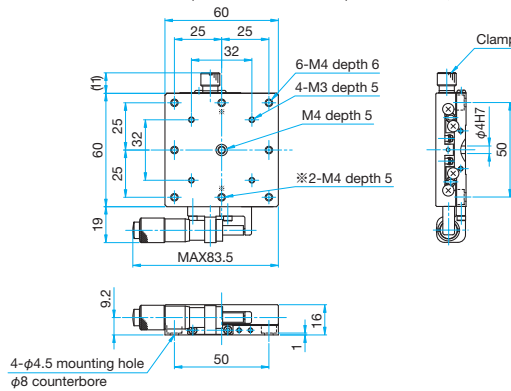
TSDH-601C Hexagonal socket head cap screw (stainless steel construction) M4x6...4 screws, Attachment pin for M4



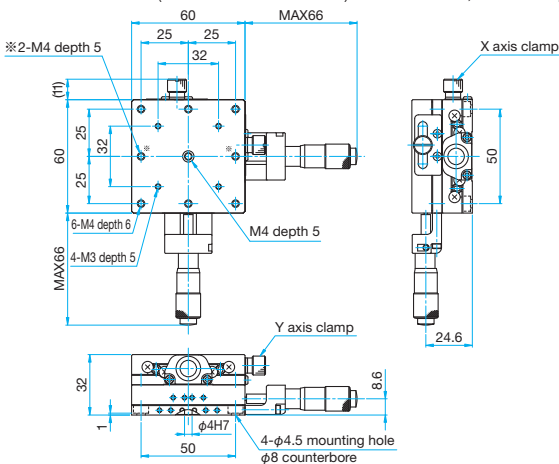
TSDH-601S Hexagonal socket head cap screw (stainless steel construction) M4x6...4 screws, Attachment pin for M4



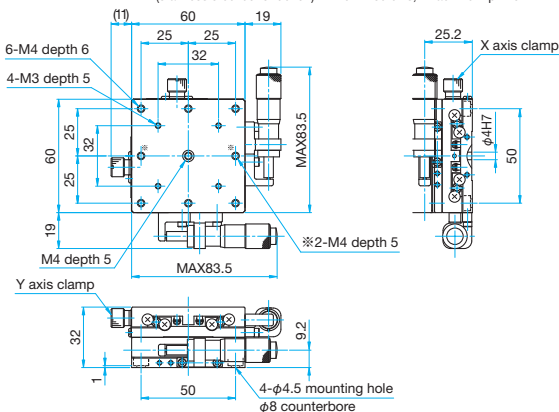
TSDH-601SR Hexagonal socket head cap screw (stainless steel construction) M4x6...4 screws, Attachment pin for M4



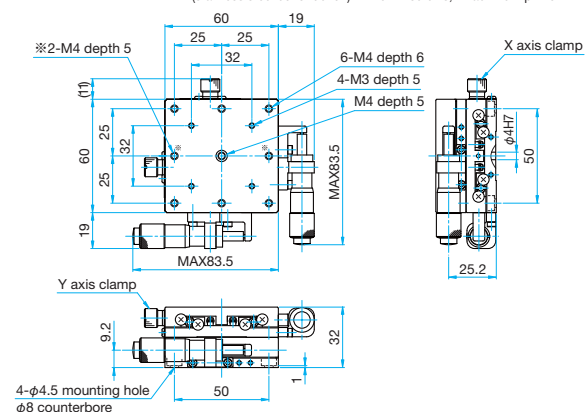
TSDH-602C Hexagonal socket head cap screw (stainless steel construction) M4x6...4 screws, Attachment pin for M4



TSDH-602S Hexagonal socket head cap screw (stainless steel construction) M4x6...4 screws, Attachment pin for M4



TSDH-602SR Hexagonal socket head cap screw (stainless steel construction) M4x6...4 screws, Attachment pin for M4



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