

# X Axis Aluminum Rack and Pinion Dovetail Stages

## X Axis Rack and Pinion Dovetail Translation Stages

TARA-1 Stage Size 40 x 40 mm

TARW/TAR Stage Size 25 x 30 mm

RoHS

RoHS

Rack and pinion dovetail translation stages, suitable for frequent use that require quick movement and long travel.

- Long travel dovetail translation stages with mounting plate size of 25x30mm.
- Large knurled adjustment knob for ease of translation.
- Strong Locking lever adjacent to adjustment knob.
- Vernier Micrometer with 0.1mm readable resolution.



### Guide

- ▶ 2 units of TARA-4010 can be assembled into XY axis.
- ▶ The same load capacity is guaranteed for vertical use.
- ▶ Two clamps enable firmer lock.
- ▶ Conversion into clamp lever is available. Please contact our Sales Representatives.

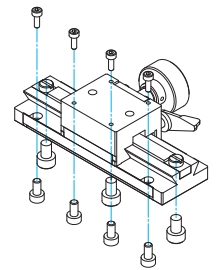
### Attention

- ▶ Additional adapter plate is needed for assembling TARA-4025 into XY axis. Please contact our Sales Division.

### Mounting Method

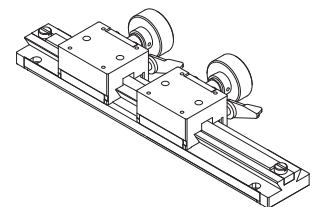
Tapped holes are used for mounting holes (clamping holes) so that compact rack and pinion dovetail stages can be assembled in optical breadboards and systems as well as secured on other instruments from both top and bottom.

Part Number	From the top	From the bottom
TARW-25501	M3	M4
TAR-25801	M2	M3, (M4)
TAR-25121	M2	M3, (M4)
TAR-25161	M2	M3, (M4)



### Guide

- ▶ The TAR-25 series can be provided with more than one moving platform. Contact Our Sales Division for more information.



### Attention

- ▶ The knurled adjustment knob of the TARW-25501 protrudes from the bottom surface of the stage. Therefore, it cannot be directly mounted on a flat surface without the use of a spacer.

### Specifications

Part Number	METRIC	TARA-4010	TARA-4025	TARW-25501	TAR-25801	TAR-25121	TAR-25161	
Stage Size [mm]		40x40	40x40	25x50	25x30	25x30	25x30	
Axes of Travel		X axis						
Travel [mm]		±10	±25	±10	±25	±45	±65	
Lead of Actuator [mm/rotation]		about 15	about 15	about 20	about 20	about 20	about 20	
Vernier Scale [mm]		0.1	0.1	0.1	0.1	0.1	0.1	
Guide Method		Dovetail method						
Primary Material		Aluminum			Brass			
Finish		Black anodized			Super black chrome			
Load Capacity [N]		29.4 (3.0kgf)	29.4 (3.0kgf)	78.5 (8.0kgf)	49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)	
Travel Accuracy	Straightness [μm]	—	—	20	30	40	50	
Max. Moment Capacity	Pitch [N·m]	—	—	1.2	0.5	0.5	0.5	
	Roll [N·m]	—	—	0.6	0.5	0.5	0.5	
	Yaw [N·m]	—	—	1.0	0.5	0.5	0.5	
Moment Stiffness	Pitch [°/N·cm]	—	—	1.22	2.03	2.03	2.03	
	Roll [°/N·cm]	—	—	2.45	1.53	1.53	1.53	
Parallelism [μm]		—	—	50	50	80	80	
Weight [kg]		0.1	0.15	0.22	0.22	0.3	0.36	

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Vacuum

Ball Bearing Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

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

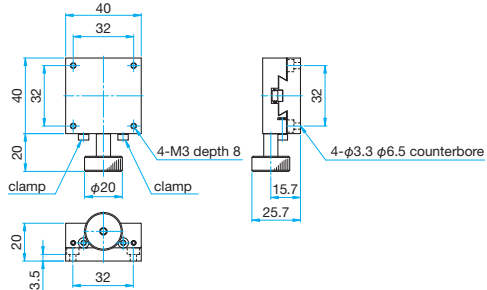
Others



## Outline Drawing

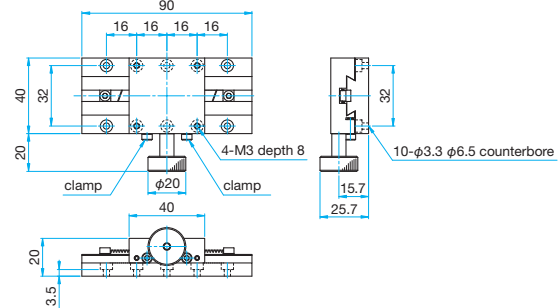
## TARA-4010

Hexagonal socket head cap screw M3x8...4 screws



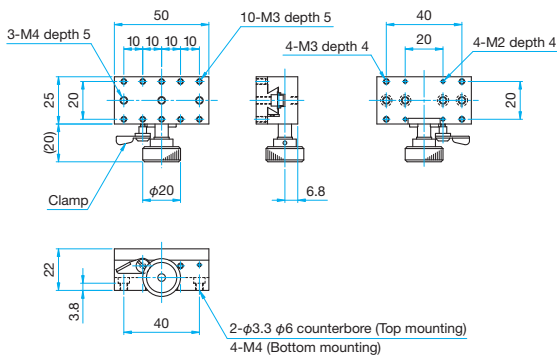
## TARA-4025

Hexagonal socket head cap screw M3x8...4 screws



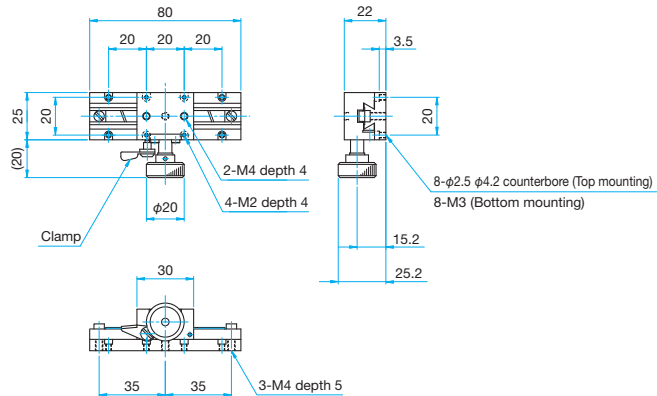
## TARW-25501

Pan head screw M3x8...4 screws



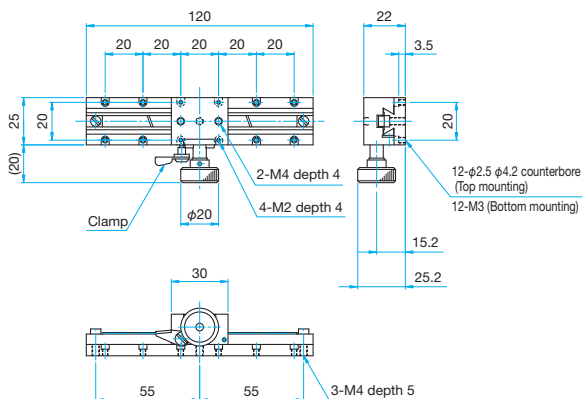
## TAR-25801

Pan head screw M2x6...4 screws



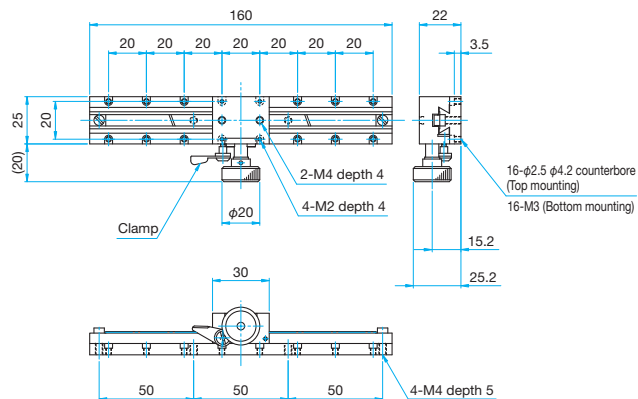
## TAR-25121

Pan head screw M2x6...6 screws



## TAR-25161

Pan head screw M2x6...8 screws



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