

# X Axis Rack and Pinion Dovetail Translation Stages

## X Axis Dual Drive Rack and Pinion Dovetail Translation Stages

TAR-1

RoHS

TAR-D

RoHS

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

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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

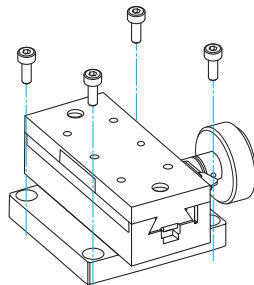
100 × 100 mm

120 × 120 mm

Others



### Mounting Method



### Guide

► Use adaptor plates for TAR (SP-109 and SP-131) to mount post holders and various stages.

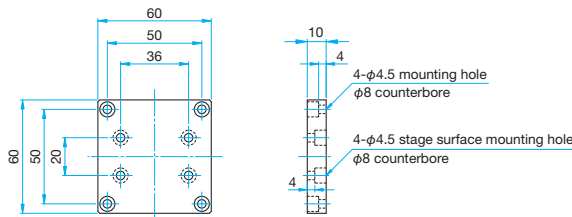
SP-109 [Reference](#) D043 [Catalog Code](#) W6061

SP-131 [Reference](#) D045 [Catalog Code](#) W6073

### Bottom Plate

Primary material: Aluminum  
Finish: Black Anodized

TAR-34601/34801/34141 include a base plate that allows mounting on instruments or bases fitted with M4 tapped holes on 50 × 50mm, preventing the handle from contacting the mounting surface.



### Specifications

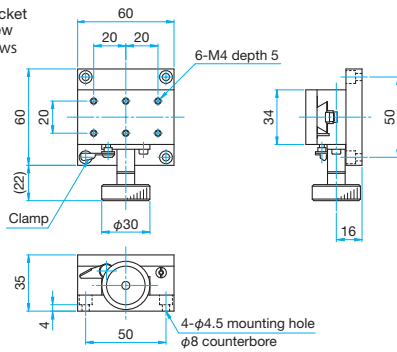
Part Number	METRIC	TAR-34601	TAR-34801	TAR-34141	TAR-38651-M6	TAR-381201-M6	TAR-38601D	TAR-38801D	TAR-38141D
	INCH	—	—	—	TAR-38651UU	TAR-381201UU	—	—	—
Stage Size [mm]		34×60	34×80	34×140	38×65	38×120	38×60	38×80	38×140
Axes of Travel		X axis							
Travel [mm]		±15	±25	±50	±15	±40	Coars: ±15 Fine: ±15	Coars: ±25 Fine: ±25	Coars: ±50 Fine: ±50
Lead of Actuator [mm/rotation]		about 20	about 20	about 20	about 20	about 20	Coars: about 20 Fine: 2.5	Coars: about 20 Fine: 2.5	Coars: about 20 Fine: 2.5
Vernier Scale [mm]		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Guide Method		Dovetail method							
Primary Material		Brass							
Finish		Super black chrome							
Load Capacity [N]		147 (15.0kgf)	196 (20.0kgf)	245 (25.0kgf)	147 (15.0kgf)	245 (25.0kgf)	147 (15.0kgf)	196 (20.0kgf)	245 (25.0kgf)
Travel Accuracy	Straightness [μm]	20	30	30	20	30	20	30	30
	Pitch [N·m]	2.9	3.8	6.9	2.9	6	2.9	3.8	6.9
	Roll [N·m]	1.5	1.5	2.0	1.5	1.5	1.5	1.5	2.0
Max. Moment Capacity	Roll [N·m]	2.0	2.6	3.9	2.0	3.0	2.00	2.6	3.9
	Yaw [N·m]	0.36	0.26	0.05	0.36	0.7	0.51	0.36	0.05
Moment Stiffness	Pitch ["/N·cm]	0.82	0.82	0.82	0.82	0.2	0.92	0.92	0.92
	Roll ["/N·cm]	60	60	80	60	80	60	60	80
Parallelism [μm]		60	60	80	60	80	60	60	80
Weight [kg]		0.5	0.8	1.0	0.6	1.0	0.5	0.8	1.0



Outline Drawing

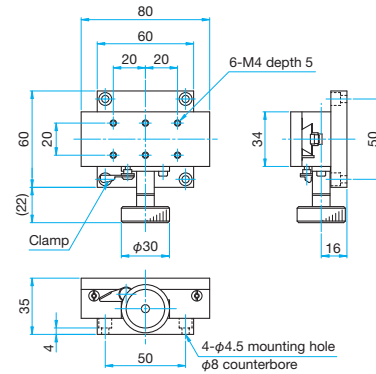
TAR-34601

Hexagonal socket head cap screw M4x8...4 screws



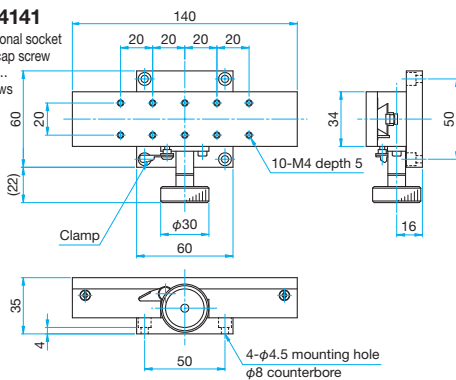
TAR-34801

Hexagonal socket head cap screw M4x8...4 screws



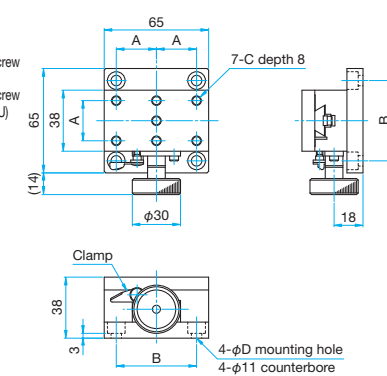
TAR-34141

Hexagonal socket head cap screw M4x8...4 screws



TAR-38651-M6  
TAR-38651UU

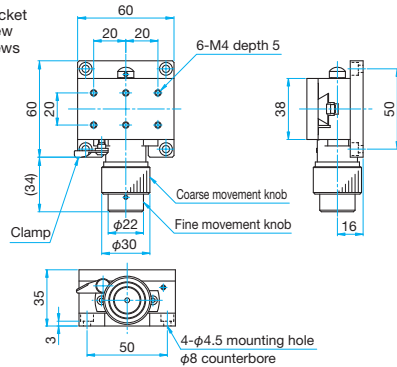
Hexagonal socket head cap screw M6x10...4 screws (M6)  
Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TAR-38651-M6	25	50	M6 P1	6.5
TAR-38651UU	25.4	50.8	1/4-20UNC	7

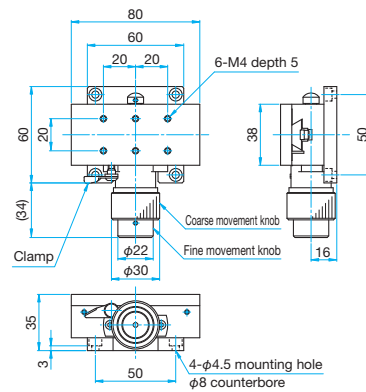
TAR-38601D

Hexagonal socket head cap screw M4x8...4 screws



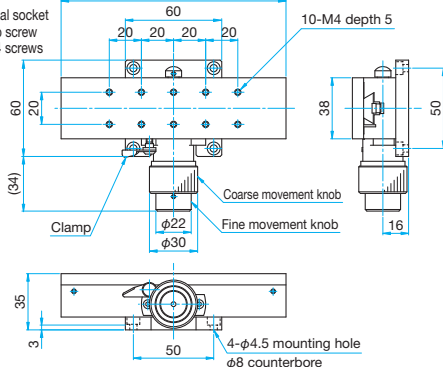
TAR-38801D

Hexagonal socket head cap screw M4x8...4 screws



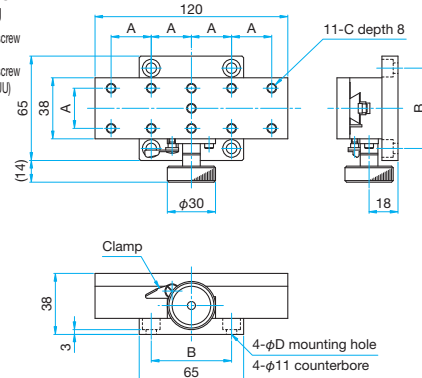
TAR-38141D

Hexagonal socket head cap screw M4x8...4 screws



TAR-381201-M6  
TAR-381201UU

Hexagonal socket head cap screw M6x10...4 screws (M6)  
Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TAR-381201-M6	25	50	M6 P1	6.5
TAR-381201UU	25.4	50.8	1/4-20UNC	7

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