

# X Axis Long Travel Aluminum Crossed Roller Translation Stages

TAMC-1

RoHS

High precision crossed-roller linear translation stages with black anodized aluminum bodies.



- These stages use a leadscrew drive system (2mm pitch) with a crank style handle enabling smooth, fast travel.
- The standard stages have a linear scale on the side of the stage with resolution of 1mm and a second scale on the crank(resolution of 20µm).
- The LS models have a digital scale with resolution of 0.1mm.

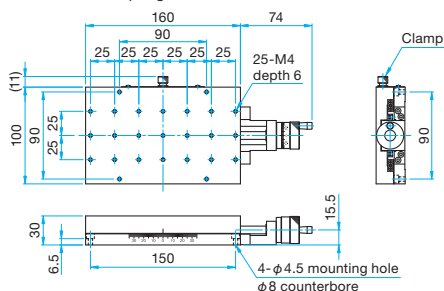
### Guide

- ▶ The TAMC-20201(LS) supports hole patterns of both 180 × 180mm and 175 × 175mm, and can be directly mounted on a 25mm pitch optical breadboard.
- ▶ The models with the part number suffix LS are fitted with a digital display scale with a readable resolution of 10µm.
- ▶ The digital display scale has a reset function and a memory function to retain the value at the time the power is turned off (redisplay the value being displayed when the power is turned off).

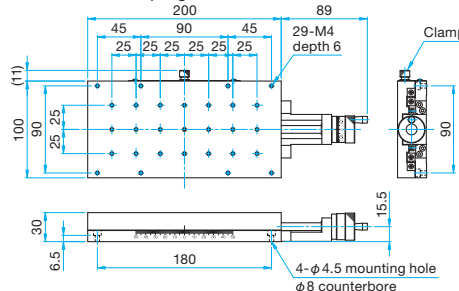


### Outline Drawing

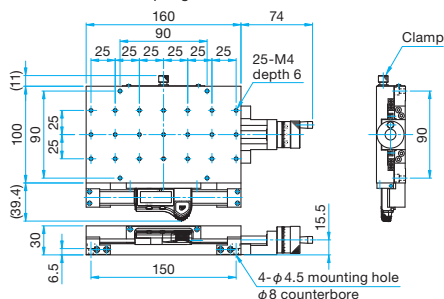
**TAMC-10161** Hexagonal socket head cap screw M4x12...4 screws  
Spring washers



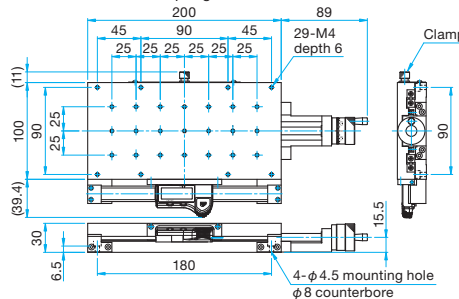
**TAMC-10201** Hexagonal socket head cap screw M4x12...4 screws  
Spring washers



**TAMC-10161LS** Hexagonal socket head cap screw M4x12...4 screws  
Spring washers



**TAMC-10201LS** Hexagonal socket head cap screw M4x12...4 screws  
Spring washers



### Specifications

Part Number	TAMC-10161	TAMC-10161LS	TAMC-10201	TAMC-10201LS
Stage Size [mm]	100x160	100x160	100x200	100x200
Axes of Travel	X axis			
Handle Position	Center	Center	Center	Center
Travel [mm]	±35	±35	±50	±50
Lead of Actuator [mm/rotation]	2.0	2.0	2.0	2.0
Readable Resolution [mm]	0.02	0.01	0.02	0.01
Guide Method	Crossed roller			
Primary Material	Aluminum			
Finish	Black anodized			
Load Capacity [N]	588 (60.0kgf)	588 (60.0kgf)	980 (100.0kgf)	980 (100.0kgf)
Travel Accuracy	Straightness [µm]	2	2	3
	Pitch [ ′ ]	40	40	60
	Yaw [ ′ ]	25	25	25
Max. Moment Capacity	Pitch [N·m]	62.8	62.8	100.0
	Roll [N·m]	60.8	60.8	99.1
	Yaw [N·m]	58.8	58.8	98.1
Moment Stiffness	Pitch [ ′/N·cm]	0.046	0.046	0.036
	Roll [ ′/N·cm]	0.04	0.04	0.03
Parallelism [µm]	100	100	100	100
Running Parallelism [µm]	15	15	25	25
Weight [kg]	1.6	1.7	1.9	2.1

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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

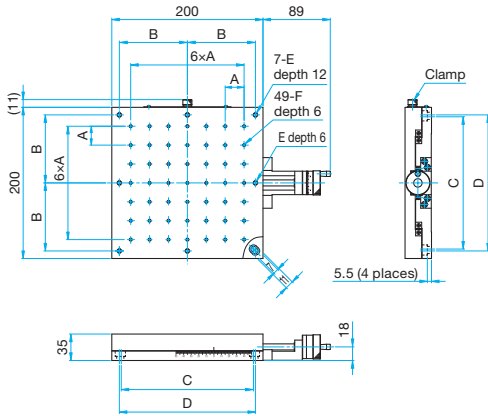
Others



**Outline Drawing**

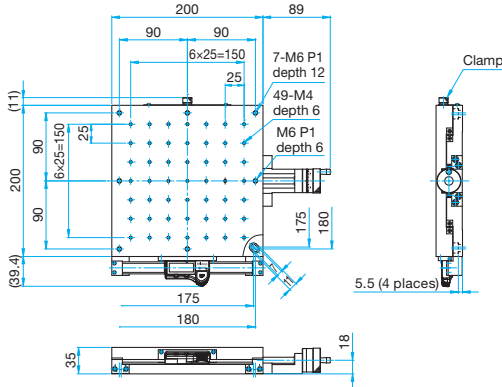
**TAMC-20201/20201-M6/20201UU**

- Hexagon socket head cap screw M6x10...4 screws
- Hexagon socket head cap screw M6x10...4 screws (M6)
- Hexagon socket head cap screw 1/4-20UNCx1/2... screws (UU)



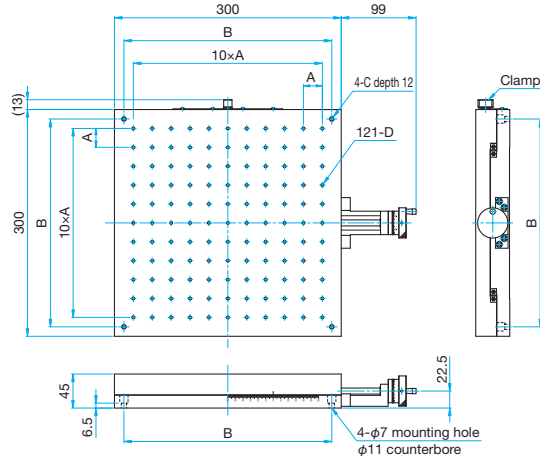
Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E	F
TAMC-20201	25	90	175	180	M6 P1	M4
TAMC-20201-M6	25	87.5	175		M6 P1	M6 P1
TAMC-20201UU	25.4	88.9	177.8		1/4-20UNC	1/4-20UNC

**TAMC-20201LS** Hexagon socket head cap screw M6x10...4 screws



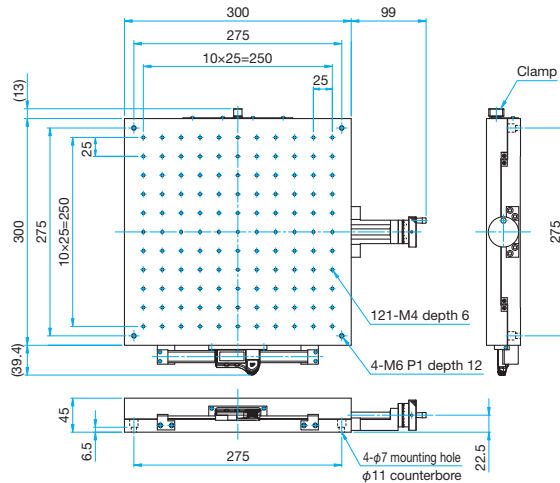
**TAMC-30301/30301-M6/30301UU**

- Hexagon socket head cap screw M6x12...4 screws
- Hexagon socket head cap screw M6x12...4 screws (M6)
- Hexagon socket head cap screw 1/4-20UNCx1/2...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D
TAMC-30301	25	275	M6 P1	M4 depth 8
TAMC-30301-M6	25	275	M6 P1	M6 P1 depth 10
TAMC-30301UU	25.4	279.4	1/4-20UNC	1/4-20UNC depth 10

**TAMC-30301LS** Hexagon socket head cap screw M6x12...4 screws



**Specifications**

Part Number	METRIC	TAMC-20201	TAMC-20201-M6	TAMC-20201LS	TAMC-30301	TAMC-30301-M6	TAMC-30301LS
	INCH	—	TAMC-20201UU	—	—	TAMC-30301UU	—
Stage Size [mm]		200x200	200x200	200x200	300x300	300x300	300x300
Axes of Travel		X axis					
Micrometer Position		Center	Center	Center	Center	Center	Center
Travel [mm]		±50	±50	±50	±60	±60	±60
Lead of Actuator [mm/rotation]		2.0	2.0	2.0	2.0	2.0	2.0
Micrometer Readable Resolution [mm]		0.02	0.02	0.01	0.02	0.02	0.01
Guide Method		Crossed roller					
Primary Material		Aluminum					
Finish		Black anodized					
Load Capacity [N]		1176 (120.0kgf)	1176 (120.0kgf)	1176 (120.0kgf)	1274 (130.0kgf)	1274 (130.0kgf)	1274 (130.0kgf)
Travel Accuracy	Straightness [μm]	4	4	4	5	5	5
	Pitch [ ″ ]	60	60	60	60	60	60
	Yaw [ ″ ]	25	25	25	25	25	25
Max. Moment Capacity	Pitch [N·m]	112.0	112.0	112.0	117.0	117.0	117.0
	Roll [N·m]	119.0	119.0	119.0	122.0	122.0	122.0
	Yaw [N·m]	113.0	113.0	113.0	116.0	116.0	116.0
Moment Stiffness	Pitch [ ″/N·cm]	0.036	0.036	0.036	0.03	0.03	0.03
	Roll [ ″/N·cm]	0.026	0.026	0.026	0.024	0.024	0.024
Parallelism [μm]		100	100	100	100	100	100
Running Parallelism [μm]		25	25	25	40	40	40
Weight [kg]		3.5	3.5	3.7	10.7	10.7	10.9

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