

X Axis Steel Extended Contact Translation Stages

XY Axis Steel Extended Contact Translation Stages

TSD-651-M6/UU

RoHS

TSD-652-M6/UU

Hardened steel linear translation stages with integrated bearing ways and a black chrome finish. Our “Extended Contact” technology yields superior stability, stiffness, accuracy, and durability. These XY stages are integrated and therefore have a lower profile vs. (2) single axis stages combined.

- Bottom counter bore clearance holes are sized and spaced to accept both M6 or 1/4 size screws for mounting these stages down to a table.
- Both M6 or 1/4-20 inch tapped hole versions available.
- Both left and right hand adjustment versions available.
- Multiple actuator options available. Standard micrometer, sub-micron micrometer, fine pitch screw.
- All stages are equipped with a robust knurled head locking screw.



Attention

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

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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

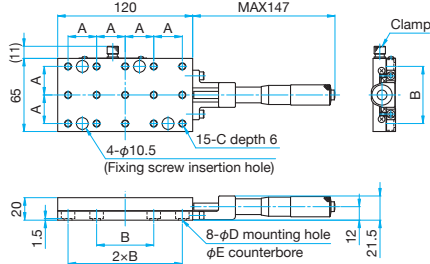
Specifications

| Part Number | METRIC | TSD-65121C-M6 | TSD-65121S-M6 | TSD-65171S-M6 | TSD-65122C-M6 | TSD-65122S-M6 | TSD-65172S-M6 |
|-------------------------------------|-------------------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
| | INCH | TSD-65121CUU | TSD-65121SUU | TSD-65171SUU | TSD-65122CUU | TSD-65122SUU | TSD-65172SUU |
| Stage Size [mm] | | 65×120 | 65×120 | 65×170 | 65×120 | 65×120 | 65×170 |
| Axes of Travel | | X axis | | | XY axis | | |
| Micrometer Position | | Center | Side | Side | Center | Side | Side |
| Travel [mm] | | ±20 | ±20 | ±25 | ±20 | ±20 | ±25 |
| Lead of Actuator [mm/rotation] | | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Micrometer Readable Resolution [mm] | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Guide Method | | Extended contact ball bearing guide | | | | | |
| Primary Material | | Steel | | | | | |
| Finish | | Super black chrome | | | | | |
| Load Capacity [N] | | 392 (40kgf) | 392 (40kgf) | 490 (50kgf) | 392 (40kgf) | 392 (40kgf) | 490 (50kgf) |
| Travel Accuracy | Straightness [μm] | 3 | 3 | 5 | 3 | 3 | 5 |
| | Pitch ["] | 25 | 25 | 25 | 25 | 25 | 25 |
| | Yaw ["] | 15 | 15 | 15 | 15 | 15 | 15 |
| Max. Moment Capacity | Pitch [N·m] | 19.6 | 19.6 | 29.4 | 9.8 | 9.8 | 9.8 |
| | Roll [N·m] | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 |
| | Yaw [N·m] | 9.8 | 9.8 | 14.7 | 9.8 | 9.8 | 10 |
| Moment Stiffness | Pitch [°/N·cm] | 0.1 | 0.1 | 0.07 | 0.3 | 0.3 | 0.27 |
| | Roll [°/N·cm] | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.27 |
| | Yaw [°/N·cm] | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.27 |
| Parallelism [μm] | | 50 | 50 | 50 | 100 | 100 | 100 |
| Running Parallelism [μm] | | 12 | 12 | 15 | 25 | 25 | 30 |
| Weight [kg] | | 1.0 | 1.0 | 1.7 | 2.4 | 2.4 | 3.4 |



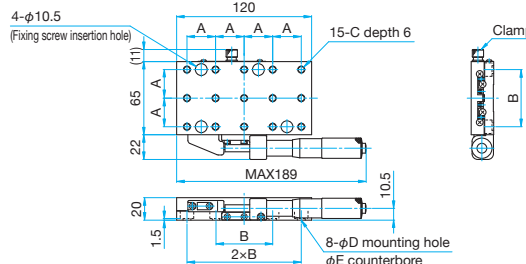
Outline Drawing

TSD-65121C-M6/65121CUU Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



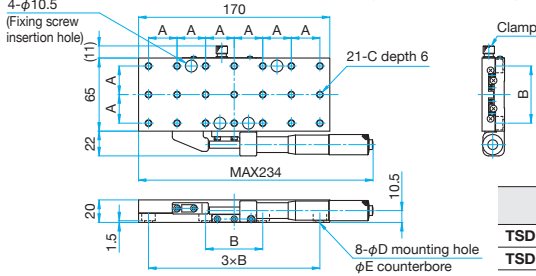
| Part Number | A (mm) | B (mm) | C | D (mm) | E (mm) |
|---------------|--------|--------|-----------|--------|--------|
| TSD-65121C-M6 | 25 | 50 | M6 P1 | 6.5 | 11 |
| TSD-65121CUU | 25.4 | 50.8 | 1/4-20UNC | 7 | 12 |

TSD-65121S-M6/65121SUU Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



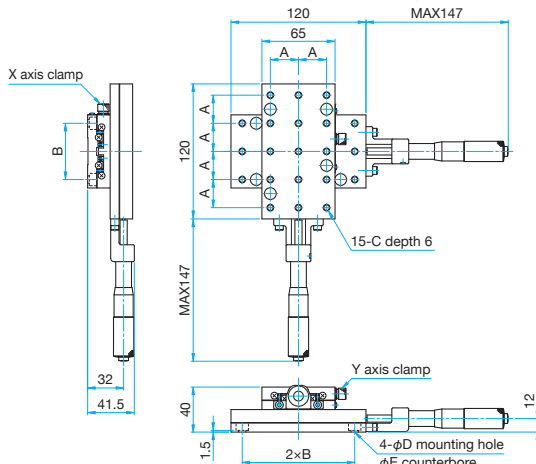
| Part Number | A (mm) | B (mm) | C | D (mm) | E (mm) |
|---------------|--------|--------|-----------|--------|--------|
| TSD-65121S-M6 | 25 | 50 | M6 P1 | 6.5 | 11 |
| TSD-65121SUU | 25.4 | 50.8 | 1/4-20UNC | 7 | 12 |

TSD-65171S-M6/65171SUU Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



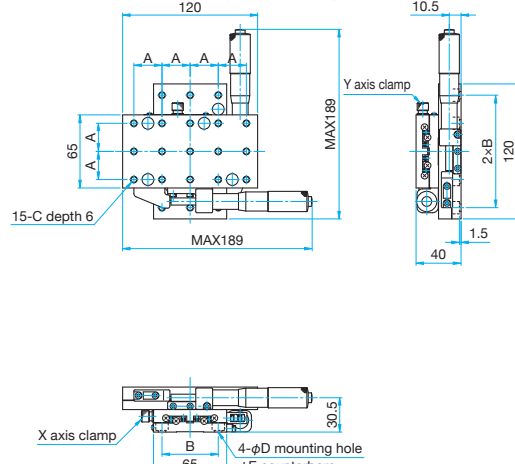
| Part Number | A (mm) | B (mm) | C | D (mm) | E (mm) |
|---------------|--------|--------|-----------|--------|--------|
| TSD-65171S-M6 | 25 | 50 | M6 P1 | 6.5 | 11 |
| TSD-65171SUU | 25.4 | 50.8 | 1/4-20UNC | 7 | 12 |

TSD-65122C-M6/65122CUU Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



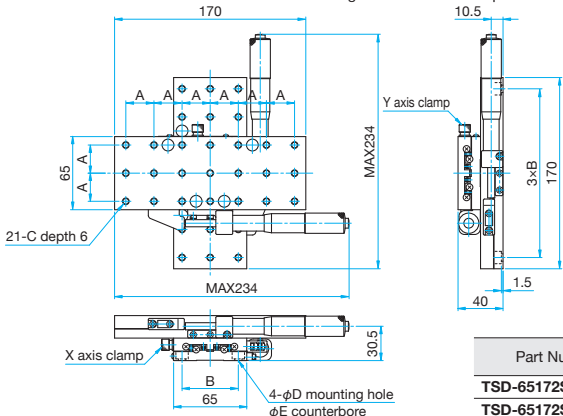
| Part Number | A (mm) | B (mm) | C | D (mm) | E (mm) |
|---------------|--------|--------|-----------|--------|--------|
| TSD-65122C-M6 | 25 | 50 | M6 P1 | 6.5 | 11 |
| TSD-65122CUU | 25.4 | 50.8 | 1/4-20UNC | 7 | 12 |

TSD-65122S-M6/65122SUU Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



| Part Number | A (mm) | B (mm) | C | D (mm) | E (mm) |
|---------------|--------|--------|-----------|--------|--------|
| TSD-65122S-M6 | 25 | 50 | M6 P1 | 6.5 | 11 |
| TSD-65122SUU | 25.4 | 50.8 | 1/4-20UNC | 7 | 12 |

TSD-65172S-M6/65172SUU Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



| Part Number | A (mm) | B (mm) | C | D (mm) | E (mm) |
|---------------|--------|--------|-----------|--------|--------|
| TSD-65172S-M6 | 25 | 50 | M6 P1 | 6.5 | 11 |
| TSD-65172SUU | 25.4 | 50.8 | 1/4-20UNC | 7 | 12 |

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