

## ▶ Manual Stages ▶ Slim Stages, Cross Roller Stages

Motorized  
StagesAutomated  
Products for  
Microscopes

Fix Stages

Thin V-B  
StagesRack & Pinion  
StagesHigh-Grade  
StagesSlim Stages,  
Cross Roller  
Stages

Z Lift Stages,

Z Stages

Rotary Stages

Tilt/Tilt  
StagesTilt/Rotary  
Stages

XZ, YZ Stages

XYZ Stages

## XYZ Slim Stages, XYZ Rotary Slim Stages 90 x 90

V-B method

V-CR method



↑ TLT-907-S1



↑ TLT-907-R1



↑ TTR-907-S1



↑ TTR-907-R1

## Features

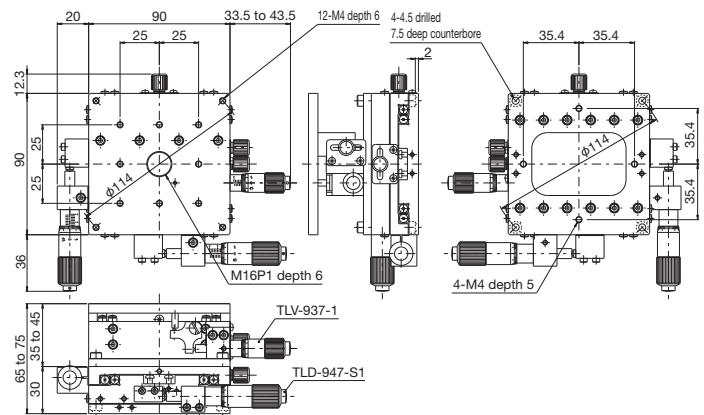
- An XYZ stage that uses V-CR method travel guides. (XY stages and Z stages are V-B type.)
- Side or reverse side options for the micrometer mounting position are available.
- Versatile use for precision positioning of cameras, sensors, workpieces, and more.

| Model number                     | TLT-907-S1  | TLT-907-R1           | TTR-907-S1  | TTR-907-R1 |
|----------------------------------|---|----------------------|---|------------|
| Model name                       | XYZ Slim Stage 90 x 90  |                      | XYZ Rotary Slim Stage $\phi$ 90   |            |
| Travel direction                 | XYZ-axis triple direction   |                      | XYZ rotary quadruple direction  |            |
| Stage surface                    | 90 mm x 90 mm   |                      | $\phi$ 90 mm  |            |
| Clamp method                     | Plate clamp   |                      | XYZ axis plate clamp, rotating axis compound clamp  |            |
| Operating part mounting position | XY-axis side  | XY-axis reverse side | XY-axis side  |            |
| Feed method                      | XY axis MHM1-15, Z axis CMH-13FM<br>(each axis has a standard micrometer)     |                      | XY axis MHM1-15, Z axis CMH-13FM, Rotary CMH-13RM<br>(each axis has a standard micrometer)  |            |
| Travel amount                    | XY axes $\pm$ 7.5 mm, Z axis 0 to 10 mm                                       |                      | XY axes $\pm$ 7.5 mm, Z axis 0 to 10 mm, rotating axis moves 360°<br>with coarse movement and $\pm$ 5° with fine movement                   |            |
| Travel amount/1 knob rotation    | Each axis is 0.5 mm   |                      | XYZ axes are 0.5 mm, rotating axis moves approx. 0.5°   |            |
| Scale                            | Micrometer 0.01 mm  |                      | XYZ axis micrometer 0.01 mm, rotating axis vernier reading 5'/<br>micrometer 0.01 mm (1 scale marking is approx. 0.01°)                     |            |
| Sensitivity                      | 0.003 mm  |                      | XYZ axes 0.003 mm   |            |
| Travel guide                     | XY axis: V-groove and cross rollers, Z axis: V-groove rail and steel<br>balls |                      | XY axis: V-groove and cross rollers,<br>Z axis: V-groove rail and steel balls, rotating axis: sliding                                       |            |
| Travel accuracy                  | Straightness: XY axes 0.003 mm, Z axis 0.008 mm                               |                      | Straightness: XY axes 0.003 mm, Straightness: Z axis 0.008 mm,<br>Circularity: rotating axis 0.04 mm, Surface runout: rotating axis 0.02 mm |            |
| XY orthogonality                 | 0.02 mm   |                      | 0.02 mm   |            |
| Load capacity                    | 49 N (5 kgf)  |                      | 29.4 N (3 kgf)  |            |
| Mass                             | 1.25 kg   |                      | 1.75 kg   |            |
| Main materials/surface treatment | Aluminum alloy/black satin anodized finish                                    |                      |   |            |

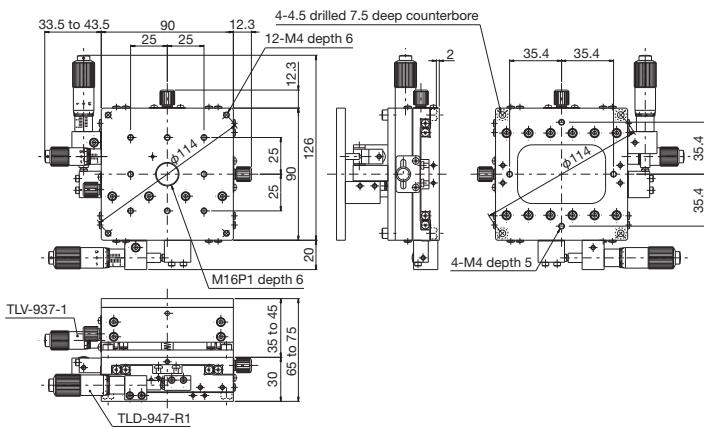


## Slim Stages, Cross Roller Stages ◀ Manual Stages ◀

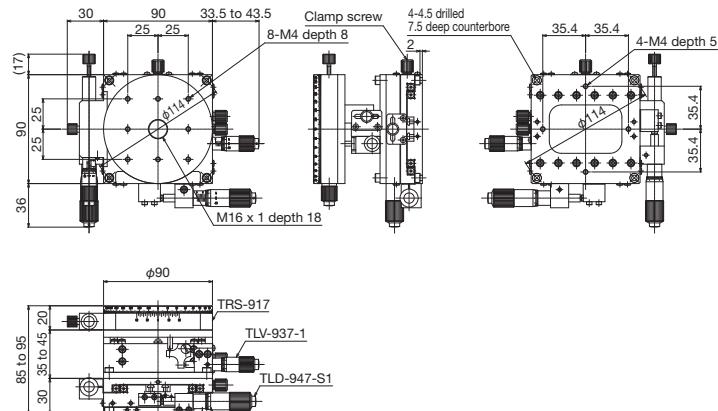
## Product Appearance



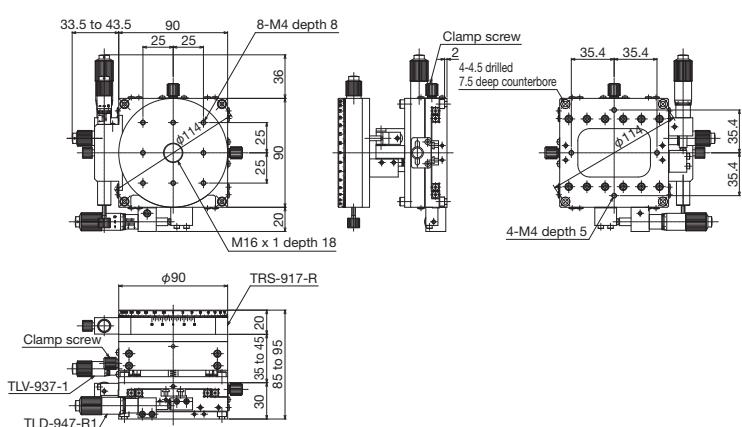
↑ TLT-907-S1



↑ TLT-907-R1



↑ TTR-907-S1



↑ TTR-907-R1

|   |                                    |               |
|---|------------------------------------|---------------|
| Motorized Stages                                | Automated Products for Microscopes | Manual Stages |
| Fix Stages                                      |                                    |               |
| Thin VIB Stages                                 |                                    |               |
| Rack & Pinion Stages                            |                                    |               |
| High-Grade Stages                               |                                    |               |
| Slim Stages, Z Lift Stages, Cross Roller Stages |                                    |               |
| Tilt Stages                                     |                                    |               |
| Rotary Stages                                   |                                    |               |
| Tilt/Rotary Stages                              |                                    |               |
| XZ, YZ Stages                                   |                                    |               |
| XIZ Stages                                      |                                    |               |

## ► Manual Stages ► Slim Stages, Cross Roller Stages

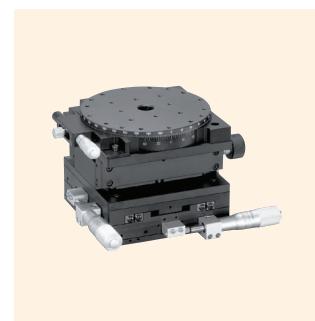
## XYZ Slim Stages, XYZ Rotary Slim Stages 125 x 125

 V-CR  
method


↑ TLT-140-S1



↑ TLT-140-R1



↑ TTR-101-S1

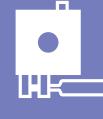


↑ TTR-101-R1

## Features

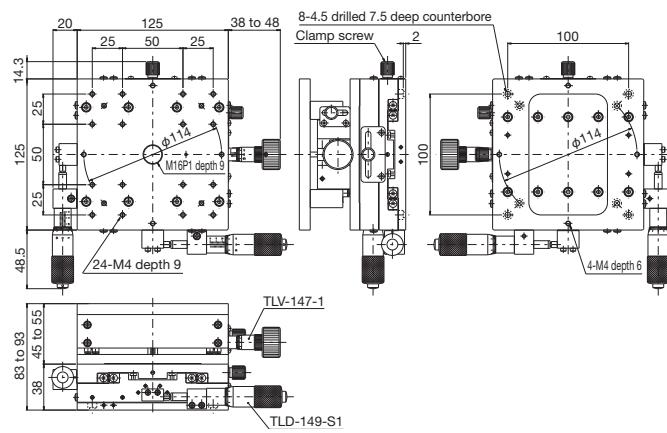
- XYZ stages combine XY stages with a Z stage, while XYZ rotary stages combine XY slim stages, Z slim stages, and rotary slim stages.
- Types with reverse micrometer orientation are available to enable operation from the left and right.
- Versatile use for precision positioning of cameras, sensors, workpieces, and more.

| Model number                     | TLT-140-S1  | TLT-140-R1           | TTR-101-S1   | TTR-101-R1 |
|----------------------------------|---|----------------------|--|------------|
| Model name                       | XYZ Slim Stage 125 x 125  |                      | XYZ Rotary Slim Stage $\phi$ 125   |            |
| Travel direction                 | XYZ-axis triple direction   |                      | XYZ rotary quadruple direction   |            |
| Stage surface                    | 125 mm x 125 mm   |                      | $\phi$ 125 mm  |            |
| Clamp method                     | Plate clamp   |                      | XYZ axis plate clamp, rotating axis complex clamp  |            |
| Operating part mounting position | XY-axis side  | XY-axis reverse side | XY-axis side   |            |
| Feed method                      | XY axis MHN1-25T, Z axis CMH-13FM,<br>(each is a standard axis micrometer)                  |                      | XY axis MHN1-25T, Z axis CMH-13FM, Rotary CMH-13RM,<br>(each axis has a standard micrometer)                               |            |
| Travel amount                    | XY axes $\pm$ 12.5 mm, Z axis 0 to 10 mm  |                      | XY axes $\pm$ 12.5 mm, Z axis 0 to 10 mm, rotating axis moves 360°<br>with coarse movement and $\pm$ 5° with fine movement |            |
| Travel amount/1 knob rotation    | Each axis is 0.5 mm   |                      | XYZ axes 0.5 mm, rotating axis approx. 0.39°   |            |
| Scale                            | Micrometer 0.01 mm  |                      | XYZ axis micrometer 0.01 mm, rotating axis vernier reading 5'/<br>micrometer 0.01 mm (1 scale marking is approx. 0.008")   |            |
| Sensitivity                      | 0.003 mm  |                      | XYZ axes 0.003 mm  |            |
| Travel guide                     | V-groove and cross rollers  |                      | XYZ axis: V-groove and cross rollers, rotating axis: sliding   |            |
| Travel accuracy                  | Straightness: XY axes 0.003 mm, Z axis 0.005 mm   |                      | Straightness: XY axes 0.003 mm, Z axis 0.005 mm,<br>Circularity: rotating axis 0.05 mm, Surface runout: rotating axis 0.03 |            |
| XY orthogonality                 |   | 0.02 mm              |  |            |
| Load capacity                    | 49 N (5 kgf)  |                      | 29.4 N (3 kgf)   |            |
| Mass                             | 5.7 kg  |                      | 6.6 kg   |            |
| Main materials/surface treatment | XY axis: Steel/hardened black chrome,<br>Z axis: Aluminum alloy/black satin anodized finish |                      | XY axis: Steel/hardened black chrome,<br>Z rotating axis: Aluminum alloy/black satin anodized finish                       |            |

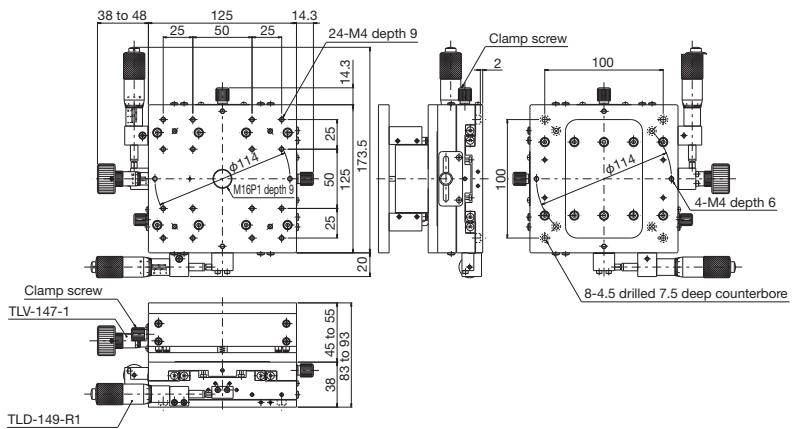


Slim Stages, Cross Roller Stages ◀ Manual Stages ◀

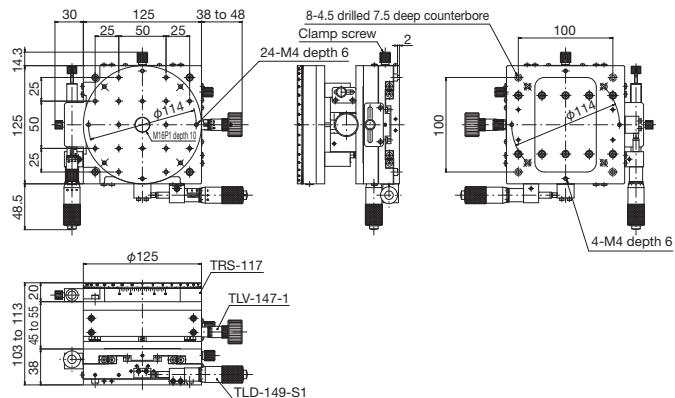
## Product Appearance



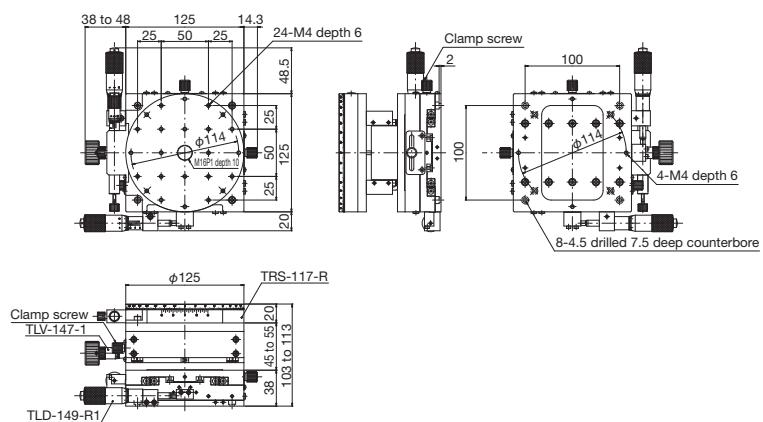
↑ TLT-140-S1



↑ TLT-140-R1



↑ TTR-101-S1



↑ TTR-101-R1