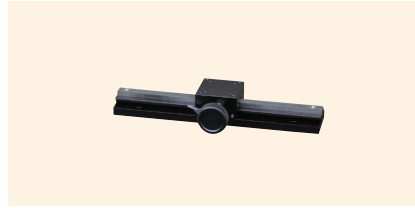


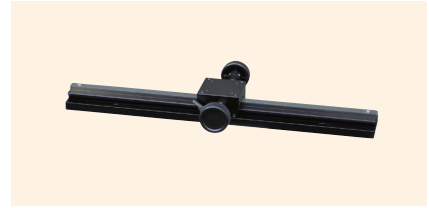
## Long-Distance Stages



↑ TLS-414WL1



↑ TLS-414L2



↑ TLS-414WL3



↑ TLS-414WSL4



↑ TLS-414WSL5

### Features

- The long-distance travel unit uses a dovetail (D-T method) for the travel guide.
- Versatile use for positioning of cameras, sensors, etc.
- Blocks can be added to enable multiple travel units to be installed on 1 rail.
- A lever type clamp enables fixing in a desired position with strong retention force.
- Includes a 1000 mm-long scale sticker with 1 mm graduations and position stickers. These can be stuck on at your desired position.



Example with added block

Model number	TLS-414L1	TLS-414L2	TLS-414L3	TLS-414L4	TLS-414L5	TLS-414WL1	TLS-414WL2	TLS-414WL3	TLS-414WL4	TLS-414WL5
Model name	Long-Distance Stage Rail length 100 mm	Long-Distance Stage Rail length 200 mm	Long-Distance Stage Rail length 300 mm	Long-Distance Stage Rail length 400 mm	Long-Distance Stage Rail length 500 mm	Long-Distance Stage Rail length 100 mm (double knob)	Long-Distance Stage Rail length 200 mm (double knob)	Long-Distance Stage Rail length 300 mm (double knob)	Long-Distance Stage Rail length 400 mm (double knob)	Long-Distance Stage Rail length 500 mm (double knob)
Travel direction	X-axis single direction									
Stage surface	40 mm x 40 mm									
Clamp method	Lever method									
Operating part mounting position	Single knob					Double knob				
Feed method	Rack & pinion method									
Travel amount	60 mm	160 mm	260 mm	360 mm	460 mm	60 mm	160 mm	260 mm	360 mm	460 mm
Travel amount/1 knob rotation	Approx. 18 mm									
Scale	1 mm									
Sensitivity	0.1 mm									
Travel guide	Dovetail									
Travel accuracy	Straightness: 0.05 mm	Straightness: 0.1 mm	Straightness: 0.15 mm	Straightness: 0.2 mm	Straightness: 0.25 mm	Straightness: 0.05 mm	Straightness: 0.1 mm	Straightness: 0.15 mm	Straightness: 0.2 mm	Straightness: 0.25 mm
Load capacity	29.4 N (3 kgf)									
Mass	0.26 kg	0.42 kg	0.57 kg	0.71 kg	0.86 kg	0.28 kg	0.44 kg	0.59 kg	0.73 kg	0.88 kg
Main materials/surface treatment	Aluminum alloy/black satin anodized finish									

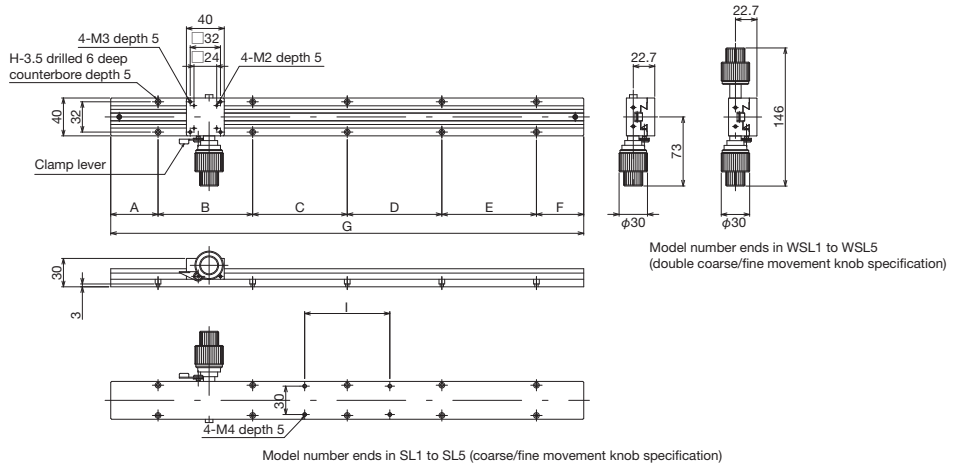
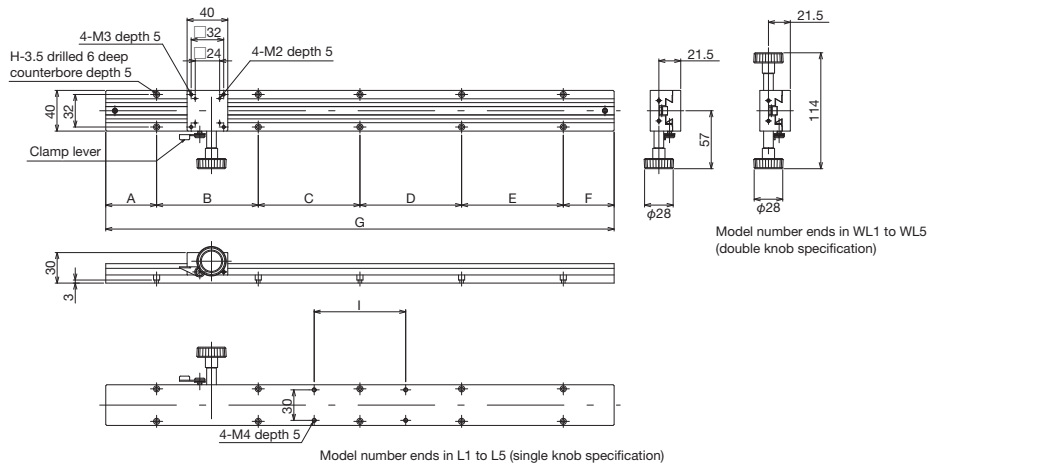
Model number	TLS-414SL1	TLS-414SL2	TLS-414SL3	TLS-414SL4	TLS-414SL5	TLS-414WSL1	TLS-414WSL2	TLS-414WSL3	TLS-414WSL4	TLS-414WSL5
Model name	Long-Distance Stage Rail length 100 mm (coarse/ fine movement knob)	Long-Distance Stage Rail length 200 mm (coarse/ fine movement knob)	Long-Distance Stage Rail length 300 mm (coarse/ fine movement knob)	Long-Distance Stage Rail length 400 mm (coarse/ fine movement knob)	Long-Distance Stage Rail length 500 mm (coarse/ fine movement knob)	Long-Distance Stage Rail length 100 mm (coarse/ fine movement knob)	Long-Distance Stage Rail length 200 mm (double coarse/ fine movement knob)	Long-Distance Stage Rail length 300 mm (double coarse/ fine movement knob)	Long-Distance Stage Rail length 400 mm (double coarse/ fine movement knob)	Long-Distance Stage Rail length 500 mm (double coarse/ fine movement knob)
Travel direction	X-axis single direction									
Stage surface	40 mm x 40 mm									
Clamp method	Lever method									
Operating part mounting position	Single coarse/fine movement knob					Double coarse/fine movement knob				
Feed method	Rack & pinion method									
Travel amount	60 mm	160 mm	260 mm	360 mm	460 mm	60 mm	160 mm	260 mm	360 mm	460 mm
Travel amount/1 knob rotation	Coarse movement: approx. 25.5 mm, Fine movement: approx. 3.3 mm									
Scale	1 mm									
Sensitivity	0.1 mm									
Travel guide	Dovetail									
Travel accuracy	Straightness: 0.05 mm	Straightness: 0.1 mm	Straightness: 0.15 mm	Straightness: 0.2 mm	Straightness: 0.25 mm	Straightness: 0.05 mm	Straightness: 0.1 mm	Straightness: 0.15 mm	Straightness: 0.2 mm	Straightness: 0.25 mm
Load capacity	29.4 N (3 kgf)									
Mass	0.34 kg	0.5 kg	0.65 kg	0.79 kg	0.94 kg	0.4 kg	0.56 kg	0.71 kg	0.85 kg	1 kg
Main materials/surface treatment	Aluminum alloy/black satin anodized finish									



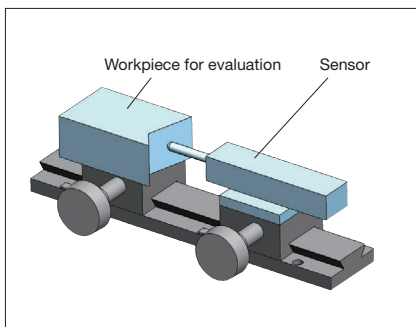
# Rack & Pinion Stages ◀ Manual Stages ◀

## Product Appearance

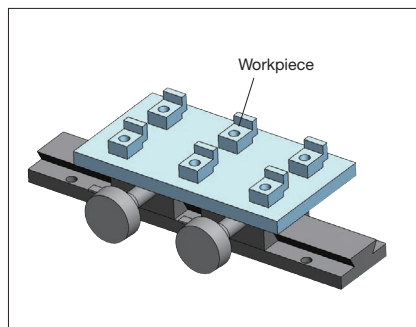
Model number	TLS-414L1, WL1	TLS-414L2, WL2	TLS-414L3, WL3	TLS-414L4, WL4	TLS-414L5, WL5
	TLS-414SL1, WSL1	TLS-414SL2, WSL2	TLS-414SL3, WSL3	TLS-414SL4, WSL4	TLS-414SL5, WSL5
Dimensions (mm)					
A	12.5	25	50	50	50
B	75	150	100	100	100
C	0	0	100	100	100
D	0	0	0	100	100
E	0	0	0	0	100
F	12.5	25	50	50	50
G	100	200	300	400	500
H	4	4	6	8	10
I	40	90	-	-	-



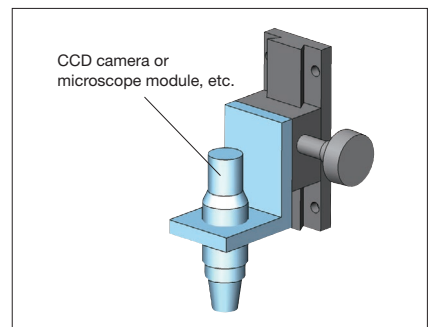
## Product usage examples



↑ Workpiece and sensor positioning



↑ Connecting 2 blocks for use as a large sample stage



↑ Adjusting the focus of optical modules

- Motorized Stages
- Automated Products for Microscopes
- Manual Stages
- Fix Stages
- Thin VB Stages
- Rack & Pinion Stages
- High-Grade Stages
- Spin Stages, Cross Roller Stages
- Z Lift Stages, Z Stages
- Rotary Stages
- Tilt Stages
- Tilt/Rotary Stages
- XZ, YZ Stages
- XYZ Stages

## Long-Distance Stage Blocks



↑ TBL-414



↑ TBL-414W



↑ TBL-414S



↑ TBL-414WS

### Features

- These are blocks for long-distance stages. These can be added to rails.
- 4 knob types are available.
- Position stickers are supplied. These can be stuck on at your desired position.

Model number	TBL-414	TBL-414W	TBL-414S	TBL-414WS
Model name	Long-Distance Stage Block	Long-Distance Stage Block (Double Knob)	Long-Distance Stage Block (Coarse/Fine Movement Knob)	Long-Distance Stage Block (Double Coarse/Fine Movement Knob)
Stage surface	40 mm x 40 mm			
Clamp method	Lever method			
Operating part mounting position	Single knob	Double knob	Single coarse/fine movement knob	Double coarse/fine movement knob
Travel amount/1 knob rotation	Approx. 18 mm when added to long-distance stages		Coarse movement approx. 25.5 mm, Fine movement approx. 3.3 mm when added to long-distance stages	
Mass	0.1 kg	0.19 kg	0.13 kg	0.25 kg
Main materials/surface treatment	Aluminum alloy/black satin anodized finish			

Motorized Stages

Automated Products for Microscopes

Manual Stages

Fx Stages

Thin Yθ Stages

Rack & Pinion Stages

High-Grade Stages

Spin Stages, Cross Roller Stages

Z Lin Stages, Z Stages

Rotary Stages

TR Stages

TR/Rotary Stages

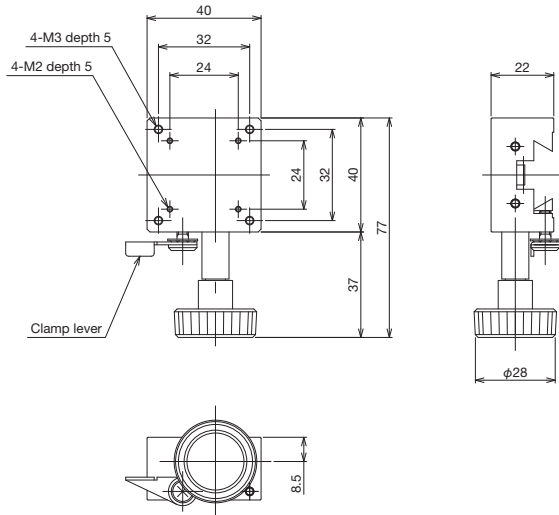
XZ, YZ Stages

XZ Stages

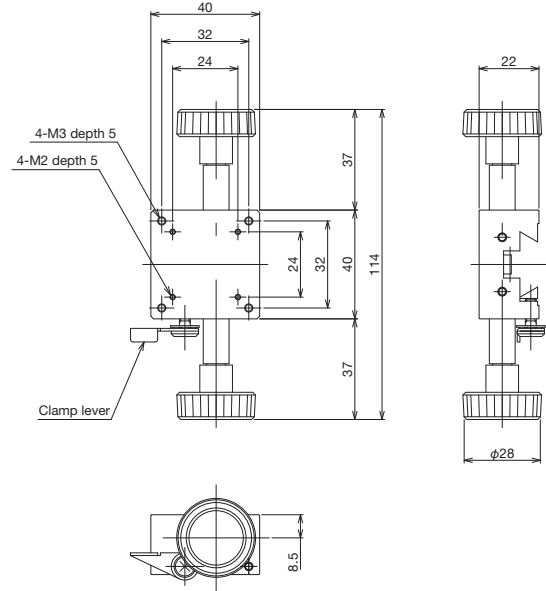


# Rack & Pinion Stages ◀ Manual Stages ▶

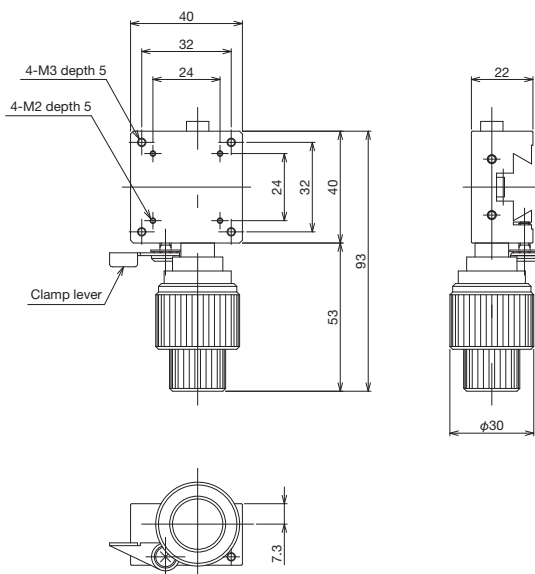
## Product Appearance



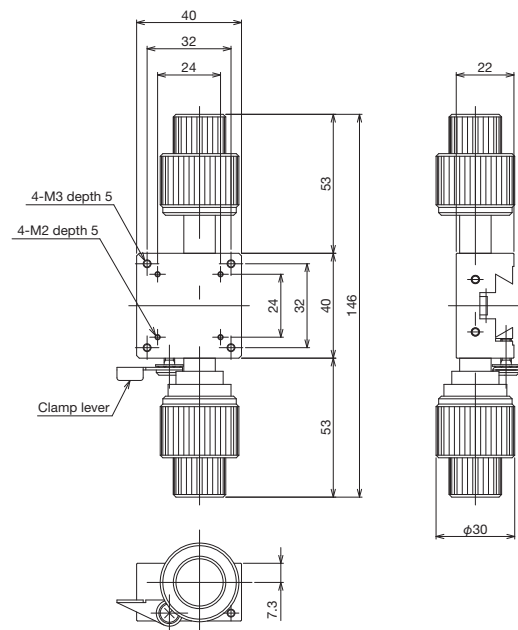
↑ TBL-414



↑ TBL-414W



↑ TBL-414S



↑ TBL-414WS

Motorized Stages	Automated Products for Microscopes	<b>Manual Stages</b>	Fix Stages	Thin VB Stages	Rack & Pinion Stages	High-Grade Stages	Spin Stages, Cross Roller Stages	Z-Like Stages, Z Stages	Rotary Stages	Tilt Stages	Tilt/Rotary Stages	XZ, YZ Stages	XYZ Stages
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