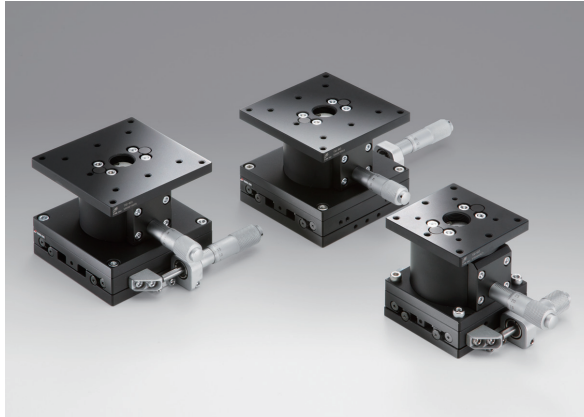


XZ axis Steel Extended Contact Slide Stages

TSD-254 Stage size 25mmTSD-404 Stage size 40mm

These stages are combinations of ball bearing slide guide X axis stages and flat Z axis stages.



Guide

▶ Vacuum-compatible stainless steel stages (TSDS-254/404) are also available. [Reference](#) E206

Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head $0.5\text{mm}/\text{rotation}$).

Specifications

Guide	METRIC	TSD-254C	TSD-254S	TSD-404C	TSD-404S
	Part Number	INCH	—	—	TSD-404CUU
X axis Stages	METRIC	—	TSD-254SR	—	TSD-404SR
	INCH	—	—	—	TSD-404SRUU
XY axis Stages					
Z axis Stages					
XZ axis Stages					
XYZ axis Stages					
θ axis Stages					
Goniometer					
Inclination					
Vacuum					
Ball Guide					
Crossed Roller					
Dovetail					
Lapping					
V Groove Screw					
Others					
<input type="checkbox"/> 15mm					
<input checked="" type="checkbox"/> 25mm					
<input type="checkbox"/> 40mm					
<input type="checkbox"/> 60mm					
<input type="checkbox"/> 65mm					
<input type="checkbox"/> 80mm					
<input type="checkbox"/> 100mm					
<input type="checkbox"/> 120mm					
Others					

Option for 25mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-42525	0.25	—	E008

Option for 40mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	X axis: FPSA-62540 Z axis: FPSA-42525	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The load capacity of the FP type is 39.2N (4.0kgf). (40mm)

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F10

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Ball Guide

Crossed Roller

Dovetail

Lapping

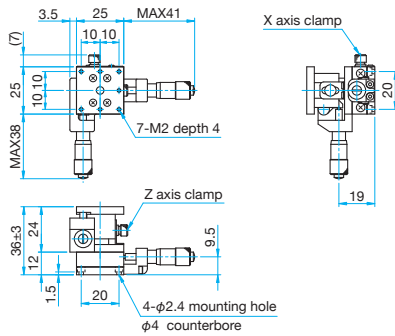
V Groove Screw

Others

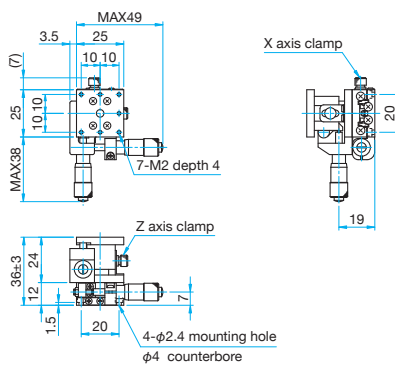


Outline Drawing

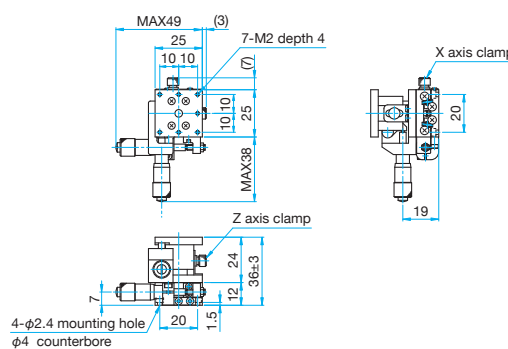
TSD-254C Hexagonal socket head cap screw M2×4...4 screws



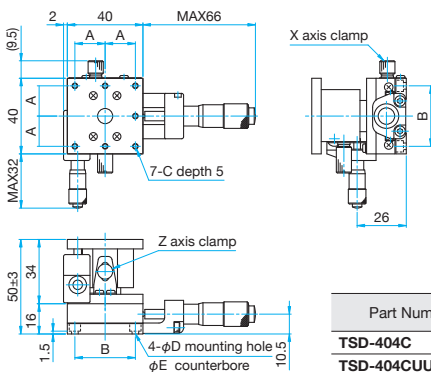
TSD-254S Hexagonal socket head cap screw M2×4...4 screws



TSD-254SR Hexagonal socket head cap screw M2×4...4 screws



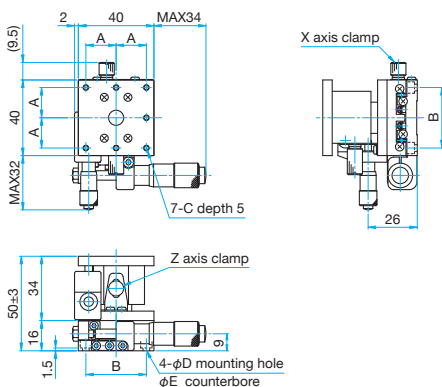
TSD-404C/404CUU Hexagonal socket head cap screw M3×6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNC×3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-404C	16	32	M3	3.5	6
TSD-404CUU	15.875	31.75	6-32UNC	4	6.5

TSD-404S/404SUU

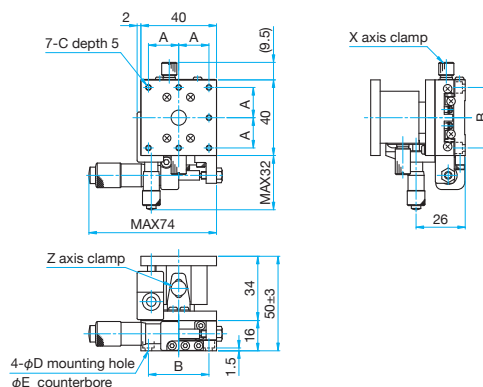
Hexagonal socket head cap screw M3×6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNC×3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-404S	16	32	M3	3.5	6
TSD-404SUU	15.875	31.75	6-32UNC	4	6.5

TSD-404SR/404SRUU

Hexagonal socket head cap screw M3×6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNC×3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-404SR	16	32	M3	3.5	6
TSD-404SRUU	15.875	31.75	6-32UNC	4	6.5

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□ 15mm

□ 25mm

□ 40mm

□ 60mm

□ 65mm

□ 80mm

□ 100mm

□ 120mm

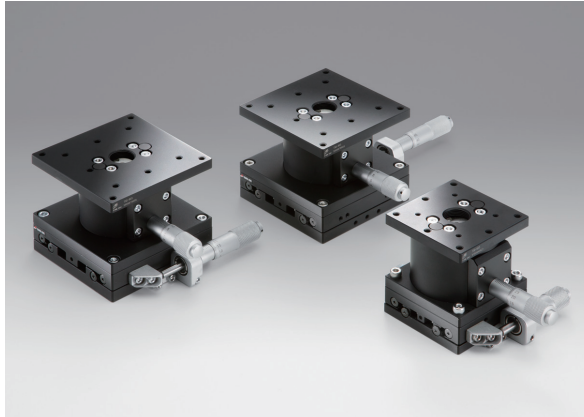
Others

XZ axis Steel Extended Contact Slide Stages

TSD-604 Stage size 60mm

TSD-654 Stage size 65mm


These stages are combinations of ball bearing slide guide X axis stages and flat Z axis stages.



Guide

▶ Vacuum-compatible stainless steel stages (TSDS-604/654) are also available. [Reference](#) E206

Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head 0.5mm/rotation).

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

Specifications

Part Number	METRIC	TSD-604C	TSD-604S	TSD-654C-M6	TSD-654S-M6
	INCH	—	—	TSD-654CUU	TSD-654SUU
(Opposite Model)	METRIC	—	TSD-604SR	—	TSD-654SR-M6
	INCH	—	—	—	TSD-654SRUU
Table Size [mm]		60×60	60×60	65×65	65×65
Axes of Travel		XZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		X axis ± 6.5 Z axis ± 5	X axis ± 6.5 Z axis ± 5	X axis ± 6.5 Z axis ± 5	X axis ± 6.5 Z axis ± 5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome + Black matte			
Load Capacity [N]		147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Travel Accuracy	Straightness [μm]	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [N·m]	6.9	6.9	6.9	6.9
	Roll [N·m]	6.9	6.9	6.9	6.9
Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.73	0.73	0.73	0.73
	Roll [$^{\circ}$ /N·cm]	0.64	0.64	0.64	0.64
Parallelism [μm]		110	110	110	110
Options		FP	FP	FP	FP
Weight [kg]		1.5	1.5	1.7	1.7

Option

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

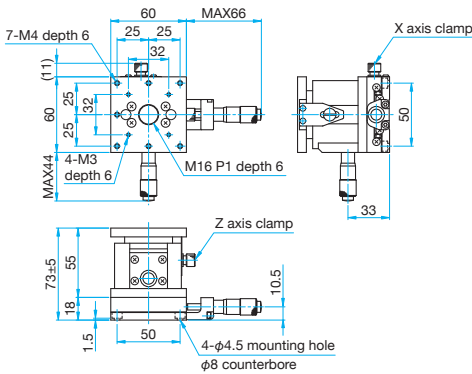
* The load capacity of the FP type is 39.2N (4.0kgf).

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

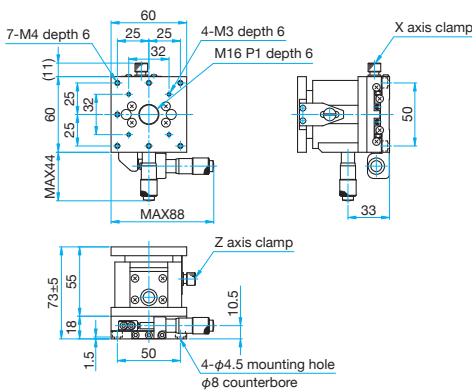


Outline Drawing

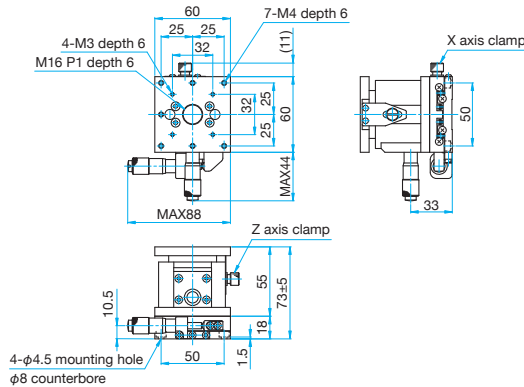
TSD-604C Hexagonal socket head cap screw M4×6...4 screws



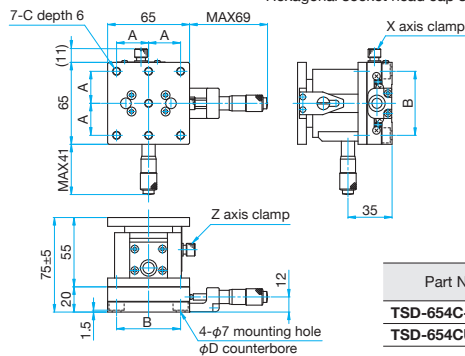
TSD-604S Hexagonal socket head cap screw M4×6...4 screws



TSD-604SR Hexagonal socket head cap screw M4×6...4 screws



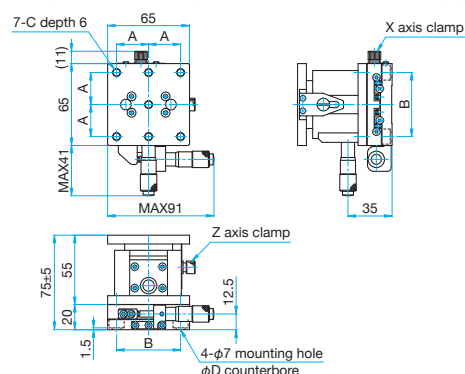
TSD-654C-M6/654CUU Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-654C-M6	25	50	M6 P1	11
TSD-654CUU	25.4	50.8	1/4-20UNC	12

TSD-654S-M6/654SUU

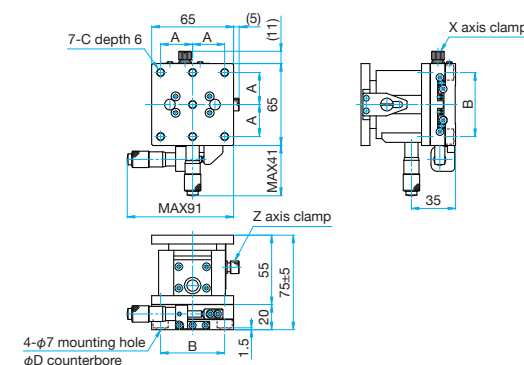
Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-654S-M6	25	50	M6 P1	11
TSD-654SUU	25.4	50.8	1/4-20UNC	12

TSD-654SR-M6/654SRUU

Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-654SR-M6	25	50	M6 P1	11
TSD-654SRUU	25.4	50.8	1/4-20UNC	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

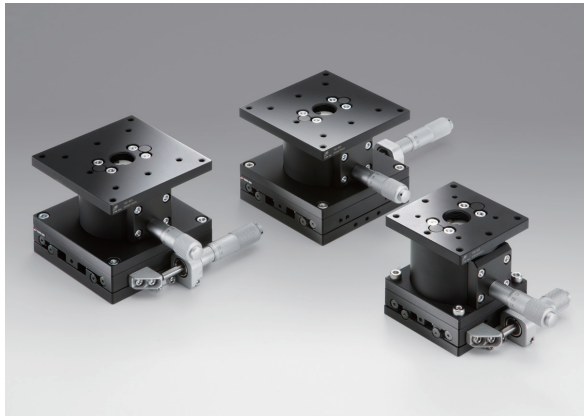
Others

XZ axis Steel Extended Contact Slide Stages

TSD-804 Stage size 80mm

TSD-1004 Stage size 100mm


These stages are combinations of ball bearing slide guide X axis stages and flat Z axis stages.



Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head 0.5mm/rotation).

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

Specifications

Part Number	METRIC	TSD-804C	TSD-804S	TSD-1004C	TSD-1004S
(Opposite Model)	METRIC	—	TSD-804SR	—	TSD-1004SR
Table Size [mm]		80×80	80×80	100×100	100×100
Axes of Travel		XZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		X axis ± 12.5 Z axis ± 5	X axis ± 12.5 Z axis ± 5	X axis ± 12.5 Z axis ± 10	X axis ± 12.5 Z axis ± 10
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome + Black matte			
Load Capacity [N]		147 (15.0kgf)	147 (15.0kgf)	245 (25.0kgf)	245 (25.0kgf)
Travel Accuracy	Straightness [μm]	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [$\text{N}\cdot\text{m}$]	6.9	6.9	9.8	9.8
	Roll [$\text{N}\cdot\text{m}$]	6.9	6.9	9.8	9.8
Moment Stiffness	Pitch [$^{\circ}/\text{N}\cdot\text{cm}$]	0.61	0.61	0.42	0.42
	Roll [$^{\circ}/\text{N}\cdot\text{cm}$]	0.57	0.57	0.39	0.39
Parallelism [μm]		110	110	130	130
Options		FP	FP	FP	FP
Weight [kg]		2.1	2.1	5.0	5.0

Option for 80mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	X axis: FPSA-62550 Z axis: FPSA-62540	0.25	—	E008

Option for 100mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62555	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

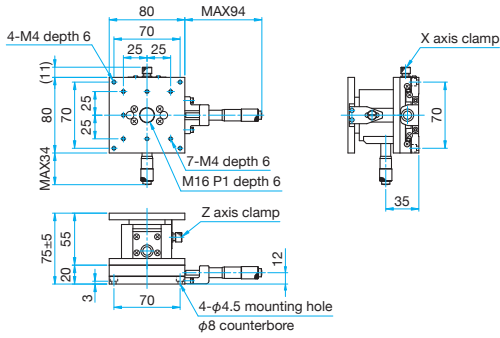
* The load capacity of the FP type is 39.2N (4.0kgf).

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

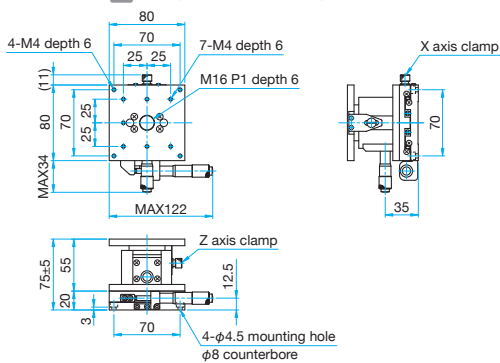


Outline Drawing

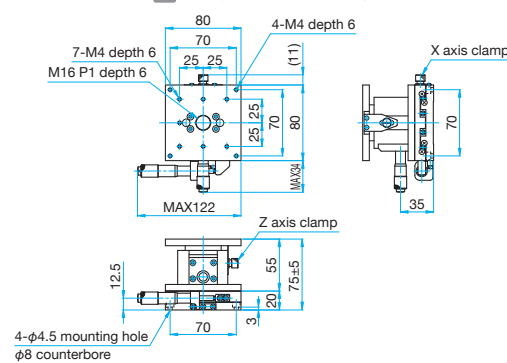
TSD-804C Hexagonal socket head cap screw M4x8...4 screws



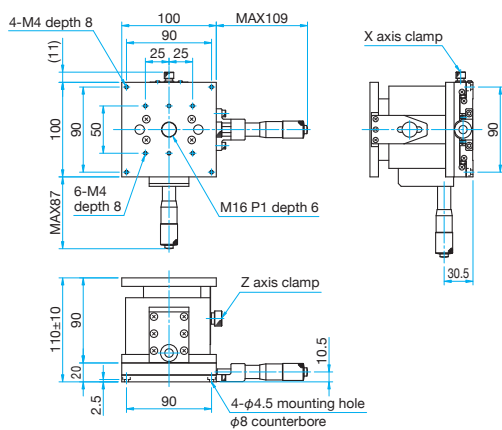
TSD-804S Hexagonal socket head cap screw M4x8...4 screws



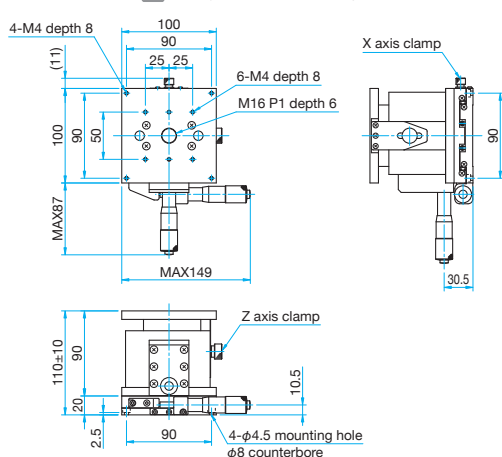
TSD-804SR Hexagonal socket head cap screw M4x8...4 screws



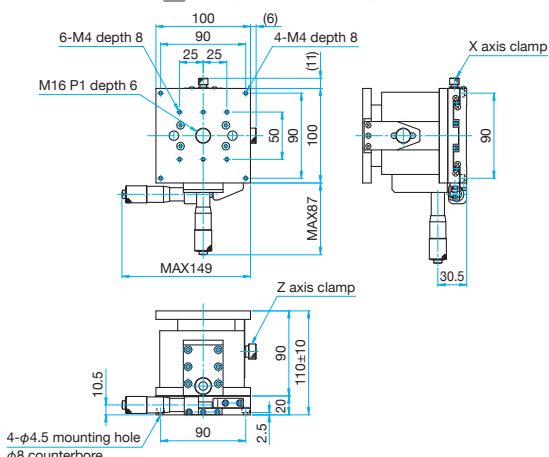
TSD-1004C Hexagonal socket head cap screw M4x8...4 screws



TSD-1004S Hexagonal socket head cap screw M4x8...4 screws



TSD-1004SR Hexagonal socket head cap screw M4x8...4 screws



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

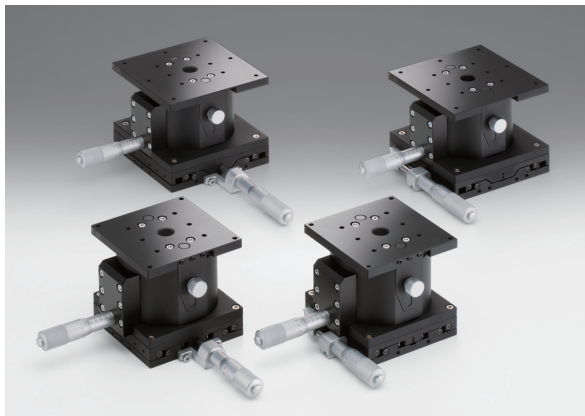
120mm

Others

XZ axis Steel Extended Contact Slide Stages | TSD-1204 Stage size □120mm

RoHS

These stages are combinations of ball bearing slide guide X axis stages and flat Z axis stages.



Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head $0.5\text{mm}/\text{rotation}$).

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

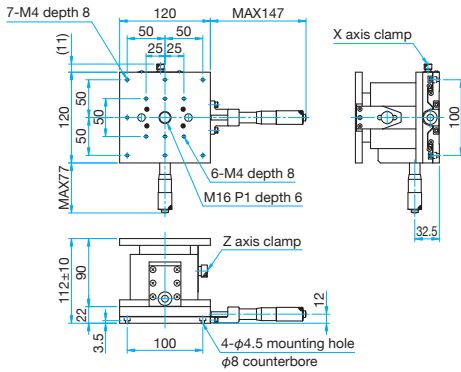
Others

Specifications					
Part Number	METRIC	TSD-1204C	TSD-1204S	TSD-1204C-M6	TSD-1204S-M6
	INCH	—	—	TSD-1204CUU	TSD-1204SUU
(Opposite Model)	METRIC	—	TSD-1204SR	—	TSD-1204SR-M6
	INCH	—	—	—	TSD-1204SRUU
Table Size [mm]		120×120	120×120	120×120	120×120
Axes of Travel		XZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		X axis ± 20 Z axis ± 5	X axis ± 20 Z axis ± 5	X axis ± 20 Z axis ± 5	X axis ± 20 Z axis ± 5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome + Black matte			
Load Capacity [N]		245 (25.0kgf)	245 (25.0kgf)	245 (25.0kgf)	245 (25.0kgf)
Travel Accuracy	Straightness [μm]	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [$\text{N}\cdot\text{m}$]	9.8	9.8	9.8	9.8
	Roll [$\text{N}\cdot\text{m}$]	9.8	9.8	9.8	9.8
Moment Stiffness	Pitch [$^{\circ}/\text{N}\cdot\text{cm}$]	0.4	0.4	0.4	0.4
	Roll [$^{\circ}/\text{N}\cdot\text{cm}$]	0.38	0.38	0.38	0.38
Parallelism [μm]		150	150	150	150
Weight [kg]		6.2	6.2	6.2	6.2

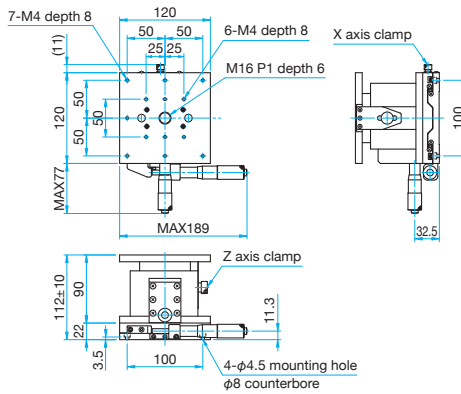


Outline Drawing

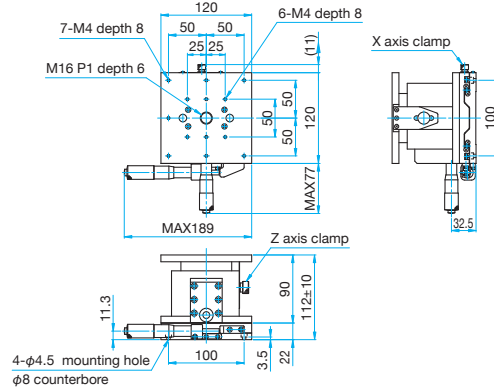
TSD-1204C Hexagonal socket head cap screw M4x8...4 screws



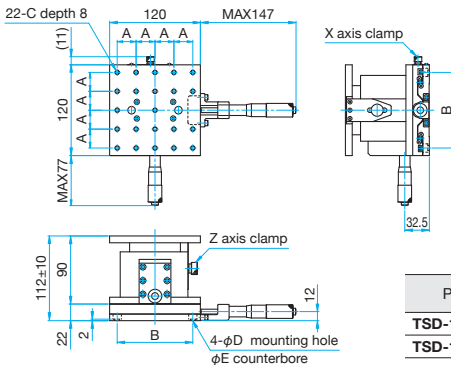
TSD-1204S Hexagonal socket head cap screw M4x8...4 screws



TSD-1204SR Hexagonal socket head cap screw M4x8...4 screws

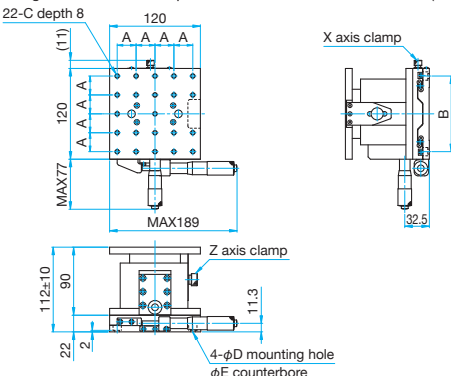


TSD-1204C-M6/1204CUU Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



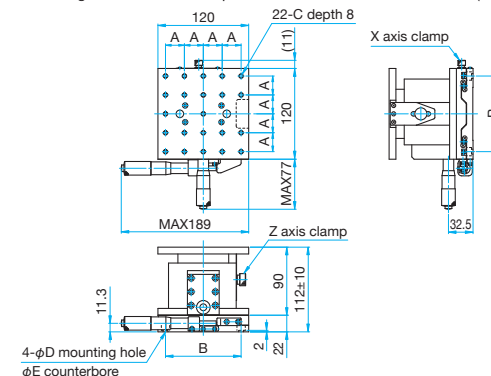
Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-1204C-M6	25	50	M6 P1	6.5	11
TSD-1204CUU	25.4	50.8	1/4-20UNC	7	12

TSD-1204S-M6/1204SUU Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-1204S-M6	25	50	M6 P1	6.5	11
TSD-1204SUU	25.4	50.8	1/4-20UNC	7	12

TSD-1204SR-M6/1204SRUU Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-1204SR-M6	25	50	M6 P1	6.5	11
TSD-1204SRUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

Others

XZ axis Steel Extended Contact Slide Stages (Vertical)

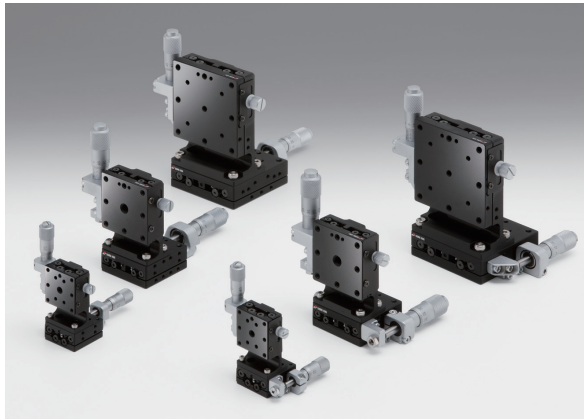
TSD-254L Stage size □25mm

RoHS

TSD-404L Stage size □40mm

RoHS

These stages are combinations of ball bearing slide guide X axis stages and flat Z axis stages.



Guide

► Vacuum-compatible stainless steel stages (TSDS-254*L/404*L) are also available. [Reference](#) E208

Specifications

Part Number	METRIC	TSD-254CL	TSD-254SL	TSD-404CL	TSD-404SL
	INCH	—	—	TSD-404CLUU	TSD-404SLUU
(Opposite Model)	METRIC	—	TSD-254SRL	—	TSD-404SRL
	INCH	—	—	—	TSD-404SRLUU
Table Size [mm]		25×25	25×25	40×40	40×40
Axes of Travel		XZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		X axis ±3 Z axis ±3	X axis ±3 Z axis ±3	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome			
Load Capacity [N]		14.7 (1.5kgf)	14.7 (1.5kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1.0	1.0
Max. Moment Capacity	Pitch [N·m]	2.2	2.2	5.0	5.0
	Roll [N·m]	2.1	2.1	5.0	5.0
Moment Stiffness	Pitch [°/N·cm]	5.1	5.1	0.9	0.9
	Options	FP	FP	FP	FP
Weight [kg]		0.17	0.17	0.5	0.5

Option for □25mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference ▶
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-42525	0.25	—	E008

Option for □40mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference ▶
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) ▶ F010

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

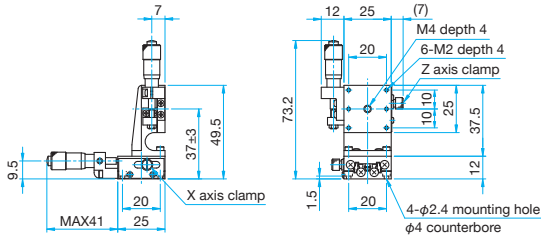
□120mm

Others

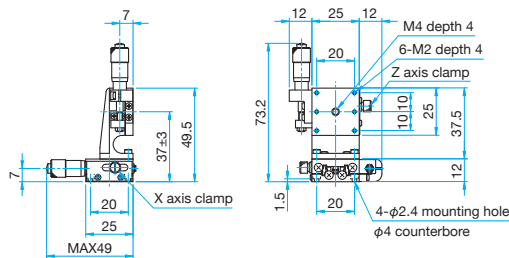


Outline Drawing

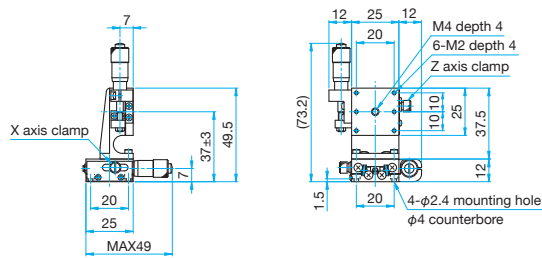
TSD-254CL Hexagonal socket head cap screw M2x4...4 screws



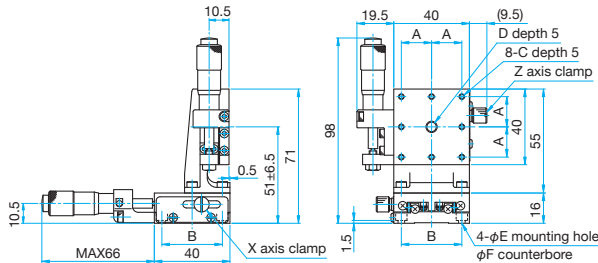
TSD-254SL Hexagonal socket head cap screw M2x4...4 screws



TSD-254SRL Hexagonal socket head cap screw M2x4...4 screws

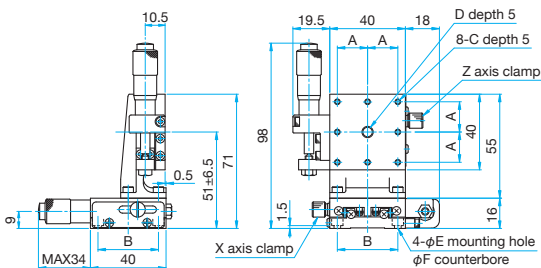


TSD-404CL/404CLUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



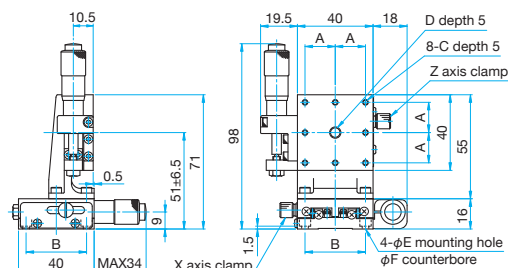
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSD-404CL	16	32	M3	M6 P1	3.5	6
TSD-404CLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSD-404SL/404SLUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSD-404SL	16	32	M3	M6 P1	3.5	6
TSD-404SLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSD-404SRL/404SRLUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSD-404SRL	16	32	M3	M6 P1	3.5	6
TSD-404SRLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

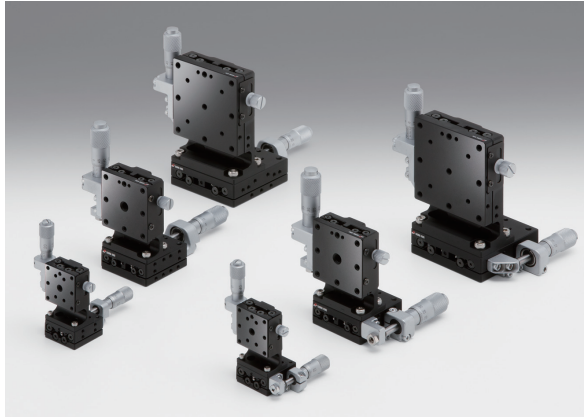
120mm

Others

XZ axis Steel Extended Contact Slide Stages (Vertical)

TSD-604L Stage size 60mmTSD-654L Stage size 65mm

These stages are combinations of ball bearing slide guide X axis stages and flat Z axis stages.



Guide

► Vacuum-compatible stainless steel stages (TSDS-604*L/654*L) are also available. [Reference](#) E208

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

Specifications

Part Number	METRIC	TSD-604CL	TSD-604SL	TSD-654CL-M6	TSD-654SL-M6
	INCH	—	—	TSD-654CLUU	TSD-654SLUU
(Opposite Model)	METRIC	—	TSD-604SRL	—	TSD-654SRL-M6
	INCH	—	—	—	TSD-654SRLUU
Table Size [mm]		60×60	60×60	65×65	65×65
Axes of Travel		XZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		X axis ± 6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome			
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch [N·m]	8.0	8.0	8.0	8.0
Max. Moment Capacity	Roll [N·m]	8.0	8.0	8.0	8.0
	Pitch [°/N·cm]	0.45	0.45	0.45	0.45
Options		FP	FP	FP	FP
Weight [kg]		1.3	1.3	1.6	1.6

Option

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference E008
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

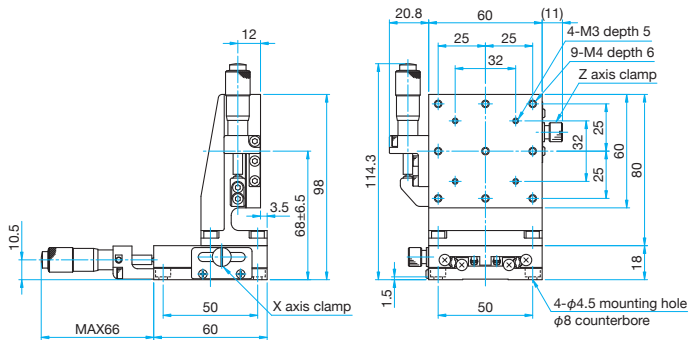
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

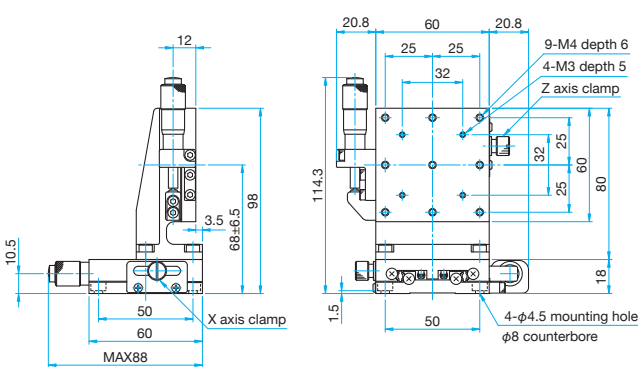


Outline Drawing

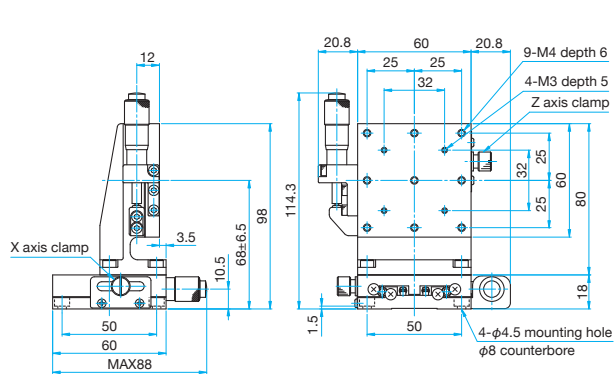
TSD-604CL Hexagonal socket head cap screw M4×6...4 screws



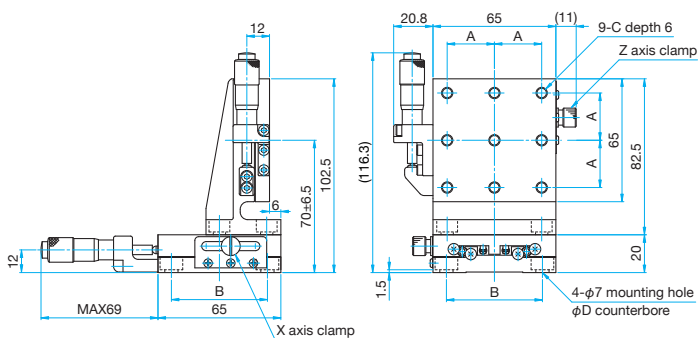
TSD-604SL Hexagonal socket head cap screw M4×6...4 screws



TSD-604SRL Hexagonal socket head cap screw M4×6...4 screws



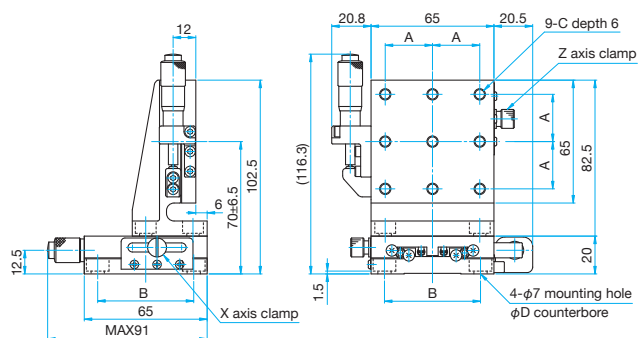
TSD-654CL-M6/654CLUU Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-654CL-M6	25	50	M6 P1	11
TSD-654CLUU	25.4	50.8	1/4-20UNC	12

TSD-654SL-M6/654SLUU

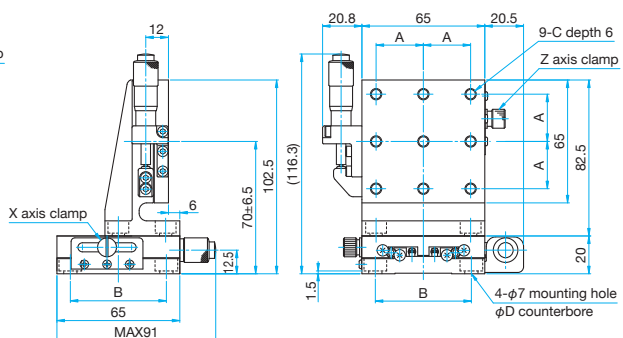
Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-654SL-M6	25	50	M6 P1	11
TSD-654SLUU	25.4	50.8	1/4-20UNC	12

TSD-654SRL-M6/654SRLUU

Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-654SRL-M6	25	50	M6 P1	11
TSD-654SRLUU	25.4	50.8	1/4-20UNC	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

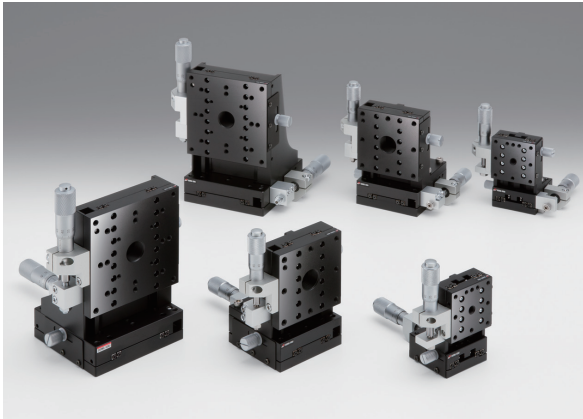
Others

XZ axis Aluminum Crossed Roller Slide Stages (Vertical)

TAM-4L Stage size □40/□60mm

RoHS

Stages that combined a light-weight Z axis aluminum stage, which integrated the stage with a Z axis bracket, with an X axis aluminum stage.
Crossed roller guide enables smooth travel.



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications					
Part Number	METRIC	TAM-404CL	TAM-404SL	TAM-604CL	TAM-604SL
	INCH	TAM-404CLUU	TAM-404SLUU	—	—
(Opposite Model)	METRIC	—	TAM-404SRL	—	TAM-604SRL
	INCH	—	TAM-404SRLUU	—	—
Table Size [mm]	40×40			60×60	
Axes of Travel	XZ axis				
Micrometer Position	Center	Side		Center	Side
Travel [mm]	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5		X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]	0.5		0.5	0.5	
Micrometer Readable Resolution [mm]	0.01		0.01	0.01	
Bearing type	Crossed roller				
Primary Material	Aluminum				
Finish	Black anodized				
Load Capacity [N]	49 (5.0kgf)		49 (5.0kgf)	49 (5.0kgf)	
Travel Accuracy	Straightness [μm]	2		2	
Max. Moment Capacity	Pitch [N·m]	2.75		5.0	
	Roll [N·m]	3.0		5.0	
Moment Stiffness	Pitch [°/N·cm]	1.4		0.6	
	Options	FP		FP	
Weight [kg]	0.3		0.3	0.6	

Option					
Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

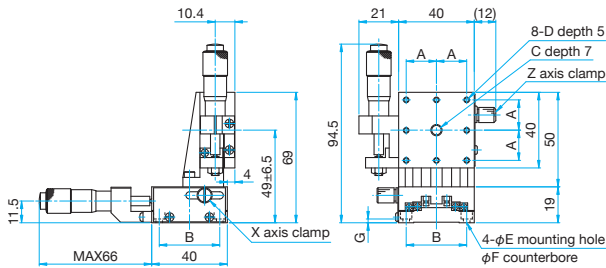
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F10



Outline Drawing

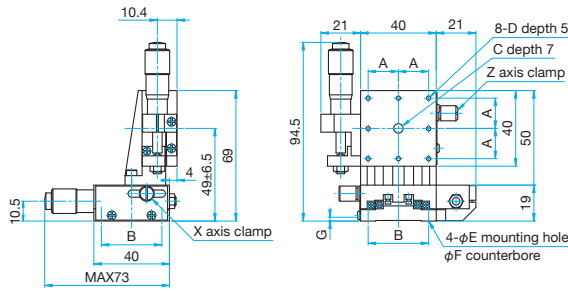
TAM-404CL/404CLUU Hexagonal socket head cap screw M3×6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)	G (mm)
TAM-404CL	16	32	M6 P1	M3	3.5	6	2
TAM-404CLUU	15.875	31.75	1/4-20UNC	6-32UNC	4	6.5	1.5

TAM-404SL/401SLUU

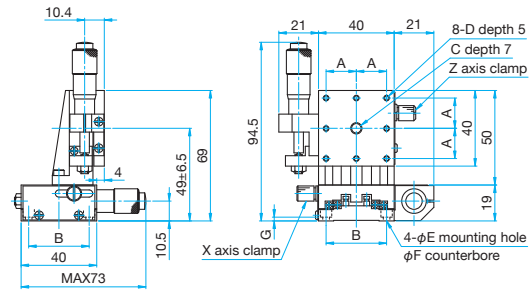
Pan head screw M3×6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)	G (mm)
TAM-404SL	16	32	M6 P1	M3	3.5	6	2
TAM-404SLUU	15.875	31.75	1/4-20UNC	6-32UNC	4	6.5	1.5

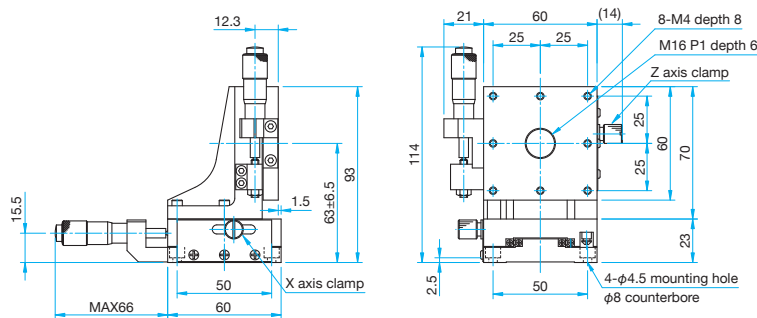
TAM-404SRL/401SRLUU

Pan head screw M3×6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNC×1/4...4 screws (UU)

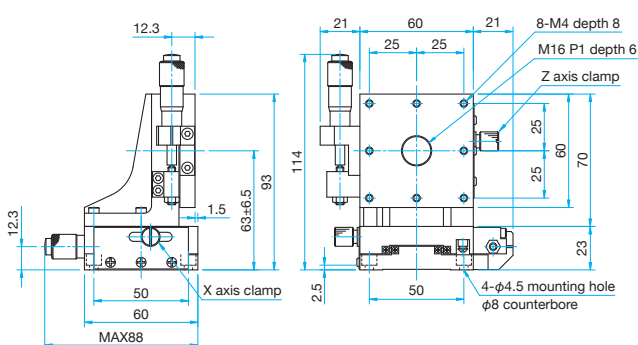


Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)	G (mm)
TAM-404SRL	16	32	M6 P1	M3	3.5	6	2
TAM-404SRLUU	15.875	31.75	1/4-20UNC	6-32UNC	4	6.5	1.5

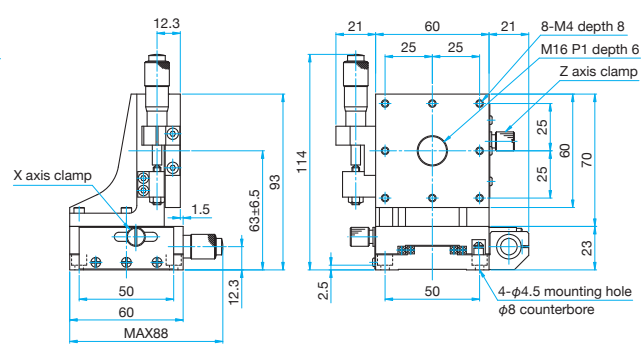
TAM-602CL Hexagonal socket head cap screw M4×8...4 screws



TAM-602SL Hexagonal socket head cap screw M4×8...4 screws



TAM-602SRL Hexagonal socket head cap screw M4×8...4 screws



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

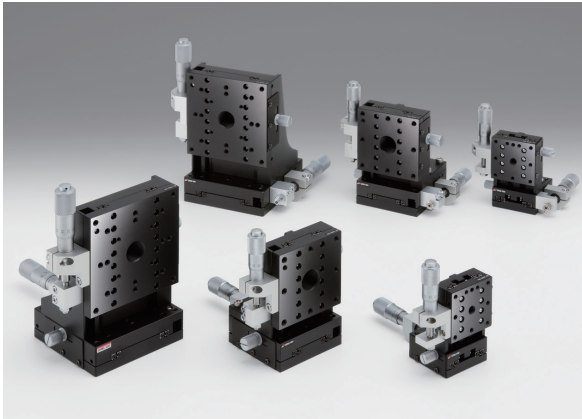
Others

XZ axis Aluminum Crossed Roller Slide Stages (Vertical)

TAM-4L Stage size □65/□80mm

RoHS

Stages that combined a light-weight Z axis aluminum stage, which integrated the stage with a Z axis bracket, with an X axis aluminum stage.
Crossed roller guide enables smooth travel.



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications

Part Number	METRIC	TAM-654CL-M6	TAM-654SL-M6	TAM-804CL	TAM-804SL
	INCH	TAM-654CLUU	TAM-654SLUU	—	—
(Opposite Model)	METRIC	—	TAM-654SRL-M6	—	—
	INCH	—	TAM-654SRLUU	—	—
Table Size [mm]		65×65	65×65	80×80	80×80
Axes of Travel		XZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5	X axis ±7.5 Z axis ±7.5	X axis ±7.5 Z axis ±7.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Crossed roller			
Primary Material		Aluminum			
Finish		Black anodized			
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	2	2	2	2
	Pitch [N·m]	5.0	5.0	7.0	7.0
Max. Moment Capacity	Roll [N·m]	5.0	5.0	7.0	7.0
	Pitch [°/N·cm]	0.6	0.6	0.25	0.25
Options		FP	FP	FP	FP
Weight [kg]		0.7	0.7	1.2	1.2

Option for □65mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

Option for □80mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62550	0.25	—	E008

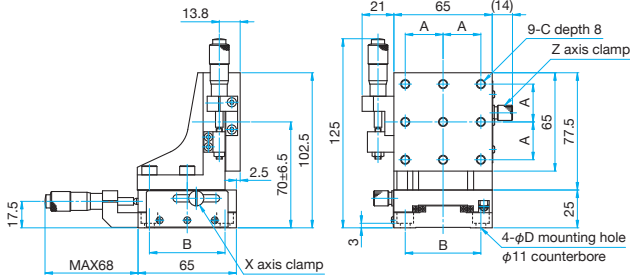
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010



Outline Drawing

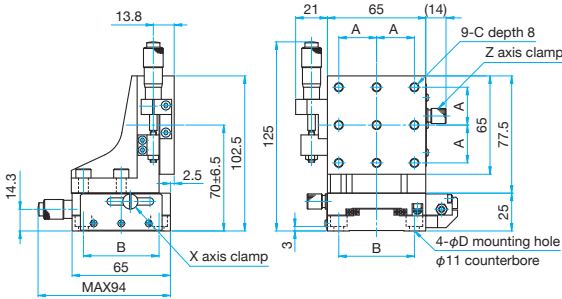
TAM-654CL-M6/654CLUU Hexagonal socket head cap screw M6x8...4 screws (M6)
 Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TAM-654CL-M6	25	50	M6 P1	6.5
TAM-654CLUU	25.4	50.8	1/4-20UNC	7

TAM-654SL-M6/654SLUU

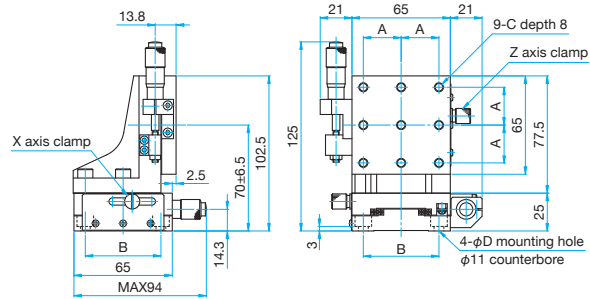
Hexagonal socket head cap screw M6x8...4 screws (M6)
 Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TAM-654SL-M6	25	50	M6 P1	6.5
TAM-654SLUU	25.4	50.8	1/4-20UNC	7

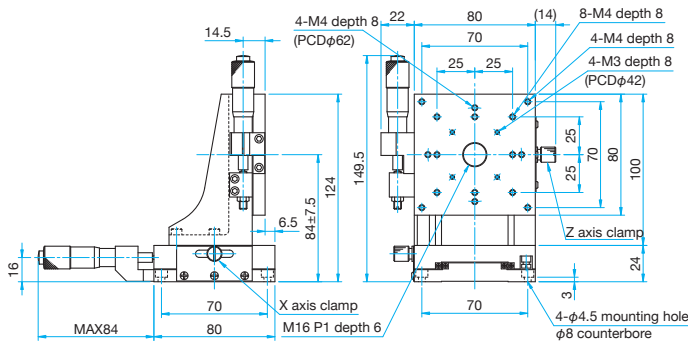
TAM-654SRL-M6/654SRLUU

Hexagonal socket head cap screw M6x8...4 screws (M6)
 Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)

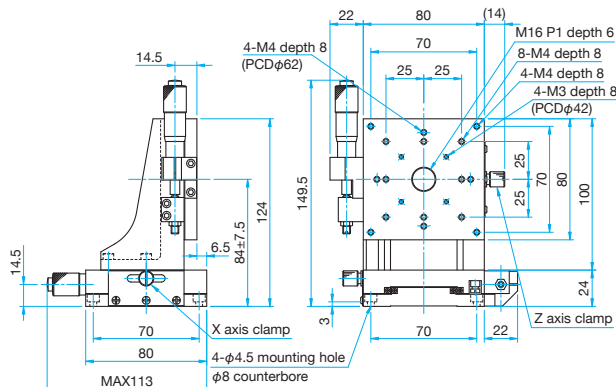


Part Number	A (mm)	B (mm)	C	D (mm)
TAM-654SRL-M6	25	50	M6 P1	6.5
TAM-654SRLUU	25.4	50.8	1/4-20UNC	7

TAM-804CL Hexagonal socket head cap screw M4x8...4 screws



TAM-804SL Hexagonal socket head cap screw M4x8...4 screws



- Application Systems
- Optics & Optical Coatings
- Holders
- Bases

Manual Stages

- Actuators
- MotORIZED Stages
- Light Sources
- Index

- Guide
- X axis Stages
- XY axis Stages
- Z axis Stages

- XZ axis Stages
- XYZ axis Stages
- θ axis Stages
- Goniometer
- Inclination
- Vacuum

- Ball Guide
- Crossed Roller

- Dovetail
- Lapping
- V Groove Screw
- Ohters

- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm
- Others

XZ axis Preset Stages

TASB-4 Stage size □15/□25/□40/□60/□65mm

RoHS

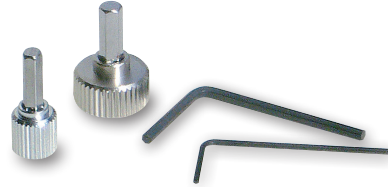
Space-saving, compact XZ axis stages with horizontal table top, suitable for less frequent operations that require fine adjustment.

- Ideal for less frequent operations and fine adjustment.
- Elimination of adjustment knobs can prevent errant operations, and elimination of protrusions makes these stages suitable for assembly in systems.

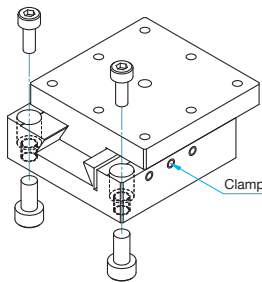


Guide

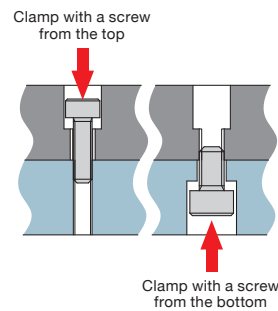
- ▶ A hex wrench with knob and clamping wrench are included.



Mounting Method



Detailed Illustration



Top mounting

Tapped holes are used as counterbores because screws are smaller than tapped holes and will go in without any interference.

Bottom mounting

Clamp with screws that match the specification of tapped holes.

About Mounting Holes

The bottom mounting holes of preset stages are tapped holes. These stages allow mounting from the top or the bottom, convenient for securing on optical breadboards or other instruments as well as assembling in systems. Use the screws of the sizes listed in the table on the right for mounting.

Part Number	Secure from the top	Secure from the bottom
TASB-154	M2	M2.6
TASB-254	M2	M3
TASB-404	M3	M4
TASB-404UU	6-32UNC	—
TASB-604	M4	M5
TASB-654-M6	M6	M8
TASB-654UU	1/4-20UNC	5/16-18UNC

* When mounting from the top surface, slide the top surface to insert screws in mounting holes.

Specifications

Part Number	METRIC	TASB-154	TASB-254	TASB-404	TASB-604	TASB-654-M6
	INCH	—	—	TASB-404UU	—	TASB-654UU
Table Size [mm]		15×15	25×25	40×40	60×60	65×65
Axes of Travel		XZ axis				
Travel [mm]		X axis ±2 Z axis +2 / -0	X axis ±3 Z axis +3 / -0	X axis ±7 Z axis +5 / -0	X axis ±10 Z axis +7 / -0	X axis ±12.5 Z axis +7 / -0
Screw Pitch [mm]		0.4	0.5	0.5	0.5	0.5
Bearing type		Dovetail slide method				
Primary Material		Brass				
Finish		Black matte				
Load Capacity [N]		4.9 (0.5kgf)	6.9 (0.7kgf)	29.4 (3.0kgf)	98.1 (10.0kgf)	98.1 (10.0kgf)
Travel Accuracy	Straightness [μm]	30	30	30	30	30
Max. Moment Capacity	Pitch [N·m]	—	0.3	0.5	1.0	1.0
	Roll [N·m]	—	0.3	0.5	1.0	1.0
Moment Stiffness	Pitch [°/N·cm]	—	8.2	5.2	1.1	1.1
	Roll [°/N·cm]	—	5.6	3.1	2.1	2.1
Parallelism [μm]		150	150	150	150	150
Weight [kg]		0.03	0.11	0.4	1.4	1.8

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

XZ axis Leadscrew Stages (Vertical)

XZ axis Rack and Pinion Dovetail Stages (Vertical)

TAS-4L

RoHS

Catalog Code W7069

TAR-4L

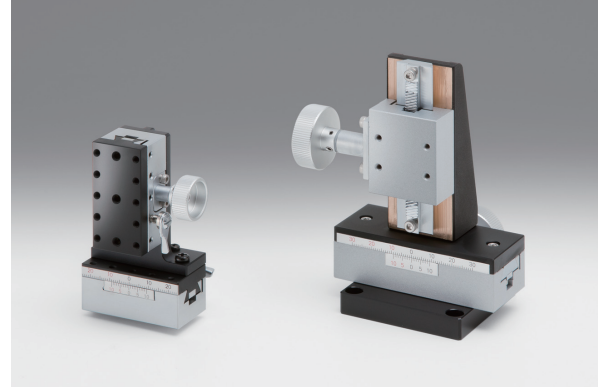
RoHS

Catalog Code W7070

The TAS type stages have dovetail groove guide and leadscrew adjustment system, suitable for less frequent operations that require fine adjustment.

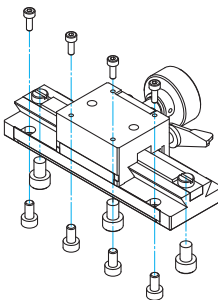
The TAR type stages have dovetail groove guide and rack and pinion system, suitable for frequent operations that require quick motion and long travel.

- The feed handle offers excellent operability.



Guide

- ▶ Micrometer brackets may extend above the top surface of some stages. Check drawings for more information.
- ▶ Note that some samples might not be able to be fixed on the stage depending on their shapes, or required travel might not be ensured.



■ Mounting Method of TAR-25504L

Use M3 pan head screws (only on both edges) to secure from the top, and M4 pan head screws to secure from the bottom.

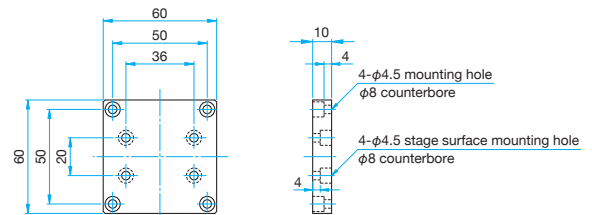
■ Components

Part Number	TAR-25504L
Z axis	TARW-25503L
X axis	TARW-25501

Bottom Plate

Primary material: Aluminum
Finish: Black Anodized

TAR-34804L include a base plate that allows mounting on instruments or bases fitted with M4 tapped holes on $\square 50\text{mm}$, preventing the handle from contacting the mounting surface.



Specifications

Part Number	METRIC	TAS-24304L	TAS-20604L	TAR-25504L	TAR-34804L	TAR-38404L-M6	TAR-60554D	TAR-60704D
	INCH	—	—	—	—	TAR-38404LUU	—	—
Table Size [mm]		24×30	18×60	25×50	34×40	38×40	60×60	60×60
Axes of Travel		XZ axis						
Travel [mm]		X axis ±4 Z axis ±4	X axis ±7.5 Z axis ±7.5	X axis ±10 Z axis ±10	X axis ±25 Z axis +25 / -20	X axis ±15 Z axis +45 / -0	X axis +27 / -0 Z axis +18 / -0	X axis +37 / -0 Z axis +33 / -1
Lead of Actuator [mm/rotation]		0.5	0.5	about 20	about 20	about 20	Coars: about 20 Fine: about 2.5	Coars: about 20 Fine: about 2.5
Vernier Readable Resolution [mm]		—			0.1			
Bearing type		Dovetail slide method						
Primary Material		Brass						
Finish		Super black chrome						
Load Capacity [N]		4.9 (0.5kgf)	9.8 (1.0kgf)	9.8 (1.0kgf)	14.7 (1.5kgf)	14.7 (1.5kgf)	24.5 (2.5kgf)	24.5 (2.5kgf)
Travel Accuracy	Straightness [μm]	20	20	30	30	30	30	30
Max. Moment Capacity	Pitch [N·m]	0.5	0.2	0.5	0.5	0.5	0.4	0.4
	Roll [N·m]	0.2	0.2	0.5	0.5	0.5	0.5	0.5
Moment Stiffness	Pitch ["/N·cm]	—	—	3.98	2	2	—	—
Weight [kg]		0.42	1.0	0.52	1.1	1.2	0.83	0.85

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

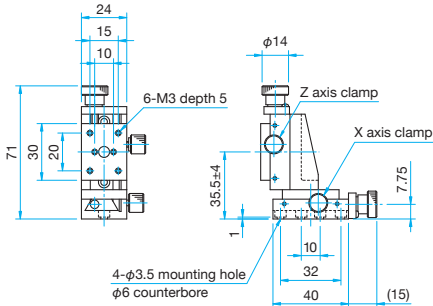
□120mm

Others

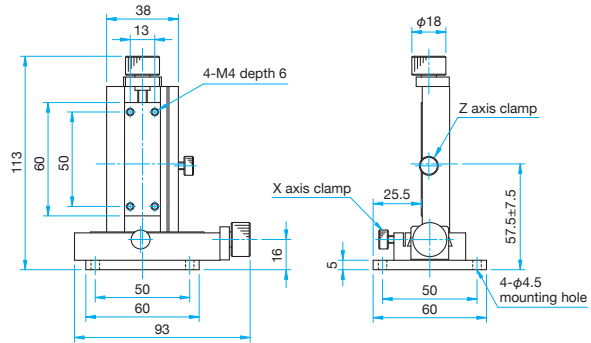


Outline Drawing

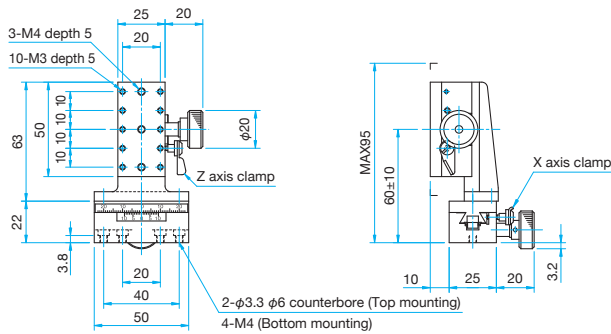
TAS-24304L Pan head screw M3x5...4 screws



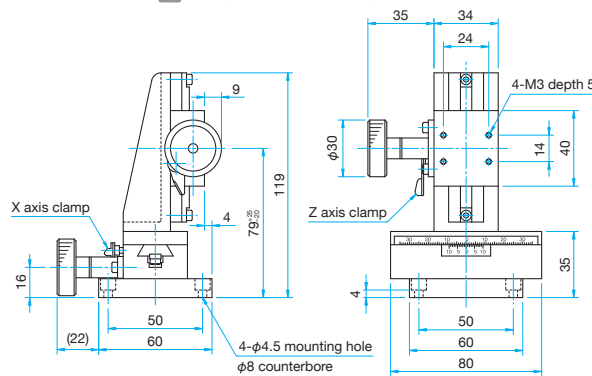
TAS-20604L Hexagonal socket head cap screw M4x10...4 screws



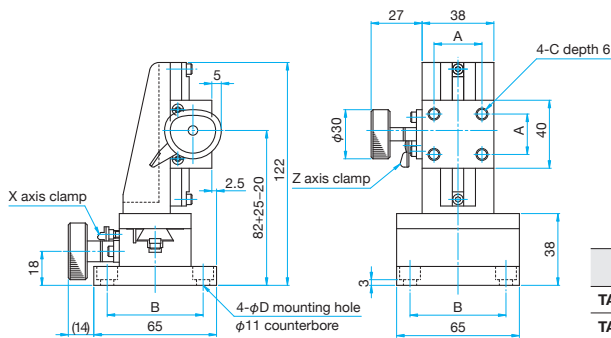
TAR-25504L Pan head screw M3x8...4 screws



TAR-34804L Hexagonal socket head cap screw M4x8...4 screws

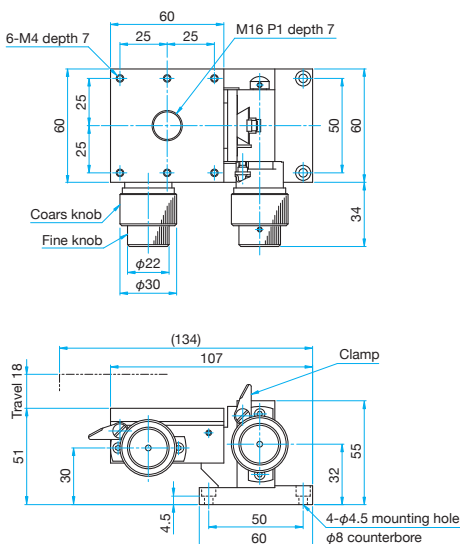


TAR-38404L-M6/38404LUU Hexagonal socket head cap screw M6x10...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)

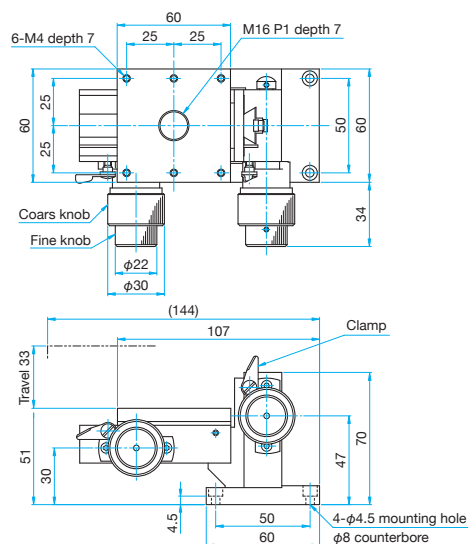


Part Number	A (mm)	B (mm)	C	D (mm)
TAR-38404L-M6	25	50	M6	6.5
TAR-38404LUU	25.4	50.8	1/4-20UNC	7

TAR-60554D Hexagonal socket head cap screw M4x8...4 screws



TAR-60704D Hexagonal socket head cap screw M4x8...4 screws



- Application Systems
- Optics & Optical Coatings
- Holders
- Bases
- Manual Stages
- Actuators
- MotORIZED Stages
- Light Sources
- Index
- Guide
- X axis Stages
- XY axis Stages
- Z axis Stages
- XZ axis Stages**
- XYZ axis Stages
- θ axis Stages
- Goniometer
- Inclination
- Vacuum
- Ball Guide
- Crossed Roller
- Dovetail
- Lapping
- V Groove Screw
- Ohters

- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm
- Others

XYZ axis Steel Extended Contact Slide Stages

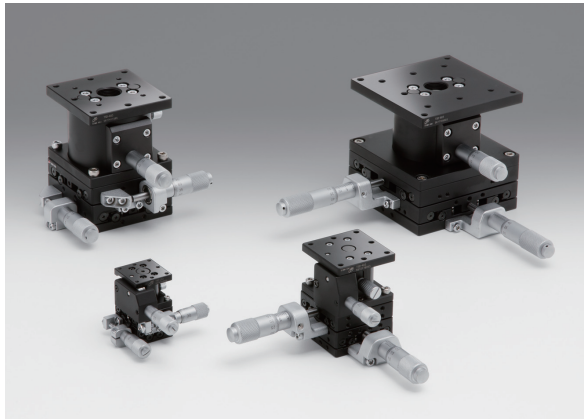
TSD-255 Stage size □25mm

TSD-405 Stage size □40mm

RoHS

RoHS

These stages are combinations of ball bearing slide guide XY axis stages and flat Z axis stages.



Guide

- ▶ Vacuum-compatible stainless steel stages (TSDS-255/405) are also available. [Reference](#) E210

Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about ±0.02mm for micrometer head 0.5mm/rotation).

Specifications

Guide	METRIC	TSD-255C	TSD-255S	TSD-405C	TSD-405S	
	Part Number	INCH	—	—	TSD-405CUU	TSD-405SUU
X axis Stages	(Opposite Model)	—	TSD-255SR	—	TSD-405SR	
		INCH	—	—	TSD-405SRUU	
XY axis Stages	Table Size [mm]	25×25	25×25	40×40	40×40	
Z axis Stages	Axes of Travel	XYZ axis				
XZ axis Stages	Micrometer Position	Center	Side	Center	Side	
XYZ axis Stages	Travel [mm]	XY axis ±3 Z axis ±3	XY axis ±3 Z axis ±3	XY axis ±6.5 Z axis ±3	XY axis ±6.5 Z axis ±3	
	Lead of Actuator [mm/rotation]	0.5	0.5	0.5	0.5	
θ axis Stages	Micrometer Readable Resolution [mm]	0.01	0.01	0.01	0.01	
	Bearing type	Extended contact ball guide				
Goniometer	Primary Material	Steel				
	Finish	Super black chrome + Black matte				
Inclination	Load Capacity [N]	29.4 (3.0kgf)	29.4 (3.0kgf)	88.3 (9.0kgf)	88.3 (9.0kgf)	
	Travel Accuracy	Straightness [μm]	5	5	2.5	2.5
Vacuum	Max. Moment Capacity	Pitch [N·m]	1.0	1.0	3.9	3.9
		Roll [N·m]	1.0	1.0	3.9	3.9
Ball Guide	Moment Stiffness	Pitch [°/N·cm]	10.55	10.55	2.34	2.34
		Roll [°/N·cm]	10.55	10.55	2.34	2.34
Crossed Roller	Parallelism [μm]	130	130	130	130	
	Options	FP	FP	FP	FP	
Dovetail	Weight [kg]	0.2	0.2	0.55	0.55	

Option for □25mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-42525	0.25	—	E008

Option for □40mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	XY axis: FPSA-62540 Z axis: FPSA-42525	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The load capacity of the FP type is 39.2N (4.0kgf). (□40mm)

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F10

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

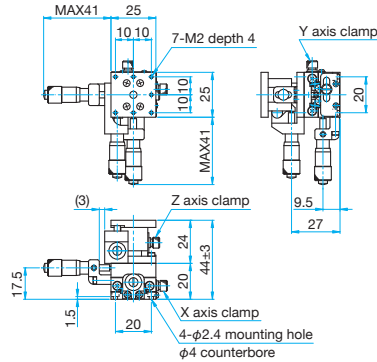
Others



Outline Drawing

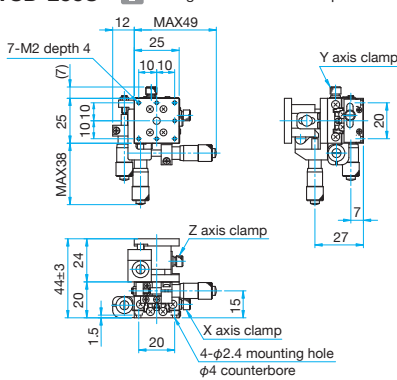
TSD-255C

Hexagonal socket head cap screw M2x4...4 screws



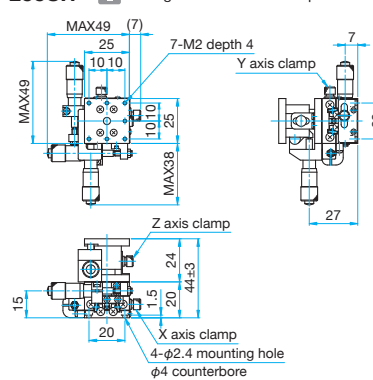
TSD-255S

Hexagonal socket head cap screw M2x4...4 screws



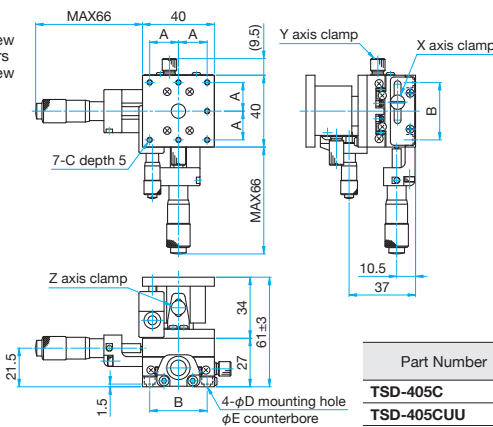
TSD-255SR

Hexagonal socket head cap screw M2x4...4 screws



TSD-405C/405CUU

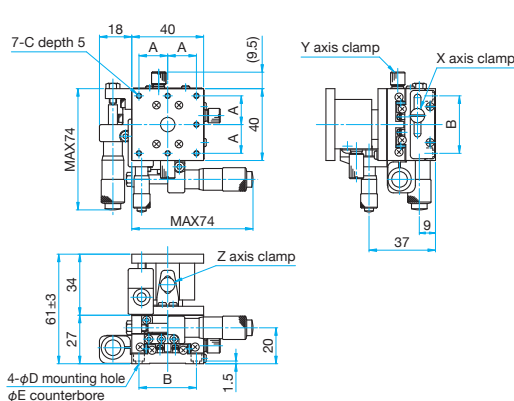
Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-405C	16	32	M3	3.5	6
TSD-405CUU	15.875	31.75	6-32UNC	4	6.5

TSD-405S/405SUU

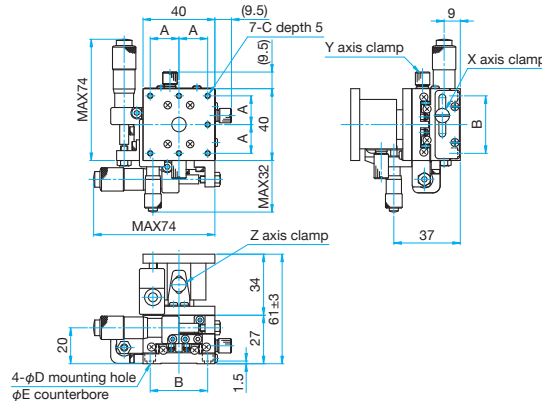
Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-405S	16	32	M3	3.5	6
TSD-405SUU	15.875	31.75	6-32UNC	4	6.5

TSD-405SR/405SRUU

Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-405SR	16	32	M3	3.5	6
TSD-405SRUU	15.875	31.75	6-32UNC	4	6.5

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

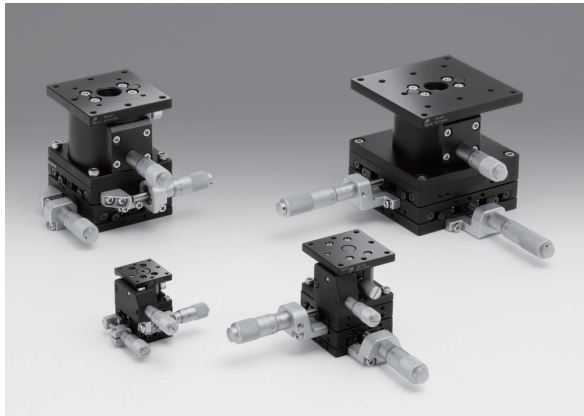
XYZ axis Steel Extended Contact Slide Stages

TSD-605 Stage size 60mmTSD-655 Stage size 65mm

RoHS

RoHS

These stages are combinations of ball bearing slide guide XY axis stages and flat Z axis stages.



Guide

- ▶ Vacuum-compatible stainless steel stages (TSDS-605/655) are also available. [Reference](#) E210

Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head 0.5mm/rotation).

Specifications

Part Number	METRIC	TSD-605C	TSD-605S	TSD-655C-M6	TSD-655S-M6
	INCH	—	—	TSD-655CUU	TSD-655SUU
(Opposite Model)	METRIC	—	TSD-605SR	—	TSD-655SR-M6
	INCH	—	—	—	TSD-655SRUU
Table Size [mm]		60×60	60×60	65×65	65×65
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ± 6.5 Z axis ± 5	XY axis ± 6.5 Z axis ± 5	XY axis ± 6.5 Z axis ± 5	XY axis ± 6.5 Z axis ± 5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome + Black matte			
Load Capacity [N]		147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Travel Accuracy	Straightness [μm]	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [N·m]	6.9	6.9	6.9	6.9
	Roll [N·m]	6.9	6.9	6.9	6.9
Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.81	0.81	0.81	0.81
	Roll [$^{\circ}$ /N·cm]	0.81	0.81	0.81	0.81
Parallelism [μm]		130	130	130	130
Options		FP	FP	FP	FP
Weight [kg]		1.9	1.9	2.0	2.0

Option

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The load capacity of the FP type is 39.2N (4.0kgf).

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

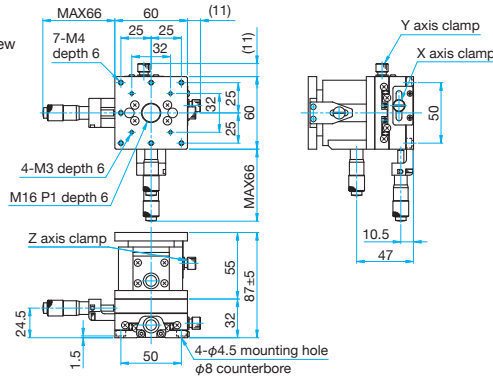
Others



Outline Drawing

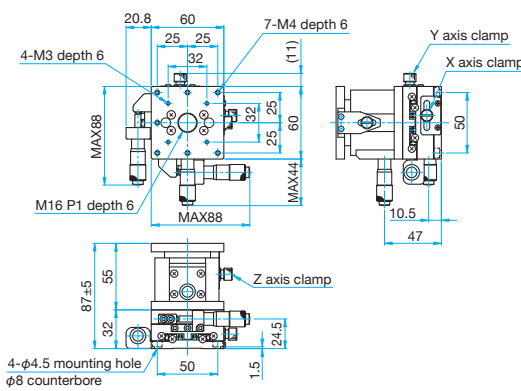
TSD-605C

Hexagonal socket head cap screw M4x6...4 screws



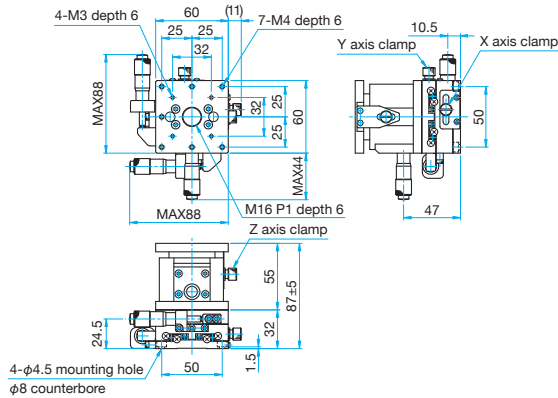
TSD-605S

Hexagonal socket head cap screw M4x6...4 screws



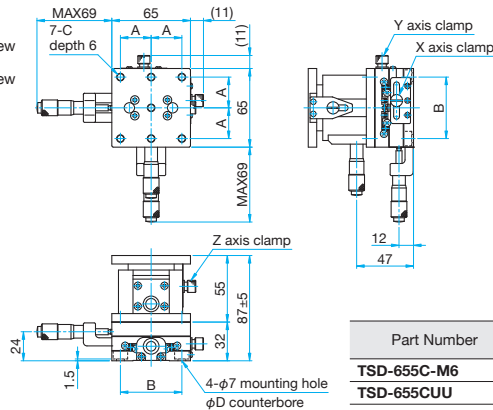
TSD-605SR

Hexagonal socket head cap screw M4x6...4 screws



TSD-655C-M6/655CUU

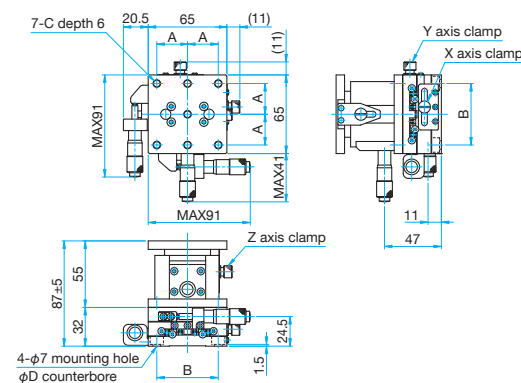
Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-655C-M6	25	50	M6 P1	11
TSD-655CUU	25.4	50.8	1/4-20UNC	12

TSD-655S-M6/655SUU

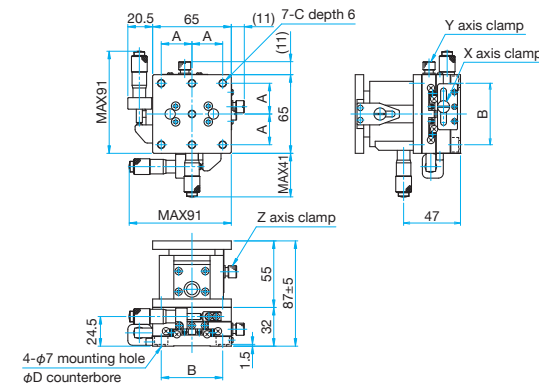
Hexagonal socket head cap screw M6x6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-655S-M6	25	50	M6 P1	11
TSD-655SUU	25.4	50.8	1/4-20UNC	12

TSD-655SR-M6/655SRUU

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)
TSD-655SR-M6	25	50	M6 P1	11
TSD-655SRUU	25.4	50.8	1/4-20UNC	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

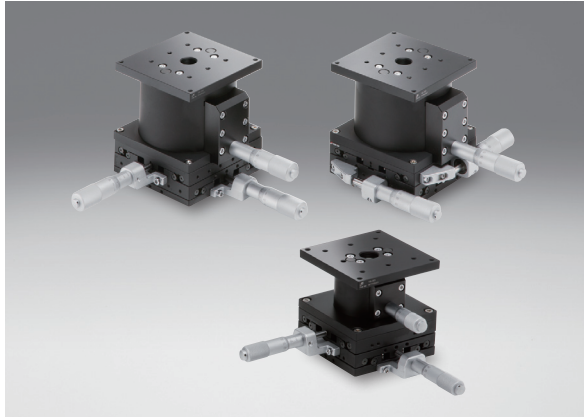
Others

XYZ axis Steel Extended Contact Slide Stages

TSD-805 Stage size □80mm
 TSD-1005 Stage size □100mm



These stages are combinations of ball bearing slide guide XY axis stages and flat Z axis stages.



Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head 0.5mm/rotation).

Specifications

Part Number	METRIC	TSD-805C	TSD-805S	TSD-1005C	TSD-1005S
(Opposite Model)	METRIC		TSD-805SR	—	TSD-1005SR
Table Size [mm]		80×80	80×80	100×100	100×100
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ± 12.5 Z axis ± 5	XY axis ± 12.5 Z axis ± 5	XY axis ± 12.5 Z axis ± 10	XY axis ± 12.5 Z axis ± 10
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome + Black matte			
Load Capacity [N]		147 (15.0kgf)	147 (15.0kgf)	245 (25.0kgf)	245 (25.0kgf)
Travel Accuracy	Straightness [μm]	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [N·m]	6.9	6.9	9.8	9.8
	Roll [N·m]	6.9	6.9	9.8	9.8
Moment Stiffness	Pitch [$^{\circ}$ /N·cm]	0.67	0.67	0.45	0.45
	Roll [$^{\circ}$ /N·cm]	0.67	0.67	0.45	0.45
Parallelism [μm]		130	130	150	150
Options		FP	FP	FP	FP
Weight [kg]		2.6	2.6	6.1	6.1

Option for □80mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	XY axis: FPSA-62550 X axis: FPSA-62540	0.25	—	E008

Option for □100mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62555	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The load capacity of the FP type is 39.2N (4.0kgf).

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F10

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

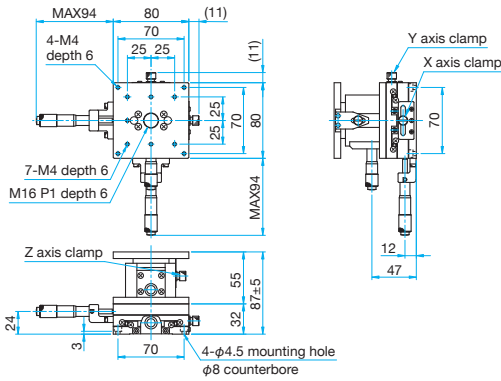
□120mm

Others

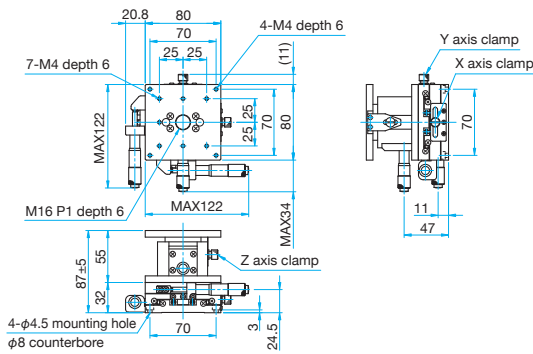


Outline Drawing

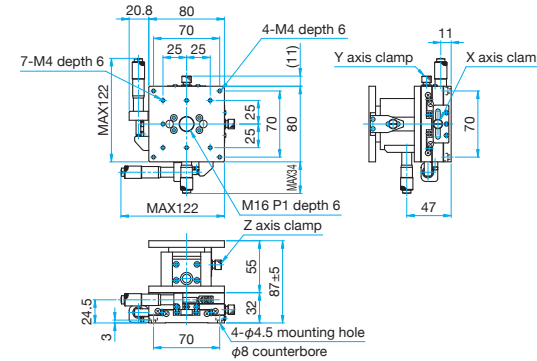
TSD-805C Hexagonal socket head cap screw M4x8...4 screws



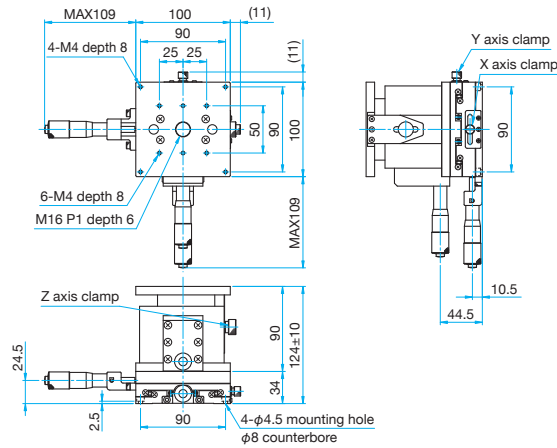
TSD-805S Hexagonal socket head cap screw M4x8...4 screws



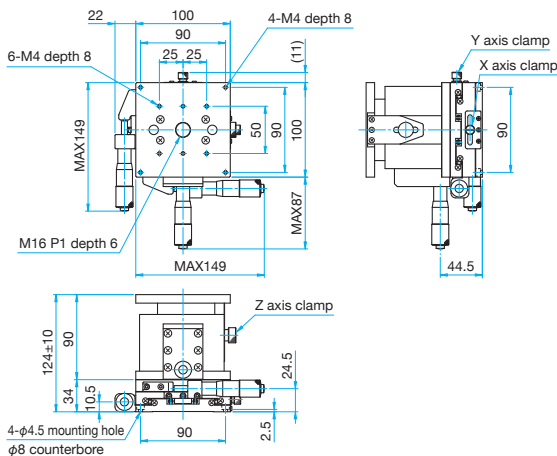
TSD-805SR Hexagonal socket head cap screw M4x8...4 screws



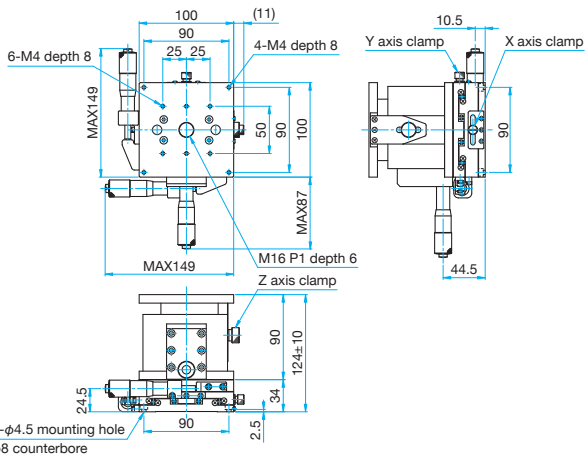
TSD-1005C Hexagonal socket head cap screw M4x8...4 screws



TSD-1005S Hexagonal socket head cap screw M4x8...4 screws



TSD-1005SR Hexagonal socket head cap screw M4x8...4 screws



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

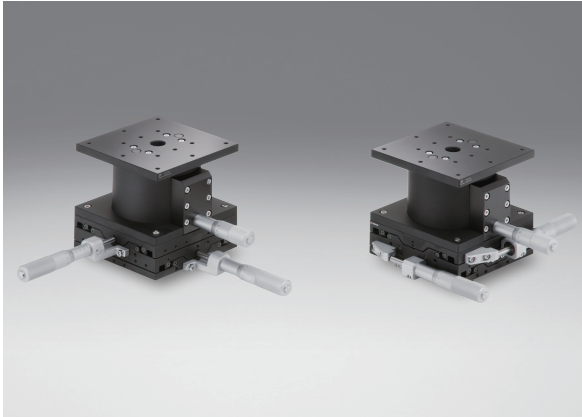
120mm

Others

XYZ axis Steel Extended Contact Slide Stages | TSD-1205 Stage size □120mm

RoHS

These stages are combinations of ball bearing slide guide XY axis stages and flat Z axis stages.

**Attention**

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head 0.5mm/rotation).

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

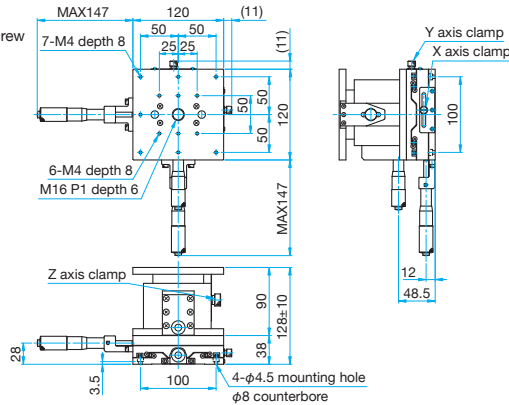
Specifications					
Part Number	METRIC	TSD-1205C	TSD-1205S	TSD-1205C-M6	TSD-1205S-M6
	INCH	—	—	TSD-1205CUU	TSD-1205SUU
(Opposite Model)	METRIC	—	TSD-1205SR	—	TSD-1205SR-M6
	INCH	—	—	—	TSD-1205SRUU
Table Size [mm]		120×120	120×120	120×120	120×120
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ± 20 Z axis ± 10	XY axis ± 20 Z axis ± 10	XY axis ± 20 Z axis ± 10	XY axis ± 20 Z axis ± 10
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome + Black matte			
Load Capacity [N]		245 (25.0kgf)	245 (25.0kgf)	245 (25.0kgf)	245 (25.0kgf)
Travel Accuracy	Straightness [μm]	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [$\text{N}\cdot\text{m}$]	9.8	9.8	9.8	9.8
	Roll [$\text{N}\cdot\text{m}$]	9.8	9.8	9.8	9.8
Moment Stiffness	Pitch [$^\circ/\text{N}\cdot\text{cm}$]	0.41	0.41	0.41	0.41
	Roll [$^\circ/\text{N}\cdot\text{cm}$]	0.41	0.41	0.41	0.41
Parallelism [μm]		150	150	150	150
Weight [kg]		7.3	7.3	7.3	7.3



Outline Drawing

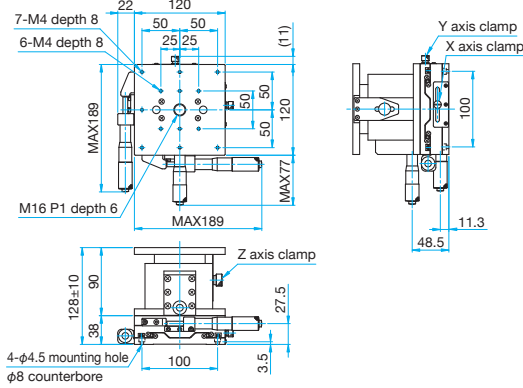
TSD-1205C

Hexagonal socket head cap screw M4x8...4 screws



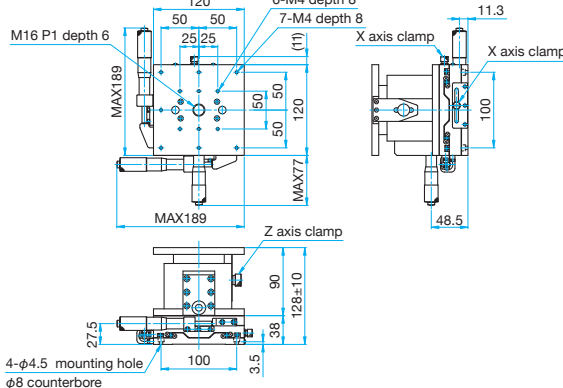
TSD-1205S

Hexagonal socket head cap screw M4x8...4 screws



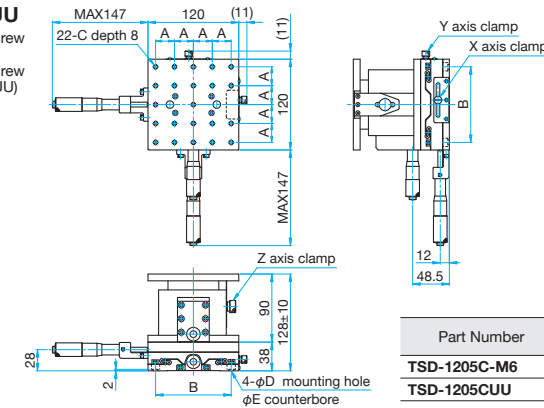
TSD-1205SR

Hexagonal socket head cap screw M4x8...4 screws



TSD-1205C-M6/1205CUU

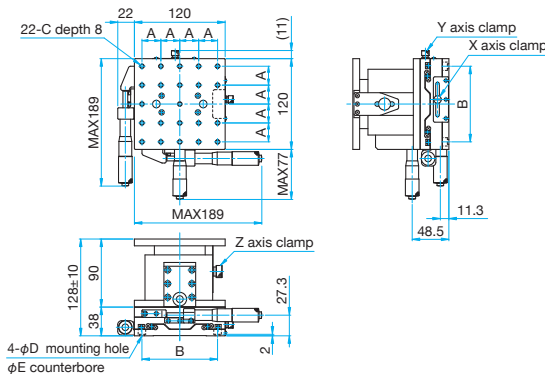
Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-1205C-M6	25	100	M6 P1	6.5	11
TSD-1205CUU	25.4	101.6	1/4-20UNC	7	12

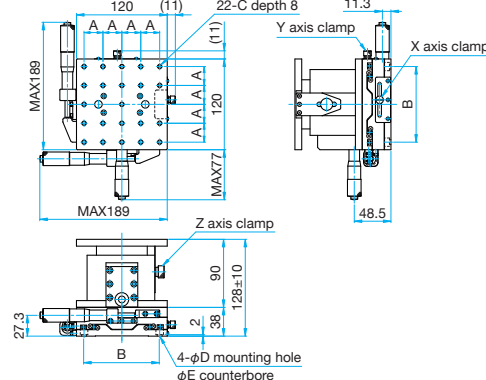
TSD-1205S-M6/1205SUU

Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



TSD-1205SR-M6/1205SRUU

Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-1205S-M6	25	100	M6 P1	6.5	11
TSD-1205SUU	25.4	101.6	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSD-1205SR-M6	25	100	M6 P1	6.5	11
TSD-1205SRUU	25.4	101.6	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

XYZ axis Steel Extended Contact Slide Stages (Vertical)

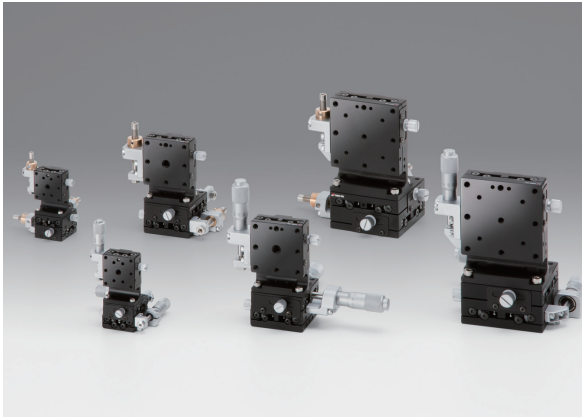
TSD-255L Stage size □25mm

TSD-405L Stage size □40mm

RoHS

RoHS

These stages are combinations of ball bearing slide guide XY axis stages and vertical mounting type Z axis stages.



Guide

► Vacuum-compatible stainless steel stages (TSDS-255*L/405*L) are also available. [Reference](#) E212

Specifications					
Part Number	METRIC	TSD-255CL	TSD-255SL	TSD-405CL	TSD-405SL
	INCH	—	—	TSD-405CLUU	TSD-405SLUU
(Opposite Model)	METRIC	—	TSD-255SRL	—	TSD-405SRL
	INCH	—	—	—	TSD-405SRLUU
Table Size [mm]		25×25	25×25	40×40	40×40
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ±3 Z axis ±3	XY axis ±3 Z axis ±3	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome			
Load Capacity [N]		14.7 (1.5kgf)	14.7 (1.5kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
Max. Moment Capacity	Pitch [N·m]	2.2	2.2	5.0	5.0
	Roll [N·m]	2.1	2.1	5.0	5.0
Moment Stiffness	Pitch [°/N·cm]	6.7	6.7	1.1	1.1
	Options	FP	FP	FP	FP
Weight [kg]		0.2	0.2	0.6	0.6

Option for □25mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-42525	0.25	—	E008

Option for □40mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

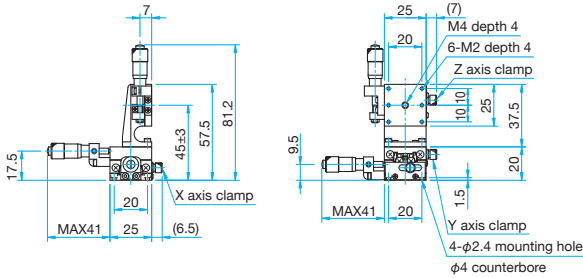
□120mm

Others

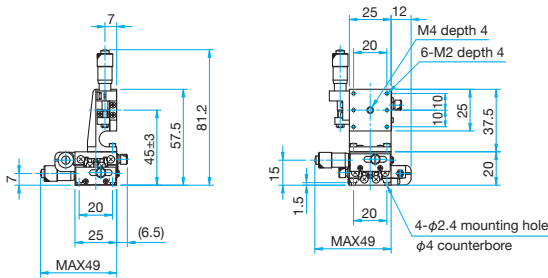


Outline Drawing

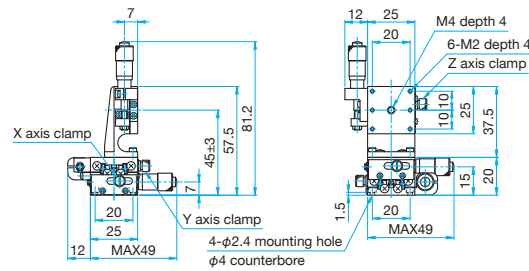
TSD-255CL Hexagonal socket head cap screw M2x4...4 screws



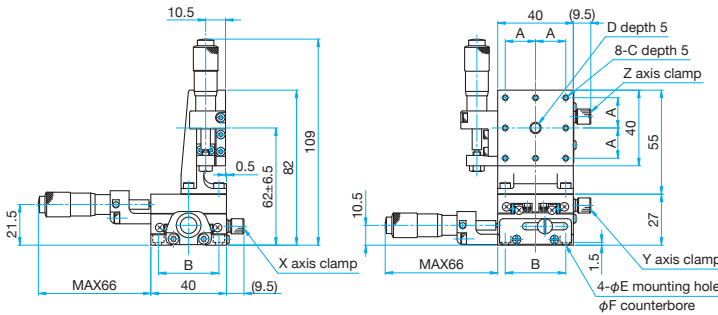
TSD-255SL Hexagonal socket head cap screw M2x4...4 screws



TSD-255SRL Hexagonal socket head cap screw M2x4...4 screws

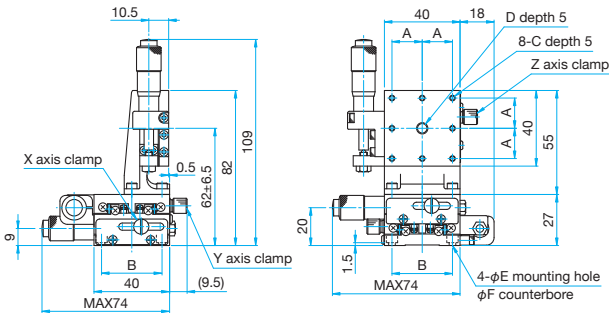


TSD-405CL/405CLUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/6...4 screws (UU)



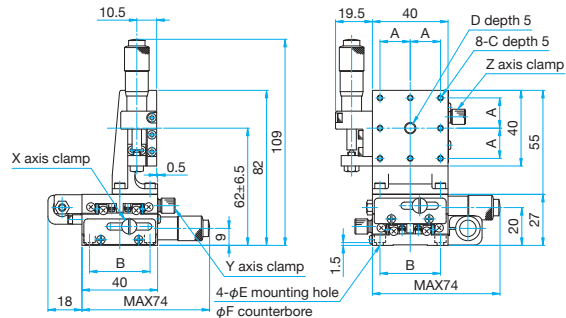
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSD-405CL	16	32	M3	M6 P1	3.5	6
TSD-405CLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSD-405SL/405SLUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/6...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSD-405SL	16	32	M3	M6 P1	3.5	6
TSD-405SLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSD-405SRL/405SRLUU Hexagonal socket head cap screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx3/6...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSD-405SRL	16	32	M3	M6 P1	3.5	6
TSD-405SRLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

XYZ axis Steel Extended Contact Slide Stages (Vertical)

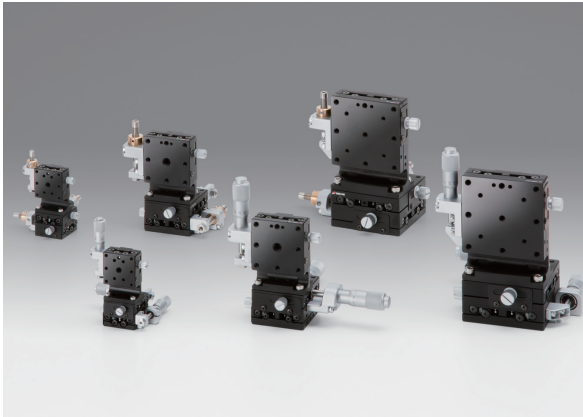
TSD-605L Stage size □ 60mm

TSD-655L Stage size □ 65mm

RoHS

RoHS

These stages are combinations of ball bearing slide guide XY axis stages and vertical mounting type Z axis stages.



Guide

► Vacuum-compatible stainless steel stages (TSDS-605*L/655*L) are also available. [Reference](#) E212

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□ 15mm

□ 25mm

□ 40mm

□ 60mm

□ 65mm

□ 80mm

□ 100mm

□ 120mm

Others

Specifications					
Part Number	METRIC	TSD-605CL	TSD-605SL	TSD-655CL-M6	TSD-655SL-M6
	INCH	—	—	TSD-655CLUU	TSD-655SLUU
(Opposite Model)	METRIC	—	TSD-605SRL	—	TSD-655SRL-M6
	INCH	—	—	—	TSD-655SRLUU
Table Size [mm]		60×60	60×60	65×65	65×65
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Steel			
Finish		Super black chrome			
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
	Pitch [N·m]	8.0	8.0	8.0	8.0
Max. Moment Capacity	Pitch [N·m]	8.0	8.0	8.0	8.0
	Pitch [°/N·cm]	0.58	0.58	0.58	0.58
Moment Stiffness		FP	FP	FP	FP
Options		FP	FP	FP	FP
Weight [kg]		1.7	1.7	1.9	1.9

Option					
Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference E008
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

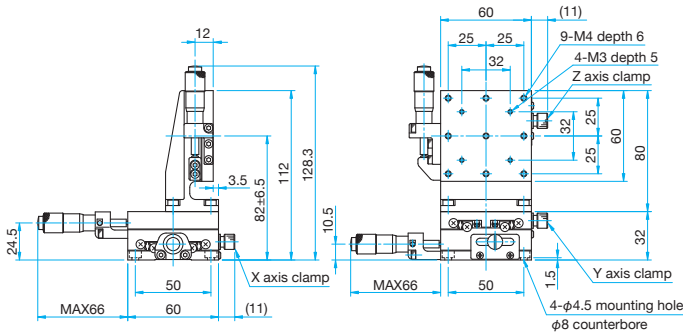
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

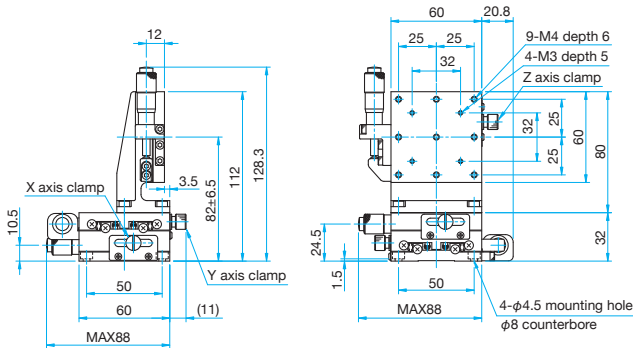


Outline Drawing

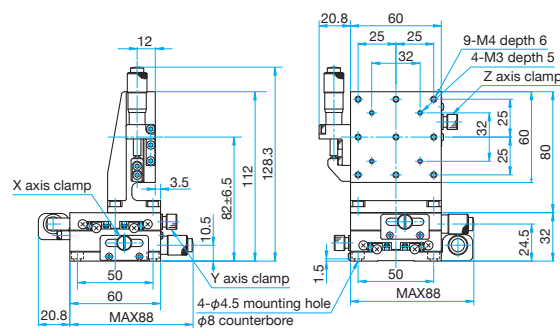
TSD-605CL Hexagonal socket head cap screw M4×6...4 screws



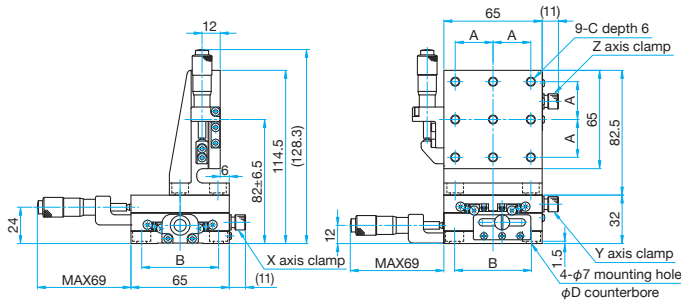
TSD-605SL Hexagonal socket head cap screw M4×6...4 screws



TSD-605SRL Hexagonal socket head cap screw M4×6...4 screws



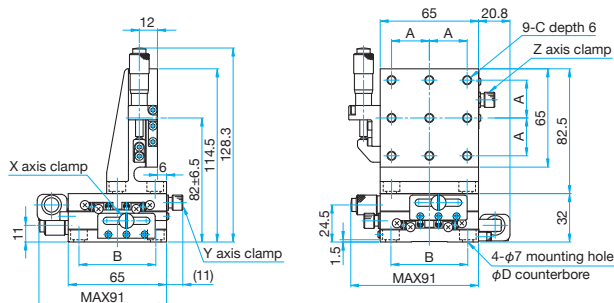
TSD-655CL-M6/655CLUU Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-655CL-M6	25	50	M6 P1	11
TSD-655CLUU	25.4	50.8	1/4-20UNC	12

TSD-655SL-M6/655SLUU

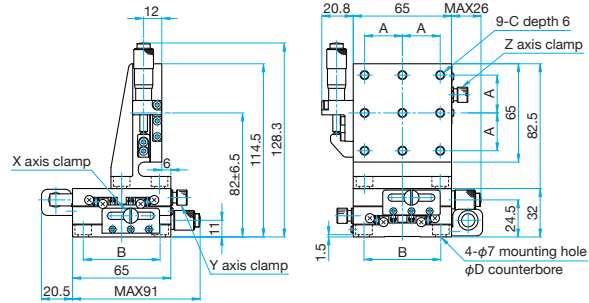
Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-655SL-M6	25	50	M6 P1	11
TSD-655SLUU	25.4	50.8	1/4-20UNC	12

TSD-655SRL-M6/655SRLUU

Hexagonal socket head cap screw M6×6...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TSD-655SRL-M6	25	50	M6 P1	11
TSD-655SRLUU	25.4	50.8	1/4-20UNC	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

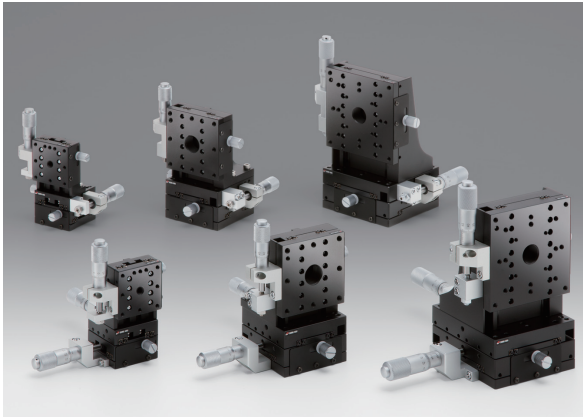
120mm

Others

XYZ axis Aluminum Crossed Roller Slide Stages (Vertical) | TAM-5L Stage size □40/□60mm

RoHS

Light-weight XYZ axis aluminum stages integrating a stage and Z bracket.
Crossed roller guide enables smooth travel.



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications					
Part Number	METRIC	TAM-405CL	TAM-405SL	TAM-605CL	TAM-605SL
	INCH	TAM-405CLUU	TAM-405SLUU	—	—
(Opposite Model)	METRIC	—	TAM-405SRL	—	TAM-605SRL
	INCH	—	TAM-405SRLUU	—	—
Table Size [mm]		40×40	40×40	60×60	60×60
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Crossed roller			
Primary Material		Aluminum			
Finish		Black anodized			
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	2	2	2	2
	Pitch [N·m]	2.75	2.75	5.0	5.0
Max. Moment Capacity	Roll [N·m]	3.0	3.0	5.0	5.0
	Pitch [°/N·cm]	1.9	1.9	0.9	0.9
Options		FP	FP	FP	FP
Weight [kg]		0.4	0.4	0.9	0.9

Option					
Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

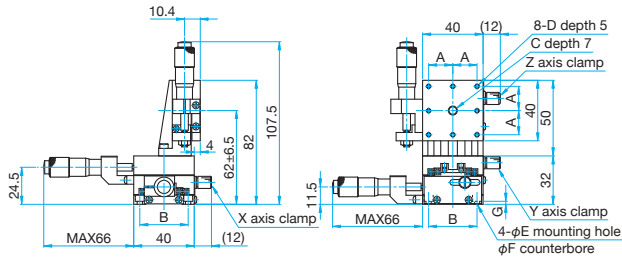
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F10



Outline Drawing

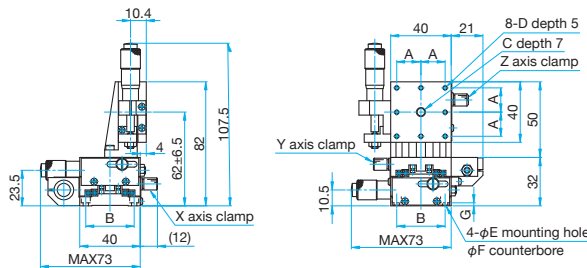
TAM-405CL/405CLUU Pan head screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)	G (mm)
TAM-405CL	16	32	M6 P1	M3	3.5	6	2
TAM-405CLUU	15.875	31.75	1/4-20UNC	6-32UNC	4	6.5	1.5

TAM-405SL/405SLUU

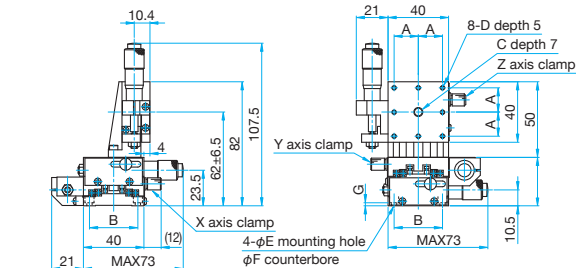
Pan head screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)	G (mm)
TAM-405SL	16	32	M6 P1	M3	3.5	6	2
TAM-405SLUU	15.875	31.75	1/4-20UNC	6-32UNC	4	6.5	1.5

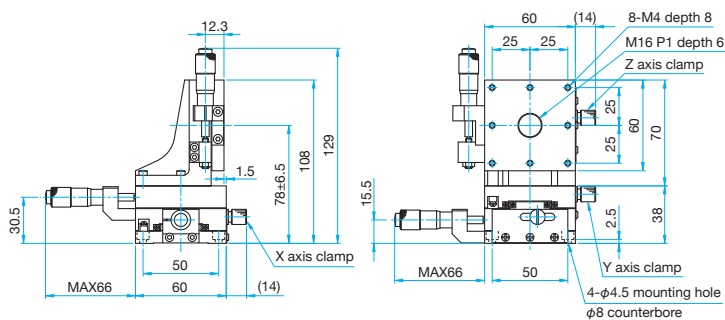
TAM-405SRL/405SRLUU

Pan head screw M3x6...4 screws, Spring washers
Hexagonal socket head cap screw 6-32UNCx1/4...4 screws (UU)

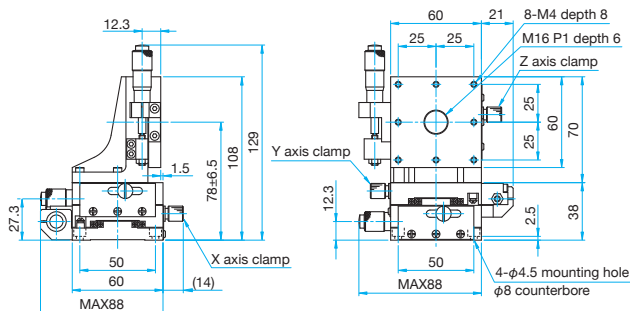


Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)	G (mm)
TAM-405SRL	16	32	M6 P1	M3	3.5	6	2
TAM-405SRLUU	15.875	31.75	1/4-20UNC	6-32UNC	4	6.5	1.5

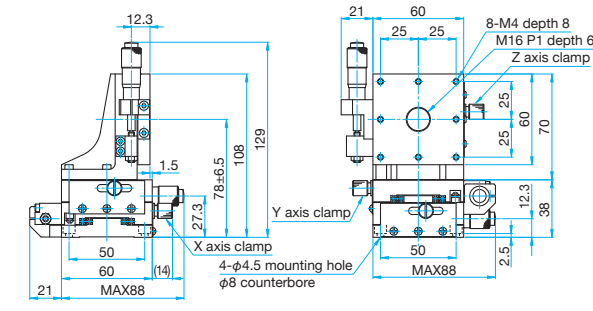
TAM-605CL Hexagonal socket head cap screw M4x8...4 screws



TAM-605SL Hexagonal socket head cap screw M4x8...4 screws



TAM-605SRL Hexagonal socket head cap screw M4x8...4 screws



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

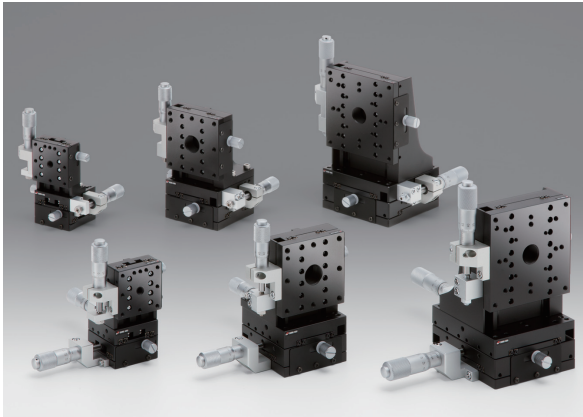
120mm

Others

XYZ axis Aluminum Crossed Roller Slide Stages (Vertical) | TAM-5L Stage size 65/80mm

RoHS

Light-weight XYZ axis aluminum stages integrating a stage and Z bracket.
Crossed roller guide enables smooth travel.



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm25mm40mm60mm65mm80mm100mm120mm

Others

Specifications

Part Number	METRIC	TAM-655CL-M6	TAM-655SL-M6	TAM-805CL	TAM-805SL
	INCH	TAM-655CLUU	TAM-655SLUU	—	—
(Opposite Model)	METRIC	—	TAM-655SRL-M6	—	—
	INCH	—	TAM-655SRLUU	—	—
Table Size [mm]		65×65	65×65	80×80	80×80
Axes of Travel		XYZ axis			
Micrometer Position		Center	Side	Center	Side
Travel [mm]		XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±7.5 Z axis ±7.5	XY axis ±7.5 Z axis ±7.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Crossed roller			
Primary Material		Aluminum			
Finish		Black anodized			
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)	49 (5.0kgf)
Travel Accuracy	Straightness [μm]	2	2	2	2
	Pitch [N·m]	5.0	5.0	7.0	7.0
Max. Moment Capacity	Roll [N·m]	5.0	5.0	7.0	7.0
	Pitch ["/N·cm]	0.9	0.9	0.35	0.35
Options		FP	FP	FP	FP
Weight [kg]		1.15	1.15	1.5	1.5

Option for 65mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62540	0.25	—	E008

Option for 80mm

Option Code	Compatible product		Lead of Actuator [mm/rotation]	Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number			
FP	Fine-pitch Screw Adjusters	FPSA-62550	0.25	—	E008

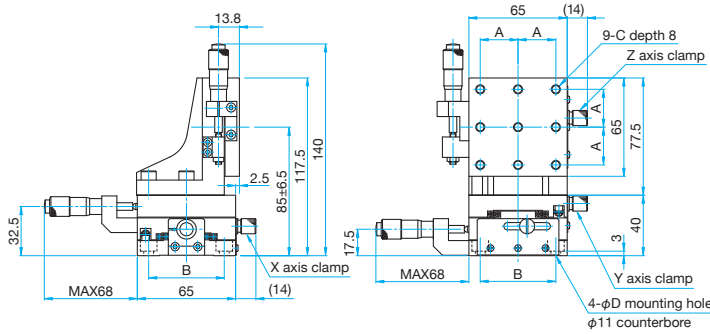
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010



Outline Drawing

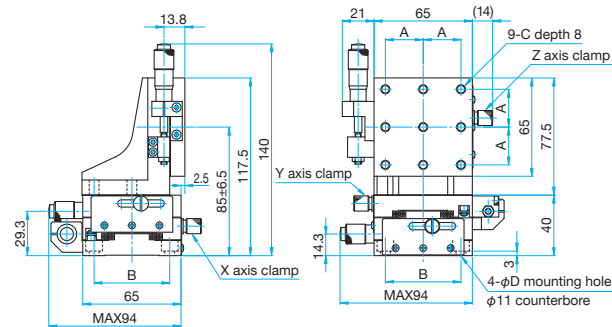
TAM-655CL-M6/655CLUU Hexagonal socket head cap screw M6x8...4 screws (M6)
 Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TAM-655CL-M6	25	50	M6 P1	6.5
TAM-655CLUU	25.4	50.8	1/4-20UNC	7

TAM-655SL-M6/655SLUU

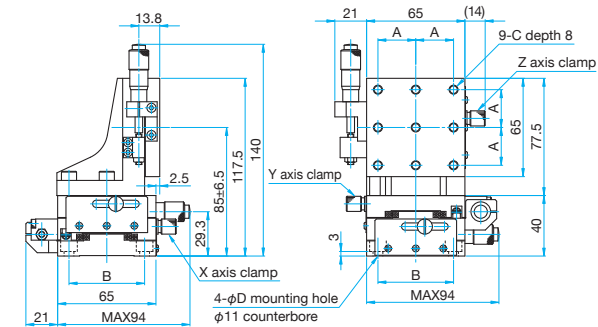
Hexagonal socket head cap screw M6x8...4 screws (M6)
 Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)
TAM-655SL-M6	25	50	M6 P1	6.5
TAM-655SLUU	25.4	50.8	1/4-20UNC	7

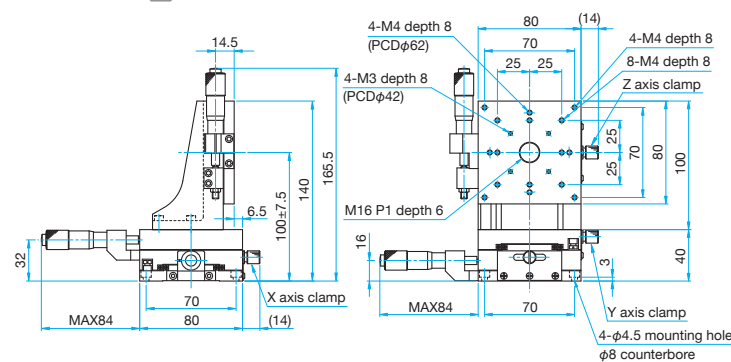
TAM-655SRL-M6/655SRLUU

Hexagonal socket head cap screw M6x8...4 screws (M6)
 Hexagonal socket head cap screw 1/4-20UNCx3/8...4 screws (UU)

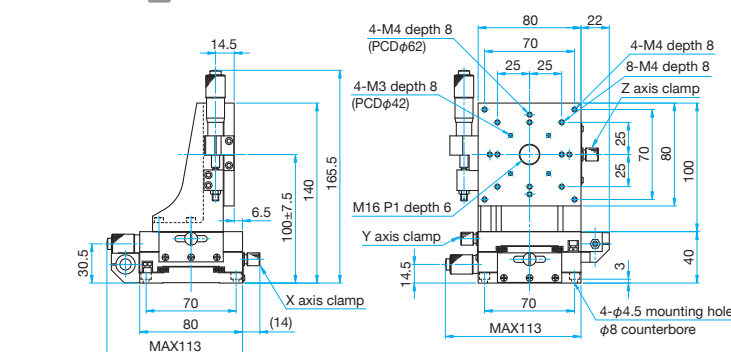


Part Number	A (mm)	B (mm)	C	D (mm)
TAM-655SRL-M6	25	50	M6 P1	6.5
TAM-655SRLUU	25.4	50.8	1/4-20UNC	7

TAM-805CL Hexagonal socket head cap screw M4x8...4 screws



TAM-805SL Hexagonal socket head cap screw M4x8...4 screws



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

XYZ axis Preset Stages

TASB-5 Stage size □15/□25/□40/□60/□65mm

RoHS

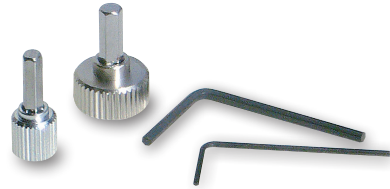
Space-saving, compact XYZ axis stages with horizontal table top, suitable for less frequent operations that require fine adjustment.

- Ideal for less frequent operations and fine adjustment.
- Elimination of adjustment knobs can prevent errant operations, and elimination of protrusions makes these stages suitable for assembly in systems.

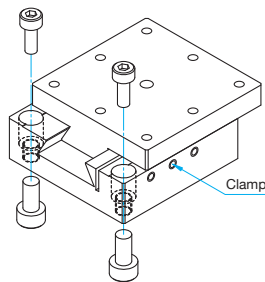


Guide

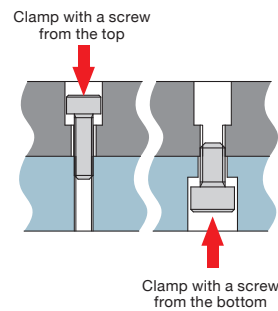
- ▶ A hex wrench with knob and clamping wrench are included.



Mounting Method



Detailed Illustration



Top mounting

Tapped holes are used as counterbores because screws are smaller than tapped holes and will go in without any interference.

Bottom mounting

Clamp with screws that match the specification of tapped holes.

About Mounting Holes

The bottom mounting holes of preset stages are tapped holes. These stages allow mounting from the top or the bottom, convenient for securing on optical breadboards or other instruments as well as assembling in systems. Use the screws of the sizes listed in the table on the right for mounting.

Part Number	Secure from the top	Secure from the bottom
TASB-155	M2	M2.6
TASB-255	M2	M3
TASB-405	M3	M4
TASB-405UU	6-32UNC	—
TASB-605	M4	M5
TASB-655-M6	M6	M8
TASB-655UU	1/4-20UNC	5/16-18UNC

* When mounting from the top surface, slide the top surface to insert screws in mounting holes.

Specifications

Part Number	METRIC	TASB-155	TASB-255	TASB-405	TASB-605	TASB-655-M6
	INCH	—	—	TASB-405UU	—	TASB-655UU
Table Size [mm]		15×15	25×25	40×40	60×60	65×65
Axes of Travel		XYZ axis				
Travel [mm]		XY axis ±2 Z axis +2 / -0	XY axis ±3 Z axis +3 / -0	XY axis ±7 Z axis +5 / -0	XY axis ±10 Z axis +7 / -0	XY axis ±12.5 Z axis +7 / -0
Screw Pitch [mm]		0.4	0.5	0.5	0.5	0.5
Bearing type		Dovetail slide method				
Primary Material		Brass				
Finish		Black matte				
Load Capacity [N]		4.9 (0.5kgf)	6.9 (0.7kgf)	29.4 (3.0kgf)	98.1 (10.0kgf)	98.1 (10.0kgf)
Travel Accuracy	Straightness [μm]	30	30	30	30	30
	Pitch [N·m]	—	0.3	0.5	1.0	1.0
Max. Moment Capacity	Roll [N·m]	—	0.3	0.5	1.0	1.0
	Pitch [°/N·cm]	—	9.7	5.8	1.5	1.5
Moment Stiffness	Roll [°/N·cm]	—	7.7	3.7	2.5	2.5
	Parallelism [μm]	200	200	200	200	200
Weight [kg]		0.04	0.16	0.53	1.73	2.22

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

XYZ axis Leadscrew Stages (Vertical)

XYZ axis Rack and Pinion Dovetail Stages (Vertical)

TAS-5L

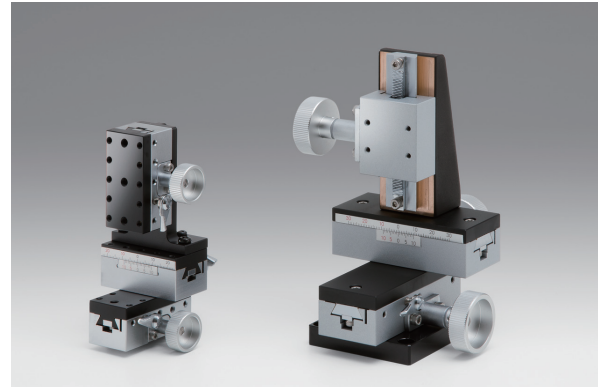
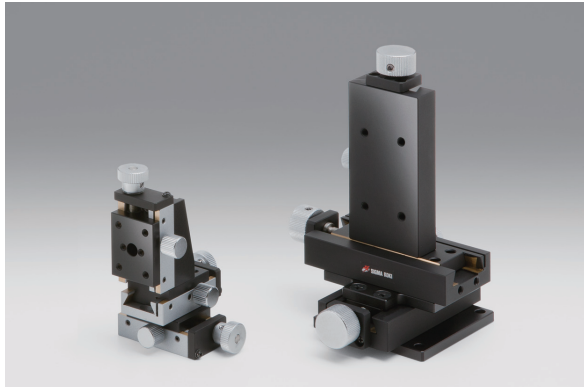
RoHS

TAR-5L

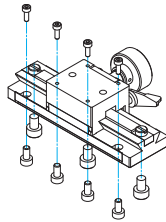
RoHS

The TAS type stages have dovetail groove guide and leadscrew adjustment system, suitable for less frequent operations that require fine adjustment.

The TAR type stages have dovetail groove guide and rack and pinion system, suitable for frequent operations that require quick motion and long travel.



Guide



■ Mounting Method of TAR-25505L

Use M3 pan head screws (only on both edges) to secure from the top, and M4 pan head screws to secure from the bottom.

■ Components

Part Number	TAR-25505L
Z axis	TARW-25503L
XY axis	TARW-25502

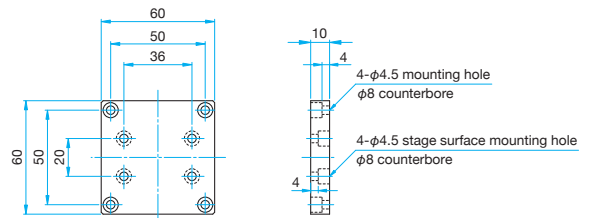
Attention

- ▶ Micrometer brackets may extend above the top surface of some stages. Check drawings for more information.
- ▶ Note that some samples might not be able to be fixed on the stage depending on their shapes, or required travel might not be ensured.

Bottom Plate

Primary material: Aluminum
Finish: Black Anodized

TAR-34805L include a base plate that allows mounting on instruments or bases fitted with M4 tapped holes on $\square 50\text{mm}$, preventing the handle from contacting the mounting surface.



Specifications

Part Number	METRIC	TAS-24305L	TAS-20605L	TAR-25505L	TAR-34805L	TAR-38405L-M6
	INCH	—	—	—	—	TAR-38405LUU
Table Size [mm]		24×30	18×60	25×50	34×40	38×40
Axes of Travel		XYZ axis				
Travel [mm]		XY axis ± 4 Z axis ± 4	XY axis ± 7.5 Z axis ± 7.5	XY axis ± 10 Z axis ± 10	X axis $+20 / -25$ Y axis ± 25 Z axis $+25 / -20$	XY axis ± 15 Z axis $+45 / -0$
Lead of Actuator [mm/rotation]		0.5	0.5	about 20	about 20	about 20
Vernier Readable Resolution [mm]		—			0.1	
Bearing type		Dovetail slide method				
Primary Material		Brass				
Finish		Super black chrome				
Load Capacity [N]		4.9 (0.5kgf)	9.8 (1.0kgf)	9.8 (1.0kgf)	14.7 (1.5kgf)	14.7 (1.5kgf)
Travel Accuracy	Straightness [μm]	30	30	30	30	30
Max. Moment Capacity	Pitch [N·m]	0.1	0.1	0.5	0.5	1.5
	Roll [N·m]	0.1	0.1	0.5	0.5	1.0
Weight [kg]		0.62	1.5	0.75	2.1	1.8

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

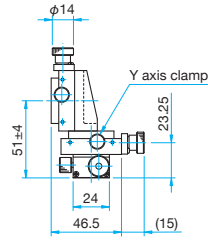
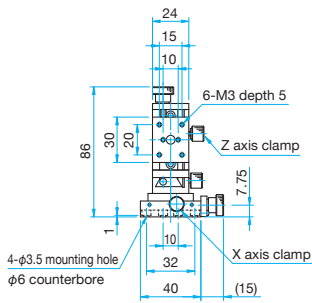
□120mm

Others

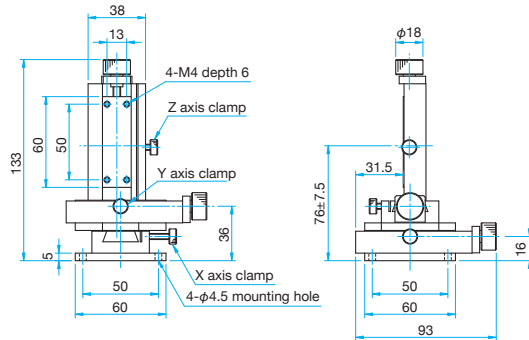


Outline Drawing

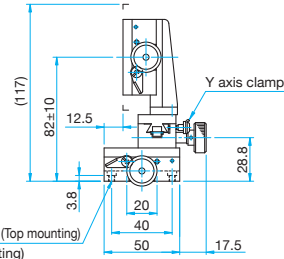
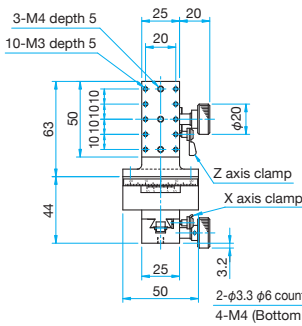
TAS-24305L Pan head screw M3x5...4 screws



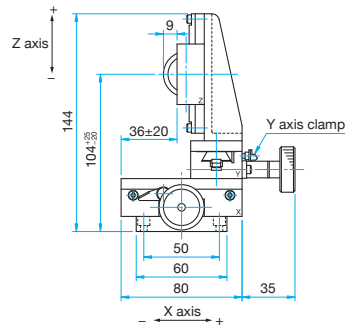
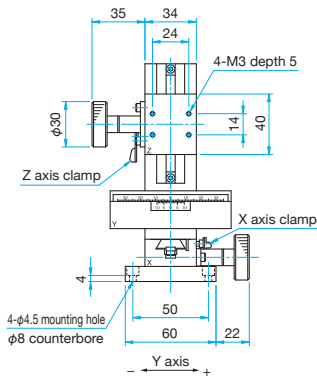
TAS-20605L Hexagonal socket head cap screw M4x10...4 screws



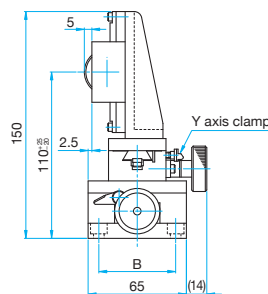
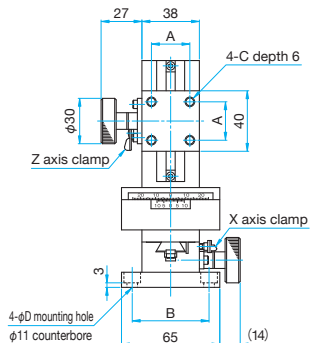
TAR-25505L Pan head screw M3x8...4 screws



TAR-34805L Hexagonal socket head cap screw M4x8...4 screws



TAR-38405L-M6/38405LUU 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-38405L-M6	25	50	M6	6.5
TAR-38405LUU	25.4	50.8	1/4-20UNC	7

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm

Others

Thin Type Rotation Stage with Central Aperture

KSPT Stage size □40/□60mm

RoHS

Square footprint θ -axis rotation stages with a clear aperture at the center, achieving table thickness of 10mm.

Allows installation in arbitrary direction such as vertical or inverted installations due to these stages having stiffness equal to the TSD.

- Ideal for assembling in systems that require minute angle adjustment, or for configuring optical systems with low optical axis because of its low-profile form.



Guide

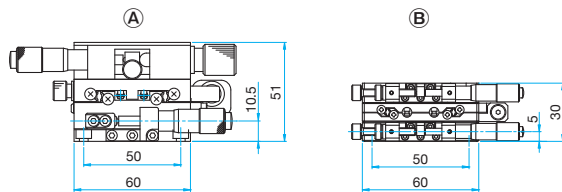
- ▶ Low-profile X axis steel stage (TSDT) with stage thickness of 10mm is also available. [Reference](#) E016
- ▶ Fitted with opposed clamp as standard.
- ▶ The part number suffix FP indicates products with fine-pitch screws instead of standard micrometers. Fine Pitch screws have a screw pitch of 0.25mm and require a hex wrench or the optional hex wrench with knob (KCL) for adjustment. [Reference](#) F010



Attention

- ▶ When installing on a vertical surface, please make sure to place the micrometer head upside down. Structurally, the spring inside the stage might not be able to withstand the load and may stretch.

Comparison of Thickness when the KSPT is Used (KSP and TSD → KSPT and TSDT)



Part Number	Ⓐ	Ⓑ
θ axis	KSP-606M	KSPT-606MH
Y axis		TSDT-601S
X axis	TSD-602S	TSDT-601S



TSDT-601S + KSPT-606MH combination

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

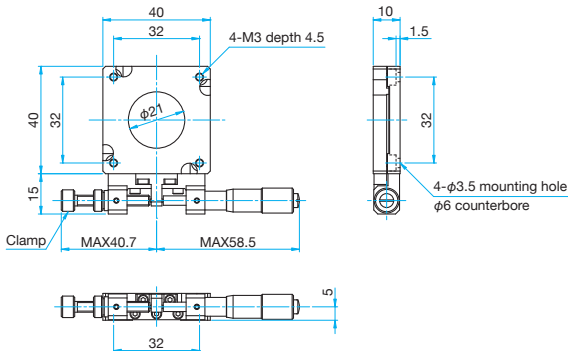
Specifications

Part Number	KSPT-406MH	KSPT-406MHFP	KSPT-606MH	KSPT-606MHFP
Opposite ModelPart Number	KSPT-406MRH	KSPT-406MRHFP	KSPT-606MRH	KSPT-606MRHFP
Table Size [mm]	40×40	40×40	60×60	60×60
Rotation Range [°]	±10	±10	±10	±10
Bearing type	Extended contact ball guide			
Primary Material	Steel			
Finish	Black matte			
Load Capacity [N]	78.4 (8.0kgf)	78.4 (8.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Max. Moment Capacity	Pitch [N·m]	3.9	3.9	6.4
	Roll [N·m]	3.9	3.9	6.4
Moment Stiffness	Pitch ["/N·cm]	0.3	0.3	0.15
	Roll ["/N·cm]	0.6	0.6	0.3
Parallelism [μ m]	30	30	30	30
Eccentricity [μ m]	10	10	10	10
Wobble [μ m]	10	10	10	10
Weight [kg]	0.11	0.11	0.18	0.18

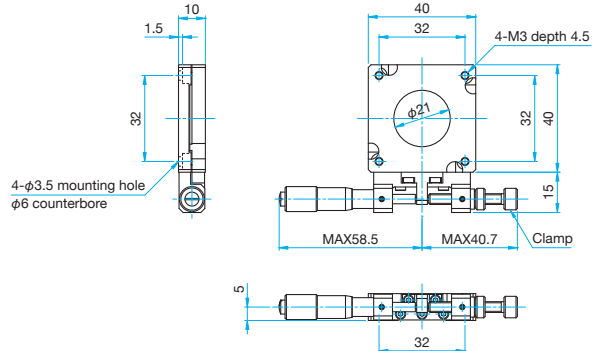


Outline Drawing

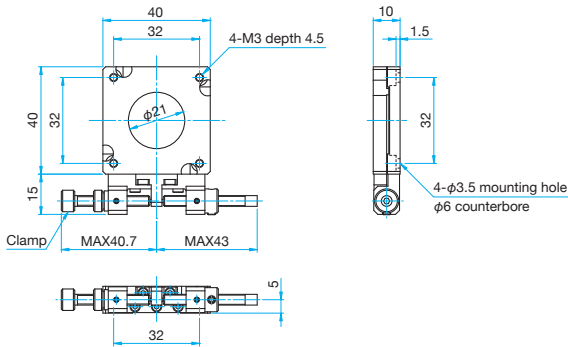
KSPT-406MH Low head hexagon socket head cap screw
M3×5...4 screws



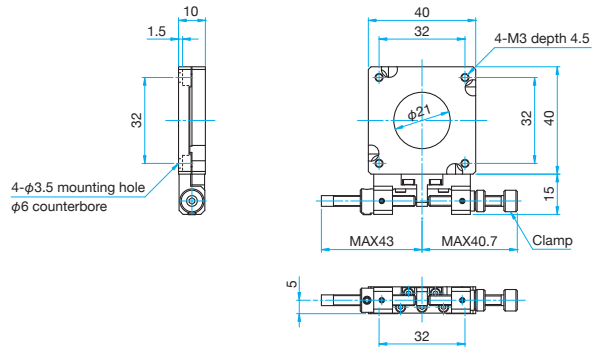
KSPT-406MRH Low head hexagon socket head cap screw
M3×5...4 screws



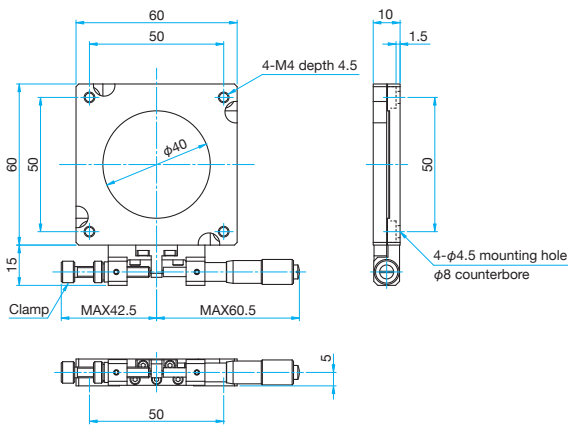
KSPT-406MHFP Low head hexagon socket head cap screw
M3×5...4 screws



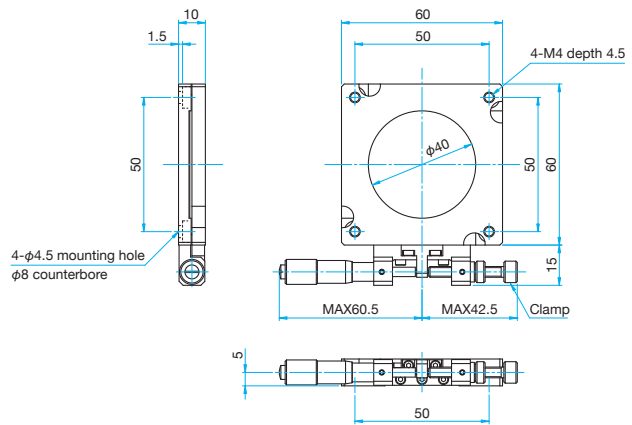
KSPT-406MRHFP Low head hexagon socket head cap screw
M3×5...4 screws



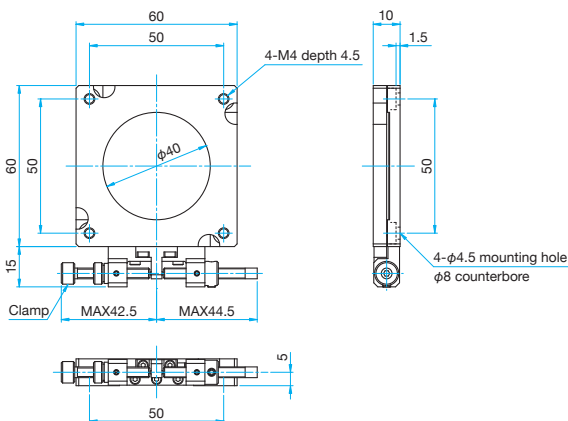
KSPT-606MH Low head hexagon socket head cap screw
M4×6...4 screws



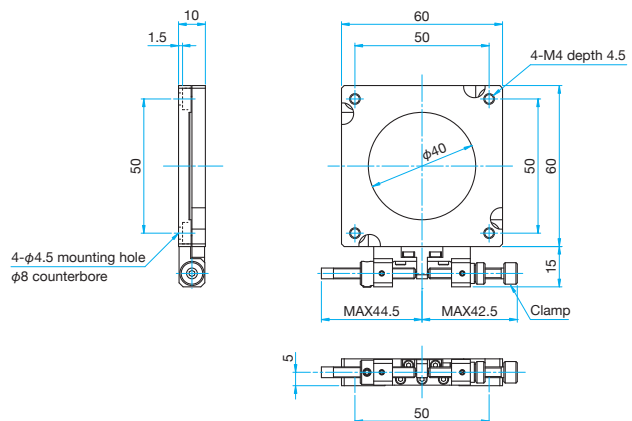
KSPT-606MRH Low head hexagon socket head cap screw
M4×6...4 screws



KSPT-606MHFP Low head hexagon socket head cap screw
M4×6...4 screws



KSPT-406MRHFP Low head hexagon socket head cap screw
M4×6...4 screws



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

θ axis Rotation Stages

KSP-256/406
KSP-606/656/786

RoHS
RoHS

θ axis (rotation) coarse/fine adjustment stages with plane bearings offer coarse rotation adjustment of 360° and fine adjustment (with either a micrometer head or fine-pitch screw). Directly rotate the stage upper plate for coarse adjustment, then clamp the clutch screw and use micrometer head or fine-pitch screw ($\pm 5^\circ$) for fine adjustment.

- The main body of these stages is made of brass for high stiffness. (Except for KSP-786M)
- The through hole at the center of the stage can be used as a transmission hole.



Guide

- ▶ Using the top plate for KSP-406 (SP-123) to convert mounting holes, various stages can be mounted. [Reference](#) D059
- ▶ Using the top plate for KSP/KSPA (SP-103) to convert mounting holes, various stages can be mounted. [Reference](#) D056
- ▶ Using the bottom plate for KSP-786M (SP-104) to convert mounting holes, mounting on magnet bases or $\square 60\text{mm}$ stages (M4 50x50) is possible. [Reference](#) D056

Specifications						
Part Number	METRIC	KSP-256	KSP-406M	KSP-606M	KSP-656M-M6	KSP-786M
	INCH	—	KSP-406MUU	—	KSP-656MUU	—
(Opposite Model)	METRIC	—	KSP-406MR	KSP-606MR	—	—
Table Size [mm]		$\phi 25$	$\phi 40$	$\phi 60$	$\phi 65$	$\phi 60$
Rotation Range [°]		Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5
Scale Readable Resolution		2°	2°	1°	1°	5'
Micrometer Readable Resolution		—	about 1'24.2"	about 55.8"	about 43.5"	about 51.6"
Bearing type		Lapping method				
Primary Material		Brass				Aluminum
Finish		Super black chrome				Black anodized
Load Capacity [N]		29.4 (3.0kgf)	49.0 (5.0kgf)	68.6 (7.0kgf)	68.6 (7.0kgf)	49 (5.0kgf)
Max. Moment Capacity [N·m]		0.15	0.3	0.75	0.75	1.3
Moment Stiffness ["/N·cm]		6.1	1.5	0.4	0.4	1.5
Parallelism [μm]		20	20	20	20	50
Eccentricity [μm]		20	20	20	20	20
Wobble [μm]		15	20	20	20	20
Options		—	FP	FP	FP	FP
Weight [kg]		0.09	0.3	0.6	0.7	0.4

Option

Option Code	Compatible product		Micrometer Readable Resolution [mm]	Reference E008
	Products Name	Part Number		
FP	Fine-pitch Screw Adjusters	FPSA-62540	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

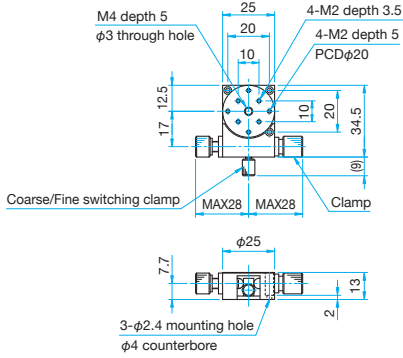
 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others



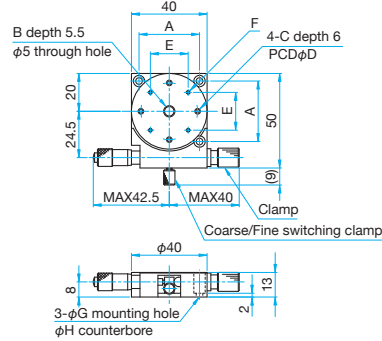
Outline Drawing

KSP-256 Pan head screw M2x5...3 screws



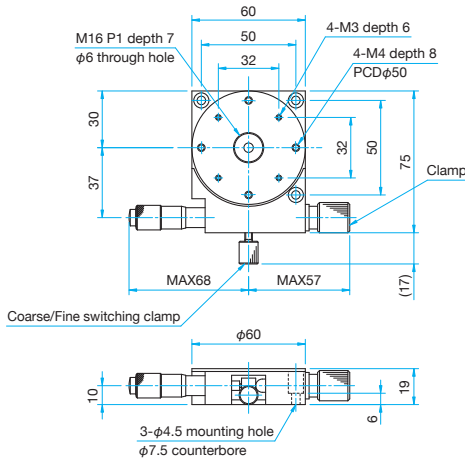
KSP-406M/406MUU

Pan head screw M3x6...3 screws
Hexagonal socket head cap screw 6-32UNCx1/4...3 screws (UU)

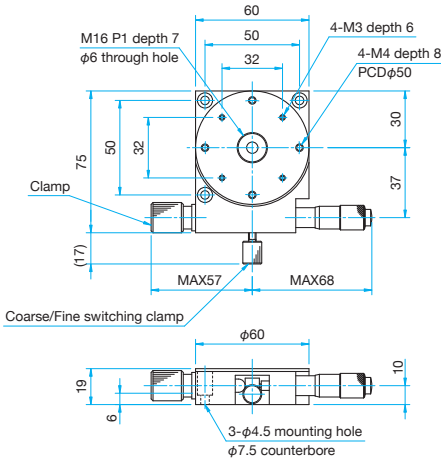


Part Number	A (mm)	B	C	D (mm)	E (mm)	F	G (mm)	H (mm)
KSP-406M	32	M6 P1	M3	30	20	4-M2 depth 2	3.5	6
KSP-406MUU	31.75	1/4-20UNC	6-32UNC	31.75			4	6.5

KSP-606M Hexagonal socket head cap screw M4x10...3 screws

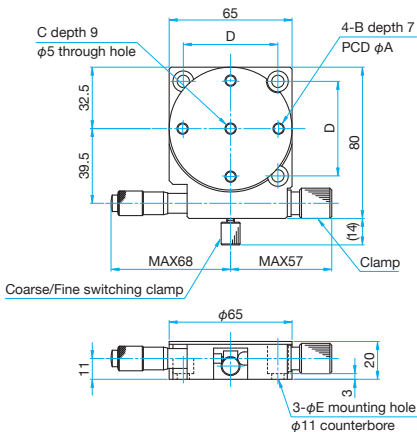


KSP-606MR Hexagonal socket head cap screw M4x10...3 screws

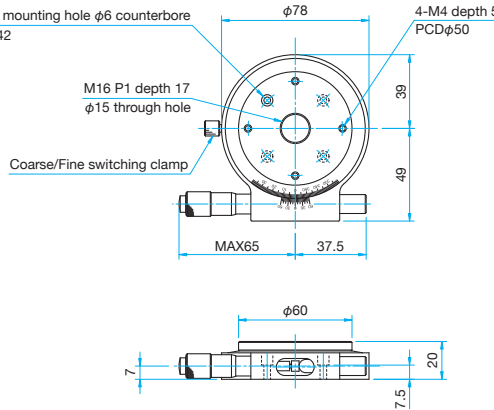


KSP-656M-M6/656MUU

Hexagonal socket head cap screw M6x8...3 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...3 screws (UU)



KSP-786M Pan head screw M3x12...4 screws



Part Number	A (mm)	B	C	D (mm)	E (mm)
KSP-656M-M6	50	M6 P1	M6 P1	50	φ6.5
KSP-656MUU	50.8	1/4-20UNC	1/4-20UNC	50.8	φ7

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm

Others

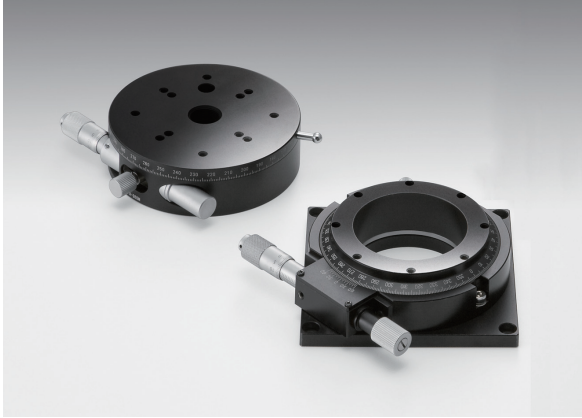
θ axis Rotation Stages with Aperture | KSPA

RoHS

θ axis (rotation) coarse/fine adjustment stages with plane bearings offer coarse rotation adjustment of 360° and fine adjustment (with either a micrometer head or fine-pitch screw).

Directly rotate the stage upper plate for coarse adjustment, then clamp the clutch screw and use micrometer head or fine-pitch screw ($\pm 5^\circ$) for fine adjustment.

- Light-weight and high precision aluminum rotation stages.
- The through hole at the center of the stage can be used as a transmission hole.



Guide

- ▶ Using the top plate for KSP/KSPA (SP-103) to convert mounting holes, various stages can be mounted. [Reference](#) D056
- ▶ Mounting holes can be converted using the bottom plate for KSPA-806M/1006M (SP-117). [Reference](#) D058

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

Specifications					
Part Number	METRIC	KSPA-806M	KSPA-986M	KSPA-806MH	KSPA-1006MH
Table Size [mm]		$\phi 80$	$\phi 98$	$\phi 57$	$\phi 76$
Rotation Range [°]		Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5
Scale Readable Resolution		5'	5'	5'	5'
Micrometer Readable Resolution		about 1'08.8"	about 52.9"	about 51.6"	about 42.1"
Bearing type		Lapping method			
Primary Material		Aluminum			
Finish		Black anodized			
Load Capacity [N]		58.8 (6.0kgf)	68.6 (7.0kgf)	49.0 (5.0kgf)	68.6 (7.0kgf)
Max. Moment Capacity [N·m]		1.0	1.0	0.88	0.98
Moment Stiffness ["/N·cm]		0.8	0.8	0.61	0.2
Parallelism [μ m]		50	50	30	40
Eccentricity [μ m]		20	20	20	20
Wobble [μ m]		20	20	20	20
Options		FP	FP	FP	FP
Weight [kg]		0.5	0.7	0.45	0.6

Option				
Option Code	Compatible product		Micrometer Readable Resolution [mm]	Reference E008
	Products Name	Part Number		
FP	Fine-pitch Screw Adjusters	FPSA-62540	—	E008

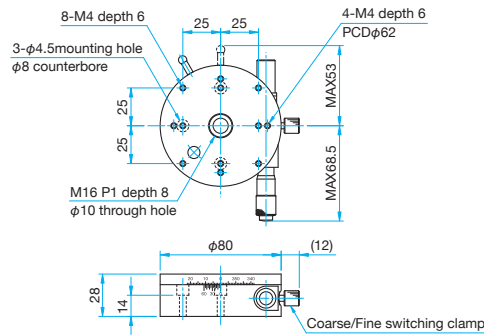
* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

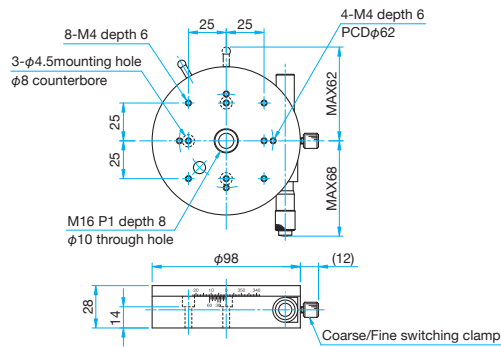


Outline Drawing

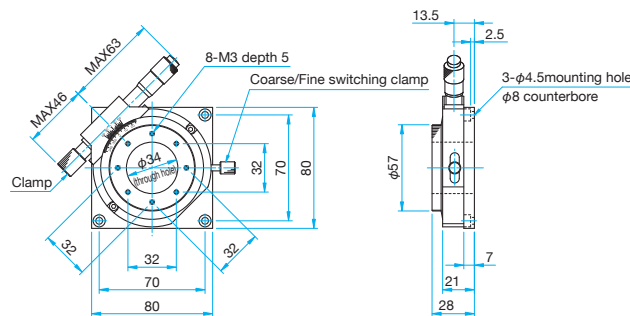
KSPA-806M Hexagonal socket head cap screw M4x20...3 screws, Spring washers



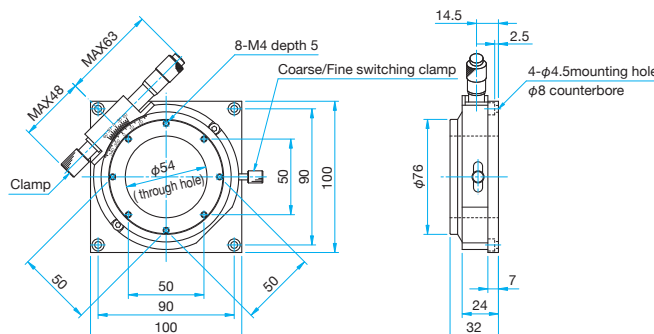
KSPA-986M Hexagonal socket head cap screw M4x20...3 screws, Spring washers



KSPA-806MH Hexagonal socket head cap screw M4x8...4 screws, Spring washers



KSPA-1006MH Hexagonal socket head cap screw M4x8...4 screws, Spring washers



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

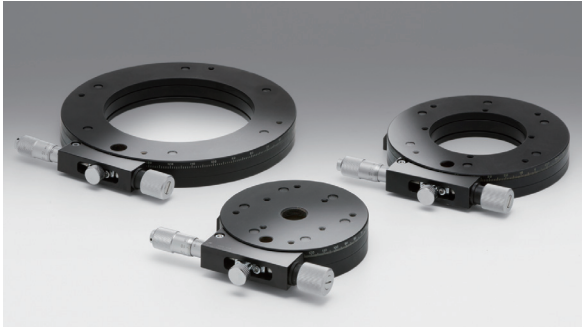
Others

- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm
- Others**

θ axis Rotation Stages with Aperture | KSPB

RoHS

θ axis (rotation) coarse/fine adjustment stages with plane bearings offer coarse rotation adjustment of 360° and fine adjustment (with either a micrometer head or fine-pitch screw). Directly rotate the stage upper plate for coarse adjustment, then clamp the clutch screw and use micrometer head or fine-pitch screw ($\pm 5^\circ$) for fine adjustment.



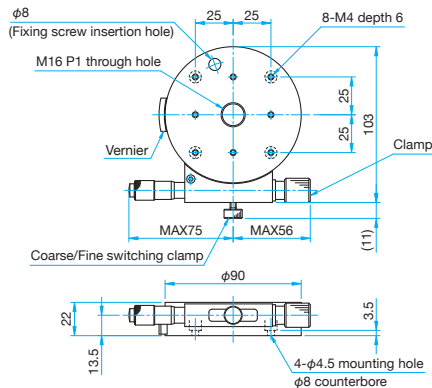
- Brass stage and steel crossed roller offer high precision and high stiffness.
- The through hole at the center of the stage can be used as a transmission hole.



Outline Drawing

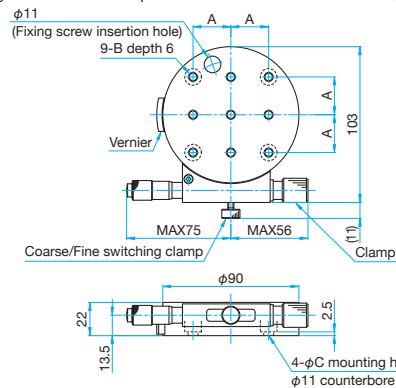
KSPB-906M

Hexagonal socket head cap screw M4x8...4 screws



KSPB-906M-M6/906MUU

Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B	ϕC (mm)
KSPB-906M-M6	25	M6 P1	$\phi 6.5$
KSPB-906MUU	25.4	1/4-20UNC	$\phi 7$

Specifications

Part Number	METRIC	KSPB-906M	KSPB-906M-M6
	INCH	—	KSPB-906MUU
Table Size [mm]		$\phi 90$	$\phi 90$
Rotation Range [°]		Coarse: 360 Fine: ± 5	Coarse: 360 Fine: ± 5
Scale Readable Resolution		5'	5'
Micrometer Readable Resolution		about 41.25"	about 41.25"
Bearing type		Crossed roller	
Primary Material		Brass	
Finish		Super black chrome	
Load Capacity [N]		147 (15.0kgf)	147 (15.0kgf)
Max. Moment Capacity [N·m]		5.0	5.0
Moment Stiffness [°/N·cm]		0.2	0.2
Parallelism [μ m]		50	50
Eccentricity [μ m]		20	20
Wobble [μ m]		20	20
Options		FP	FP
Weight [kg]		1.3	1.3

Option

Option Code	Compatible product		Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number		
FP	Fine-pitch Screw Adjusters	FPSA-62540	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.

* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. [Reference](#) F010

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

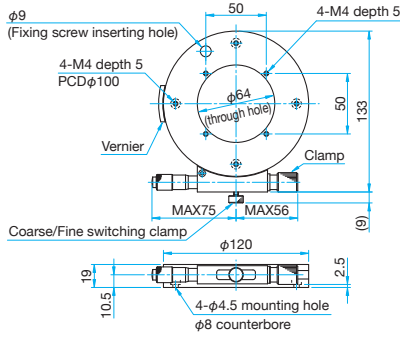
Others



Outline Drawing

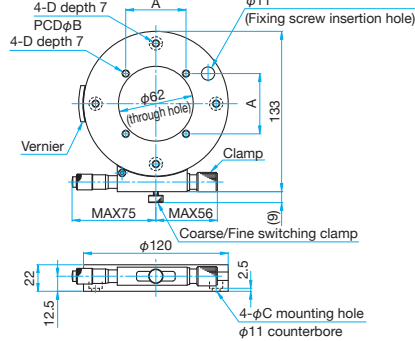
KSPB-1206MH

Hexagonal socket head cap screw M4x8...4 screws



KSPB-1206MH-M6/1206MHUU

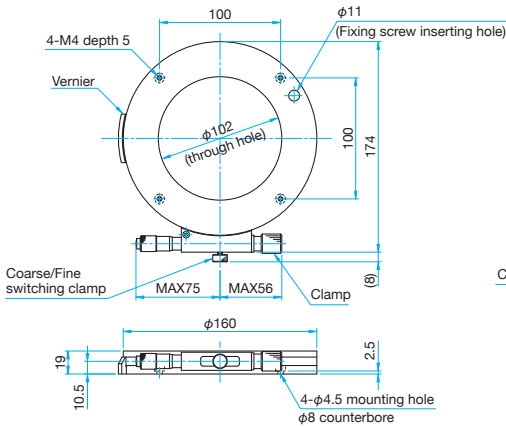
Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	φB (mm)	φC (mm)	D
KSPB-1206MH-M6	50	φ100	φ6.5	M6 P1
KSPB-1206MH-UU	50.8	φ101.6	φ7	1/4-20UNC

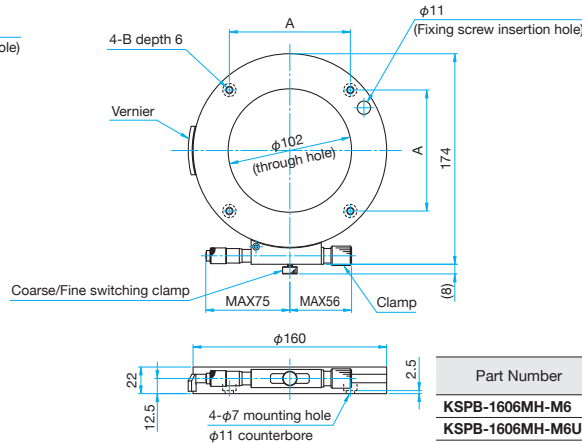
KSPB-1606MH

Hexagonal socket head cap screw M4x8...4 screws



KSPB-1606MH-M6/1606MHUU

Hexagonal socket head cap screw M6x8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B
KSPB-1606MH-M6	100	M6 P1
KSPB-1606MH-M6UU	101.6	1/4-20UNC

Specifications

Part Number	METRIC	KSPB-1206MH	KSPB-1206MH-M6	KSPB-1606MH	KSPB-1606MH-M6
	INCH	—	KSPB-1206MHUU	—	KSPB-1606MHUU
Table Size [mm]		φ120	φ120	φ160	φ160
Rotation Range [°]		Coarse: 360 Fine: ±4	Coarse: 360 Fine: ±4	Coarse: 360 Fine: ±3	Coarse: 360 Fine: ±3
Scale Readable Resolution		5'	5'	5'	5'
Micrometer Readable Resolution		about 31.8"	about 31.8"	about 23.7"	about 23.7"
Bearing type		Crossed roller			
Primary Material		Brass			
Finish		Super black chrome			
Load Capacity [N]		196 (20.0kgf)	196 (20.0kgf)	196 (20.0kgf)	196 (20.0kgf)
Max. Moment Capacity [N·m]		7.8	7.8	9.8	9.8
Moment Stiffness ["/N·cm]		0.1	0.1	0.1	0.1
Parallelism [μm]		50	50	50	50
Eccentricity [μm]		30	30	30	30
Wobble [μm]		20	20	20	20
Options		FP	FP	FP	FP
Weight [kg]		1.1	1.1	1.5	1.5

Option

Option Code	Compatible product		Micrometer Readable Resolution [mm]	Reference
	Products Name	Part Number		
FP	Fine-pitch Screw Adjusters	FPSA-62540	—	E008

* Please add an option code as the part number suffix to specify various optional specifications.
* The FP type requires a hex wrench or the optional hex wrench with knob (KCL) for driving operation. Reference F010

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

θ axis Rotation Stages

θ axis Rotation Stages with Square Top

KSC
KSSARoHS
RoHSCatalog Code W7506
Catalog Code W7508

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

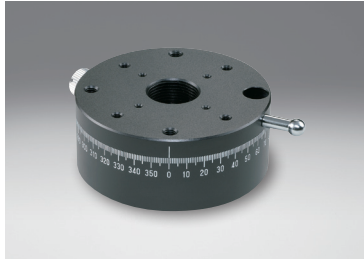
80mm

100mm

120mm

Others

The top plate of KSC stage can be rotated 360°(coarse) by turning the handle attached side of the top plate. It is a general-purpose θ axis stage with an aluminum body, best suited for weight reduction. The KSSA stages are unique fine rotation stages having a square table top. These stages are suitable for making minute angle adjustment, or being assembled in devices because there is no protrusion such as micrometers.

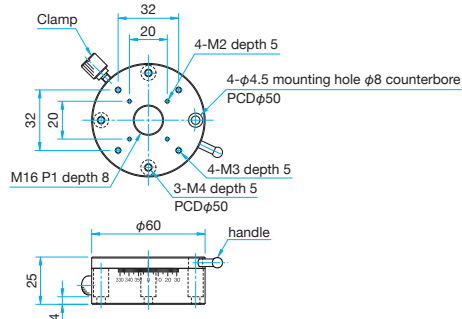


● The KSSA stages come with a hexagonal wrench with knob and clamping wrench.



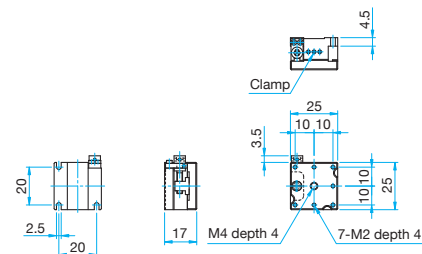
Outline Drawing

KSC-606 Hexagonal socket head cap screw M4x8...4 screws



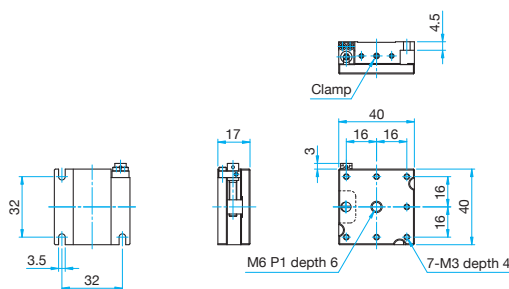
KSSA-256

Hexagonal socket head cap screw M2x8...3 screws,
One 3mm hex wrench with knob, One 0.89mm hex wrench
Wrench size for adjustment 3mm, Wrench size for clamp 0.89mm



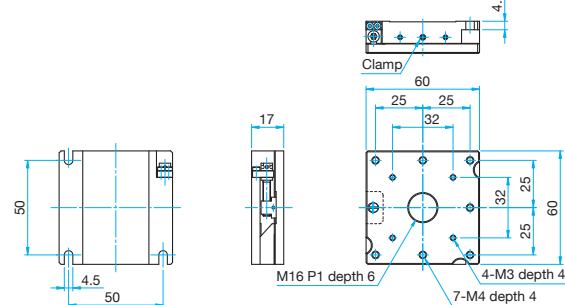
KSSA-406

Hexagonal socket head cap screw M3x8...3 screws,
One 3mm hex wrench with knob, One 1.5mm hex wrench
Wrench size for adjustment 3mm, Wrench size for clamp 1.5mm



KSSA-606

Hexagonal socket head cap screw M4x8...3 screws,
One 3mm hex wrench with knob, One 1.5mm hex wrench
Wrench size for adjustment 3mm, Wrench size for clamp 1.5mm



Specifications

Part Number	METRIC	KSC-606	KSSA-256	KSSA-406	KSSA-606
Table Size [mm]		φ60	25×25	40×40	60×60
Rotation Range [°]		360	±3	±5	±7
Scale Readable Resolution		1°	—	—	—
Micrometer Readable Resolution [°]		—	about 3.18	about 1.92	about 1.47
Bearing type		Lapping method		Dovetail method	
Primary Material		Aluminum		Brass	
Finish		Black anodized		Super black chrome	
Load Capacity [N]		68.6 (7.0kgf)	29.4 (3.0kgf)	49.0 (5.0kgf)	68.6 (7.0kgf)
Max. Moment Capacity [N·m]		—	—	—	—
Moment Stiffness ["/N·cm]		1.5	2.0	1.5	1.0
Parallelism [μm]		50	50	50	50
Eccentricity [μm]		20	—	—	—
Wobble [μm]		20	—	—	—
Weight [kg]		0.19	0.09	0.23	0.5

* When using the M3 or M4 screws in the screw hole on the top surface of this stage, please use the screws within the length of the tap depth. There is a risk of damaging the sliding surface.

Driven by a worm gear, these rotation stages are capable of precise adjustment over a full 360° rotation.



- The through hole at the center of the stage can be used as a transmission hole.

Attention

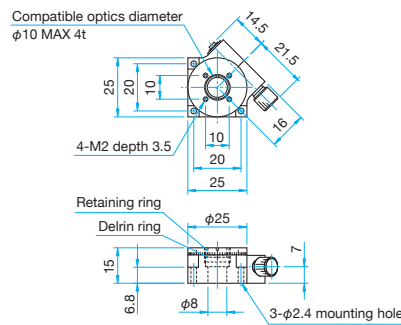
- ▶ KSW-256 and KSW-1006 do not have a clamping mechanism.
- ▶ KSW-256 and KSW-406 do not have a vernier scale.



Outline Drawing

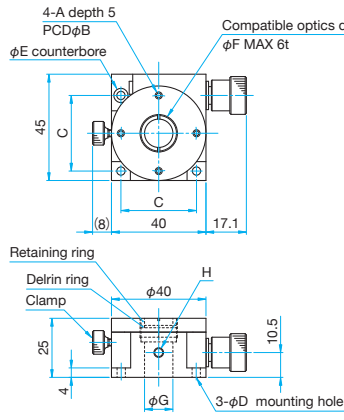
KSW-256

☐ Pan head screw M2x10...3 screws



KSW-406/406UU

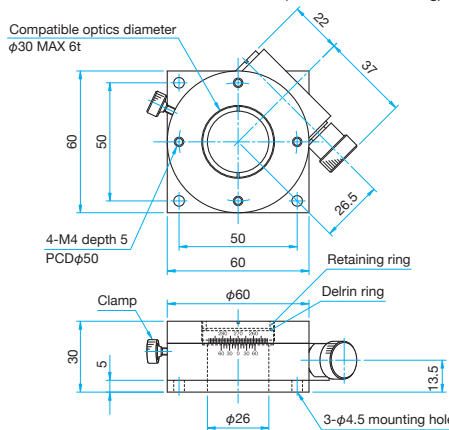
☐ Pan head screw M3x8...3 screws, Hexagonal socket head cap screw 6-32UNCx5/16...3 screws (UU)



Part Number	KSW-406	KSW-406UU
A	M3	6-32UNC
B (mm)	φ32	φ31.75
C (mm)	32	31.75
D (mm)	φ3.5	φ4
E (mm)	φ6	φ6.5
F (mm)	φ15	φ12.7
G (mm)	φ12	φ10
H		8-32UNC depth5

KSW-606

☐ Hexagonal socket head cap screw M4x10...3 screws, One 1.5mm hex wrench (Coarse/Fine switching)



Specifications

Part Number	METRIC	KSW-256	KSW-406	KSW-606
	INCH	—	KSW-406UU	—
Table Size [mm]		φ25	φ40	φ60
Rotation Range [°]		Fine: 360°	Fine: 360°	Fine: 360°
Scale Readable Resolution		5°	2°	10'
Knob Rotation Angle [°/1 rotation]		about 8	about 7.5	about 4
Bearing type		Lapping method		
Primary Material		Brass		
Finish		Super black chrome		
Load Capacity [N]		29.4 (3.0kgf)	49.0 (5.0kgf)	98.0 (10.0kgf)
Max. Moment Capacity	Pitch [N·m]	0.14	0.29	0.49
Moment Stiffness	Pitch [°/N·cm]	6.1	1.5	0.9
Parallelism [μm]		30	30	50
Eccentricity [μm]		20	20	20
Wobble [μm]		15	20	20
Weight [kg]		0.07	0.3	0.55

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

θ axis Rotation Stages (Worm Nut and Gear Drive)

KSW

RoHS

Driven by a worm gear, these rotation stages are capable of precise adjustment over a full 360° rotation.

- The through hole at the center of the stage can be used as a transmission hole.

**Attention**

- ▶ KSW-1006 does not have a clamping mechanism.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm**Others****Specifications**

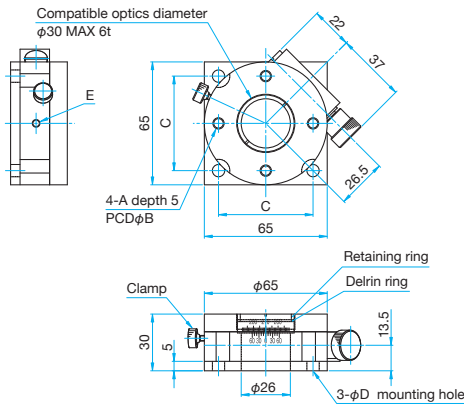
Part Number	METRIC	KSW-656-M6	KSW-1006	KSW-1206	KSW-1206-M6
	INCH	KSW-656UU	—	—	KSW-1206UU
Table Size [mm]		φ65mm	φ84mm	φ120mm	φ120mm
Rotation Range [°]		Coarse: 360° Fine: 360°	— Fine: 360°	Coarse: 360° Fine: 360°	Coarse: 360° Fine: 360°
Scale Readable Resolution		10'	5'	5'	5'
Knob Rotation Angle [°/1 rotation]		4	2.05	1.62	1.62
Bearing type		Lapping method	Lapping method	Crossed roller	Crossed roller
Primary Material		Brass	Aluminum	Brass	
Finish		Super black chrome	Black anodized	Super black chrome	
Load Capacity [N]		98.0 (10.0kgf)	78.4 (8.0kgf)	196.0 (20.0kgf)	196.0 (20.0kgf)
Max. Moment Capacity	Pitch [N·m]	0.49	1.0	9.8	9.8
Moment Stiffness	Pitch ["/N·cm]	0.9	0.5	0.15	0.15
Parallelism [μm]		50	70	60	60
Eccentricity [μm]		20	20	30	30
Wobble [μm]		20	20	30	30
Weight [kg]		0.6	0.62	2.2	2.2



Outline Drawing

KSW-656-M6/656UU

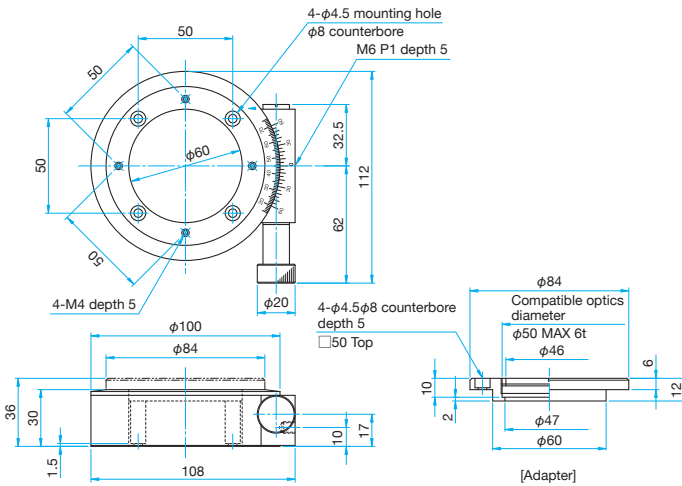
Hexagonal socket head cap screw M6×10...3 screws, One 1.5mm hex wrench (Coarse/Fine switching) (M6)
Hexagonal socket head cap screw 1/4-20UNC×3/8...3 screws, One 1.5mm hex wrench (Coarse/Fine switching) (UU)



Part Number	A	B (mm)	C (mm)	D (mm)	E
KSW-656-M6	M6	φ50	50	φ6.5	
KSW-656UU	1/4-20UNC	φ50.8	50.8	φ7	8-32UNC depth 5

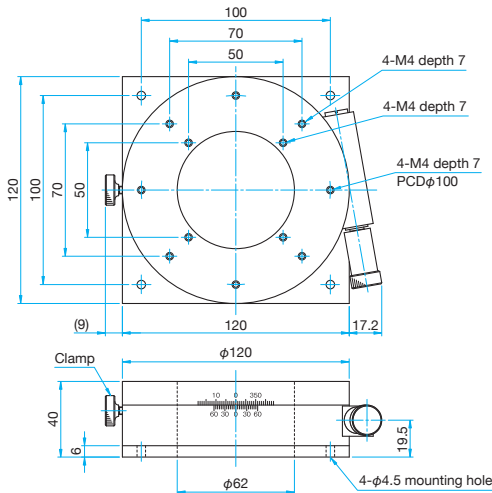
KSW-1006

Hexagonal socket head cap screw M4×6...4 screws



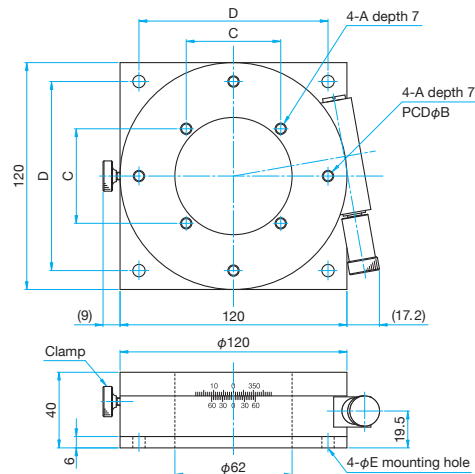
KSW-1206

Hexagonal socket head cap screw M4×12...4 screws, Spring washer, One 1.5mm hex wrench (Coarse/Fine switching)



KSW-1206-M6/1206UU

Hexagonal socket head cap screw M6×12...4 screws, Spring washer, One 1.5mm hex wrench (Coarse/Fine switching) (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/2...4 screws, One 1.5mm hex wrench (Coarse/Fine switching) (UU)



Part Number	A	B (mm)	C (mm)	D (mm)	E (mm)
KSW-1206-M6	M6 P1	φ100	50	100	φ6.5
KSW-1206UU	1/4-20UNC	φ101.6	50.8	101.6	φ7

- Application Systems
- Optics & Optical Coatings
- Holders
- Bases
- Manual Stages
- Actuators
- MotORIZED Stages
- Light Sources
- Index
- Guide
- X axis Stages
- XY axis Stages
- Z axis Stages
- XZ axis Stages
- XYZ axis Stages
- θ axis Stages**
- Goniometer
- Inclination
- Vacuum
- Ball Guide
- Crossed Roller
- Dovetail
- Lapping
- V Groove Screw
- Ohters
- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm
- Others

Extended Contact Ball Slide Goniometers

GOHT-40A Stage size □40mm

RoHS

High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Disc clamp improves the stability of clamping.
- Integral-guide structure offers high performance of rotation center displacement $\phi 0.007$ mm.
- Attachment pins (accessories) are ideal for positioning when assembling into $\alpha\beta$ axis or mounting on various instruments or devices.



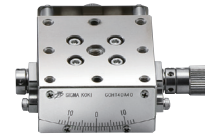
Guide

- ▶ Attachment pins (GOHT-AP) can be purchased separately. [Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Motorized extended guide goniometers (OSMS-40A****) with stepping motor are also available. [Reference](#) G082



OSMS-40A

- ▶ For the surface finishing, the white coating of electroless nickel plating is also available. [WEB Reference](#) [Catalog Code](#) W7092



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications

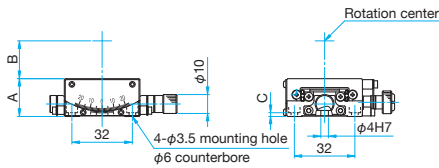
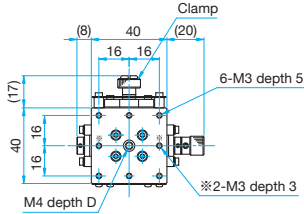
Part Number	METRIC	GOHT-40A20B	GOHT-40A40B	GOHT-40A60B	GOHT-40A75B
	INCH	GOHT-40A20BUU	GOHT-40A40BUU	GOHT-40A60BUU	GOHT-40A75BUU
(Opposite Model)	METRIC	GOHT-40A20BR	GOHT-40A40BR	GOHT-40A60BR	GOHT-40A75BR
	INCH	GOHT-40A20BRUU	GOHT-40A40BRUU	GOHT-40A60BRUU	GOHT-40A75BRUU
Table Size [mm]		40×40	40×40	40×40	40×40
Axes of Travel		α axis			
Rotation Center Height [mm]		20±0.1	40±0.1	60±0.1	75±0.1
Angle Range [°]		±20	±10	±8	±6
Vernier Readable Resolution		0.1°	0.1°	0.1°	0.1°
Travel per Knob Rotation [°]		about 2.31	about 1.41	about 1.08	about 0.89
Rotation Center Displacement [mm]		$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less
Bearing type		Extended contact ball guide			
Primary Material		SUS440C quench hardened			
Finish		Super black chrome			
Load Capacity [N]		58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)
Max. Moment Capacity	Pitch [N·m]	2.0	2.0	2.0	2.0
	Roll [N·m]	3.0	3.0	3.0	3.0
	Yaw [N·m]	2.0	2.0	2.0	2.0
Moment Stiffness	Roll [°/N·cm]	0.6	0.6	0.6	0.6
	Yaw [°/N·cm]	0.6	0.6	0.6	0.6
Parallelism [μ m]		30	30	30	30
Weight [kg]		0.2	0.2	0.2	0.2



Outline Drawing

GOHT-40A* *B

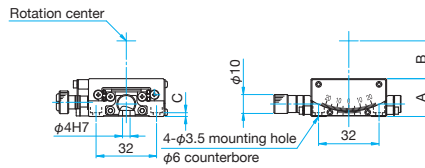
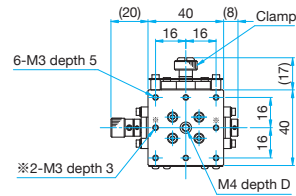
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws
Attachment pin for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20B	20	20	2	4
GOHT-40A40B	20	40	1.5	4
GOHT-40A60B	15	60	1	3
GOHT-40A75B	15	75	1	3

GOHT-40A* *BR

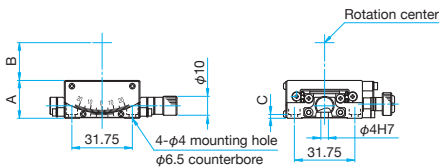
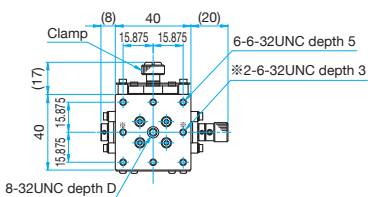
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws
Attachment pin for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BR	20	20	2	4
GOHT-40A40BR	20	40	1.5	4
GOHT-40A60BR	15	60	1	3
GOHT-40A75BR	15	75	1	3

GOHT-40A* *BUU

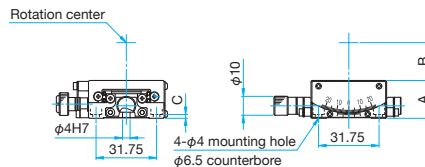
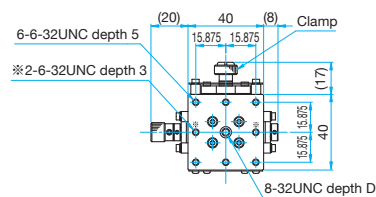
Low head hexagon socket head cap screw (stainless steel construction)
6-32UNC×1/4...4 screws, Attachment pin for 8-32UNC...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BUU	20	20	2	4
GOHT-40A40BUU	20	40	1.5	4
GOHT-40A60BUU	15	60	1	3
GOHT-40A75BUU	15	75	1	3

GOHT-40A* *BRUU

Low head hexagon socket head cap screw (stainless steel construction)
6-32UNC×1/4...4 screws, Attachment pin for 8-32UNC...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BRUU	20	20	2	4
GOHT-40A40BRUU	20	40	1.5	4
GOHT-40A60BRUU	15	60	1	3
GOHT-40A75BRUU	15	75	1	3

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

$\alpha\beta$ axis Extended Contact Ball Slide Goniometers

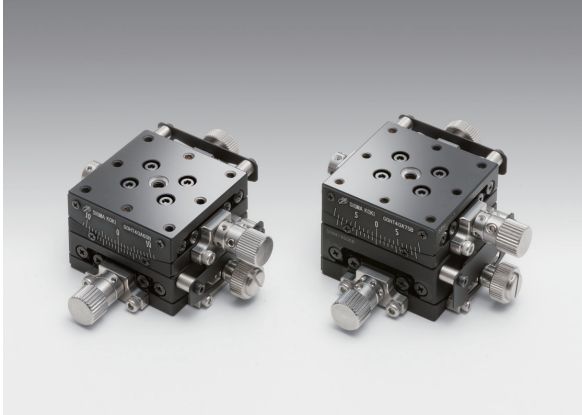
GOHT-40B Stage size □40mm

RoHS

High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Disc clamp improves the stability of clamping.
- Integral-guide structure offers high performance of rotation center displacement $\phi 0.007\text{mm}$.



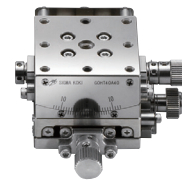
Guide

- ▶ Attachment pins (GOHT-AP) can be purchased separately. [Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Motorized extended guide goniometers (OSMS-40A****) with stepping motor are also available. [Reference](#) G082



OSMS-40A

- ▶ For the surface finishing, the white coating of electroless nickel plating is also available. [WEB Reference](#) [Catalog Code](#) W7104



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications

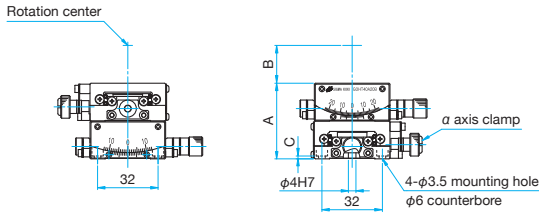
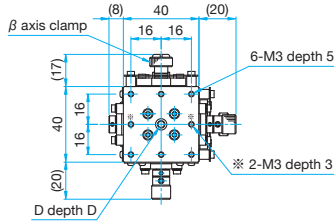
Part Number	METRIC	GOHT-40B20B	GOHT-40B40B	GOHT-40B60B
	INCH	GOHT-40B20BUU	GOHT-40B40BUU	GOHT-40B60BUU
(Opposite Model)	METRIC	GOHT-40B20BR	GOHT-40B40BR	GOHT-40B60BR
	INCH	GOHT-40B20BRUU	GOHT-40B40BRUU	GOHT-40B60BRUU
Table Size [mm]		40×40	40×40	40×40
Axes of Travel			$\alpha\beta$ axis	
Rotation Center Height [mm]		20±0.2	40±0.2	60±0.2
Angle Range [°]	(Upper) β axis	±20	±10	±8
	(Lower) α axis	±10	±8	±6
Vernier Readable Resolution		0.1°	0.1°	0.1°
Travel per Knob Rotation [°]	(Upper) β axis	about 2.31	about 1.41	about 1.08
	(Lower) α axis	about 1.41	about 1.08	about 0.89
Rotation Center Displacement [mm]		$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less
Bearing type		Extended contact ball guide		
Primary Material		SUS440C quench hardened		
Finish		Super black chrome		
Load Capacity [N]		58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)
Max. Moment Capacity	Pitch [N·m]	2.0	2.0	2.0
	Roll [N·m]	2.0	2.0	2.0
	Yaw [N·m]	2.0	2.0	2.0
Parallelism [μm]		30	30	30
Weight [kg]		0.4	0.4	0.4



Outline Drawing

GOHT-40BB**

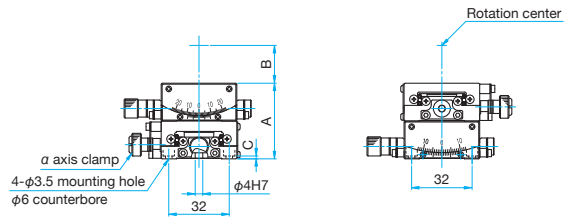
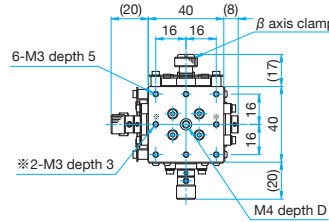
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws
Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40B20B	40	20	1.5	4
GOHT-40B40B	35	40	1	4
GOHT-40B60B	30	60	1	3

GOHT-40BBR**

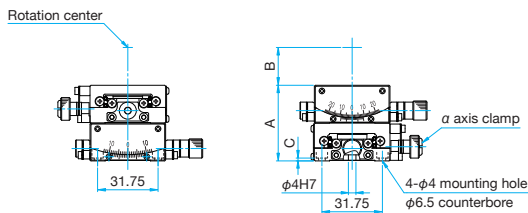
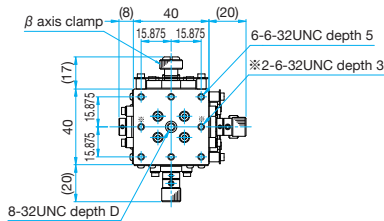
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws
Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40B20BR	40	20	1.5	4
GOHT-40B40BR	35	40	1	4
GOHT-40B60BR	30	60	1	3

GOHT-40BBUU**

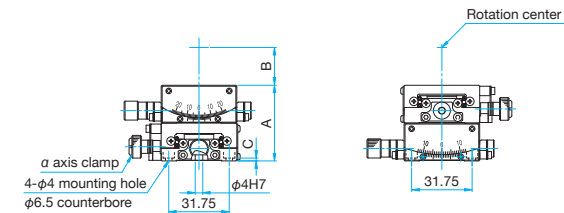
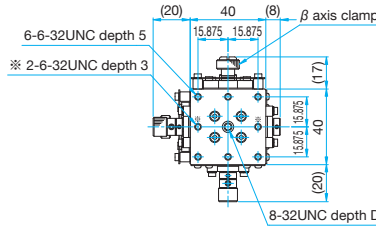
Low head hexagon socket head cap screw (stainless steel construction)
6-32UNC×1/4...4screws, Attachment pins for 8-32UNC...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40B20BUU	40	20	1.5	4
GOHT-40B40BUU	35	40	1	4
GOHT-40B60BUU	30	60	1	3

GOHT-40BBRUU**

Low head hexagon socket head cap screw (stainless steel construction)
6-32UNC×1/4...4screws, Attachment pins for 8-32UNC...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40B20BRUU	40	20	1.5	4
GOHT-40B40BRUU	35	40	1	4
GOHT-40B60BRUU	30	60	1	3

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

Extended Contact Ball Slide Goniometers

$\alpha\beta$ axis Extended Contact Ball Slide Goniometers

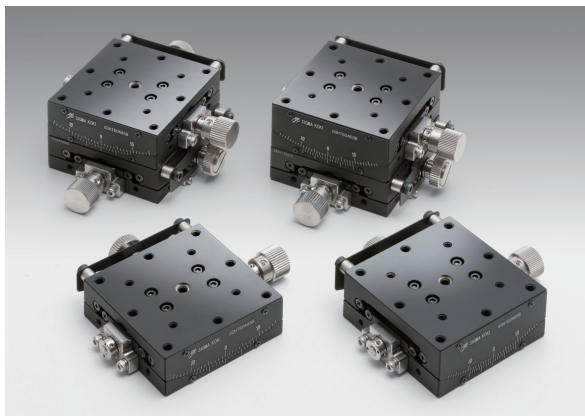
GOHT-60A Stage size □60mm
GOHT-60B



High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Disc clamp improves the stability of clamping.
- Integral-guide structure offers high performance of rotation center displacement $\phi 0.007$ mm.



Guide

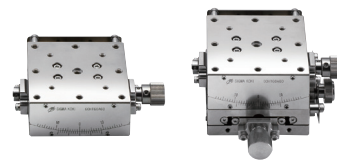
- ▶ Attachment pins (GOHT-AP) can be purchased separately. [Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Motorized extended guide goniometers (OSMS-60A***) with stepping motor are also available. [Reference](#) G084



OSMS-60A

- ▶ For the surface finishing, the white coating of electroless nickel plating is also available.

[WEB Reference](#) [Catalog Code](#) W7093(α axis), W7105($\alpha\beta$ axis)

 α axis β axis

Specifications								
Part Number	METRIC	GOHT-60A35B	GOHT-60A60B	GOHT-60A85B	GOHT-60A105B	GOHT-60B35B	GOHT-60B60B	GOHT-60B85B
(Opposite Model)	METRIC	GOHT-60A35BR	GOHT-60A60BR	GOHT-60A85BR	GOHT-60A105BR	GOHT-60B35BR	GOHT-60B60BR	GOHT-60B85BR
Table Size [mm]		60×60	60×60	60×60	60×60	60×60	60×60	60×60
Axes of Travel		α axis				$\alpha\beta$ axis		
Rotation Center Height [mm]		35±0.1	60±0.1	85±0.1	105±0.1	35±0.2	60±0.2	85±0.2
Angle Range [°]	(Upper) β axis	—	—	—	—	±20	±15	±10
	(Lower) α axis	±20	±15	±10	±8	±15	±10	±8
Vernier Readable Resolution		0.1°	0.1°	0.1°	0.1°	0.1°	0.1°	0.1°
Travel per Knob Rotation [°]	(Upper) β axis	—	—	—	—	about 2.2	about 1.46	about 1.15
	(Lower) α axis	about 2.2	about 1.46	about 1.15	about 0.95	about 1.46	about 1.15	about 0.95
Rotation Center Displacement [mm]		$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less
Bearing type		Extended contact ball guide						
Primary Material		SUS440C quench hardened						
Finish		Super black chrome						
Load Capacity [N]		98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)
Max. Moment Capacity	Pitch [N·m]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Roll [N·m]	6.0	6.0	6.0	6.0	3.0	3.0	3.0
	Yaw [N·m]	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Moment Stiffness	Roll [°/N·cm]	0.25	0.25	0.25	0.25	—	—	—
	Yaw [°/N·cm]	0.1	0.1	0.1	0.1	—	—	—
Parallelism [μ m]		30	30	30	30	30	30	30
Weight [kg]		0.6	0.6	0.6	0.6	1.2	1.2	1.2

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

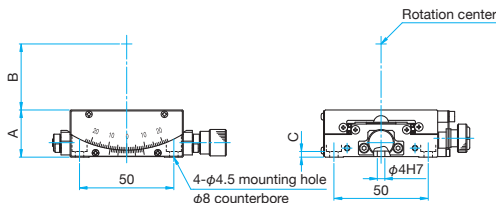
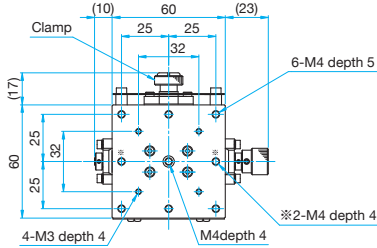
Others



Outline Drawing

GOHT-60A**B

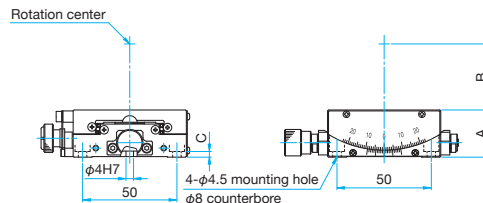
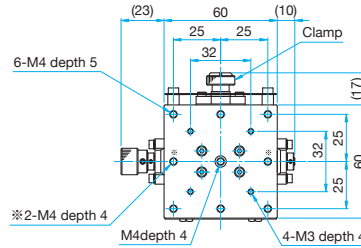
Hexagon socket head cap screw (stainless steel construction) M4x8...4 screws, Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)
GOHT-60A35B	25	35	3
GOHT-60A60B	25	60	3
GOHT-60A85B	20	85	2
GOHT-60A105B	20	105	2

GOHT-60A**BR

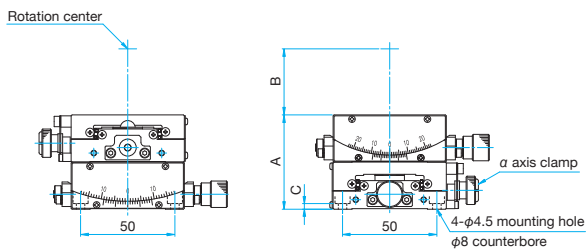
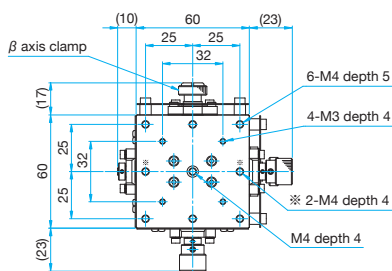
Hexagon socket head cap screw (stainless steel construction) M4x8...4 screws, Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)
GOHT-60A35BR	25	35	3
GOHT-60A60BR	25	60	3
GOHT-60A85BR	20	85	2
GOHT-60A105BR	20	105	2

GOHT-60B**B

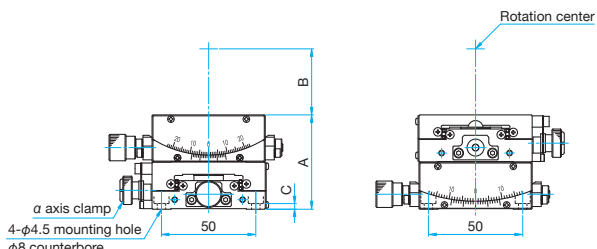
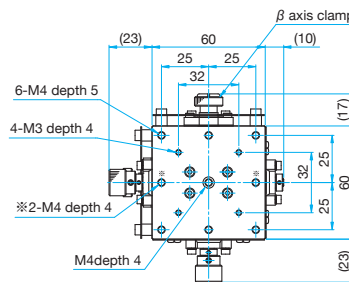
Hexagon socket head cap screw (stainless steel construction) M4x8...4 screws, Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)
GOHT-60B35B	50	35	3
GOHT-60B60B	45	60	2
GOHT-60B85B	40	85	2

GOHT-60B**BR

Hexagon socket head cap screw (stainless steel construction) M4x8...4 screws, Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)
GOHT-60B35BR	50	35	3
GOHT-60B60BR	45	60	2
GOHT-60B85BR	40	85	2

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

Extended Contact Ball Slide Goniometers

$\alpha\beta$ axis Extended Contact Ball Slide Goniometers

GOHT-65A Stage size □65mm
GOHT-65B



High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Disc clamp improves the stability of clamping.
- Integral-guide structure offers high performance of rotation center displacement $\phi 0.007$ mm.



Guide

- ▶ Attachment pins (GOHT-AP) can be purchased separately.
[Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications

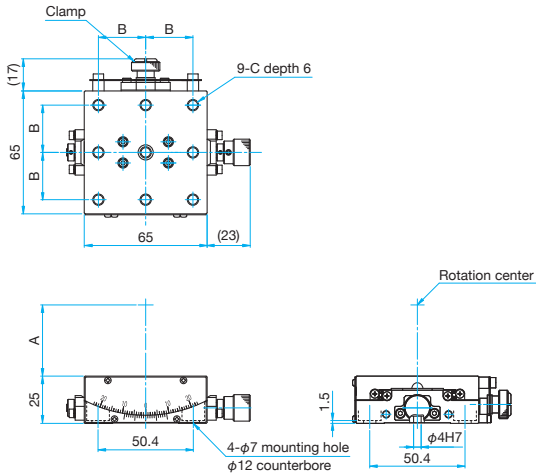
Part Number	METRIC	GOHT-65A50B-M6	GOHT-65A75B-M6	GOHT-65A100B-M6	GOHT-65B50B-M6	GOHT-65B75B-M6
	INCH	GOHT-65A50BUU	GOHT-65A75BUU	GOHT-65A100BUU	GOHT-65B50BUU	GOHT-65B75BUU
(Opposite Model)	METRIC	GOHT-65A50BR-M6	GOHT-65A75BR-M6	GOHT-65A100BR-M6	GOHT-65B50BR-M6	GOHT-65B75BR-M6
	INCH	GOHT-65A50BRUU	GOHT-65A75BRUU	GOHT-65A100BRUU	GOHT-65B50BRUU	GOHT-65B75BRUU
Table Size [mm]		65×65	65×65	65×65	65×65	65×65
Axes of Travel		α axis			$\alpha\beta$ axis	
Rotation Center Height [mm]		50±0.1	75±0.1	100±0.1	50±0.2	75±0.2
Angle Range [°]	(Upper) β axis	—	—	—	±20	±15
	(Lower) α axis	±20	±15	±10	±15	±10
Vernier Readable Resolution		0.1°	0.1°	0.1°	0.1°	0.1°
Travel per Knob Rotation [°]	(Upper) β axis	—	—	—	about 1.70	about 1.22
	(Lower) α axis	about 1.70	about 1.22	about 0.95	about 1.22	about 0.95
Rotation Center Displacement [mm]		$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less	$\phi 0.007$ or less
Bearing type		Extended contact ball guide				
Primary Material		SUS440C quench hardened				
Finish		Super black chrome				
Load Capacity [N]		98 (10kgf)	98 (10kgf)	98 (10kgf)	98 (10kgf)	98 (10kgf)
Max. Moment Capacity	Pitch [N·m]	3.5	3.5	3.5	3.5	3.5
	Roll [N·m]	6.5	6.5	6.5	3.5	3.5
	Yaw [N·m]	3.5	3.5	3.5	3.5	3.5
Moment Stiffness	Roll ["/N·cm]	0.3	0.3	0.3	—	—
	Yaw ["/N·cm]	0.3	0.3	0.3	—	—
Parallelism [μ m]		30	30	30	30.0	30.0
Weight [kg]		0.75	0.75	0.75	1.5	1.5



Outline Drawing

GOHT-65AB-M6/65A**BUU**

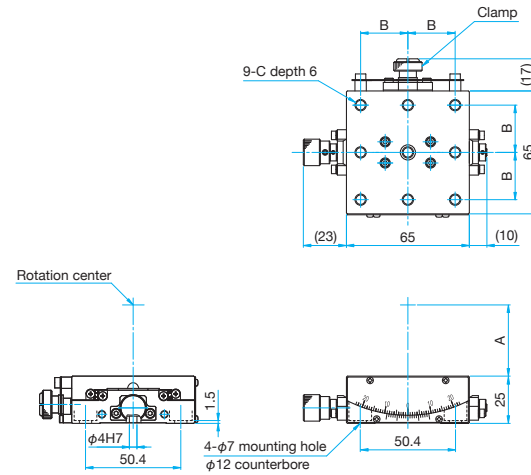
- Low head hexagon socket head cap screw (stainless steel construction) M6×6...4 screws, Attachment pins for M6...1 pin (M6)
- Low head hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws, Attachment pins for 1/4-20UNC...1 pin (UU)



Part Number	A (mm)	B (mm)	C
GOHT-65A50B-M6	50	25	M6 P1
GOHT-65A50BUU	50	25.4	1/4-20UNC
GOHT-65A75B-M6	75	25	M6 P1
GOHT-65A75BUU	75	25.4	1/4-20UNC
GOHT-65A100B-M6	100	25	M6 P1
GOHT-65A100BUU	100	25.4	1/4-20UNC

GOHT-65ABR-M6/65A**BRUU**

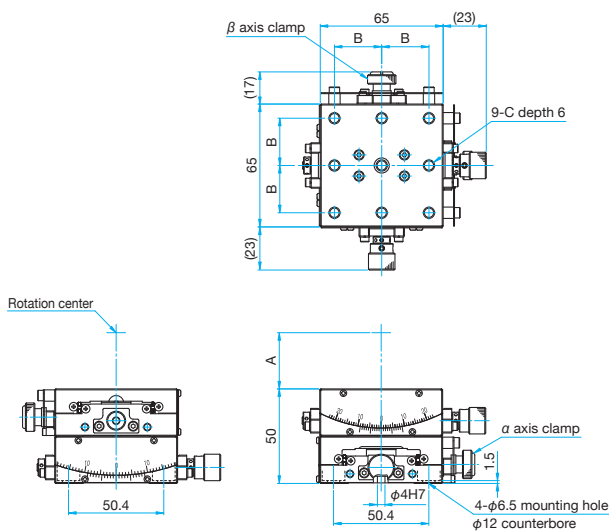
- Low head hexagon socket head cap screw (stainless steel construction) M6×6...4 screws, Attachment pins for M6...1 pin (M6)
- Low head hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws, Attachment pins for 1/4-20UNC...1 pin (UU)



Part Number	A (mm)	B (mm)	C
GOHT-65A50BR-M6	50	25	M6 P1
GOHT-65A50BRUU	50	25.4	1/4-20UNC
GOHT-65A75BR-M6	75	25	M6 P1
GOHT-65A75BRUU	75	25.4	1/4-20UNC
GOHT-65A100BR-M6	100	25	M6 P1
GOHT-65A100BRUU	100	25.4	1/4-20UNC

GOHT-65BB-M6/65B**BUU**

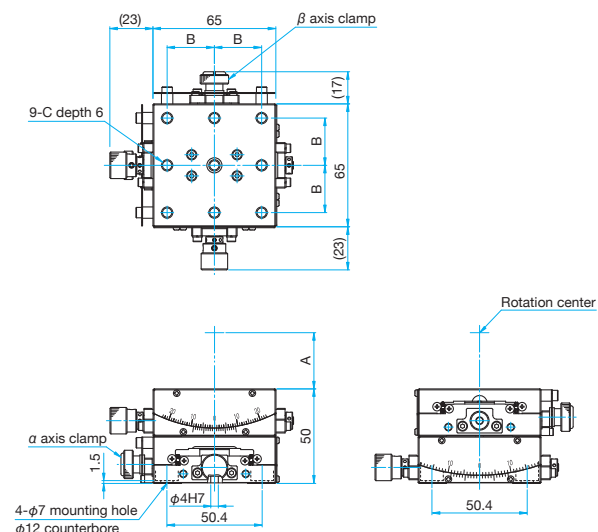
- Low head hexagon socket head cap screw (stainless steel construction) M6×6...4 screws, Attachment pins for M6...1 pin (M6)
- Low head hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws, Attachment pins for 1/4-20UNC...1 pin (UU)



Part Number	A (mm)	B (mm)	C
GOHT-65B50B-M6	50	25	M6 P1
GOHT-65B50BUU	50	25.4	1/4-20UNC
GOHT-65B75B-M6	75	25	M6 P1
GOHT-65B75BUU	75	25.4	1/4-20UNC

GOHT-65BBR-M6/65B**BRUU**

- Low head hexagon socket head cap screw (stainless steel construction) M6×6...4 screws, Attachment pins for M6...1 pin (M6)
- Low head hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws, Attachment pins for 1/4-20UNC...1 pin (UU)



Part Number	A (mm)	B (mm)	C
GOHT-65B50BR-M6	50	25	M6 P1
GOHT-65B50BRUU	50	25.4	1/4-20UNC
GOHT-65B75BR-M6	75	25	M6 P1
GOHT-65B75BRUU	75	25.4	1/4-20UNC

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□ 15mm

□ 25mm

□ 40mm

□ 60mm

□ 65mm

□ 80mm

□ 100mm

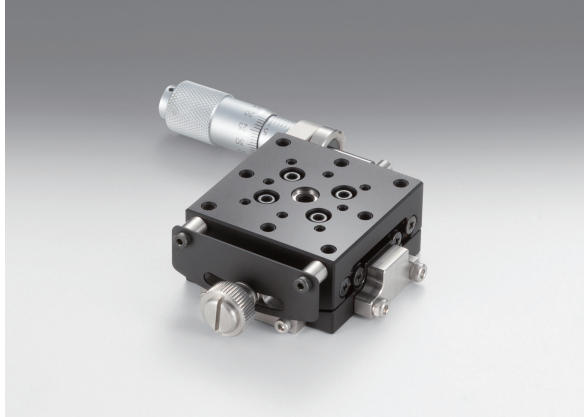
□ 120mm

Others

High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Fitted with micrometers, enabling accurate operations compared to feeding with knobs (GOHT).
- Attachment pins (accessories) are ideal for positioning when assembling into $\alpha\beta$ axis or mounting on various instruments or devices.



Guide

- ▶ Attachment pins (GOHT-AP) can be purchased separately. [Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Motorized extended guide goniometers (OSMS-40A****) with stepping motor are also available. [Reference](#) G082

Attention

- ▶ When assembled to an $\alpha\beta$ axis stage, the micrometer head of the α axis stage interferes. Please contact our International Sales Division for more information.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Specifications

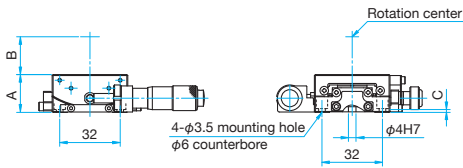
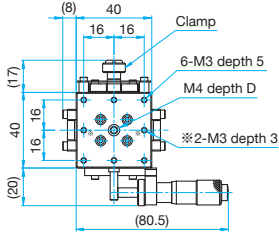
Part Number	METRIC	GOHT-40A20BMS	GOHT-40A40BMS	GOHT-40A60BMS	GOHT-40A75BMS
	INCH	GOHT-40A20BMSUU	GOHT-40A40BMSUU	GOHT-40A60BMSUU	GOHT-40A75BMSUU
(Opposite Model)	METRIC	GOHT-40A20BMSR	GOHT-40A40BMSR	GOHT-40A60BMSR	GOHT-40A75BMSR
	INCH	GOHT-40A20BMSRUU	GOHT-40A40BMSRUU	GOHT-40A60BMSRUU	GOHT-40A75BMSRUU
Table Size [mm]		40×40	40×40	40×40	40×40
Axes of Travel		α axis			
Micrometer Position		Side	Side	Side	Side
Rotation Center Height [mm]		20±0.1	40±0.1	60±0.1	75±0.1
Angle Range [°]		±11	±7	±5.5	±4.5
Travel per Knob Rotation [°]		about 0.9	about 0.55	about 0.42	about 0.35
Rotation Center Displacement [mm]		φ0.007 or less	φ0.007 or less	φ0.007 or less	φ0.007 or less
Bearing type		Extended contact ball guide			
Primary Material		SUS440C quench hardened			
Finish		Super black chrome			
Load Capacity [N]		58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)
Max. Moment Capacity	Pitch [N·m]	2.0	2.0	2.0	2.0
	Roll [N·m]	3.0	3.0	3.0	3.0
	Yaw [N·m]	2.0	2.0	2.0	2.0
Moment Stiffness	Roll [°/N·cm]	0.6	0.6	0.6	0.6
	Yaw [°/N·cm]	0.6	0.6	0.6	0.6
Parallelism [μm]		30	30	30	30
Weight [kg]		0.2	0.2	0.2	0.2



Outline Drawing

GOHT-40A* *BMS

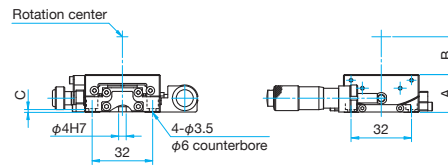
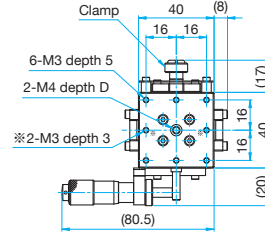
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws
Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BMS	20	20	2	4
GOHT-40A40BMS	20	40	1.5	4
GOHT-40A60BMS	15	60	1	3
GOHT-40A75BMS	15	75	1	3

GOHT-40A* *BMSR

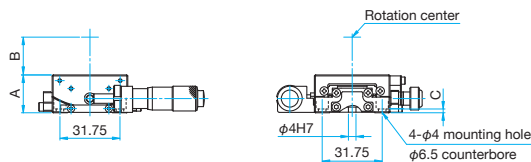
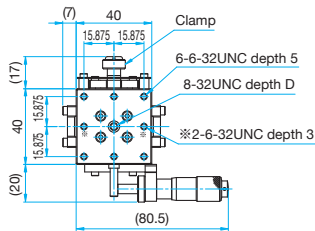
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws
Attachment pins for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BRMS	20	20	2	4
GOHT-40A40BRMS	20	40	1.5	4
GOHT-40A60BRMS	15	60	1	3
GOHT-40A75BRMS	15	75	1	3

GOHT-40A* *BMSUU

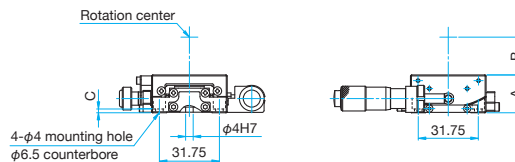
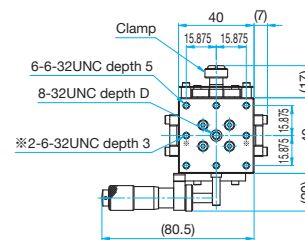
Low head hexagon socket head cap screw (stainless steel construction)
6-32UNC×1/4...4 screws, Attachment pins for 8-32UNC...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BMSUU	20	20	2	4
GOHT-40A40BMSUU	20	40	1.5	4
GOHT-40A60BMSUU	15	60	1	3
GOHT-40A75BMSUU	15	75	1	3

GOHT-40A* *BMSRUU

Low head hexagon socket head cap screw (stainless steel construction)
6-32UNC×1/4...4 screws, Attachment pins for 8-32UNC...1 pin



Part Number	A (mm)	B (mm)	C (mm)	D (mm)
GOHT-40A20BMSRUU	20	20	2	4
GOHT-40A40BMSRUU	20	40	1.5	4
GOHT-40A60BMSRUU	15	60	1	3
GOHT-40A75BMSRUU	15	75	1	3

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Extended Contact Micrometer Goniometers

GOHT-60A-S Stage size 60mm

RoHS

High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Fitted with micrometers, enabling accurate operations compared to feeding with knobs (GOHT).
- Attachment pins (accessories) are ideal for positioning when assembling into $\alpha\beta$ axis or mounting on various instruments or devices.



Guide

- ▶ Attachment pins (GOHT-AP) can be purchased separately. [Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Motorized extended guide goniometers (OSMS-60A****) with stepping motor are also available. [Reference](#) G084

Attention

- ▶ When assembled to an $\alpha\beta$ axis stage, the micrometer head of the α axis stage interferes. Please contact our International Sales Division for more information.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

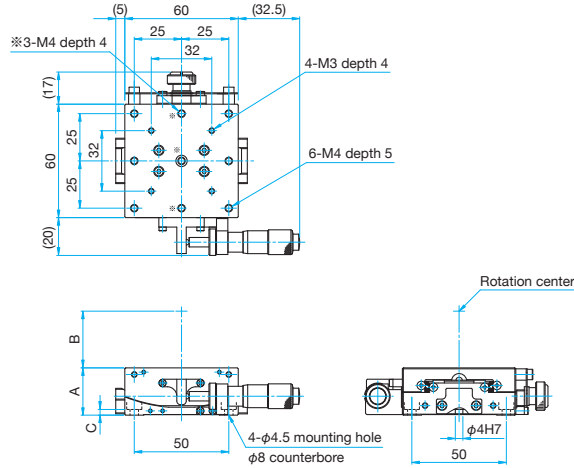
Specifications					
Part Number	METRIC	GOHT-60A35BMS	GOHT-60A60BMS	GOHT-60A85BMS	GOHT-60A105BMS
(Opposite Model)	METRIC	GOHT-60A35BMSR	GOHT-60A60BMSR	GOHT-60A85BMSR	GOHT-60A105BMSR
Table Size [mm]		60×60	60×60	60×60	60×60
Axes of Travel		α axis			
Micrometer Position		Side	Side	Side	Side
Rotation Center Height [mm]		35±0.1	60±0.1	85±0.1	105±0.1
Angle Range [°]		±7	±4.5	±3.5	±3
Travel per Knob Rotation [°]		about 0.0096	about 0.38	about 0.3	about 0.25
Rotation Center Displacement [mm]		φ0.007 or less	φ0.007 or less	φ0.007 or less	φ0.007 or less
Bearing type		Extended contact ball guide			
Primary Material		SUS440C quench hardened			
Finish		Super black chrome			
Load Capacity [N]		98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)
Max. Moment Capacity	Pitch [N·m]	3.0	3.0	3.0	3.0
	Roll [N·m]	6.0	6.0	6.0	6.0
	Yaw [N·m]	3.0	3.0	3.0	3.0
Moment Stiffness	Roll ["/N·cm]	0.25	0.25	0.25	0.25
	Yaw ["/N·cm]	0.1	0.1	0.1	0.1
Parallelism [μm]		30	30	30	30
Weight [kg]		0.6	0.6	0.6	0.6



Outline Drawing

GOHT-60ABMS**

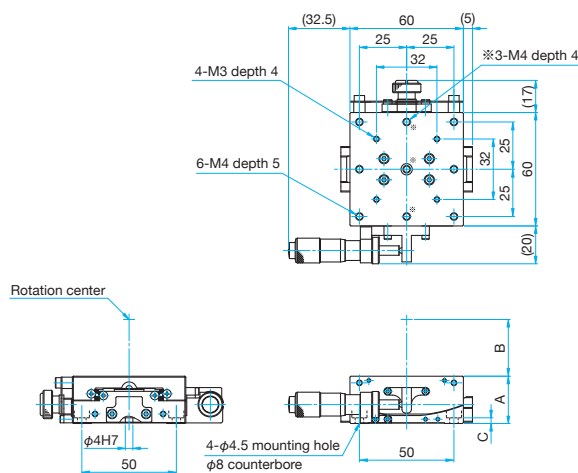
Hexagon socket head cap screw (stainless steel construction) M4x8...4 screws
Attachment pin for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)
GOHT-60A35BMS	25	35	3
GOHT-60A60BMS	25	60	3
GOHT-60A85BMS	20	85	2
GOHT-60A105BMS	20	105	2

GOHT-60ABMSR**

Hexagon socket head cap screw (stainless steel construction) M4x8...4 screws
Attachment pin for M4...1 pin



Part Number	A (mm)	B (mm)	C (mm)
GOHT-60A35BMSR	25	35	3
GOHT-60A60BMSR	25	60	3
GOHT-60A85BMSR	20	85	2
GOHT-60A105BMSR	20	105	2

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motoeized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

Extended Contact Micrometer Goniometers

GOHT-65A-S Stage size □ 65mm

RoHS

High precision goniometers with integrated bearing ways for superior stiffness, accuracy and durability.

Their smooth movement is ideal for frequent operations.

- Fitted with micrometers, enabling accurate operations compared to feeding with knobs (GOHT).
- Attachment pins (accessories) are ideal for positioning when assembling into $\alpha\beta$ axis or mounting on various instruments or devices.



Guide

- ▶ Attachment pins (GOHT-AP) can be purchased separately. [Reference](#) E010
- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.
- ▶ Motorized extended guide goniometers (OSMS-60A****) with stepping motor are also available. [Reference](#) G084

Attention

- ▶ When assembled to an $\alpha\beta$ axis stage, the micrometer head of the α axis stage interferes. Please contact our International Sales Division for more information.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□ 15mm

□ 25mm

□ 40mm

□ 60mm

□ 65mm

□ 80mm

□ 100mm

□ 120mm

Others

Specifications

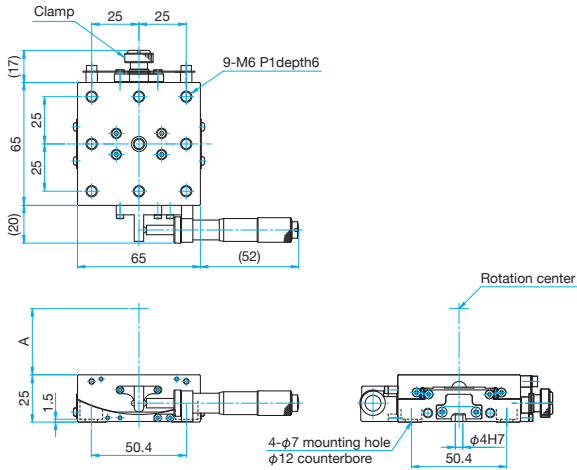
Part Number	METRIC	GOHT-65A50BMS-M6	GOHT-65A75BMS-M6	GOHT-65A100BMS-M6
	INCH	GOHT-65A50BMSUU	GOHT-65A75BMSUU	GOHT-65A100BMSUU
(Opposite Model)	METRIC	GOHT-65A50BMSR-M6	GOHT-65A75BMSR-M6	GOHT-65A100BMSR-M6
	INCH	GOHT-65A50BMSRUU	GOHT-65A75BMSRUU	GOHT-65A100BMSRUU
Table Size [mm]		65×65	65×65	65×65
Axes of Travel			α axis	
Micrometer Position		Side	Side	Side
Rotation Center Height [mm]		50±0.1	75±0.1	100±0.1
Angle Range [°]		±10	±7	±6
Travel per Knob Rotation [°]		about 0.44	about 0.32	about 0.25
Rotation Center Displacement [mm]		φ0.007 or less	φ0.007 or less	φ0.007 or less
Bearing type		Extended contact ball guide		
Primary Material		SUS440C quench hardened		
Finish		Super black chrome		
Load Capacity [N]		98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)
Max. Moment Capacity	Pitch [N·m]	3.0	3.0	3.0
	Roll [N·m]	6.0	6.0	6.0
	Yaw [N·m]	3.0	3.0	3.0
Moment Stiffness	Roll [°/N·cm]	0.25	0.25	0.25
	Yaw [°/N·cm]	0.1	0.1	0.1
Parallelism [μm]		30	30	30
Weight [kg]		0.7	0.7	0.7



Outline Drawing

GOHT-65A* *BMS

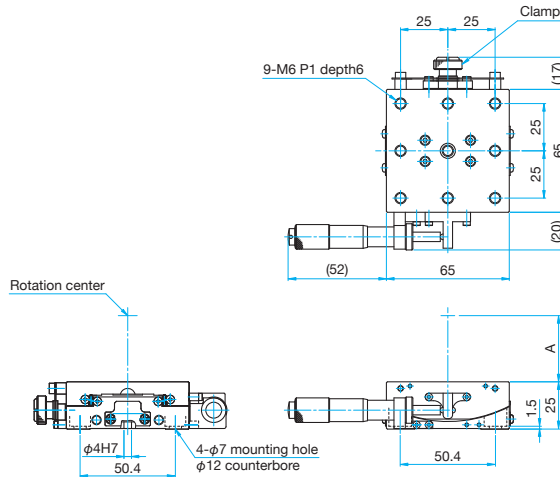
Hexagon socket head cap screw (stainless steel construction) M6×8...4 screws
Attachment pins for M6...1 pin



Part Number	A (mm)
GOHT-65A50BMS-M6	50
GOHT-65A75BMS-M6	75
GOHT-65A100BMS-M6	100

GOHT-65A* *BMSR

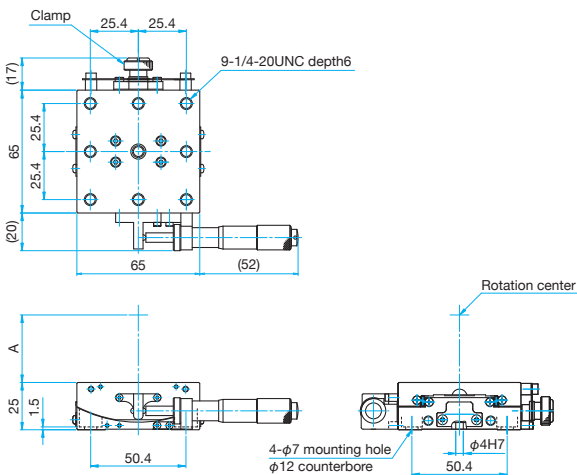
Hexagon socket head cap screw (stainless steel construction) M6×8...4 screws
Attachment pins for M6...1 pin



Part Number	A (mm)
GOHT-65A50BMSR-M6	50
GOHT-65A75BMSR-M6	75
GOHT-65A100BMSR-M6	100

GOHT-65A* *BMSUU

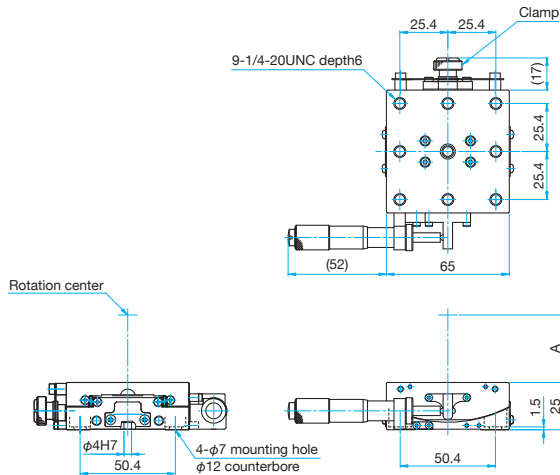
Low head hexagon socket head cap screw (stainless steel construction)
1/4-20UNC×1/4...4 screws, Attachments pin for 1/420UNC...1 pin



Part Number	A (mm)
GOHT-65A50BMSUU	50
GOHT-65A75BMSUU	75
GOHT-65A100BMSUU	100

GOHT-65A* *BMSRUU

Low head hexagon socket head cap screw (stainless steel construction)
1/4-20UNC×1/4...4 screws, Attachment pins for 1/420UNC...1 pin



Part Number	A (mm)
GOHT-65A50BMSRUU	50
GOHT-65A75BMSRUU	75
GOHT-65A100BMSRUU	100

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

α axis Goniometers

α axis Goniometers / $\alpha\beta$ axis Goniometers

GOH-15A

Stage size □15mm

RoHS

GOH-25A/25B

Stage size □25mm

RoHS

Goniometers fitted with dovetail slide and worm gear, suitable for orientation adjustment (angle adjustment or correction).

- The goniometer with stage size □15mm (GOH-15A10) is unique to Sigma-Koki.



Guide

- ▶ To operate the GOH-15A10, fit a hex wrench to a hexagonal socket.

Attention

- ▶ The GOH-15A10 is not fitted with scale or clamping mechanism.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

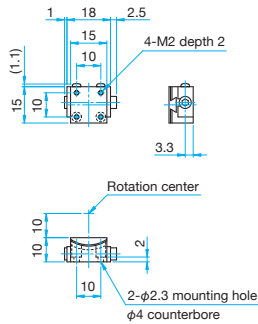
Others

Specifications							
Part Number	METRIC	GOH-15A10	GOH-25A18	GOH-25A30	GOH-25A40	GOH-25B18	GOH-25B30
(Opposite Model)	METRIC	—	GOH-25A18R	GOH-25A30R	GOH-25A40R	GOH-25B18R	GOH-25B30R
Table Size [mm]		15×15	25×25	25×25	25×25	25×25	25×25
Axes of Travel		α axis				$\alpha\beta$ axis	
Rotation Center Height [mm]		10±0.1	18±0.1	30±0.1	40±0.1	18±0.1	30±0.1
Angle Range [°]	(Upper) β axis	—	—	—	—	±20	±15
	(Lower) α axis	±20	±20	±15	±10	±15	±10
Vernier Readable Resolution		—	12'	12'	12'	12'	12'
Travel per Knob Rotation [°]	(Upper) β axis	—	—	—	—	about 3.1	about 2.17
	(Lower) α axis	about 5	about 3.1	about 2.17	about 1.67	about 2.17	about 1.67
Rotation Center Displacement [mm]		φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less
Bearing type		Dovetail slide method					
Primary Material		Brass					
Finish		Super black chrome					
Load Capacity [N]		9.8 (1.0kgf)	19.6 (2.0kgf)	19.6 (2.0kgf)	19.6 (2.0kgf)	19.6 (2.0kgf)	19.6 (2.0kgf)
Max. Moment Capacity	Pitch [N·m]	0.03	0.35	0.35	0.35	0.35	0.35
	Roll [N·m]	0.05	0.4	0.4	0.4	0.35	0.35
Moment Stiffness	Roll [°/N·cm]	—	1.0	1.0	1.0	—	—
Parallelism [μm]		50	50	50	50	100	100
Weight [kg]		0.02	0.07	0.06	0.06	0.13	0.12

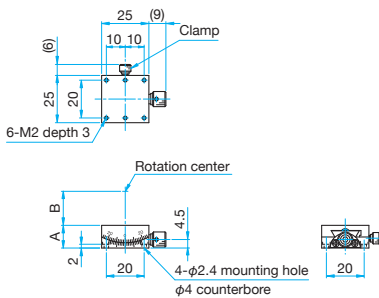


Outline Drawing

GOH-15A10 Pan head screw M2x5...2 screws 2.5mm

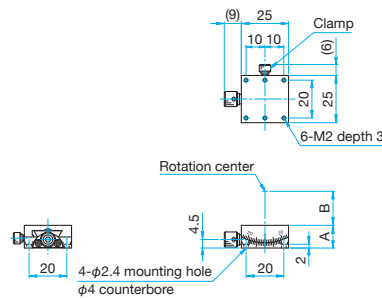


GOH-25A** Pan head screw M2x4...4 screws 2.5mm



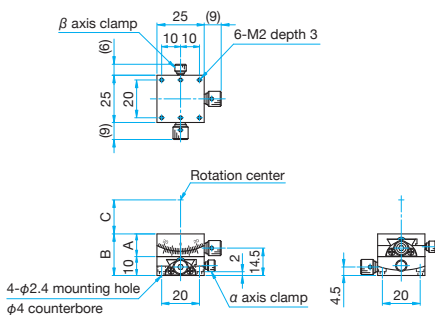
Part Number	A (mm)	B (mm)
GOH-25A18	12	18
GOH-25A30	10	30
GOH-25A40	10	40

GOH-25AR** Pan head screw M2x4...4 screws 2.5mm



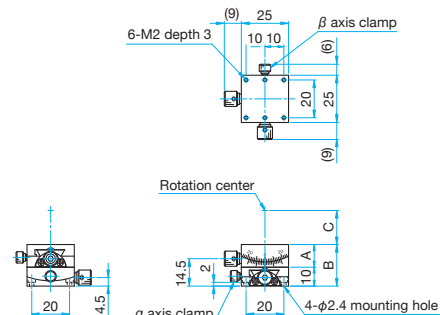
Part Number	A (mm)	B (mm)
GOH-25A18R	12	18
GOH-25A30R	10	30
GOH-25A40R	10	40

GOH-25B** Pan head screw M2x4...4 screws



Part Number	A (mm)	B (mm)	C (mm)
GOH-25B18	12	22	18
GOH-25B30	10	20	30

GOH-25BR** Pan head screw M2x4...4 screws



Part Number	A (mm)	B (mm)	C (mm)
GOH-25B18R	12	22	18
GOH-25B30R	10	20	30

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motoeized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

α axis Goniometers $\alpha\beta$ axis Goniometers

GOH-40A Stage size 40mm
GOH-40B

RoHS
RoHS

Goniometers fitted with dovetail slide and worm gear, suitable for orientation adjustment (angle adjustment or correction).



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm25mm40mm60mm65mm80mm100mm120mm

Others

Specifications

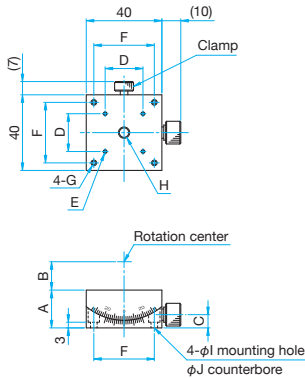
Part Number	METRIC	GOH-40A15	GOH-40A35	GOH-40A51	GOH-40B15	GOH-40B35
	INCH	GOH-40A15UU	GOH-40A35UU	GOH-40A51UU	GOH-40B15UU	GOH-40B35UU
(Opposite Model)	METRIC	GOH-40A15R	GOH-40A35R	GOH-40A51R	GOH-40B15R	GOH-40B35R
	INCH	GOH-40A15RUU	GOH-40A35RUU	GOH-40A51RUU	GOH-40B15RUU	GOH-40B35RUU
Table Size [mm]		40×40	40×40	40×40	40×40	40×40
Axes of Travel		α axis			$\alpha\beta$ axis	
Rotation Center Height [mm]		15±0.1	35±0.1	51±0.1	15±0.1	35±0.1
Angle Range [°]	(Upper) β axis	—	—	—	±20	±20
	(Lower) α axis	±20	±20	±15	±20	±15
Vernier Readable Resolution		12'	12'	12'	12'	12'
Travel per Knob Rotation [°]	(Upper) β axis	—	—	—	about 2.83	about 1.74
	(Lower) α axis	about 2.83	about 1.74	about 1.27	about 1.74	about 1.27
Rotation Center Displacement [mm]		φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less
Bearing type		Dovetail slide method				
Primary Material		Brass				
Finish		Super black chrome				
Load Capacity [N]		68.7 (7.0kgf)	68.7 (7.0kgf)	68.7 (7.0kgf)	68.7 (7.0kgf)	68.7 (7.0kgf)
Max. Moment Capacity	Pitch [N·m]	0.9	0.9	0.9	0.9	0.9
	Roll [N·m]	1.2	1.2	1.2	0.9	0.9
Moment Stiffness	Roll [°/N·cm]	0.51	0.51	0.51	—	—
Parallelism [μm]		50	50	50	100	100
Weight [kg]		0.25	0.20	0.18	0.45	0.38



Outline Drawing

GOH-40A/GOH-40A**UU**

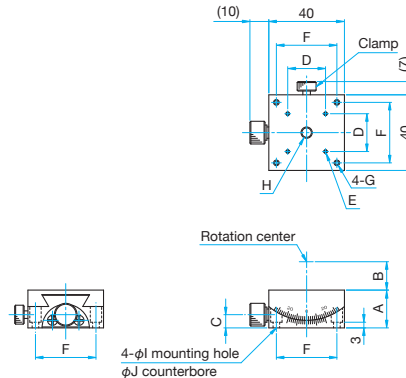
Pan head screw M3x6...4 screws
 Pan head screw 6-32UNCx5/16...4 screws, Custom head ($\phi 6 \times H2$) (UU) 2.5mm



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E	F (mm)	G	H	I (mm)	J (mm)
GOH-40A15	20	15	7	20	4-M2 depth 3	32	M3 depth 5	M6 P1 depth 6	$\phi 3.5$	$\phi 6$
GOH-40A35	16	35	7	20	4-M2 depth 3	32	M3 depth 5	M4 depth 4	$\phi 3.5$	$\phi 6$
GOH-40A51	15	51	6.5	20	4-M2 depth 3	32	M3 depth 5	M4 depth 4	$\phi 3.5$	$\phi 6$
GOH-40A15UU	20	15	7			31.75	6-32UNC depth 5	1/4-20UNC depth 6	$\phi 4$	$\phi 6.5$
GOH-40A35UU	16	35	7			31.75	6-32UNC depth 5	8-32UNC depth 4	$\phi 4$	$\phi 6.5$
GOH-40A51UU	15	51	6.5			31.75	6-32UNC depth 5	8-32UNC depth 4	$\phi 4$	$\phi 6.5$

GOH-40AR/GOH-40A**RUU**

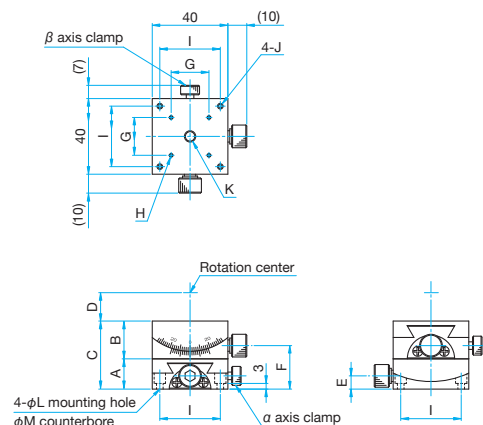
Pan head screw M3x6...4 screws
 Pan head screw 6-32UNCx5/16...4 screws, Custom head ($\phi 6 \times H2$) (UU) 2.5mm



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E	F (mm)	G	H	I (mm)	J (mm)
GOH-40A15R	20	15	7	20	4-M2 depth 3	32	M3 depth 5	M6 P1 depth 6	$\phi 3.5$	$\phi 6$
GOH-40A35R	16	35	7	20	4-M2 depth 3	32	M3 depth 5	M4 depth 4	$\phi 3.5$	$\phi 6$
GOH-40A51R	15	51	6.5	20	4-M2 depth 3	32	M3 depth 5	M4 depth 4	$\phi 3.5$	$\phi 6$
GOH-40A15RUU	20	15	7			31.75	6-32UNC depth 5	1/4-20UNC depth 6	$\phi 4$	$\phi 6.5$
GOH-40A35RUU	16	35	7			31.75	6-32UNC depth 5	8-32UNC depth 4	$\phi 4$	$\phi 6.5$
GOH-40A51RUU	15	51	6.5			31.75	6-32UNC depth 5	8-32UNC depth 4	$\phi 4$	$\phi 6.5$

GOH-40B/GOH-40B**UU**

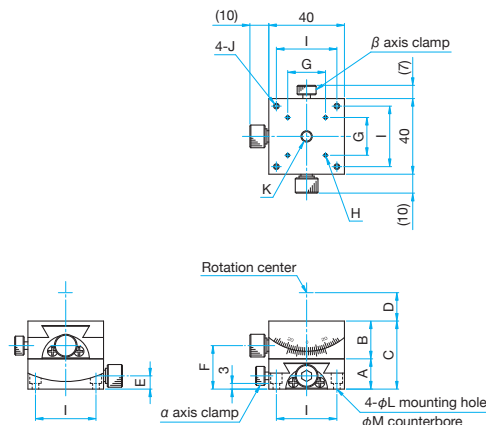
Pan head screw M3x6...4 screws
 Pan head screw 6-32UNCx5/16...4 screws, Custom head ($\phi 6 \times H2$) (UU) 2.5mm



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H	I (mm)	J	K	L (mm)	M (mm)
GOH-40B15	16	20	35	15	7	23	20	4-M2 depth 3	32	M3 depth 5	M6 P1 depth 6	$\phi 3.5$	$\phi 6$
GOH-40B35	15	16	31	35	6.5	22	20	4-M2 depth 3	32	M3 depth 5	M4 depth 4	$\phi 3.5$	$\phi 6$
GOH-40B15UU	16	20	35	15	7	23			31.75	6-32UNC depth 5	1/4-20UNC depth 6	$\phi 4$	$\phi 6.5$
GOH-40B35UU	15	16	31	35	6.5	22			31.75	6-32UNC depth 5	8-32UNC depth 4	$\phi 4$	$\phi 6.5$

GOH-40BR/GOH-40B**RUU**

Pan head screw M3x6...4 screws
 Pan head screw 6-32UNCx5/16...4 screws, Custom head ($\phi 6 \times H2$) (UU) 2.5mm



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H	I (mm)	J	K	L (mm)	M (mm)
GOH-40B15R	16	20	35	15	7	23	20	4-M2 depth 3	32	M3 depth 5	M6 P1 depth 6	$\phi 3.5$	$\phi 6$
GOH-40B35R	15	16	31	35	6.5	22	20	4-M2 depth 3	32	M3 depth 5	M4 depth 4	$\phi 3.5$	$\phi 6$
GOH-40B15RUU	16	20	35	15	7	23			31.75	6-32UNC depth 5	1/4-20UNC depth 6	$\phi 4$	$\phi 6.5$
GOH-40B35RUU	15	16	31	35	6.5	22			31.75	6-32UNC depth 5	8-32UNC depth 4	$\phi 4$	$\phi 6.5$

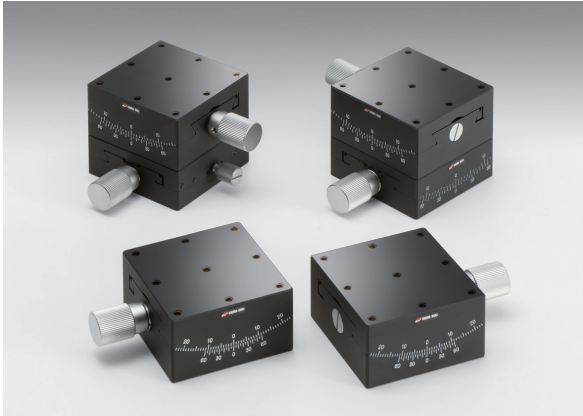
- Application Systems
- Optics & Optical Coatings
- Holders
- Bases
- Manual Stages
- Actuators
- MotORIZED Stages
- Light Sources
- Index
- Guide
- X axis Stages
- XY axis Stages
- Z axis Stages
- XZ axis Stages
- XYZ axis Stages
- θ axis Stages
- Goniometer**
- Inclination
- Vacuum
- Ball Guide
- Crossed Roller
- Dovetail
- Lapping
- V Groove Screw
- Ohters
 - 15mm
 - 25mm
 - 40mm
 - 60mm
 - 65mm
 - 80mm
 - 100mm
 - 120mm
- Others

α axis Goniometers $\alpha\beta$ axis Goniometers

GOH-60A Stage size 60mm
GOH-60B

RoHS
RoHS

Goniometers fitted with dovetail slide and worm gear, suitable for orientation adjustment (angle adjustment or correction).



Application Systems
Optics & Optical Coatings
Holders
Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

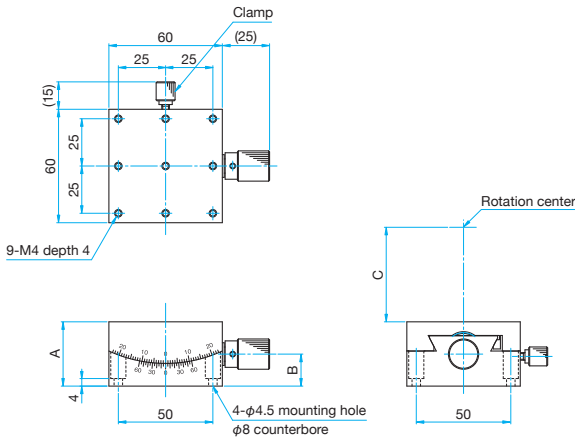
Others

Specifications						
Part Number	METRIC	GOH-60A50	GOH-60A84	GOH-60A115	GOH-60B50	GOH-60B84
(Opposite Model)	METRIC	GOH-60A50R	GOH-60A84R	GOH-60A115R	GOH-60B50R	GOH-60B84R
Table Size [mm]		60×60	60×60	60×60	60×60	60×60
Axes of Travel		α axis			$\alpha\beta$ axis	
Rotation Center Height [mm]		50±0.1	84±0.1	115±0.1	50±0.1	84±0.1
Angle Range [°]	(Upper) β axis	—	—	—	±20	±15
	(Lower) α axis	±20	±15	±10	±15	±10
Vernier Readable Resolution		5'	5'	5'	5'	5'
Travel per Knob Rotation [°]	(Upper) β axis	—	—	—	about 1.03	about 0.71
	(Lower) α axis	about 1.03	about 0.71	about 0.58	about 0.71	about 0.58
Rotation Center Displacement [mm]		φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less	φ0.1 or less
Bearing type		Dovetail slide method				
Primary Material		Brass				
Finish		Super black chrome				
Load Capacity [N]		98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)
Max. Moment Capacity	Pitch [N·m]	1.6	1.6	1.6	1.6	1.6
	Roll [N·m]	2.2	2.2	2.2	1.6	1.6
Moment Stiffness	Roll [°/N·cm]	0.3	0.3	0.3	—	—
Parallelism [μm]		50	50	50	100	100
Weight [kg]		1.0	0.9	0.85	1.9	1.75



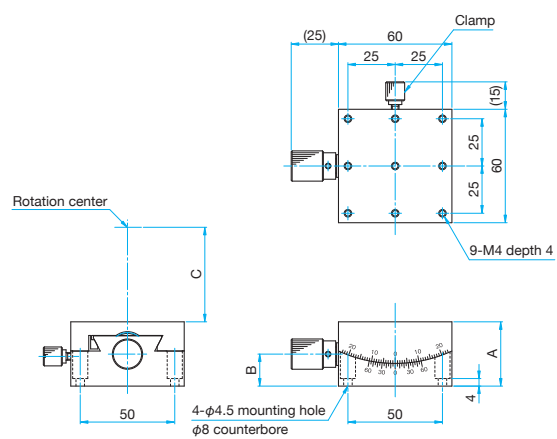
Outline Drawing

GOH-60A** Hexagonal socket head cap screw M4x8...4 screws



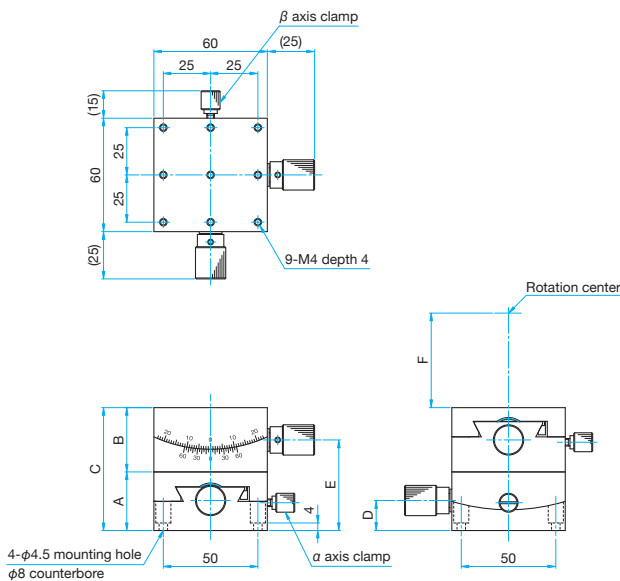
Part Number	A (mm)	B (mm)	C (mm)
GOH-60A50	34	16.9	50
GOH-60A84	31	15.9	84
GOH-60A115	24	10	115

GOH-60AR** Hexagonal socket head cap screw M4x8...4 screws



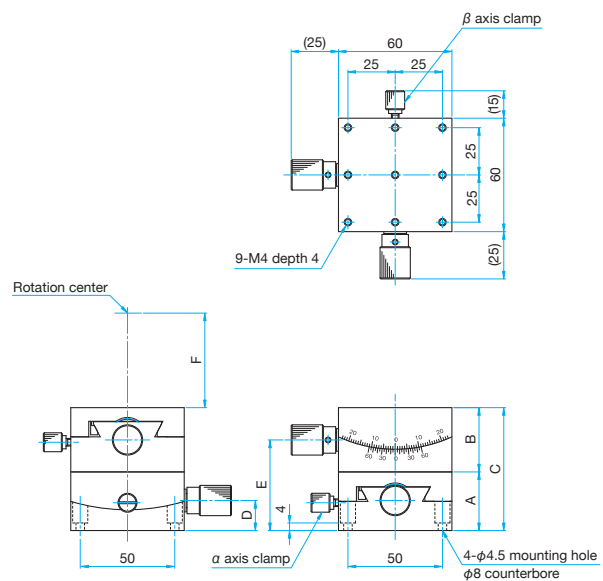
Part Number	A (mm)	B (mm)	C (mm)
GOH-60A50R	34	16.9	50
GOH-60A84R	31	15.9	84
GOH-60A115R	24	10	115

GOH-60B** Hexagonal socket head cap screw M4x8...4 screws



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
GOH-60B50	31	34	65	15.9	47.9	50
GOH-60B84	24	31	55	10	39.9	84

GOH-60BR** Hexagonal socket head cap screw M4x8...4 screws



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
GOH-60B50R	31	34	65	15.9	47.9	50
GOH-60B84R	24	31	55	10	39.9	84

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

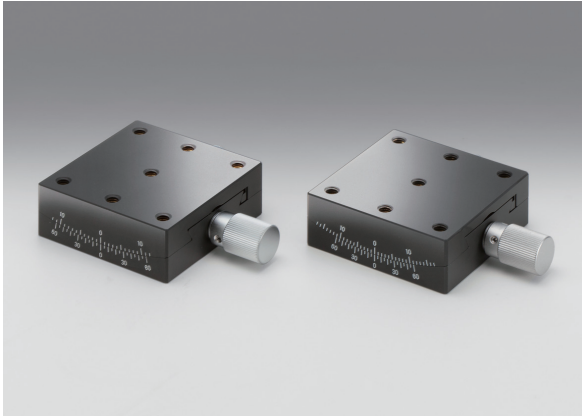
Others

α axis Goniometers –M6– $\alpha\beta$ axis Goniometers –M6–

GOH-65A Stage size 65mm
GOH-65B

RoHS
RoHS

Goniometers fitted with dovetail slide and worm gear, suitable for orientation adjustment (angle adjustment or correction).



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Holders

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

Specifications

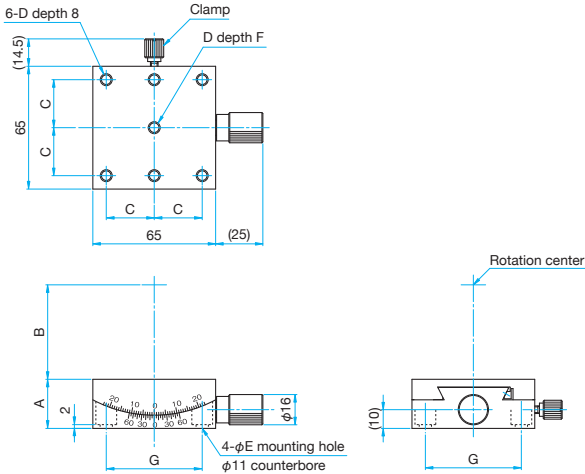
Part Number	METRIC	GOH-65A50-M6	GOH-65A76-M6	GOH-65A100-M6	GOH-65B50-M6	GOH-65B76-M6
	INCH	GOH-65A50UU	GOH-65A76UU	GOH-65A100UU	GOH-65B50UU	GOH-65B76UU
(Opposite Model)	METRIC	GOH-65A50R-M6	GOH-65A76R-M6	GOH-65A100R-M6	GOH-65B50R-M6	GOH-65B76R-M6
	INCH	GOH-65A50RUU	GOH-65A76RUU	GOH-65A100RUU	GOH-65B50RUU	GOH-65B76RUU
Table Size [mm]		65×65	65×65	65×65	65×65	65×65
Axes of Travel		α axis			$\alpha\beta$ axis	
Rotation Center Height [mm]		50±0.1	76±0.1	100±0.1	50±0.1	76±0.1
Angle Range [°]	(Upper) β axis	—	—	—	±20	±15
	(Lower) α axis	±20	±15	±10	±15	±10
Vernier Readable Resolution		5'	5'	5'	5'	5'
Travel per Knob Rotation [°]	(Upper) β axis	—	—	—	about 1.16	about 0.84
	(Lower) α axis	about 1.16	about 0.84	about 0.65	about 0.84	about 0.65
Rotation Center Displacement [mm]		ϕ 0.1 or less	ϕ 0.1 or less	ϕ 0.1 or less	ϕ 0.1 or less	ϕ 0.1 or less
Bearing type		Dovetail slide method				
Primary Material		Brass				
Finish		Super black chrome				
Load Capacity [N]		98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)	98 (10.0kgf)
Max. Moment Capacity	Pitch [N·m]	1.0	1.0	1.0	1.0	1.0
	Roll [N·m]	1.5	1.5	1.5	1.5	1.5
Moment Stiffness	Roll [°/N·cm]	0.3	0.3	0.3	—	—
Parallelism [μ m]		50	50	50	100	100
Weight [kg]		0.88	0.86	0.86	1.74	1.72



Outline Drawing

GOH-65A -M6/GOH-65A** UU**

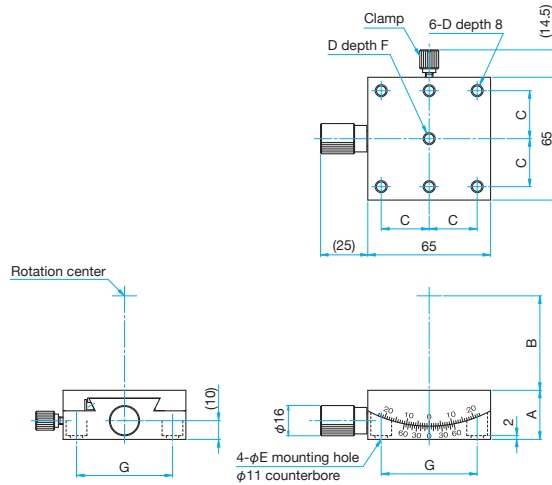
- Hexagonal socket head cap screw M6x8...4 screws (M6)
- Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C (mm)	D	E (mm)	F (mm)	G (mm)
GOH-65A50-M6	26	50	25	M6 P1	φ6.5	8	50
GOH-65A76-M6	24	76	25	M6 P1	φ6.5	6	50
GOH-65A100-M6	24	100	25	M6 P1	φ6.5	6	50
GOH-65A50UU	26	50	25.4	1/4-20UNC	φ7	8	50.8
GOH-65A76UU	24	76	25.4	1/4-20UNC	φ7	6	50.8
GOH-65A100UU	24	100	25.4	1/4-20UNC	φ7	6	50.8

GOH-65A R-M6/GOH-65A** RUU**

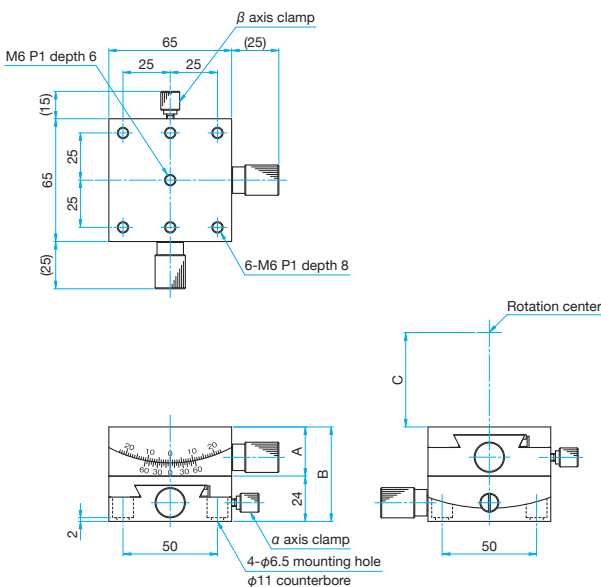
- Hexagonal socket head cap screw M6x8...4 screws (M6)
- Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C (mm)	D	E (mm)	F (mm)	G (mm)
GOH-65A50R-M6	26	50	25	M6 P1	φ6.5	8	50
GOH-65A76R-M6	24	76	25	M6 P1	φ6.5	6	50
GOH-65A100R-M6	24	100	25	M6 P1	φ6.5	6	50
GOH-65A50RUU	26	50	25.4	1/4-20UNC	φ7	8	50.8
GOH-65A76RUU	24	76	25.4	1/4-20UNC	φ7	6	50.8
GOH-65A100RUU	24	100	25.4	1/4-20UNC	φ7	6	50.8

GOH-65B -M6/GOH-65B** UU**

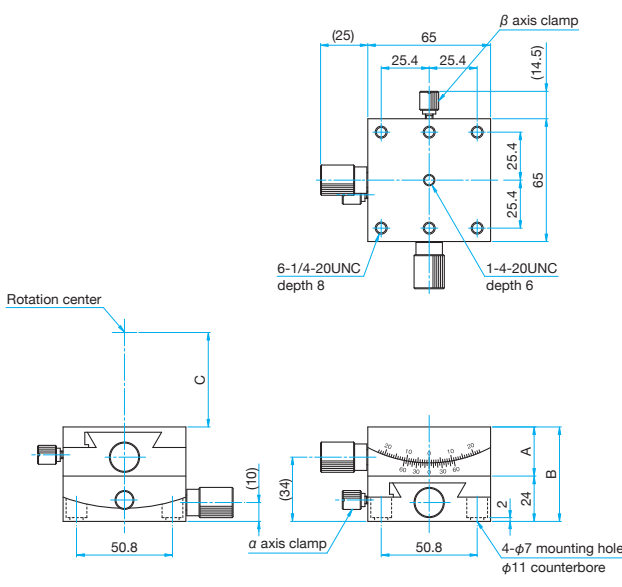
- Hexagonal socket head cap screw M6x8...4 screws (M6)
- Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E	F (mm)	G (mm)	H (mm)
GOH-65B50-M6	26	50	50	25	M6 P1	φ6.5	8	50
GOH-65B76-M6	24	48	76	25	M6 P1	φ6.5	6	50
GOH-65B50UU	26	50	50	25.4	1/4-20UNC	φ7	8	50.8
GOH-65B76UU	24	48	76	25.4	1/4-20UNC	φ7	6	50.8

GOH-65B R-M6/GOH-65B** RUU**

- Hexagonal socket head cap screw M6x8...4 screws (M6)
- Hexagonal socket head cap screw 1/4-20UNCx5/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C (mm)	D (mm)	E	F (mm)	G (mm)	H (mm)
GOH-65B50R-M6	26	50	50	25	M6 P1	φ6.5	8	50
GOH-65B76R-M6	24	48	76	25	M6 P1	φ6.5	6	50
GOH-65B50RUU	26	50	50	25.4	1/4-20UNC	φ7	8	50.8
GOH-65B76RUU	24	48	76	25.4	1/4-20UNC	φ7	6	50.8

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

□15mm

□25mm

□40mm

□60mm

□65mm

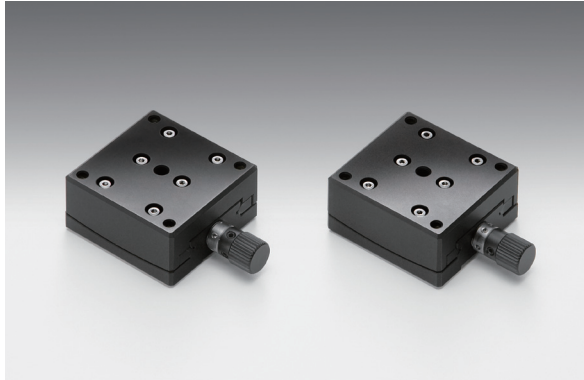
□80mm

□100mm

□120mm

Others

Cost-effective goniometers with V-groove guide and leadscrew drive.
Leadscrew mechanism has large contact area, offering excellent durability.



- Rotation center is larger than the conventional goniometers (GOH).

Guide

- ▶ Contact our International Sales Division if you desire a rotation center height not listed in the catalog.

Attention

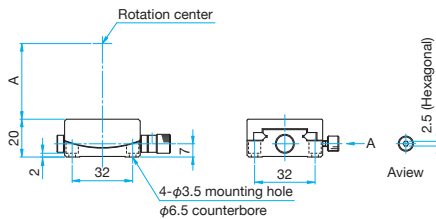
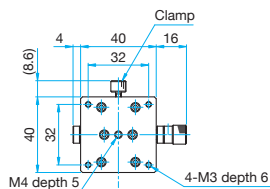
- ▶ Not fitted with vernier.



Outline Drawing

GOHB-40A**

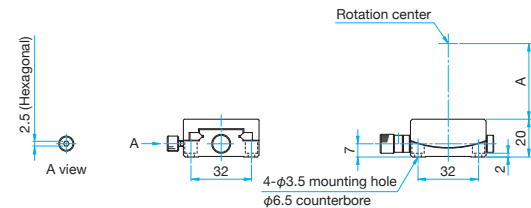
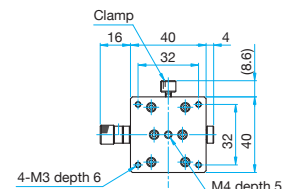
Hexagonal socket head cap screw M3×6...4 screws 2.5mm



Part Number	A (mm)
GOHB-40A40	40
GOHB-40A60	60
GOHB-40A100	100
GOHB-40A120	120

GOHB-40A**R

Hexagonal socket head cap screw M3×6...4 screws 2.5mm



Part Number	A (mm)
GOHB-40A40R	40
GOHB-40A60R	60
GOHB-40A100R	100
GOHB-40A120R	120

Specifications

Part Number	METRIC	GOHB-40A40	GOHB-40A60	GOHB-40A100	GOHB-40A120
(Opposite Model)	METRIC	GOHB-40A40R	GOHB-40A60R	GOHB-40A100R	GOHB-40A120R
Table Size [mm]		40×40	40×40	40×40	40×40
Axes of Travel		α axis			
Rotation Center Height [mm]		40±0.1	60±0.1	100±0.1	120±0.1
Angle Range [°]		±8	±6	±4	±3
Travel per Knob Rotation [°]		about 0.54	about 0.39	about 0.25	about 0.22
Rotation Center Displacement [mm]		φ0.05 or less	φ0.05 or less	φ0.05 or less	φ0.05 or less
Bearing type		V groove method			
Primary Material		Brass			
Finish		Super black chrome			
Load Capacity [N]		39.2 (4.0kgf)	39.2 (4.0kgf)	39.2 (4.0kgf)	39.2 (4.0kgf)
Max. Moment Capacity	Pitch [N·m]	1.0	1.0	1.0	1.0
	Roll [N·m]	2.0	2.0	2.0	2.0
	Yaw [N·m]	2.0	2.0	2.0	2.0
Moment Stiffness	Pitch [°/N·cm]	0.5	0.5	0.5	0.5
	Roll [°/N·cm]	0.4	0.4	0.4	0.4
	Yaw [°/N·cm]	0.35	0.35	0.35	0.35
Weight [kg]		0.25	0.25	0.25	0.25

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

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□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

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□120mm

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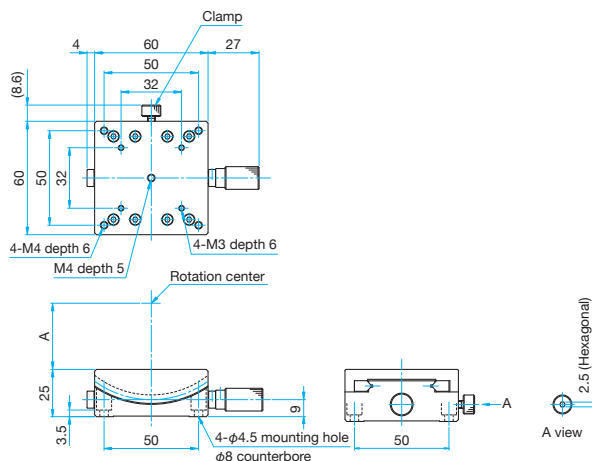
▶ Not fitted with vernier.



Outline Drawing

GOHB-60A**

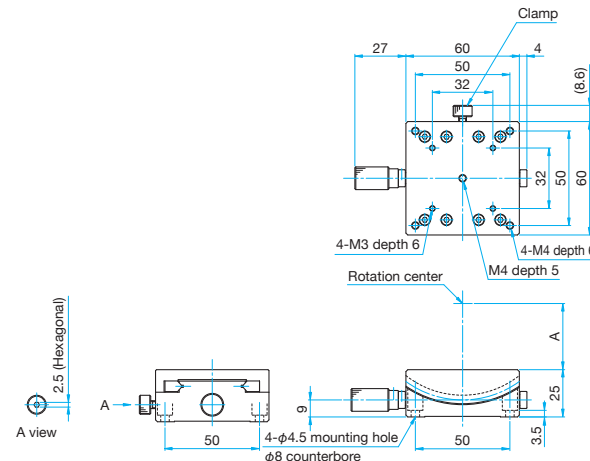
Hexagonal socket head cap screw M4x8...4 screws 2.5mm



Part Number	A (mm)
GOHB-60A35	35
GOHB-60A50	50
GOHB-60A75	75
GOHB-60A100	100
GOHB-60A125	125

GOHB-60AR**

Hexagonal socket head cap screw M4x8...4 screws 2.5mm



Part Number	A (mm)
GOHB-60A35R	35
GOHB-60A50R	50
GOHB-60A75R	75
GOHB-60A100R	100
GOHB-60A125R	125

Specifications

Part Number	METRIC	GOHB-60A35	GOHB-60A50	GOHB-60A75	GOHB-60A100	GOHB-60A125
(Opposite Model)	METRIC	GOHB-60A35R	GOHB-60A50R	GOHB-60A75R	GOHB-60A100R	GOHB-60A125R
Table Size [mm]		60×60	60×60	60×60	60×60	60×60
Axes of Travel		α axis				
Rotation Center Height [mm]		35±0.1	50±0.1	75±0.1	100±0.1	125±0.1
Angle Range [°]		±11	±8	±6	±4.5	±4
Travel per Knob Rotation [°]		about 0.56	about 0.43	about 0.31	about 0.25	about 0.2
Rotation Center Displacement [mm]		φ0.05 or less	φ0.05 or less	φ0.05 or less	φ0.05 or less	φ0.05 or less
Bearing type		V groove method				
Primary Material		Brass				
Finish		Super black chrome				
Load Capacity [N]		58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)	58.8 (6.0kgf)
Max. Moment Capacity	Pitch [N·m]	2.0	2.0	2.0	2.0	2.0
	Roll [N·m]	3.0	3.0	3.0	3.0	3.0
	Yaw [N·m]	3.0	3.0	3.0	3.0	3.0
Moment Stiffness	Pitch ["/N·cm]	0.4	0.4	0.4	0.4	0.4
	Roll ["/N·cm]	0.3	0.3	0.3	0.3	0.3
	Yaw ["/N·cm]	0.2	0.2	0.2	0.2	0.2
Weight [kg]		0.65	0.65	0.65	0.65	0.65

- Application Systems
- Optics & Optical Coatings
- Holders
- Bases
- Manual Stages
- Actuators
- MotORIZED Stages
- Light Sources
- Index
- Guide
- X axis Stages
- XY axis Stages
- Z axis Stages
- XZ axis Stages
- XYZ axis Stages
- θ axis Stages
- Goniometer**
- Inclination
- Vacuum
- Ball Guide
- Crossed Roller
- Dovetail
- Lapping
- V Groove Screw
- Ohters
 - 15mm
 - 25mm
 - 40mm
 - 60mm
 - 65mm
 - 80mm
 - 100mm
 - 120mm

α axis Goniometers $\alpha\beta$ axis Goniometers

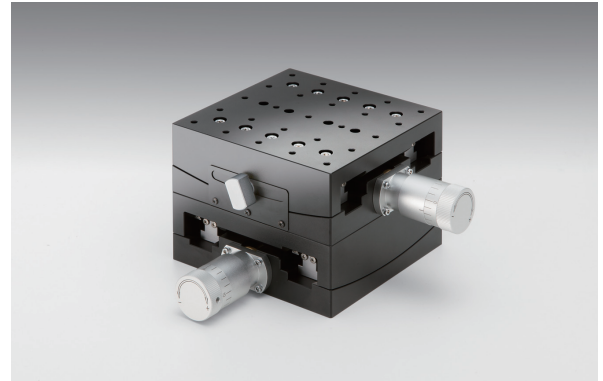
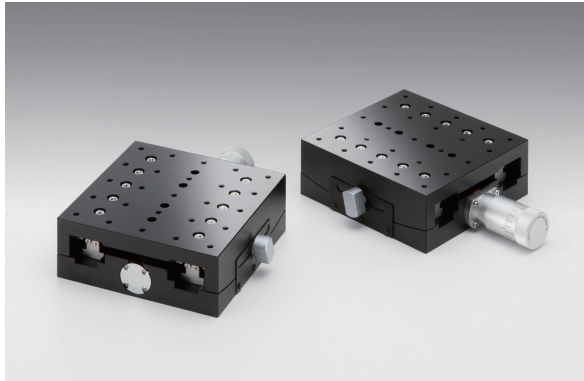
GOHTA-120A
GOHTA-120B

Stage size \square 120mm

RoHS
RoHS

Catalog Code W7139
Catalog Code W7140

The primary material is aluminum, but the ball guide type positioning slide offers high load capacity.



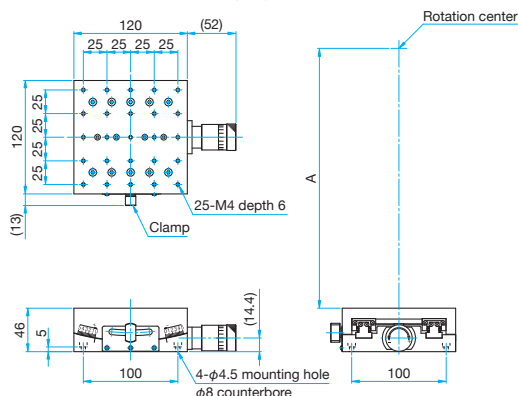
Guide

► Contact our International Sales Division if you desire a rotation center height not listed in the catalog.

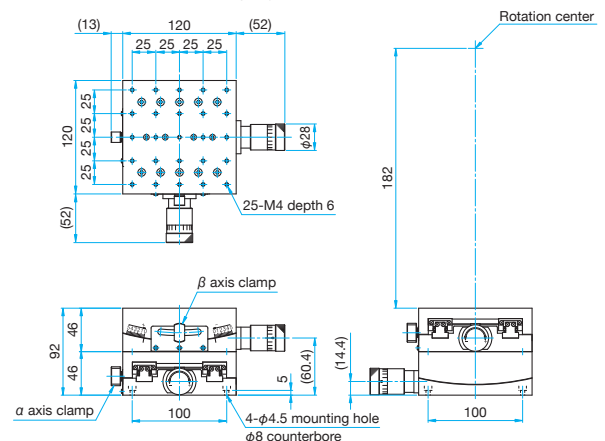


Outline Drawing

GOHTA-120A182/228 Hexagonal socket head cap screw M4×10...4 screws
Spring washer



GOHTA-120B182 Hexagonal socket head cap screw M4×10...4 screws
Spring washer



Part Number	A (mm)
GOHTA-120A182	182
GOHTA-120A228	228

Specifications

Part Number	METRIC	GOHTA-120A182	GOHTA-120A228	GOHTA-120B182
Table Size [mm]		120×120	120×120	120×120
Axes of Travel		α axis		$\alpha\beta$ axis
Rotation Center Height [mm]		182	228	182
Angle Range [°]	(Upper) β axis	—	—	±5
	(Lower) α axis	±5	±5	±5
Vernier Readable Resolution		1'	1'	1'
Travel per Knob Rotation [°]	(Upper) β axis	—	—	about 0.33
	(Lower) α axis	about 0.33	about 0.33	about 0.33
Rotation Center Displacement [mm]		φ0.02 or loss	φ0.02 or loss	φ0.04 or loss
Bearing type		Extended contact ball guide		
Primary Material		Aluminum		
Finish		Black anodized		
Load Capacity [N]		294 (30.0kgf)	294 (30.0kgf)	294 (30.0kgf)
Max. Moment Capacity	Pitch [N·m]	19.6	19.6	19.6
	Roll [N·m]	44.1	44.1	19.6
Moment Stiffness	Roll [°/N·cm]	0.02	0.02	—
Parallelism [μm]		100	100	200
Weight [kg]		2.2	2.2	4.4

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

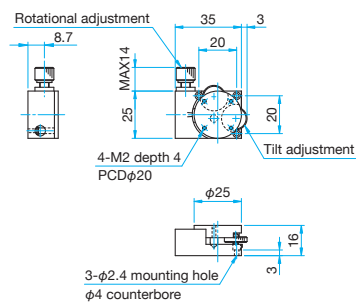
Tilt/rotation stages for adjusting the tilt of a sample on the table top to an arbitrary angle. Their compact and low-profile form is effective in confined spaces and compact optical systems.

- Use the adjustment ring for tilt adjustment and the feed knob for rotational adjustment.
- Be careful of the load on the stage since it is for light-load use.

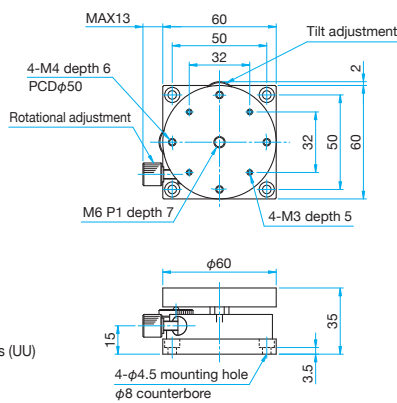


Outline Drawing

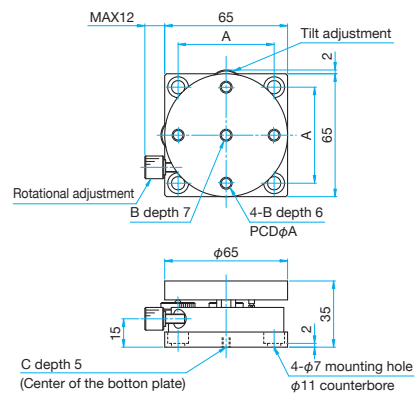
KKD-25C Pan head screw M2×6...3 screws



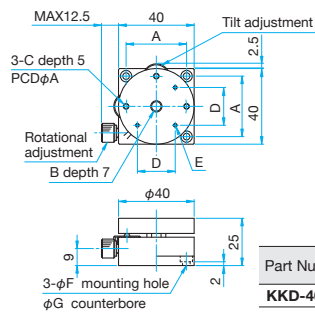
KKD-60C Hexagonal socket head cap screw M4×8...4 screws



KKD-65-M6/65UU Hexagonal socket head cap screw M6×8...4 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×5/16...4 screws (UU)



KKD-40C/40UU Pan head screw M3×6...3 screws
Hexagonal socket head cap screw 6-32UNC×1/4...3 screws (UU)



Part Number	A (mm)	B	C	D (mm)	E	F (mm)	G (mm)
KKD-40C	32	M6 P1	M3	20	3-M2 depth 4	3.5	6
KKD-40UU	31.75	1/4-20UNC	6-32UNC			4	6.5

Part Number	A (mm)	B	C
KKD-65-M6	50	M6 P1	M4
KKD-65UU	50.8	1/4-20UNC	8-32UNC

Specifications

Part Number	METRIC	KKD-25C	KKD-40C	KKD-60C	KKD-65-M6
	INCH	—	KKD-40UU	—	KKD-65UU
Table Size [mm]		φ25	φ40	φ60	φ65
Rotation Range [mm]		±3	±3	±3	±3
Tilt Range [°]	α axis	±3	±3	±3	±3
	β axis	±3	±3	±3	±3
Travel per Knob Rotation [°]	θ axis	about 0.9	about 2	about 1.7	about 1.68
	α axis	about 2.2	about 1.5	about 1	about 1.2
	β axis	about 2.2	about 1.5	about 1	about 1.2
Primary Material		Aluminum			
Finish		Black anodized			
Load Capacity [N]		1 (0.1kgf)	2 (0.2kgf)	4.9 (0.5kgf)	4.9 (0.5kgf)
Weight [kg]		0.05	0.1	0.3	0.5

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

$\alpha(\beta)$ axis Tilt Stages | AIS

RoHS

Tilt stages for adjusting the tilt of a sample on the table top to an arbitrary angle.
The control component (adjustment ring) is located on the side of the stage to minimize protrusions.



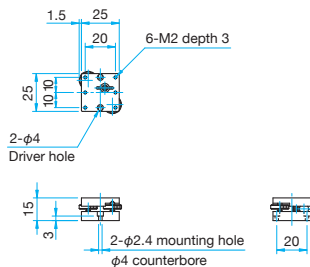
- The adjustment ring type is ideal for quick and easy tilt adjustment.
- The micrometer type is effective in confined spaces where vertical control from the top is required.

Attention

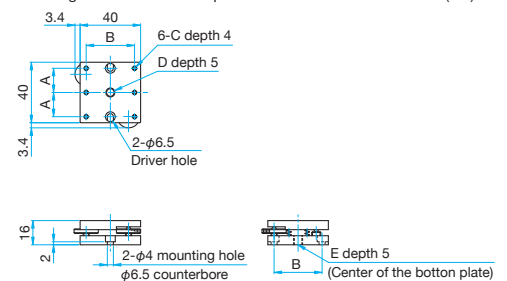
- Please use in surface load because the three-point support structure. It can not be used hanging on the wall or upside down.

**Outline Drawing**

AIS-25B □ Pan head screw M2×6...2 screws, Flat washers

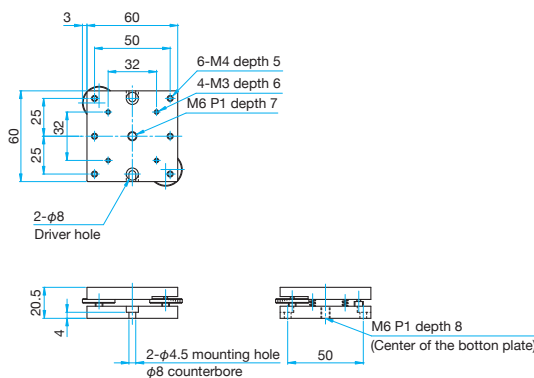


AIS-40B/40BUU □ Pan head screw M3×6...2 screws, Flat washers
Hexagonal socket head cap screw 6-32UNC×1/4...2 screws (UU)

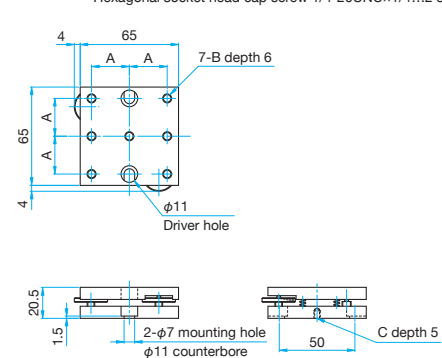


Part Number	A (mm)	B (mm)	C	D	E
AIS-40B	16	32	M3	M6 P1	M6 P1
AIS-40BUU	15.875	31.75	6-32UNC	1/4-20UNC	8-32UNC

AIS-60B □ Hexagonal socket head cap screw M4×8...2 screws



AIS-65B-M6/65BUU □ Hexagonal socket head cap screw M6×6...2 screws (M6)
Hexagonal socket head cap screw 1/4-20UNC×1/4...2 screws (UU)



Part Number	A (mm)	B	C
AIS-65B-M6	25	M6 P1	M4
AIS-65BUU	25.4	1/4-20UNC	8-32UNC

Specifications

Part Number	METRIC	AIS-25B	AIS-40B	AIS-60B	AIS-65B-M6
	INCH	—	AIS-40BUU	—	AIS-65BUU
Table Size [mm]		25×25	40×40	60×60	65×65
Tilt Range [°]		±2	±2	±2	±2
Travel per Knob Rotation [°]		about 1.8	about 1	about 0.65	about 0.58
Primary Material		Aluminum			
Finish		Black anodized			
Load Capacity [N]		9.8 (1.0kgf)	29.4 (3.0kgf)	49.0 (5.0kgf)	49.0 (5.0kgf)
Weight [kg]		0.04	0.06	0.17	0.2

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

- 15mm
- 25mm
- 40mm
- 60mm
- 65mm
- 80mm
- 100mm
- 120mm

Others



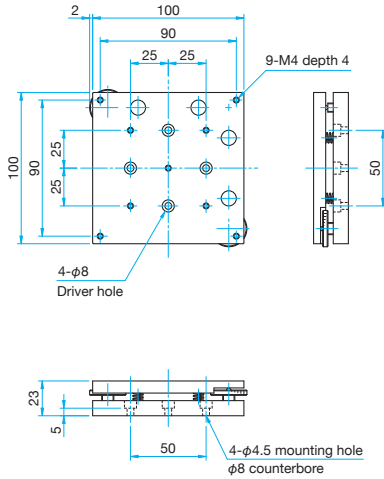
Guide

► Since the table sizes of AIS-8013B/1016B/1622B are the same as that of the precision labjacks (LJ/LJA), these can be used in combination with the labjacks. [Reference](#) E108

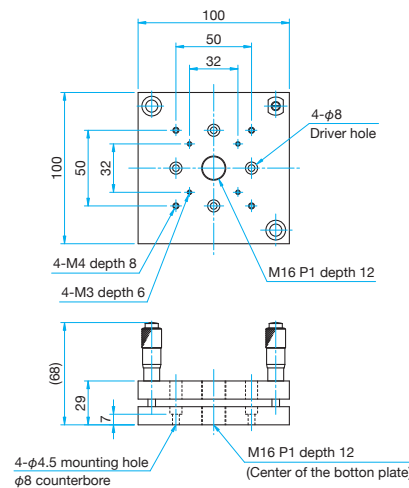


Outline Drawing

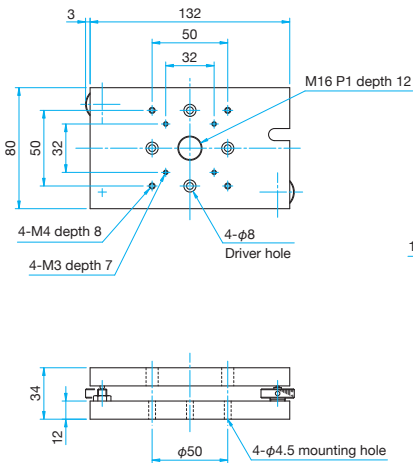
AIS-100B Hexagonal socket head cap screw M4×10...4 screws, Spring washers



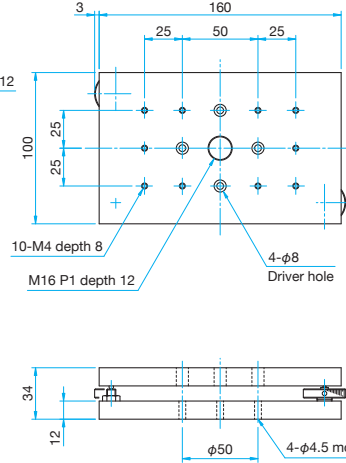
AIS-100CM Hexagonal socket head cap screw M4×12...4 screws, Spring washers



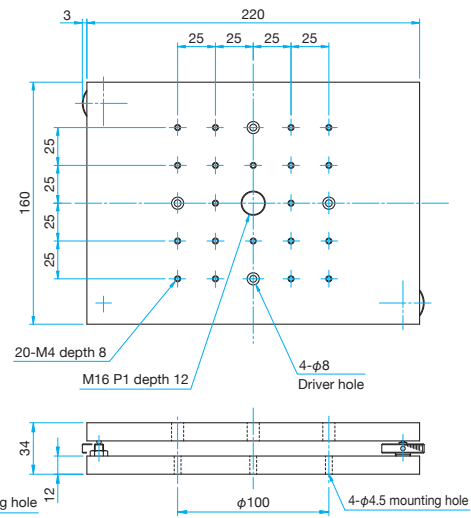
AIS-8013B Hexagonal socket head cap screw M4×16...4 screws



AIS-1016B Hexagonal socket head cap screw M4×16...4 screws



AIS-1622B Hexagonal socket head cap screw M4×16...4 screws



Specifications

Part Number	METRIC	AIS-100B	AIS-100CM	AIS-8013B	AIS-1016B	AIS-1622B
Table Size [mm]		100×100	100×100	80×130	100×160	160×120
Tilt Range [°]	α axis (Narrow side direction)	±2	±3	±1.4	±1.2	±0.7
	β axis (Long side direction)	—	—	±0.8	±0.7	±0.6
Travel per Knob Rotation [°]	α axis (Narrow side direction)	about 0.36	about 0.35	about 0.74	about 0.6	about 0.33
	β axis (Long side direction)	about 0.36	about 0.35	about 0.37	about 0.32	about 0.22
Primary Material		Aluminum				
Finish		Black anodized				
Load Capacity [N]		68.6 (7.0kgf)	68.6 (7.0kgf)	78.4 (8.0kgf)	98.0 (10.0kgf)	98.0 (10.0kgf)
Weight [kg]		0.51	0.6	0.8	1.2	2.5

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Stainless Steel Linear Slides | IPWS



IPWS series is a high precision linear movement slide guide with integrated processing type of two configuration parts, processing and hardening polish the guide directly to the (upper plate) moving table and the lower plate, which installed the steel ball.



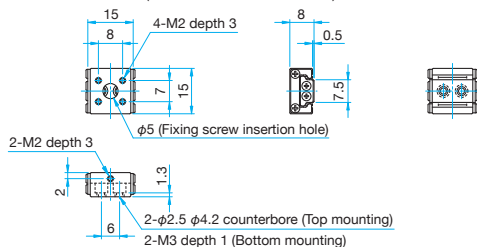
Preload of Impulse Ways

There are two preloads for impulse ways as shown in the following table. The standard preload is applied to the standard impulse ways. The standard preload, either zero or only a slight preload, provides smooth travel. On the other hand, the light preload applies a preload slightly larger than the standard preload, making it suited to usage that requires enhanced stiffness or under slight vibrations. Impulse ways with a higher-than-standard preload are also available upon request. Contact our International sales Division for more information.

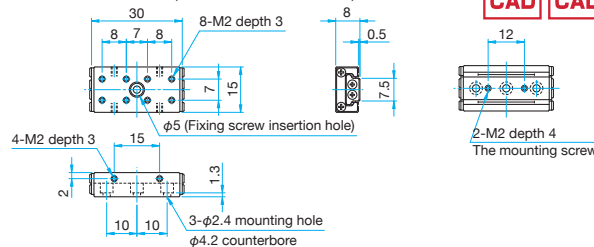
Type	Standard (Zero) Preload	Light Preload
Preload	+2 -- -3	-2 -- -4
Condition	<ul style="list-style-type: none"> ● Location or usage under only slight vibration ● Smooth travel ● Location or usage under a load in a specific direction 	<ul style="list-style-type: none"> ● Location or usage under slight vibration ● Location or usage under a slight prying load ● Location or usage under a complex load

Outline Drawing

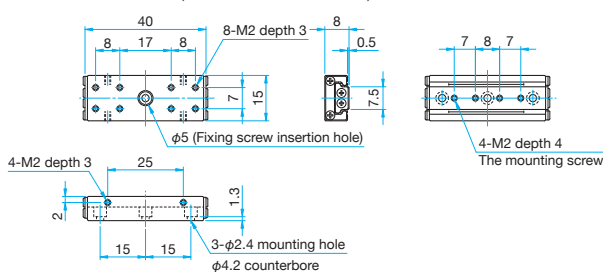
IPWS-F1515 Hexagonal socket head cap screw (stainless steel construction) M2×4...3 screws



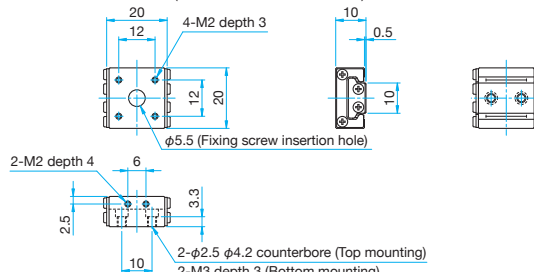
IPWS-F1530 Hexagonal socket head cap screw (stainless steel construction) M2×4...3 screws



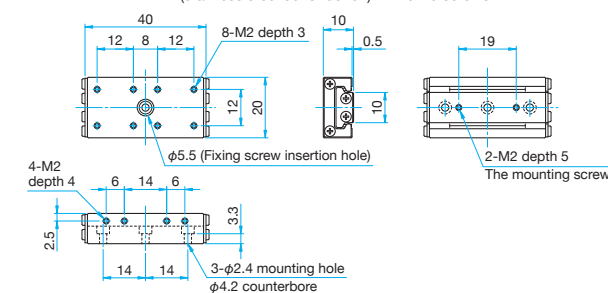
IPWS-F1540 Hexagonal socket head cap screw (stainless steel construction) M2×4...3 screws



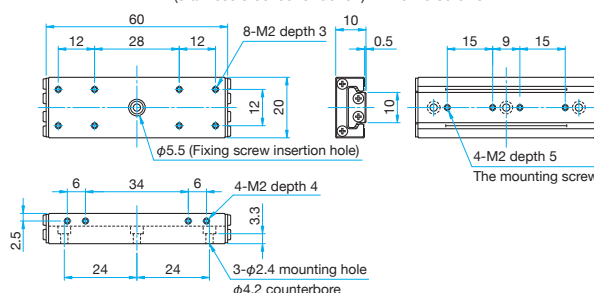
IPWS-F2020 Hexagonal socket head cap screw (stainless steel construction) M2×6...2 screws



IPWS-F2040 Hexagonal socket head cap screw (stainless steel construction) M2×6...3 screws



IPWS-F2060 Hexagonal socket head cap screw (stainless steel construction) M2×6...3 screws



Specifications

Part Number	METRIC	IPWS-F1515	IPWS-F1530	IPWS-F1540	IPWS-F2020	IPWS-F2040	IPWS-F2060
Table Size [mm]		15×15	15×30	15×40	20×20	20×40	20×60
Axes of Travel		X axis					
Travel [mm]		±3	±9	±12	±4	±12	±18
Bearing type		Extended contact ball guide					
Primary Material		SUS440C quench hardened					
Finish		None					
Max. Moment Capacity	Pitch [N·m]	0.4	1.2	1.8	0.7	1.8	3
	Roll [N·m]	0.8	2	2.8	1.6	2.7	4.2
	Yaw [N·m]	0.4	1.2	1.8	0.7	1.8	3
Parallelism [μm]		30	30	30	30	30	30
Running Parallelism [μm]		10	10	10	10	10	10
Weight [kg]		0.01	0.02	0.03	0.02	0.04	0.07

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

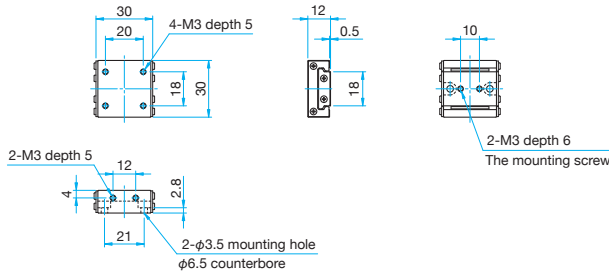
120mm

Others

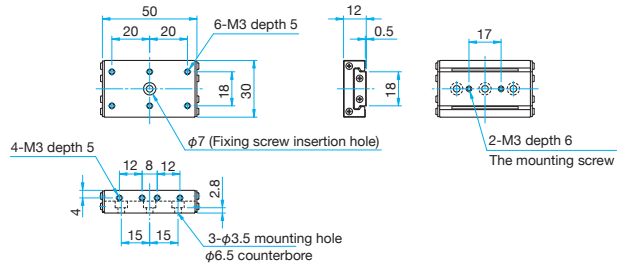


Outline Drawing

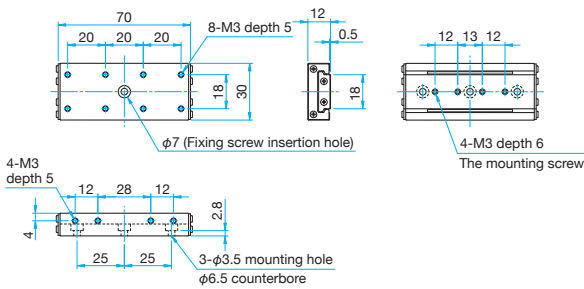
IPWS-F3030 Hexagonal socket head cap screw (stainless steel construction) M3×6...2 screws



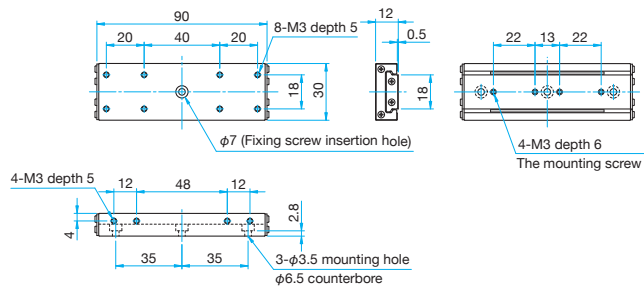
IPWS-F3050 Hexagonal socket head cap screw (stainless steel construction) M3×6...3 screws



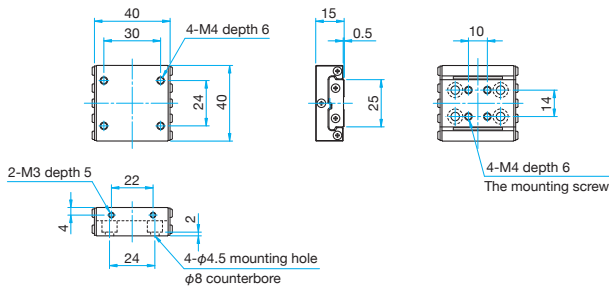
IPWS-F3070 Hexagonal socket head cap screw (stainless steel construction) M3×6...3 screws



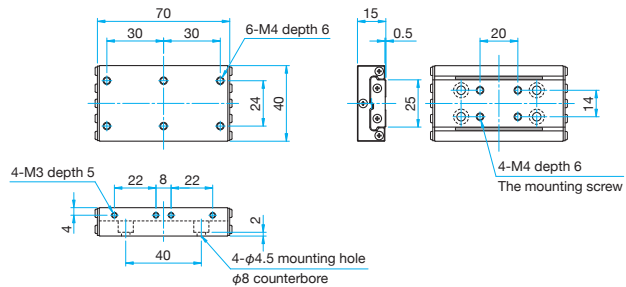
IPWS-F3090 Hexagonal socket head cap screw (stainless steel construction) M3×6...3 screws



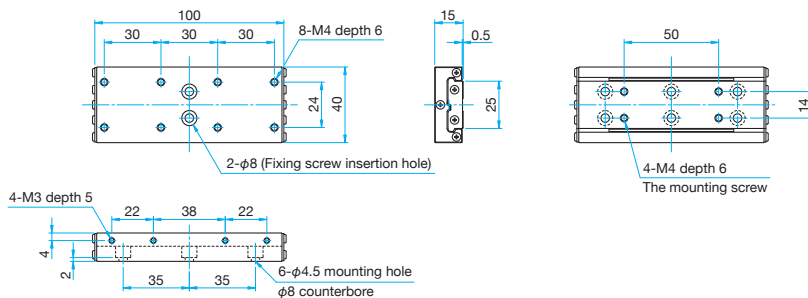
IPWS-F4040 Hexagonal socket head cap screw (stainless steel construction) M4×6...4 screws



IPWS-F4070 Hexagonal socket head cap screw (stainless steel construction) M4×6...4 screws



IPWS-F40100 Hexagonal socket head cap screw (stainless steel construction) M4×6...6screws



Specifications

Part Number	METRIC	IPWS-F3030	IPWS-F3050	IPWS-F3070	IPWS-F3090	IPWS-F4040	IPWS-F4070	IPWS-F40100
Table Size [mm]		30×30	30×50	30×70	30×90	40×40	40×70	40×100
Axes of Travel		X axis						
Travel [mm]		±7	±14	±20	±27	±10	±20	±30
Bearing type		Extended contact ball guide						
Primary Material		SUS440C quench hardened						
Finish		None						
Max. Moment Capacity	Pitch [N·m]	2	3.9	5.3	7.3	3.9	7.9	11.9
	Roll [N·m]	5.3	9.2	11.9	15.9	13.2	23.9	34.4
	Yaw [N·m]	2	3.9	5.3	7.3	3.9	7.9	11.9
Parallelism [μm]		30	30	30	30	30	30	30
Running Parallelism [μm]		10	10	10	15	10	10	15
Weight [kg]		0.07	0.12	0.16	0.21	0.15	0.26	0.38

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

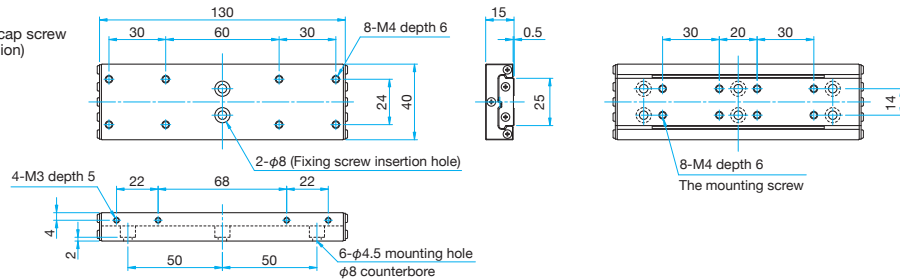
Others



Outline Drawing

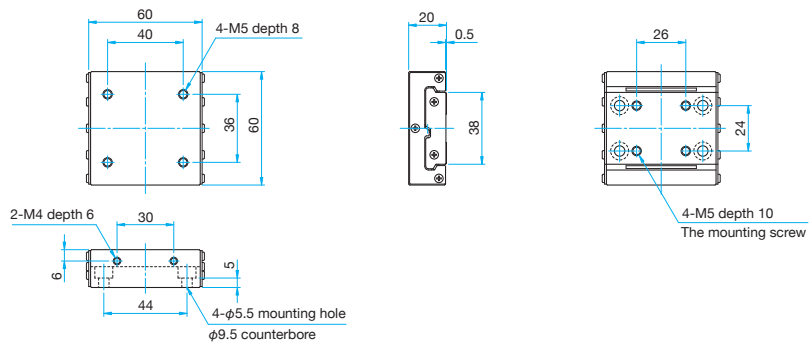
IPWS-F40130

Hexagonal socket head cap screw (stainless steel construction)
M4×6...6 screws



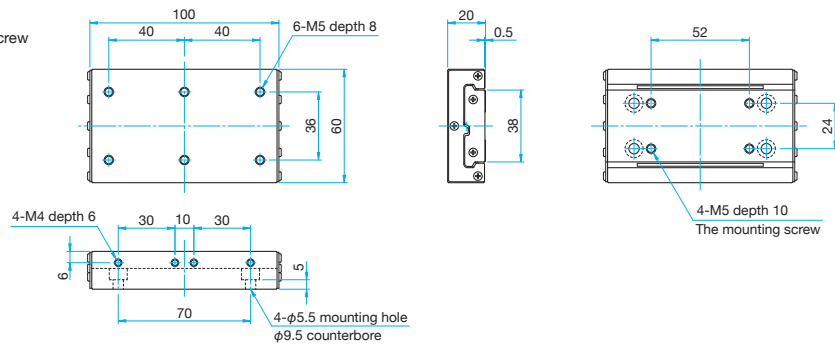
IPWS-F6060

Hexagonal socket head cap screw (stainless steel construction)
5×10...4 screws



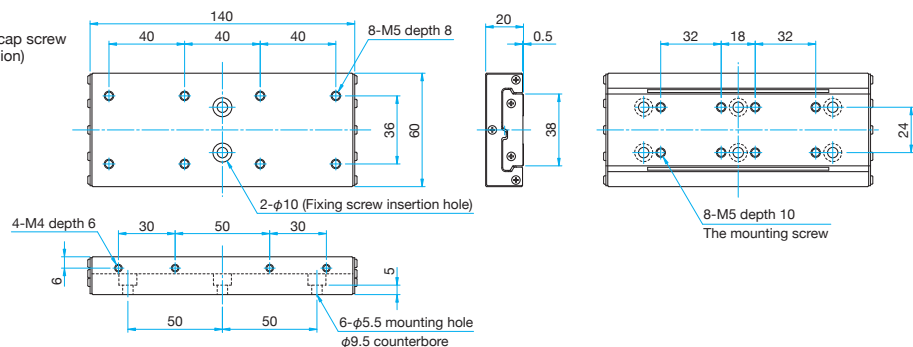
IPWS-F60100

Hexagonal socket head cap screw (stainless steel construction)
M5×10...4 screws



IPWS-F60140

Hexagonal socket head cap screw (stainless steel construction)
M5×10...6 screws



Specifications

Part Number	METRIC	IPWS-F40130	IPWS-F6060	IPWS-F60100	IPWS-F60140
Table Size [mm]		40×130	60×60	60×100	60×140
Axes of Travel		X axis			
Travel [mm]		±37.5	±13	±30	±40
Bearing type		Extended contact ball guide			
Primary Material		SUS440C quench hardened			
Finish		None			
Max. Moment Capacity	Pitch [N·m]	16.9	17.7	28.3	42.5
	Roll [N·m]	47.7	59.7	89.5	129
	Yaw [N·m]	16.9	17.7	28.3	42.5
Parallelism [μm]		50	30	30	50
Running Parallelism [μm]		15	10	15	15
Weight [kg]		0.5	0.47	0.78	1.1

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

Vacuum Guidance for Stainless Steel Stages

The amount of gas emitted from a vacuum compatible manual stage was measured. According to the analysis of gas, the gas consists mainly of water and hydrocarbon. It is assumed that moisture on the stage surface and part of the grease used as drive lubricating oil evaporated.

Emitted amount of gas

Part Number	Emitted Amount of Gas Q (after 40 minutes of emission)	
	(Torr·ℓ/s/unit)	(Pa·ℓ/s/unit)
TSDS-602S	3.57×10^{-5}	4.76×10^{-3}
TSDS-603	1.65×10^{-5}	2.20×10^{-3}

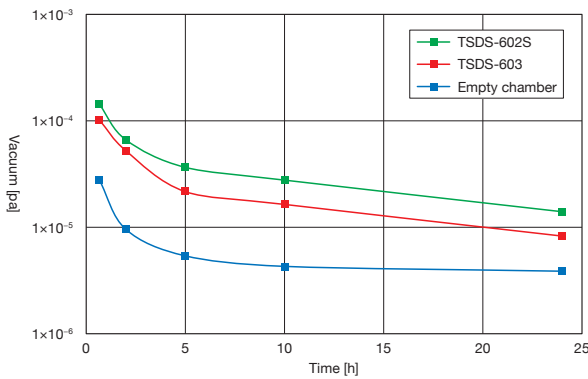
Evaluation and Device Specifications
 Exhaust system: Turbo-Molecular Pump STP-301
 Seiyu Instruments Inc. (Now Edwards Japan Limited)
 Pumping speed: 300ℓ/sec
 Mass spectroscope: Quad Mass Spectrometer QME200
 Pfeiffer Vacuum
 Mass range: 1 – 200amu

Emitted amount of gas is found by the following equation:

$$Q = \frac{(P - P') \times V}{t \times N}$$

P : Vacuum immediately after seal off
 P' : Vacuum after seal-off time has elapsed
 N : Number of stage units (1unit)
 V : Vacuum chamber volume (ℓ)
 t : Seal-off time (600s)

Vacuum of Vacuum Chamber



Mass Component Ratio

Mass Number	Component Ratio [%]		Ion	Gas Molecule
	TSDS-602S	TSDS-603		
1	7.48	8.72	H ⁺	H ₂ , water vapor, hydrocarbon
2	6.56	7.75	H ₂ ⁺	H ₂ , water vapor, hydrocarbon
6	0.01	-	C ²⁺	CO, CO ₂ , hydrocarbon
12	0.51	0.66	C ⁺	CO, CO ₂ , hydrocarbon
14	-	2.84	N ⁺ , CO ²⁺ , CH ₂ ⁺	N ₂ , NH ₃ , CO, hydrocarbon
15	2.26	3.06	CH ₃ ⁺ , NH ⁺	Hydrocarbon, NH ₃
18	9.7	17.92	H ₂ O ⁺	H ₂ O
20	-	0.13	HF ⁺ , Ar ²⁺	HF, Ar
22	0.01	0.01	CO ₂ ²⁺	CO ₂
27	4.9	4.56	C ₂ H ₃ ⁺	Hydrocarbon
28	-	11.46	CO ⁺ , N ₂ ⁺ , C ₂ H ₄ ⁺	CO, CO ₂ , N ₂ , Hydrocarbon
29	7.44	4.94	C ₂ H ₅ ⁺	Hydrocarbon
31	-	0.3	C ₂ H ₇ O ⁺	C ₂ H ₅ OH
32	0.24	1.65	O ²⁺ , S ⁺	O ₂ , H ₂ S, SO ₂
34	0.13	0.16	H ₂ S ⁺	H ₂ S
36	-	0.19	HCl ⁺	HCl
39	3.19	2.94	C ₃ H ₃ ⁺	Hydrocarbon
41	10.99	6.97	C ₃ H ₅ ⁺	Hydrocarbon
43	11.79	5.56	C ₃ H ₇ ⁺	Hydrocarbon
47	0.04	0.05	CH ₃ S ⁺	CH ₃ SH

Interpretation of Mass Peak

The following list shows major gases that appear for each mass number when mass peaks (mass spectra) of residual gas are measured, and their interpretations.

List of Residual Gas Spectra

Mass Number	Ion	Remarks	Mass Number	Ion	Remarks
1	H ⁺	H ₂ , H ₂ O, hydrocarbons, etc	30	NO ⁺	Appears immediately after emission of dirty vacuum system.
2	H ₂ ⁺	H ₂ , H ₂ O, hydrocarbons, etc	31	CH ₃ O ⁺	Alcohol
3	HD ⁺	Abundance ratio of D is about 0.01%.	32	O ₂ ⁺	Becomes N ₂₃ : O ₃₂ = 4 : 1 when air leak occurs.
4	He ⁺		35	Cl ⁺	
12	C ⁺	CO, CO ₂ , hydrocarbons	37	Cl ⁺	Cl ₃₅ : Cl ₃₇ = 3 : 1
14	N ⁺ , CH ₂ ⁺ , CO ₂ ⁺	N ₂ , CO ₂ , hydrocarbons	39	K ⁺ , C ₃ H ₃ ⁺	K ⁺ dissociates from filament.
15	CH ₃ ⁺	Molecule that has CH ₄ , CH ₃	40	Ar ⁺ , C ₃ H ₄ ⁺	Ar makes up 1% of the atmosphere.
16	C ⁺ , CH ₄ ⁺	O ₂ , CH ₄ , oxygen compounds	41	C ₃ H ₅ ⁺	Hydrocarbon
17	OH ⁺	H ₂ O	42	C ₃ H ₆ ⁺	Hydrocarbon
18	H ₂ O ⁺	H ₂ O, OH ⁺ : H ₂ O ⁺ ≐ 1 : 5	43	C ₃ H ₇ ⁺	Hydrocarbon
19	F ⁺	Sometimes adsorbed to filaments and electrode surface.	44	CO ₂ ⁺	
20	Ar ⁺ , H ₂ O ⁺ , Ne ⁺	H ₂ O(20) is present about 0.2% of abundance ratio of O ₁₅ .	50	C ₄ H ₂ ⁺	Hydrocarbon
22	CO ₂ ²⁺ , Ne ⁺	Abundance ratio of NE ₂₂ is 8.8%.	51	C ₄ H ₃ ⁺	Hydrocarbon
23	Na ⁺	Sometimes adsorbed to filaments and electrode surface.	55	C ₄ H ₇ ⁺	Hydrocarbon
27	C ₂ H ₃ ⁺	Hydrocarbon	56	C ₄ H ₈ ⁺	Hydrocarbon
28	N ₂ ⁺ , CO ⁺	Remain till the last.	57	C ₄ H ₉ ⁺	Hydrocarbon
29	C ₂ H ₅ ⁺ , N ₂ ⁺ , CO ⁺	Abundance ratio of N ₁₅ is 0.7%, and that of C ₁₃ is 1.1%.			

X axis Stainless Steel Extended Contact Slide Stages

TSDS-1 Stage size □25/□40/□60/□65mm

RoHS

Stainless Steel Linear Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages

Completely made of stainless steel, they offering excellent corrosion resistance.

Both the stage and the stainless steel micrometer head are lubricated with a high grade vacuum grease (YVAC2).



Guide

- ▶ The TSDS series offers stages suitable for use in clean rooms or vacuum applications.
Reference ▶ Vacuum measurement data E199
 Also ideal for use in airtight spaces that have to avoid outgassing.

Attention

- ▶ There may be protrusions from the top surface depending on the components that secure the micrometer heads.
- ▶ Note that some samples might not be able to be fixed on the stage depending on their shapes, or required travel might not be ensured.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

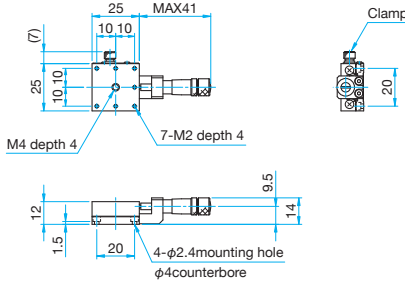
Specifications

Part Number	METRIC	TSDS-251C	TSDS-251S	TSDS-401C	TSDS-401S	TSDS-601C	TSDS-601S	TSDS-651C-M6	TSDS-651S-M6
	INCH	—	—	TSDS-401CUU	TSDS-401SUU	—	—	TSDS-651CUU	TSDS-651SUU
Table Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		X axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		±3	±3	±6.5	±6.5	±6.5	±6.5	±6.5	±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	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	0.01	0.01
Bearing type		Extended contact ball guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	147 (15.0kgf)	147 (15.0kgf)	343 (35.0kgf)	343 (35.0kgf)	343 (35.0kgf)	343 (35.0kgf)
Travel Accuracy	Straightness [μm]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Pitch [″]	30	30	30	30	25	25	25	25
	Yaw [″]	25	25	25	25	15	15	15	15
Max. Moment Capacity	Pitch [N·m]	3.0	3.0	3.9	3.9	6.4	6.4	8.8	8.8
	Roll [N·m]	3.7	3.7	3.9	3.9	6.4	6.4	9.8	9.8
	Yaw [N·m]	1.5	1.5	2.5	2.5	4.9	4.9	4.9	4.9
Moment Stiffness	Pitch [°/N·cm]	1.8	1.8	0.36	0.36	0.2	0.2	0.2	0.2
	Roll [°/N·cm]	1.6	1.6	0.3	0.3	0.2	0.2	0.2	0.2
	Yaw [°/N·cm]	2.0	2.0	0.4	0.4	0.2	0.2	0.2	0.2
Parallelism [μm]		30	30	15	15	15	15	30	30
Running Parallelism [μm]		10	10	10	10	10	10	10	10
Weight [kg]		0.07	0.07	0.2	0.2	0.5	0.5	0.55	0.55

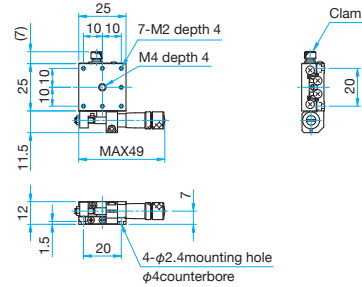


Outline Drawing

TSDS-251C Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws

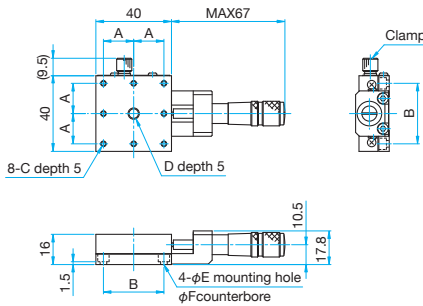


TSDS-251S Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws



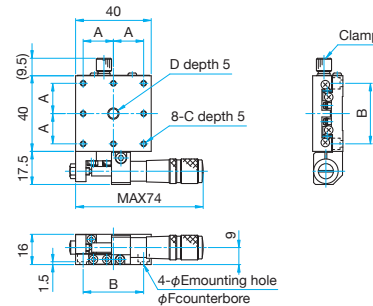
TSDS-401C/401CUU

Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



TSDS-401S/401SUU

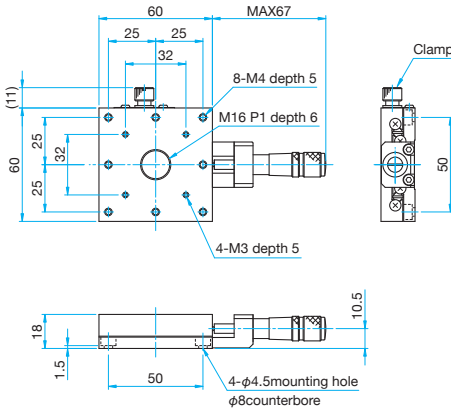
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



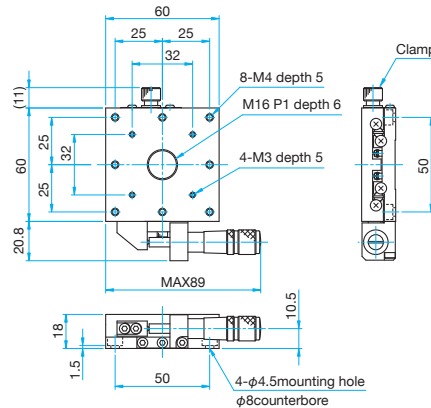
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-401C	16	32	M3	M6 P1	3.5	6
TSDS-401CUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-401S	16	32	M3	M6 P1	3.5	6
TSDS-401SUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSDS-601C Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws

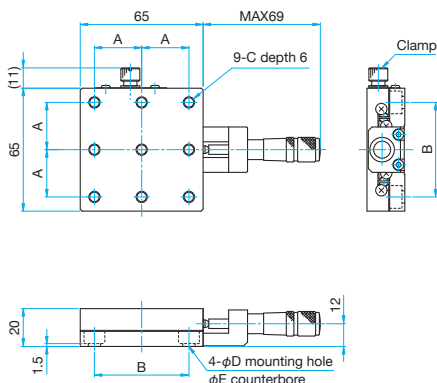


TSDS-601S Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws



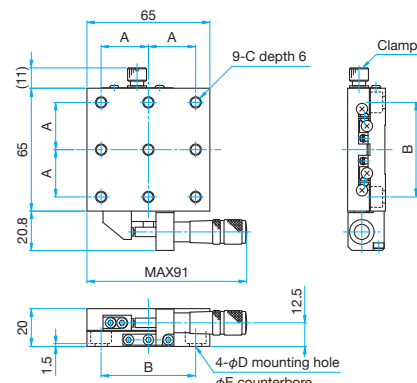
TSDS-651C-M6/651CUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



TSDS-651S-M6/651SUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-651C-M6	25	50	M6	6.5	11
TSDS-651CUU	25.4	50.8	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-651S-M6	25	50	M6	6.5	11
TSDS-651SUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others

XY axis Stainless Steel Extended Contact Slide Stages | TSDS-2 Stage size □25/□40/□60/□65mm

RoHS

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

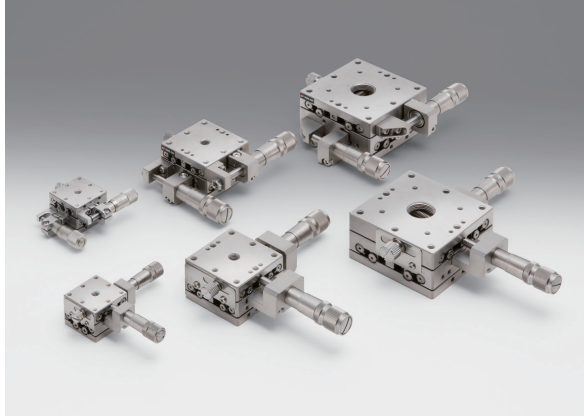
□120mm

Others

Stainless Steel Linear Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

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Both the stage and the stainless steel micrometer head are lubricated with a high grade vacuum grease (YVAC2).



Guide

- ▶ The TSDS series offers stages suitable for use in clean rooms or vacuum applications.
Reference ▶ Vacuum measurement data E199
 Also ideal for use in airtight spaces that have to avoid outgassing.

Attention

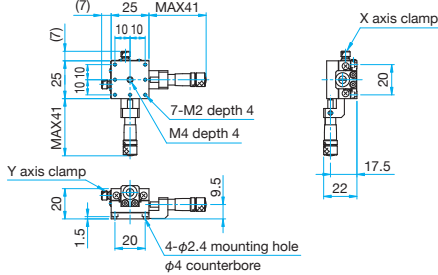
- ▶ There may be protrusions from the top surface depending on the components that secure the micrometer heads.
- ▶ Note that some samples might not be able to be fixed on the stage depending on their shapes, or required travel might not be ensured.

Specifications									
Part Number	METRIC	TSDS-252C	TSDS-252S	TSDS-402C	TSDS-402S	TSDS-602C	TSDS-602S	TSDS-652C-M6	TSDS-652S-M6
	INCH	—	—	TSDS-402CUU	TSDS-402SUU	—	—	TSDS-652CUU	TSDS-652SUU
Table Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		XY axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		±3	±3	±6.5	±6.5	±6.5	±6.5	±6.5	±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	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	0.01	0.01
Bearing type		Extended contact ball guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		49 (5.0kgf)	49 (5.0kgf)	147 (15.0kgf)	147 (15.0kgf)	343 (35.0kgf)	343 (35.0kgf)	343 (35.0kgf)	343 (35.0kgf)
Travel Accuracy	Straightness [μm]	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Pitch [′]	30	30	30	30	25	25	25	25
	Yaw [′]	25	25	25	25	15	15	15	15
Max. Moment Capacity	Pitch [N·m]	3.0	3.0	3.9	3.9	6.4	6.4	8.8	8.8
	Roll [N·m]	3.0	3.0	3.9	3.9	6.4	6.4	8.8	8.8
	Yaw [N·m]	1.5	1.5	2.5	2.5	4.9	4.9	4.9	4.9
Moment Stiffness	Pitch [°/N·cm]	3.4	3.4	0.66	0.66	0.41	0.41	0.41	0.41
	Roll [°/N·cm]	3.4	3.4	0.66	0.66	0.41	0.41	0.41	0.41
	Yaw [°/N·cm]	4.0	4.0	0.8	0.8	0.41	0.41	0.41	0.41
Parallelism [μm]		50	50	30	30	30	30	50	50
Running Parallelism [μm]		20	20	20	20	20	20	20	20
Orthogonality [μm]		10	10	10	10	10	10	10	10
Weight [kg]		0.1	0.1	0.3	0.3	0.9	0.9	1.2	1.2

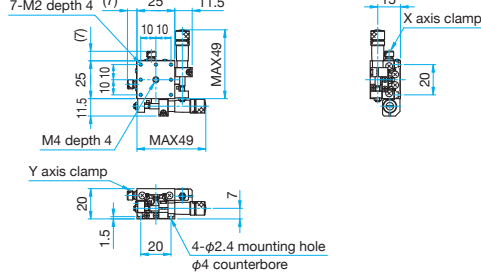


Outline Drawing

TSDS-252C Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws

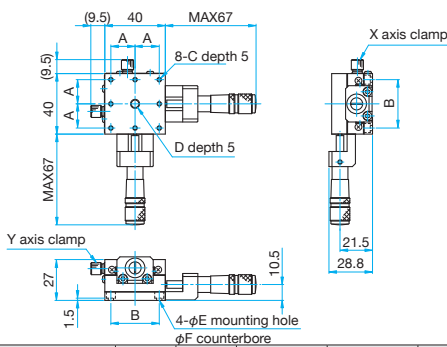


TSDS-252S Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws



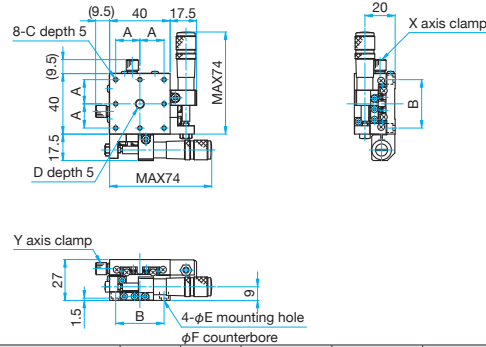
TSDS-402C/402CUU

Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



TSDS-402S/402SUU

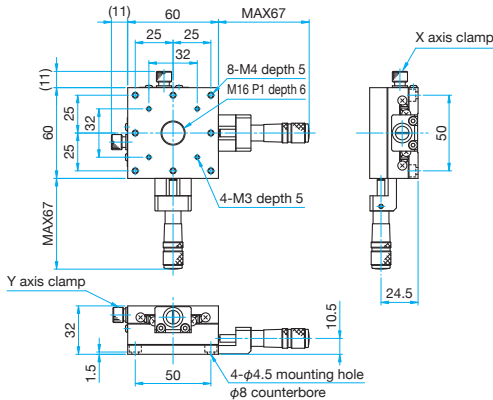
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



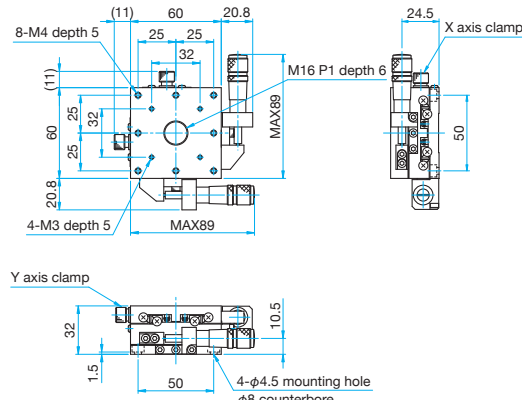
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-402C	16	32	M3	M6 P1	3.5	6
TSDS-402CUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-402S	16	32	M3	M6 P1	3.5	6
TSDS-402SUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSDS-602C Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws

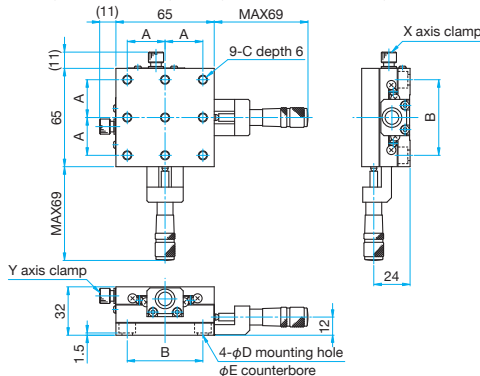


TSDS-602S Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws



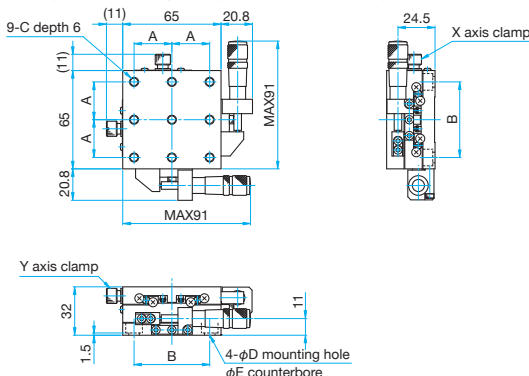
TSDS-652C-M6/652CUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



TSDS-652S-M6/652SUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-652C-M6	25	50	M6	6.5	11
TSDS-652CUU	25.4	50.8	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-652S-M6	25	50	M6	6.5	11
TSDS-652SUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

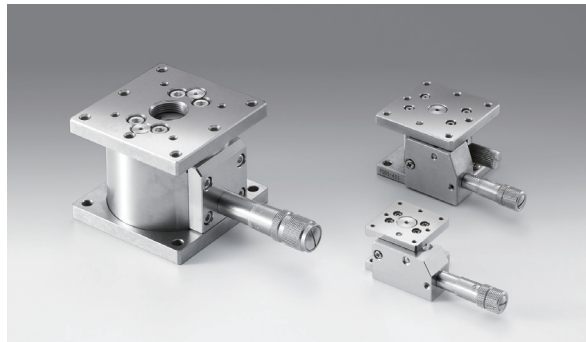
100mm

120mm

Others

Stainless Steel Linear Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

Completely made of stainless steel, they offering excellent corrosion resistance. Both the stage and the stainless steel micrometer head are lubricated with a high grade vacuum grease (YVAC2).



Guide

► The TSDS series offers stages suitable for use in clean rooms or vacuum applications.

Reference Vacuum measurement data E199

Also ideal for use in airtight spaces that have to avoid outgassing.

Attention

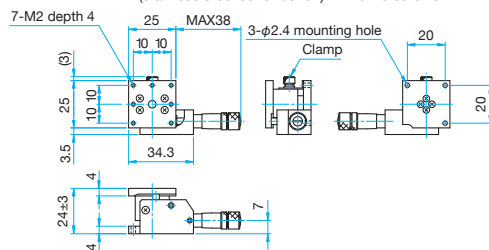
► The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.

► Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about ±0.02mm for micrometer head 0.5mm/rotation).

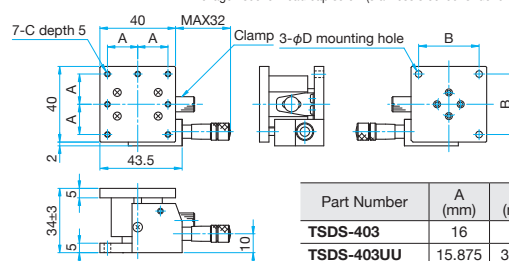


Outline Drawing

TSDS-253 Hexagon socket head cap screw (stainless steel construction) M2×6...3 screws

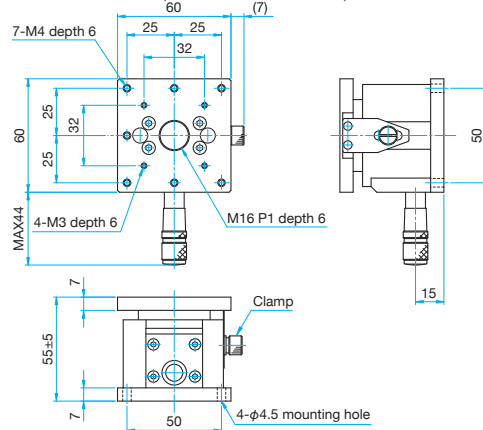


TSDS-403/403UU Hexagon socket head cap screw (stainless steel construction) M3×8...3 screws
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/8...3 screws (UU)

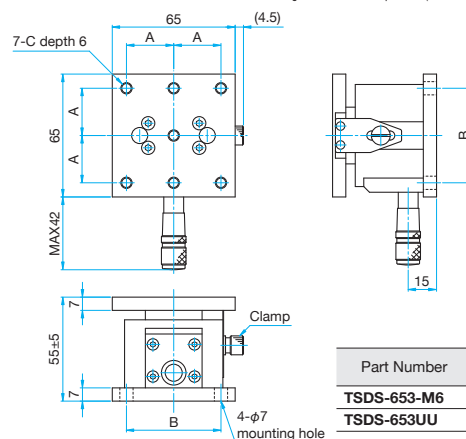


Part Number	A (mm)	B (mm)	C	D (mm)
TSDS-403	16	32	M3	3.5
TSDS-403UU	15.875	31.75	6-32UNC	4

TSDS-603 Hexagon socket head cap screw (stainless steel construction) M4×12...4 screws



TSDS-653-M6/653UU Hexagon socket head cap screw (stainless steel construction) M6×12...3 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/2...4 screws (UU)



Part Number	A (mm)	B (mm)	C
TSDS-653-M6	25	50	M6
TSDS-653UU	25.4	50.8	1/4-20UNC

Specifications

Part Number	METRIC INCH	TSDS-253 —	TSDS-403 TSDS-403UU	TSDS-603 —	TSDS-653-M6 TSDS-653UU
Table Size [mm]		25×25	40×40	60×60	65×65
Axes of Travel		Z axis			
Travel [mm]		±3	±3	±5	±5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Stainless steel			
Finish		None			
Load Capacity [N]		29.4 (3.0kgf)	88.3 (9.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Travel Accuracy	Straightness [μm]	5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [N·m]	1	3.9	6.9	6.9
	Roll [N·m]	1	3.9	6.9	6.9
Moment Stiffness	Pitch ["/N·cm]	7.14	1.84	0.51	0.51
	Roll ["/N·cm]	7.15	1.84	0.51	0.51
Parallelism [μm]		80	80	80	80
Running Parallelism [μm]		15	20	25	25
Weight [kg]		0.1	0.25	1.0	1.1

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

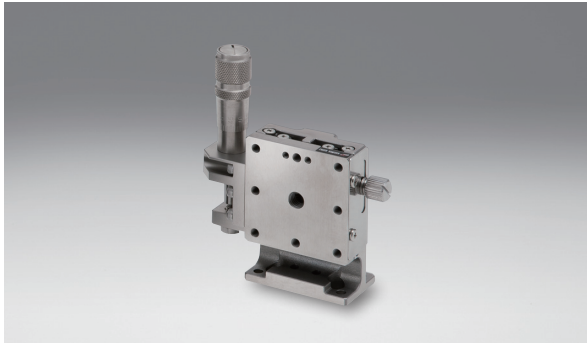
□100mm

□120mm

Others

Stainless Steel Linear Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

Completely made of stainless steel, they offering excellent corrosion resistance. Both the stage and the stainless steel micrometer head are lubricated with a high grade vacuum grease (YVAC2).



Guide

▶ The TSDS series offers stages suitable for use in clean rooms or vacuum applications.

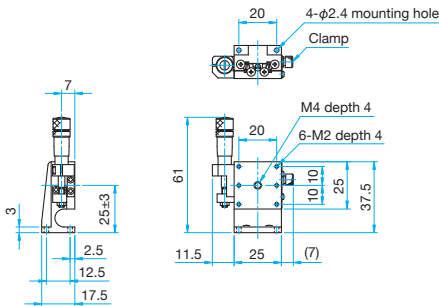
Reference Vacuum measurement data E199

Also ideal for use in airtight spaces that have to avoid outgassing.

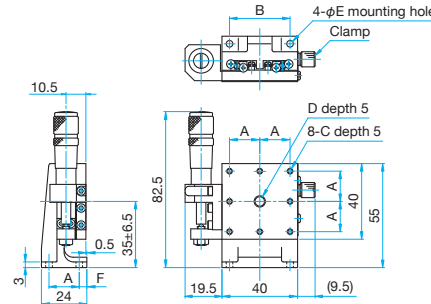


Outline Drawing

TSDS-253L Hexagonal socket head cap screw (stainless steel construction) M2x6...4 screws

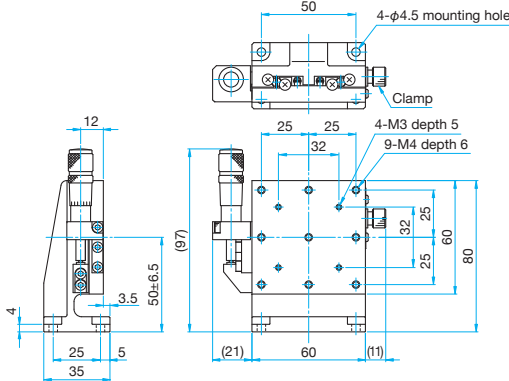


TSDS-403L/403LUU Hexagonal socket head cap screw M3x6...4 screws Hexagonal socket head cap screw 6-32UNCx1/4...4 screws (UU)

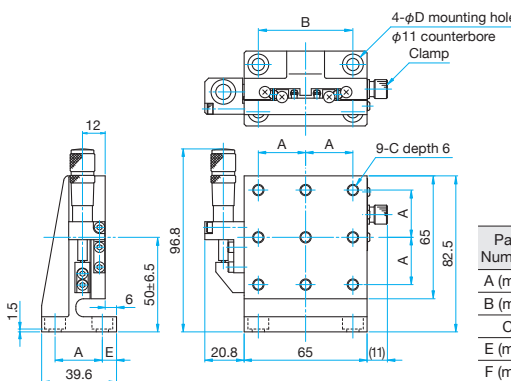


Part Number	TSDS-403L	TSDS-403LUU
A (mm)	16	15.875
B (mm)	32	31.75
C	M3	6-32UNC
D	M6 P1	1/4-20UNC
E (mm)	3.5	4
F (mm)	4	3.625

TSDS-603L Hexagonal socket head cap screw (stainless steel construction) M4x8...4 screws



TSDS-653L-M6/653LUU Hexagonal socket head cap screw M6x6...4 screws (M6) Hexagonal socket head cap screw 1/4-20UNCx1/4...4 screws (UU)



Part Number	TSDS-653L-M6	TSDS-653LUU
A (mm)	25	25.4
B (mm)	50	50.8
C	M6 P1	1/4-20UNC
E (mm)	6.5	7
F (mm)	11	12

Specifications

Part Number	METRIC	TSDS-253L	TSDS-403L	TSDS-603L	TSDS-653L-M6
	INCH		TSDS-403LUU		TSDS-653LUU
Table Size [mm]		25x25	40x40	60x60	65x65
Axes of Travel		Z axis			
Micrometer Position		Side	Side	Side	Side
Travel [mm]		±3	±6.5	±6.5	±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	0.5	0.5
Micrometer Readable Resolution [mm]		0.01	0.01	0.01	0.01
Bearing type		Extended contact ball guide			
Primary Material		Stainless steel			
Finish		None			
Load Capacity [N]		14.7 (1.5kgf)	49.0 (5.0kgf)	49.0 (5.0kgf)	49.0 (5.0kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1
Max. Moment Capacity	Pitch [N·m]	2.2	5	8	8
	Roll [N·m]	2.1	5	8	8
Moment Stiffness	Pitch [°/N·cm]	3.3	0.6	0.25	0.25
	Parallelism [μm]	20	20	20	20
Running Parallelism [μm]		30	30	30	30
Weight [kg]		0.1	0.3	0.8	0.9

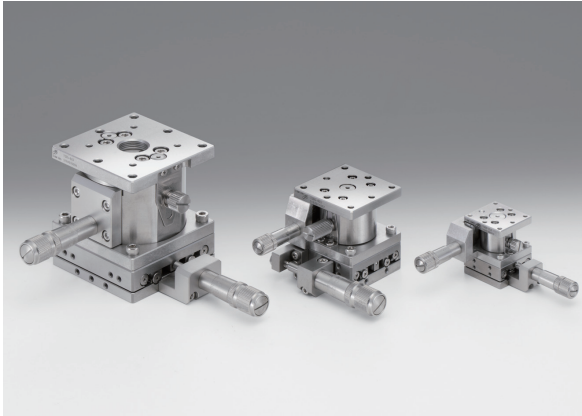
XZ axis Stainless Steel Extended Contact Slide Stages

TSDS-4 Stage size □25/□40/□60/□65mm

RoHS

XZ axis Stainless Steel Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

- Made completely of stainless steel, offering excellent corrosion resistance.
- Both the stage and micrometer head use high vacuum grease (YVAC2).



Guide

- ▶ The TSDS series offers stages suitable for use in clean rooms or vacuum applications.
Reference Vacuum measurement data E199
 Also ideal for use in airtight spaces that have to avoid outgassing.

Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about $\pm 0.02\text{mm}$ for micrometer head 0.5mm/rotation).

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

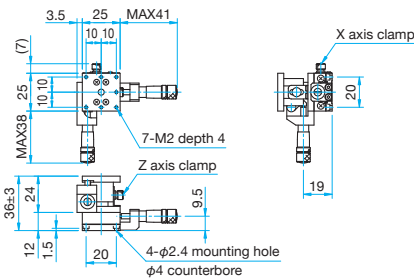
Specifications

Part Number	METRIC	TSDS-254C	TSDS-254S	TSDS-404C	TSDS-404S	TSDS-604C	TSDS-604S	TSDS-654C-M6	TSDS-654S-M6
	INCH	—	—	TSDS-404CUU	TSDS-404SUU	—	—	TSDS-654CUU	TSDS-654SUU
Table Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		XZ axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		X axis ± 3 Z axis ± 3	X axis ± 3 Z axis ± 3	X axis ± 6.5 Z axis ± 3	X axis ± 6.5 Z axis ± 3	X axis ± 6.5 Z axis ± 5	X axis ± 6.5 Z axis ± 5	X axis ± 6.5 Z axis ± 5	X axis ± 6.5 Z axis ± 5
Lead of Actuator [mm/rotation]		0.5	0.5	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	0.01	0.01
Bearing type		Extended contact ball guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		29.4 (3.0kgf)	29.4 (3.0kgf)	88.3 (9.0kgf)	88.3 (9.0kgf)	147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Travel Accuracy	Straightness [μm]	5	5	2.5	2.5	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [$\text{N}\cdot\text{m}$]	1.0	1.0	3.9	3.9	6.9	6.9	6.9	6.9
	Roll [$\text{N}\cdot\text{m}$]	1.0	1.0	3.9	3.9	6.9	6.9	6.9	6.9
Moment Stiffness	Pitch [$^{\circ}/\text{N}\cdot\text{cm}$]	8.95	8.95	2.2	2.2	0.75	0.75	0.75	0.75
	Roll [$^{\circ}/\text{N}\cdot\text{cm}$]	8.75	8.75	2.15	2.15	0.75	0.75	0.75	0.75
Parallelism [μm]		110	110	110	110	110	110	110	110
Weight [kg]		0.17	0.17	0.45	0.45	1.5	1.5	1.65	1.65

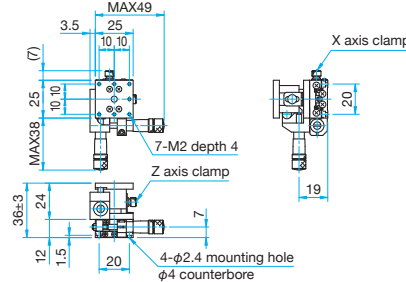


Outline Drawing

TSDS-254C Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws

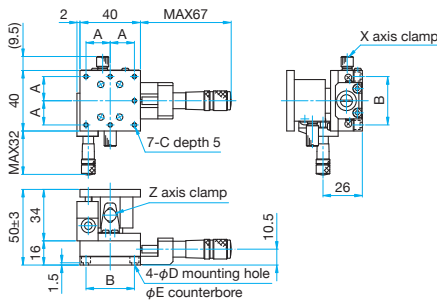


TSDS-254S Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws



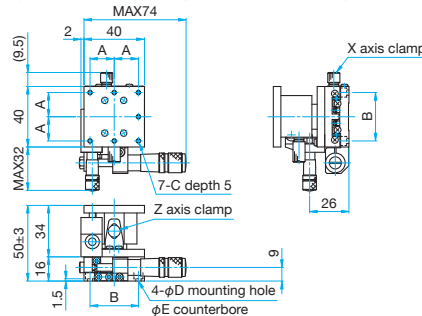
TSDS-404C/404CUU

Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



TSDS-404S/404SUU

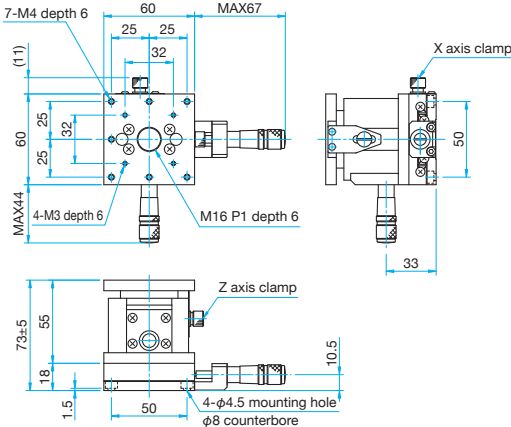
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



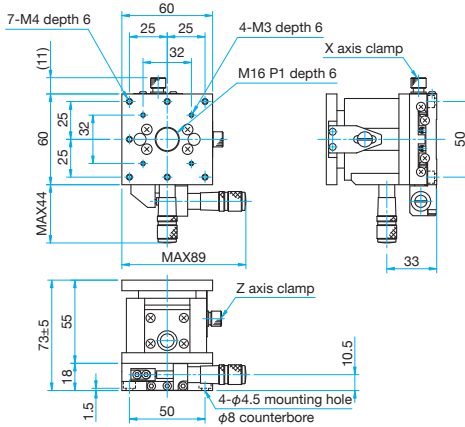
Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-404C	16	32	M3	3.5	6
TSDS-404CUU	15.875	31.75	6-32UNC	4	6.5

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-404S	16	32	M3	3.5	6
TSDS-404SUU	15.875	31.75	6-32UNC	4	6.5

TSDS-604C Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws

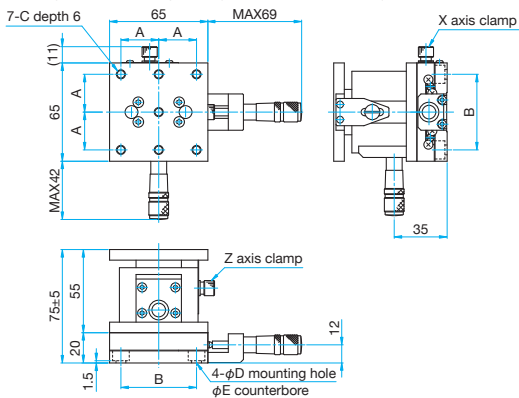


TSDS-604S Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws



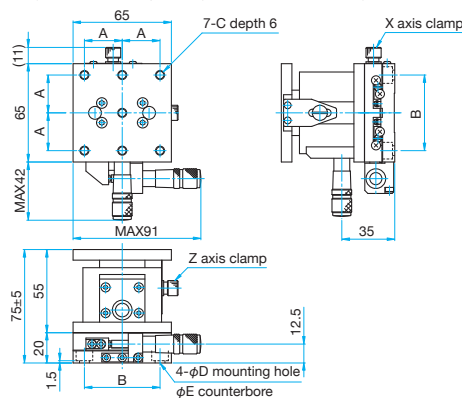
TSDS-654C-M6/654CUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



TSDS-654S-M6/654SUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-654C-M6	25	50	M6	6.5	11
TSDS-654CUU	25.4	50.8	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-654S-M6	25	50	M6	6.5	11
TSDS-654SUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

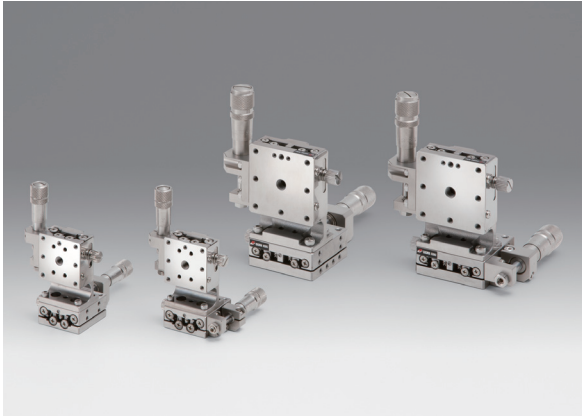
Others

XYZ axis Stainless Steel Extended Contact Slide Stages (Vertical) | TSDS-4L Stage size □25/□40/□60/□65mm

RoHS

XYZ axis Stainless Steel Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

- Made completely of stainless steel, offering excellent corrosion resistance.
- Both the stage and micrometer head use high vacuum grease (YVAC2).



Guide

- The TSDS series offers stages suitable for use in clean rooms or vacuum applications.
- [Reference](#) Vacuum measurement data E199
- Also ideal for use in airtight spaces that have to avoid outgassing.

Application Systems
Optics & Optical Coatings
Holders
Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

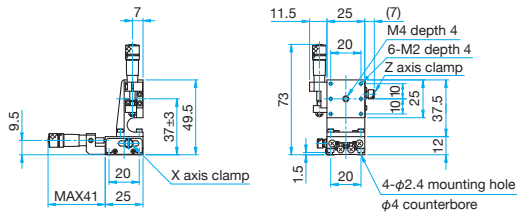
Specifications

Part Number	METRIC	TSDS-254CL	TSDS-254SL	TSDS-404CL	TSDS-404SL	TSDS-604CL	TSDS-604SL	TSDS-654CL-M6	TSDS-654SL-M6
	INCH	—	—	TSDS-404CLUU	TSDS-404SLUU	—	—	TSDS-654CLUU	TSDS-654SLUU
Table Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		XZ axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		X axis ±3 Z axis ±3	X axis ±3 Z axis ±3	X axis ±6.5 Z axis ±3	X axis ±6.5 Z axis ±3	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5	X axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	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	0.01	0.01
Bearing type		Extended contact ball guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		14.7 (1.5kgf)	14. (1.5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1	1	1	1	1
Max. Moment Capacity	Pitch [N·m]	2.2	2.2	3.9	3.9	8.0	8.0	8.0	8.0
	Roll [N·m]	2.1	2.1	3.9	3.9	8.0	8.0	8.0	8.0
Moment Stiffness	Pitch [°/N·cm]	5.1	5.1	0.96	0.96	0.45	0.45	0.45	0.45
Weight [kg]		0.17	0.17	0.5	0.5	1.3	1.3	1.45	1.45

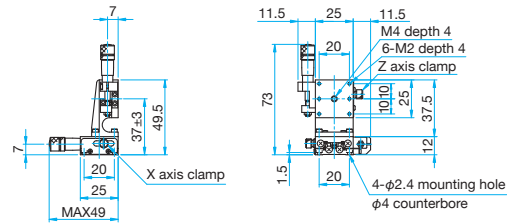


Outline Drawing

TSDS-254CL Hexagon socket head cap screw (stainless steel construction) M2x4...4 screws

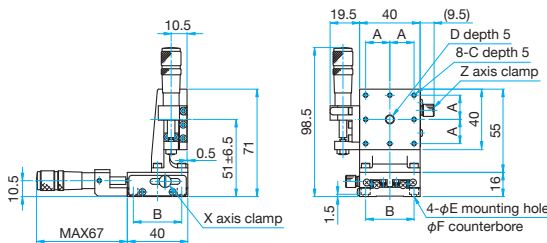


TSDS-254SL Hexagon socket head cap screw (stainless steel construction) M2x4...4 screws



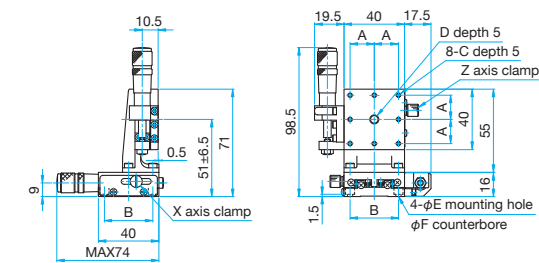
TSDS-404CL/404CLUU

Hexagon socket head cap screw (stainless steel construction) M3x6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNCx3/16...4 screws (UU)



TSDS-404SL/404SLUU

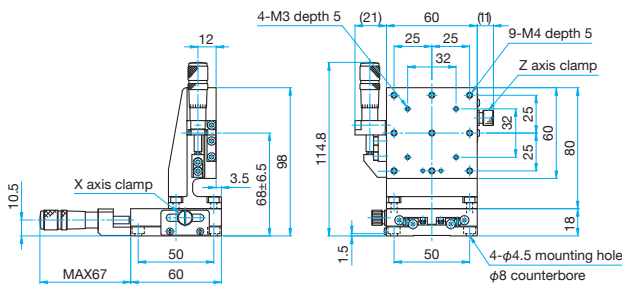
Hexagon socket head cap screw (stainless steel construction) M3x6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNCx3/16...4 screws (UU)



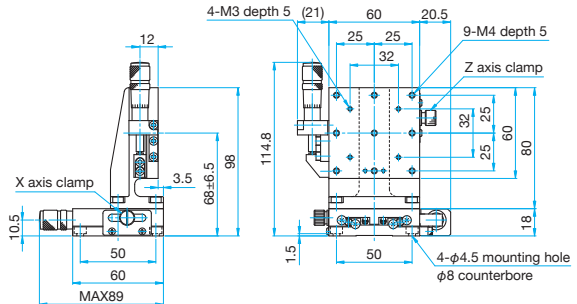
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-404CL	16	32	M3	M6 P1	3.5	6
TSDS-404CLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-404SL	16	32	M3	M6 P1	3.5	6
TSDS-404SLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSDS-604CL Hexagon socket head cap screw (stainless steel construction) M4x6...4 screws

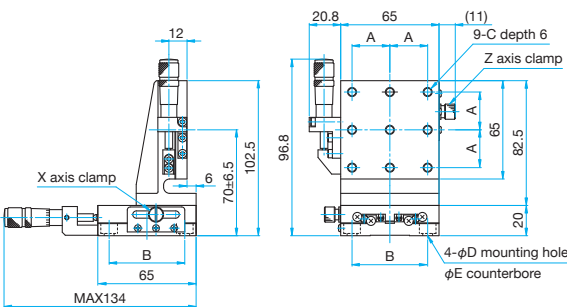


TSDS-604SL Hexagon socket head cap screw (stainless steel construction) M4x6...4 screws



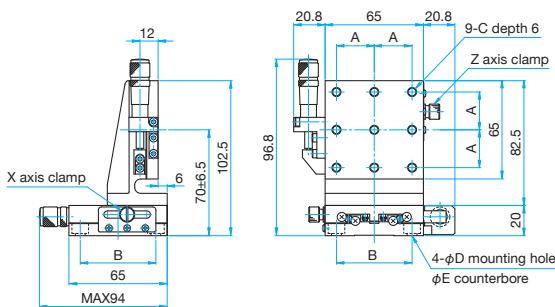
TSDS-654CL-M6/654CLUU

Hexagon socket head cap screw (stainless steel construction) M6x6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNCx1/4...4 screws (UU)



TSDS-654SL-M6/654SLUU

Hexagon socket head cap screw (stainless steel construction) M6x6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNCx1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-654CL-M6	25	50	M6	6.5	11
TSDS-654CLUU	25.4	50.8	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-654SL-M6	25	50	M6	6.5	11
TSDS-654SLUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

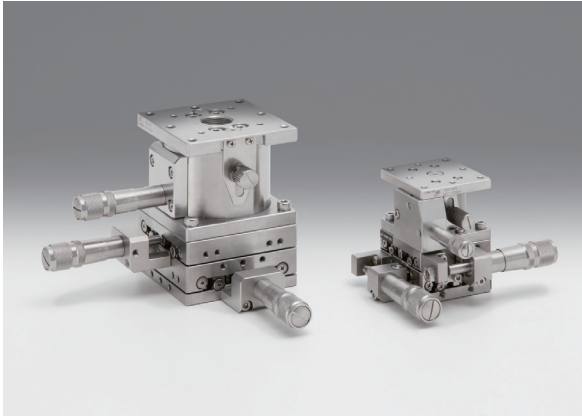
Others

XYZ axis Stainless Steel Extended Contact Slide Stages | TSDS-5 Stage size □25/□40/□60/□65mm

RoHS

XYZ axis Stainless Steel Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

- Made completely of stainless steel, offering excellent corrosion resistance.
- Both the stage and micrometer head use high vacuum grease (YVAC2).



Guide

- ▶ The TSDS series offers stages suitable for use in clean rooms or vacuum applications.
- ▶ **Reference** Vacuum measurement data E199
- ▶ Also ideal for use in airtight spaces that have to avoid outgassing.

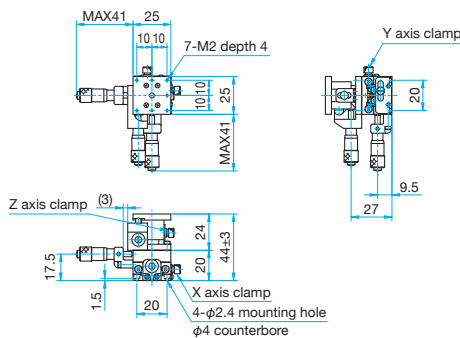
Attention

- ▶ The structure does not allow upside down installation since the spring inside the stage might not be able to withstand the load and may stretch.
- ▶ Since the structure uses the principle of leverage, the feed rate fluctuates against the scale depending on the travel (about ±0.02mm for micrometer head 0.5mm/rotation).

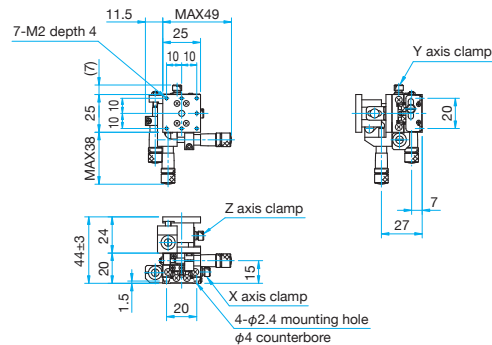


Outline Drawing

TSDS-255C Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws



TSDS-255S Hexagon socket head cap screw (stainless steel construction) M2×4...4 screws



Specifications

Part Number	METRIC	TSDS-255C	TSDS-255S	TSDS-405C	TSDS-405S	TSDS-605C	TSDS-605S	TSDS-655C-M6	TSDS-655S-M6
	INCH	—	—	TSDS-405CUU	TSDS-405SUU	—	—	TSDS-655CUU	TSDS-655SUU
Table Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		XYZ axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		XY axis ±3 Z axis ±3	XY axis ±3 Z axis ±3	XY axis ±6.5 Z axis ±3	XY axis ±6.5 Z axis ±3	XY axis ±6.5 Z axis ±5	XY axis ±6.5 Z axis ±5	XY axis ±6.5 Z axis ±5	XY axis ±6.5 Z axis ±5
Lead of Actuator [mm/rotation]		0.5	0.5	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	0.01	0.01
Bearing type		Extended contact ball guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		29.4 (3.0kgf)	29.4 (3.0kgf)	88.3 (9.0kgf)	88.3 (9.0kgf)	147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)	147 (15.0kgf)
Travel Accuracy	Straightness [μm]	5	5	2.5	2.5	2.5	2.5	2.5	2.5
Max. Moment Capacity	Pitch [N·m]	1.0	1.0	3.9	3.9	6.9	6.9	6.9	6.9
	Roll [N·m]	1.0	1.0	3.9	3.9	6.9	6.9	6.9	6.9
Moment Stiffness	Pitch [°/N·cm]	10.55	10.55	2.5	2.5	1.0	1.0	1.0	1.0
	Roll [°/N·cm]	10.55	10.55	2.5	2.5	1.0	1.0	1.0	1.0
Parallelism [μm]		130	130	130	130	130	130	130	130
Weight [kg]		0.2	0.2	0.55	0.55	1.9	1.9	2.2	2.2

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

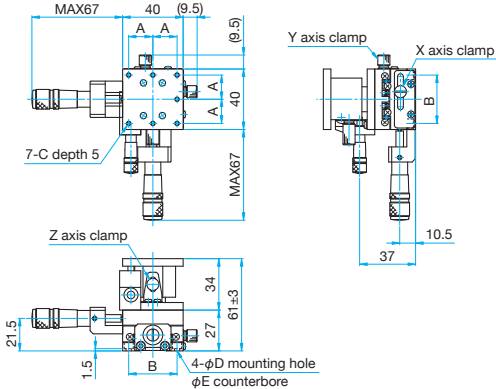
Others



Outline Drawing

TSDS-405C/405CUU

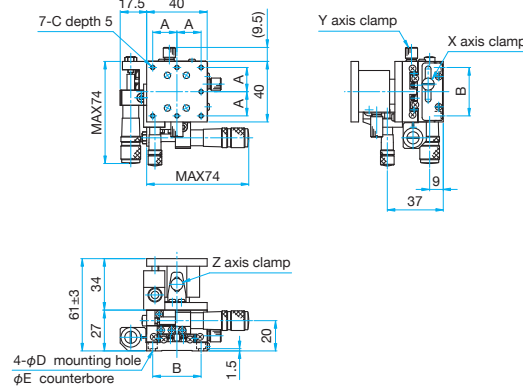
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-405C	16	32	M3	3.5	6
TSDS-405CUU	15.875	31.75	6-32UNC	4	6.5

TSDS-405S/405SUU

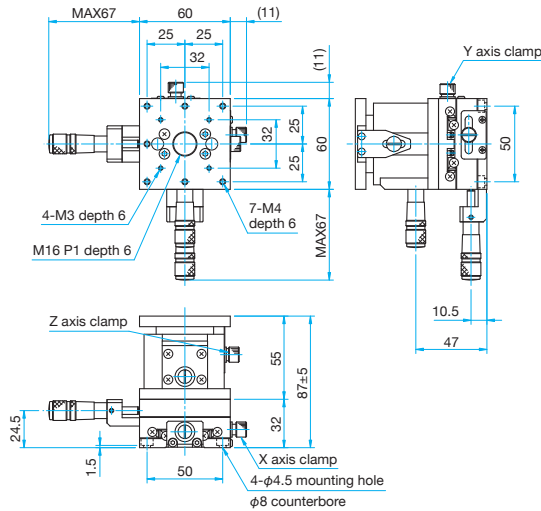
Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws, Spring washers
Hexagon socket head cap screw (stainless steel construction) 6-32UNC×3/16...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-405S	16	32	M3	3.5	6
TSDS-405SUU	15.875	31.75	6-32UNC	4	6.5

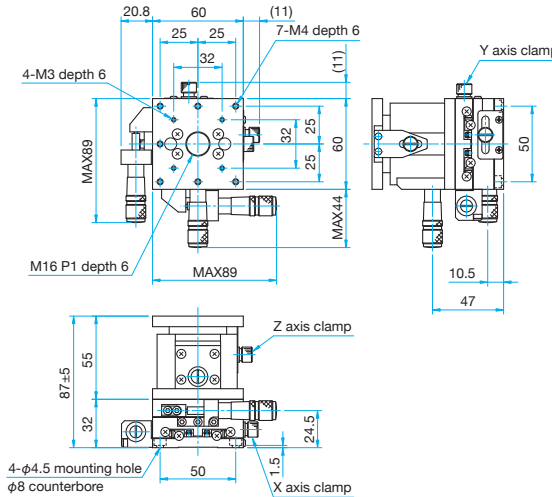
TSDS-605C

Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws



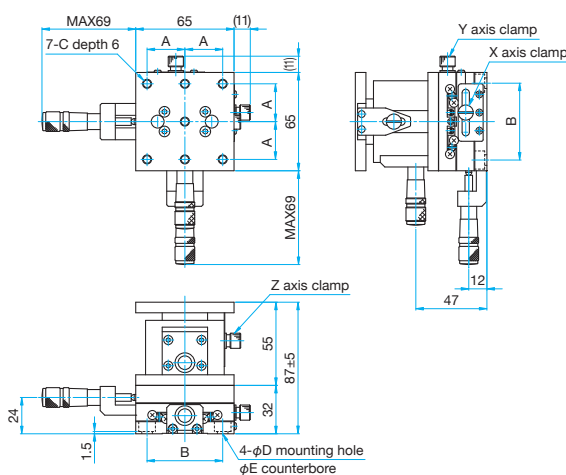
TSDS-605S

Hexagon socket head cap screw (stainless steel construction) M4×6...4 screws



TSDS-655C-M6/655CUU

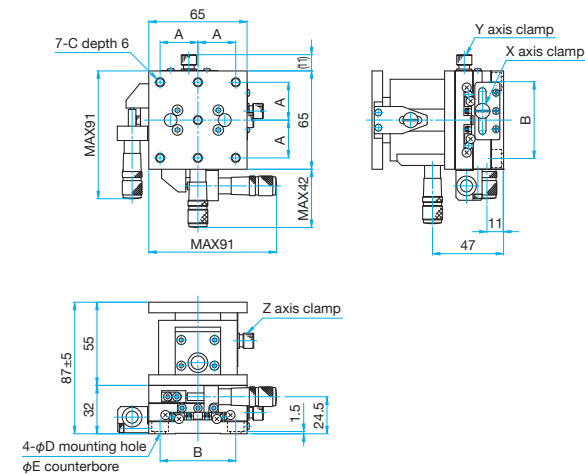
Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-655C-M6	25	50	M6	6.5	11
TSDS-655CUU	25.4	50.8	1/4-20UNC	7	12

TSDS-655S-M6/655SUU

Hexagon socket head cap screw (stainless steel construction) M6×6...4 screws (M6)
Hexagon socket head cap screw (stainless steel construction) 1/4-20UNC×1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-655S-M6	25	50	M6	6.5	11
TSDS-655SUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

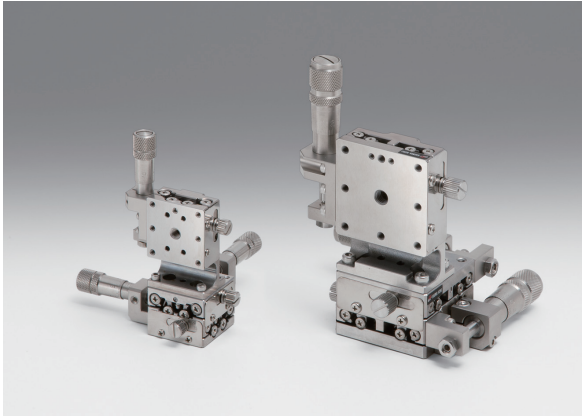
Others

XYZ axis Stainless Steel Extended Contact Slide Stages (Vertical) | TSDS-5L Stage size □25/□40/□60/□65mm

RoHS

XYZ axis Stainless Steel Stages suitable for hard vacuum and clean room applications have the same design and performance as TSD stages.

- Made completely of stainless steel, offering excellent corrosion resistance.
- Both the stage and micrometer head use high vacuum grease (YVAC2).



Guide

- The TSDS series offers stages suitable for use in clean rooms or vacuum applications.
- [Reference](#) Vacuum measurement data E199
- Also ideal for use in airtight spaces that have to avoid outgassing.

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

□15mm

□25mm

□40mm

□60mm

□65mm

□80mm

□100mm

□120mm

Others

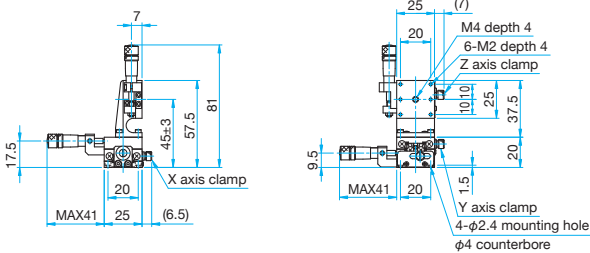
Specifications

Part Number	METRIC	TSDS-255CL	TSDS-255SL	TSDS-405CL	TSDS-405SL	TSDS-605CL	TSDS-605SL	TSDS-655CL-M6	TSDS-655SL-M6
	INCH	—	—	TSDS-405CLUU	TSDS-405SLUU	—	—	TSDS-655CLUU	TSDS-655SLUU
Table Size [mm]		25×25	25×25	40×40	40×40	60×60	60×60	65×65	65×65
Axes of Travel		XYZ axis							
Micrometer Position		Center	Side	Center	Side	Center	Side	Center	Side
Travel [mm]		XY axis ±3 Z axis ±3	XY axis ±3 Z axis ±3	XY axis ±6.5 Z axis ±3	XY axis ±6.5 Z axis ±3	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5	XY axis ±6.5 Z axis ±6.5
Lead of Actuator [mm/rotation]		0.5	0.5	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	0.01	0.01
Bearing type		Extended contact ball guide							
Primary Material		Stainless steel							
Finish		None							
Load Capacity [N]		14.7 (1.5kgf)	14.7 (1.5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)	49 (5kgf)
Travel Accuracy	Straightness [μm]	1	1	1	1	1	1	1	1
	Pitch [N·m]	2.2	2.2	3.9	3.9	8.0	8.0	8.0	8.0
Max. Moment Capacity	Roll [N·m]	2.1	2.1	3.9	3.9	8.0	8.0	8.0	8.0
	Pitch [°/N·cm]	6.7	6.7	1.26	1.26	0.58	0.58	0.58	0.58
Moment Stiffness		6.7	6.7	1.26	1.26	0.58	0.58	0.58	0.58
Weight [kg]		0.2	0.2	0.6	0.6	1.7	1.7	2.0	2.0

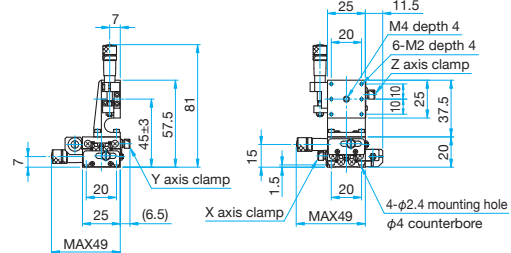


Outline Drawing

TSDS-255CL Hexagon socket head cap screw (stainless steel construction) M2x4...4 screws

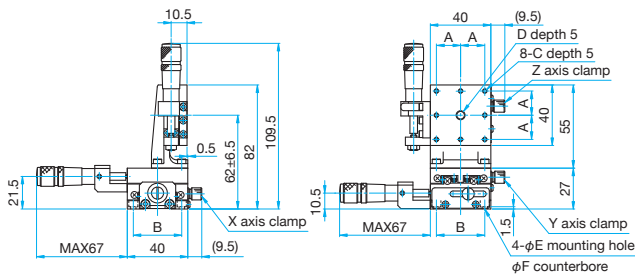


TSDS-255SL Hexagon socket head cap screw (stainless steel construction) M2x4...4 screws



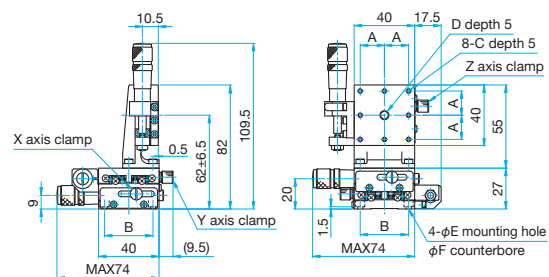
TSDS-405CL/405CLUU

Hexagon socket head cap screw (stainless steel construction) M3x6...4 screws, Spring washers
 Hexagon socket head cap screw (stainless steel construction) 6-32UNCx3/16...4 screws (UU)



TSDS-405SL/405SLUU

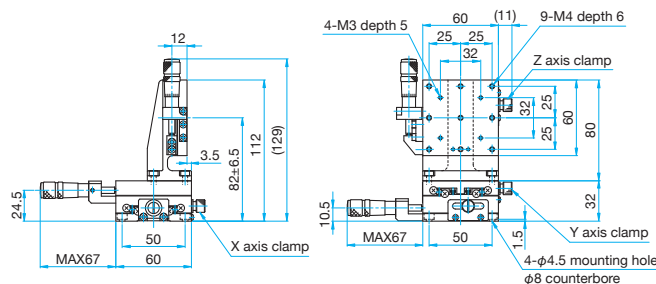
Hexagon socket head cap screw (stainless steel construction) M3x6...4 screws, Spring washers
 Hexagon socket head cap screw (stainless steel construction) 6-32UNCx3/16...4 screws (UU)



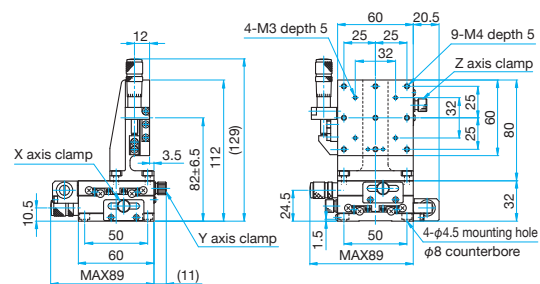
Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-405CL	16	32	M3	M6 P1	3.5	6
TSDS-405CLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

Part Number	A (mm)	B (mm)	C	D	E (mm)	F (mm)
TSDS-405SL	16	32	M3	M6 P1	3.5	6
TSDS-405SLUU	15.875	31.75	6-32UNC	1/4-20UNC	4	6.5

TSDS-605CL Hexagon socket head cap screw (stainless steel construction) M4x6...4 screws

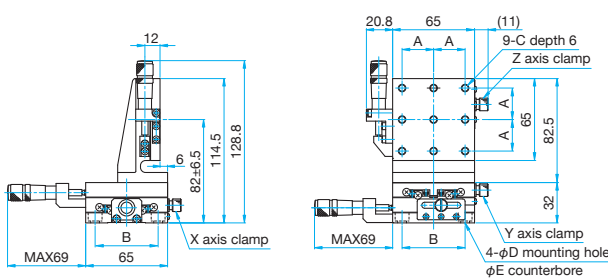


TSDS-605SL Hexagon socket head cap screw (stainless steel construction) M4x6...4 screws



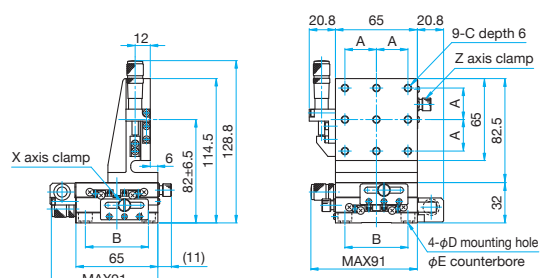
TSDS-655CL-M6/655CLUU

Hexagon socket head cap screw (stainless steel construction) M6x6...4 screws (M6)
 Hexagon socket head cap screw (stainless steel construction) 1/4-20UNCx1/4...4 screws (UU)



TSDS-655SL-M6/655SLUU

Hexagon socket head cap screw (stainless steel construction) M6x6...4 screws (M6)
 Hexagon socket head cap screw (stainless steel construction) 1/4-20UNCx1/4...4 screws (UU)



Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-655CL-M6	25	50	M6	6.5	11
TSDS-655CLUU	25.4	50.8	1/4-20UNC	7	12

Part Number	A (mm)	B (mm)	C	D (mm)	E (mm)
TSDS-655SL-M6	25	50	M6	6.5	11
TSDS-655SLUU	25.4	50.8	1/4-20UNC	7	12

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

□ 15mm

□ 25mm

□ 40mm

□ 60mm

□ 65mm

□ 80mm

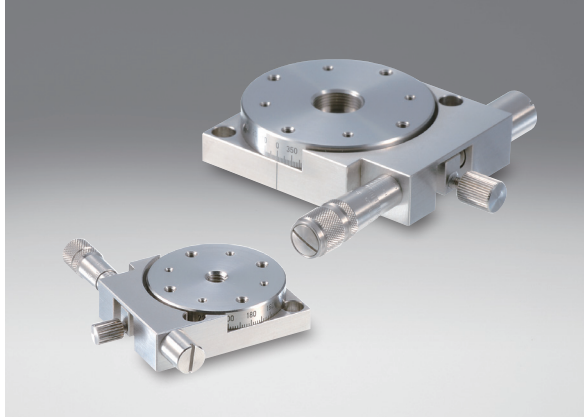
□ 100mm

□ 120mm

Others

θ axis (rotation) coarse/fine adjustment stages that use a fitting method, offering coarse rotation adjustment of 360° and fine adjustment (micrometer head).

Directly rotate the stage top plate for coarse adjustment, and clamp the coarse adjustment part and use micrometer head ($\pm 5^\circ$) for fine adjustment.

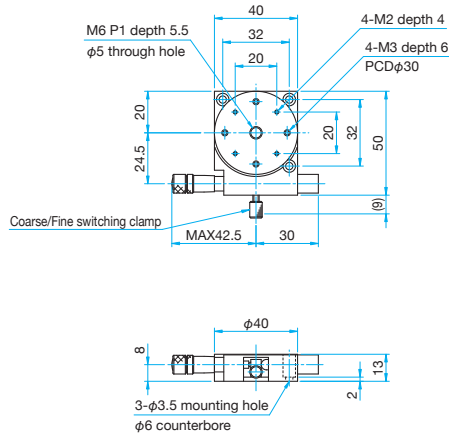


- Made completely of stainless steel, offering excellent corrosion resistance. Both the stage and micrometer head use high vacuum grease (YVAC2).

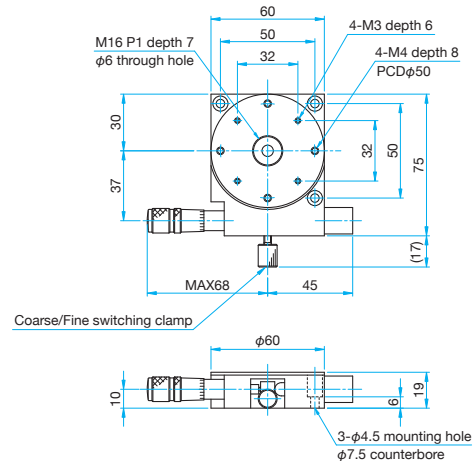


Outline Drawing

KSPS-406M Hexagon socket head cap screw (stainless steel construction)
M3x6...3 screws



KSPS-606M Hexagon socket head cap screw (stainless steel construction)
M4x10...3 screws



Specifications

Part Number	METRIC	KSPS-406M	KSPS-606M
Table Size [mm]		φ40.0	φ60.0
Angle of Rotation [°]		Coars: 360° Fine: $\pm 5^\circ$	Coars: 360° Fine: $\pm 5^\circ$
Micrometer Position		Center	Side
Scale Readable Resolution		2°	1°
Micrometer Readable Resolution		$\approx 1'24.2''$	$\approx 55.8''$
Bearing type		Lapping method	
Primary Material		Stainless steel	
Finish		None	
Load Capacity [N]		49 (5.0kgf)	68.6 (7.0kgf)
Max. Moment Capacity [N·m]		0.3	0.75
Moment Stiffness ["/N·m]		1.5	1
Parallelism [μm]		30	50
Eccentricity [μm]		20	20
Wobble [μm]		20	20
Weight [kg]		0.3	0.6

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

Motorized Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

 θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

 15mm 25mm 40mm 60mm 65mm 80mm 100mm 120mm

Others

α axis Stainless Steel Goniometers $\alpha\beta$ axis Stainless Steel Goniometers

GOHS-40A Stage size 40mm

GOHS-40B Stage size 40mm



Catalog Code W7099



Catalog Code W7107

Goniometers fitted with dovetail groove and worm gear, suitable for orientation adjustment (angle adjustment or correction).

Best suited for use in vacuum because high vacuum grease (YVAC2) is used.



Guide

▶ The TSDS series offers stages suitable for use in clean rooms or vacuum applications.

Reference ▶ Vacuum measurement data E199

Also ideal for use in airtight spaces that have to avoid outgassing.

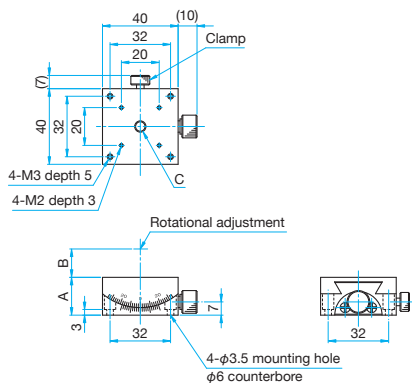


Outline Drawing

GOHS-40A15/35

Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws

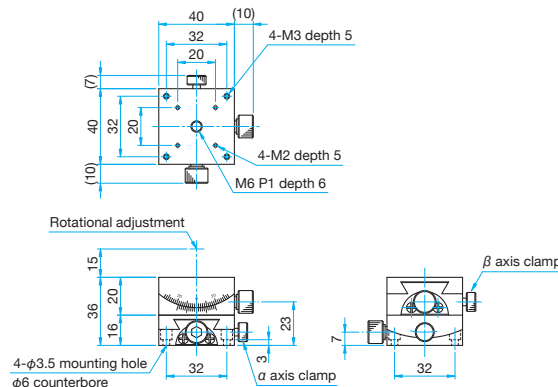
2.5mm



GOHS-40B15

Hexagon socket head cap screw (stainless steel construction) M3×6...4 screws

2.5mm



Part Number	A (mm)	B (mm)	C
GOHS-40A15	20	15	M6 P1 depth 6
GOHS-40A35	16	35	M4 depth 4

Specifications

Part Number	METRIC	GOHS-40A15	GOHS-40A35	GOHS-40B15
Table Size [mm]		40×40	40×40	40×40
Axes of Travel		α axis		$\alpha\beta$ axis
Rotation Center Height [mm]		15±0.1	35±0.1	15±0.1
Angle Range [°]		±20	±20	±20
Vernier Readable Resolution		12'	12'	12'
Travel per Knob Rotation [°]	(Upper) β axis (Lower) α axis	— about 2.83°	— about 1.74°	about 2.83° about 1.74°
Rotation Center Displacement [mm]		φ2mm or less	φ2mm or less	φ2mm or less
Bearing type		Dovetail slide method		
Primary Material		Stainless steel		
Finish		None		
Load Capacity [N]		68.7 (7.0kgf)	68.7 (7.0kgf)	68.7 (7.0kgf)
Max. Moment Capacity	Pitch [N·m]	0.9	0.9	0.9
	Roll [N·m]	1.2	1.2	0.9
Moment Stiffness	Roll [°/N·m]	0.51	0.51	—
Parallelism [μm]		50	50	100
Weight [kg]		0.25	0.2	0.45

Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Gonio

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Ohters

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others



Application Systems

Optics & Optical Coatings

Holders

Bases

Manual Stages

Actuators

MotORIZED Stages

Light Sources

Index

Guide

X axis Stages

XY axis Stages

Z axis Stages

XZ axis Stages

XYZ axis Stages

θ axis Stages

Goniometer

Inclination

Vacuum

Ball Guide

Crossed Roller

Dovetail

Lapping

V Groove Screw

Others

15mm

25mm

40mm

60mm

65mm

80mm

100mm

120mm

Others