CHAPTER 5

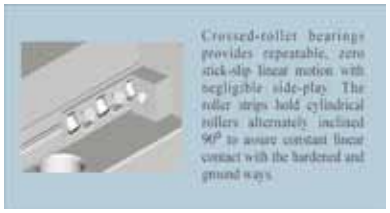
OPTO-MECHANICS

CHAPTER 5 OPTO-MECHANICS

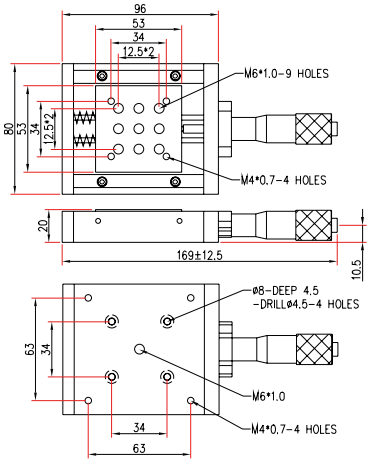
PRECISION LINEAR STAGES

Onset offers a complete line of linear translation stage to build your positioning system. For precision positioning, the crossed-roller bearing design provides high load capacity, high resolution, and accuracy motion with minimum backlash and sideplay.

- Linear bearing with hardened roller cages in V-shaped guide.
- High load capacity.
- High resolution and accuracy.

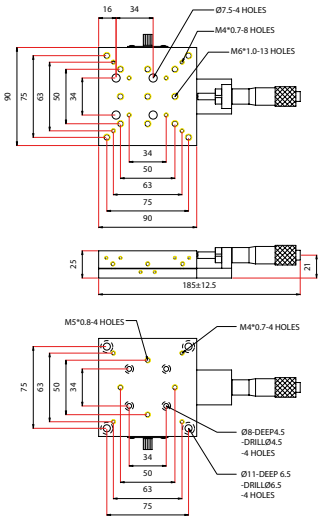


CT01A



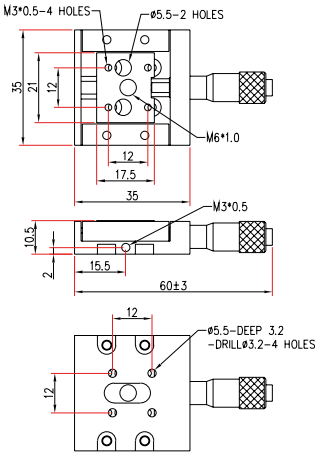
- Linear bearing with hardened roller cages in V-shaped guide.
- High resolution and accuracy.
- Thumbscrew lock design.

CT03A

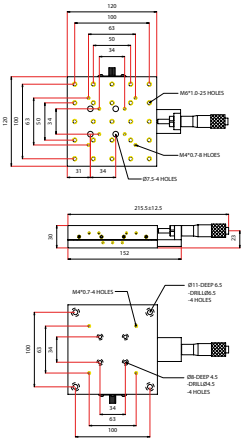


- Miniature platform in low profile.
- Hardened linear roller bearing guided by steel rods.

CT01SA

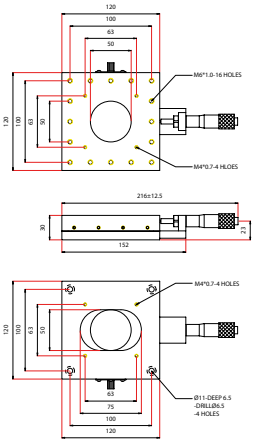


- Linear bearing with hardened roller cages in V-shaped guide provides smoothand accurate motion.
- Large platform and high load capacity.
- Thumbscrew lock design.



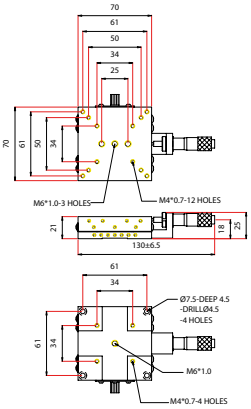
CT05A

- Linear bearing with hardened roller cages in V-shaped guide.
- Large platform and high load capacity.
- Thumbscrew lock design.
- φ50-mm apertured design.



CT05AC

- Large platform in low profile.
- Optional micrometer :25mm travel range.



CT17A

Model	CT01A	CT03A	CT05A	CT05AC	CT17A	CT01SA
Travel Range	25 mm				13mm(25mm)	6mm
Resolution	0.01 mm, 0.001 mm option				0.01 mm	
Deviation	0.01 mm				0.01 mm	
Load Capacity	5.0 kg	10 kg	30 kg	30 kg	10kg	1kg
Platform Size	53X53 mm^2	90X90 mm^2	120X120 mm^2	120X120 mm^2	70x70 mm^2	21x17 mm^2
Weight	0.6 kg	0.7 kg	1.2 kg	1.1 kg	0.4 kg	0.05 kg

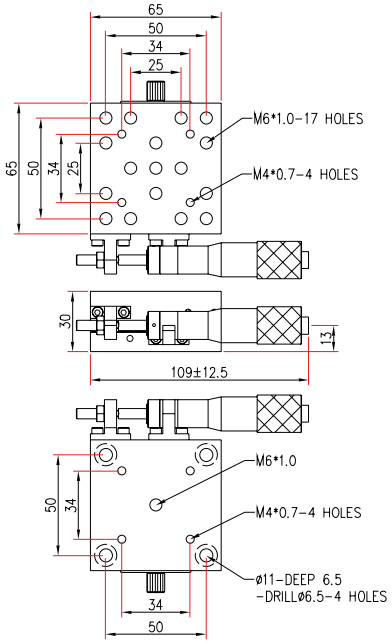
CHAPTER 5 OPTO-MECHANICS

PRECISION SIDE-DRIVEN LINEAR STAGES

With a smaller footprint, side-driven stage can save more space than a center-driven one. Onset provides a complete line of side-driven linear stages with various platform sizes to custom your positioning systems.

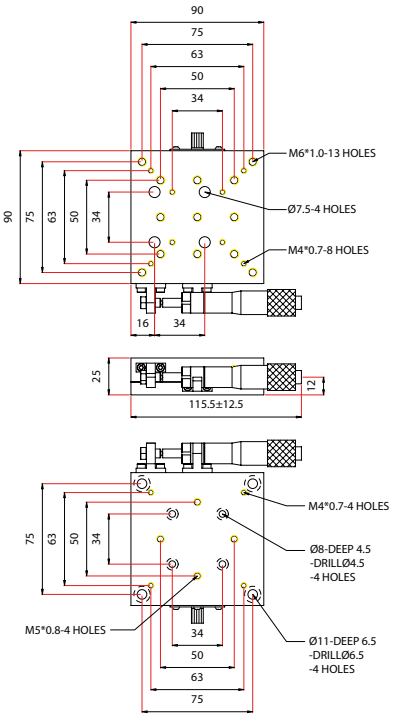
- Linear bearing with hardened roller cages in V-shaped guide.
- High load capacity.
- High resolution and accuracy.
- Thumbscrew lock design.

CT02A



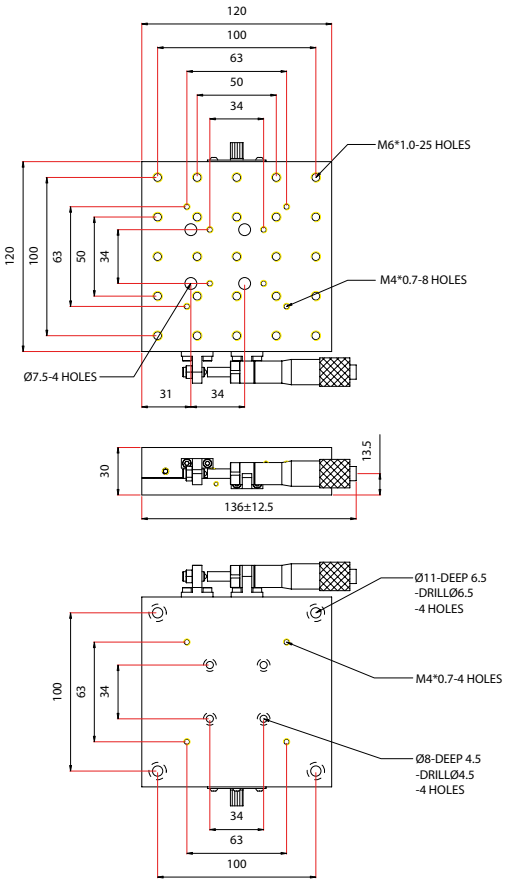
- Linear bearing with hardened roller cages in V-shaped guide.
- High resolution and accuracy.
- Thumbscrew lock design.

CT04A



- Linear bearing with hardened roller cages in V-shaped guide provides smooth and accurate motion.
- Large platform and high load capacity.
- Thumbscrew lock design.

CT06A

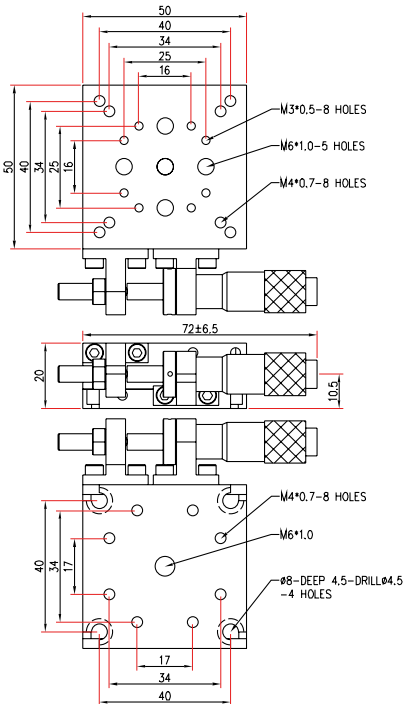


Model	CT02A	CT04A	CT06A
Travel Range		25 mm	
Resolution		0.01 mm, 0.001 mm option	
Deviation		0.01 mm	
Load Capacity	5.0 kg	10 kg	30 kg
Platform Size	65X65 mm^2	90X90 mm^2	120X120 mm^2
Weight	0.5kg	0.7 kg	1.2 kg

CHAPTER 5 OPTO-MECHANICS

PRECISION SIDE-DRIVEN LINEAR STAGES

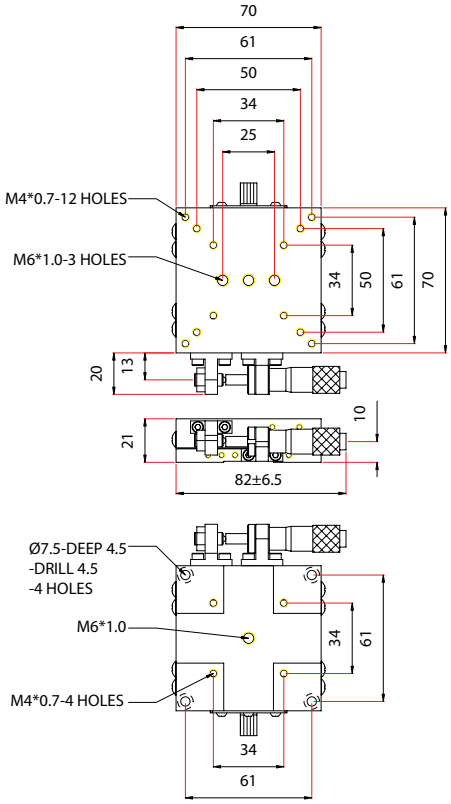
CT16A



Model	CT16A	CT18A
Travel Range	13 mm	13mm
Resolution	0.01mm	0.01mm
Deviation	0.01mm	0.01mm
Load Capacity	2kg	10kg
Platform Size	50X50 mm^2	70X70 mm^2
Weight	0.2kg	0.4kg

- Optional micrometer :25mm travel range.

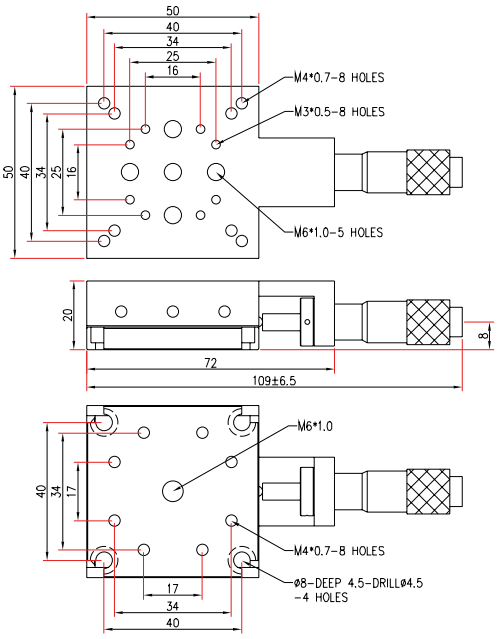
CT18A



PRECISION ACTUATOR-LOADED LINEAR STAGE

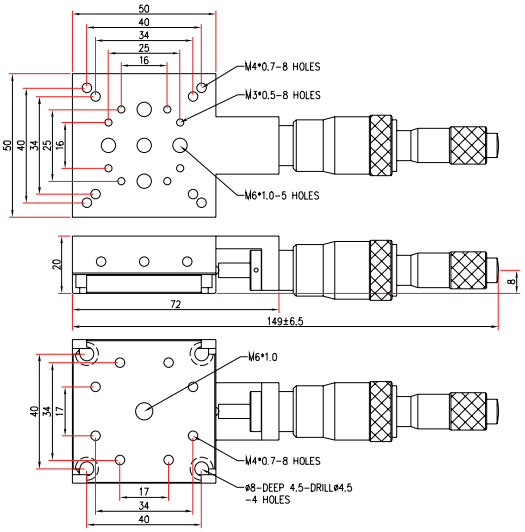
CT15A ,CT15AD Linear Stages feature actuator-loaded design to provide high loading capacity, especially on the vertical movement applications. The CT15AD stage has a differential micrometer with higher resolution than 0.5μm.

CT15A



Model	CT15A
Travel Range	13 mm
Resolution	0.01 mm
Deviation	0.01 mm
Load Capacity	2kg
Platform Size	50X50 mm^2
Weight	0.2kg

CT15AD



Model	CT15AD
Travel Range	13 mm
Resolution	0.5μm
Deviation	0.01 mm
Load Capacity	2kg
Platform Size	50X50 mm^2
Weight	0.2kg

CHAPTER 5 OPTO-MECHANICS

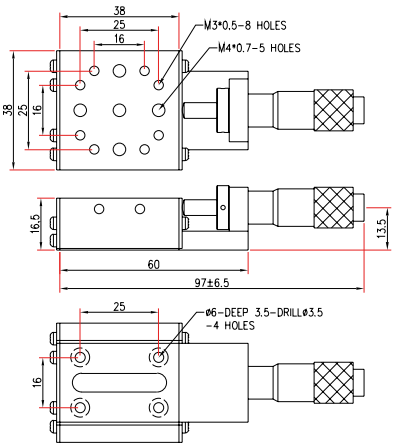
PRECISION SIDE-DRIVEN LINEAR STAGES

CT10A

- Linear roller bearing design with hardened and ground steel rod provides smooth and high accuracy motion.
- Miniature design is ideal for applications within a limited space.

Model	CT10A
Travel Range	13 mm
Resolution	0.01 mm
Deviation	0.01 mm
Load Capacity	2.0 kg
Platform Size	38X38 mm^2
Weight	0.1kg

CT10A

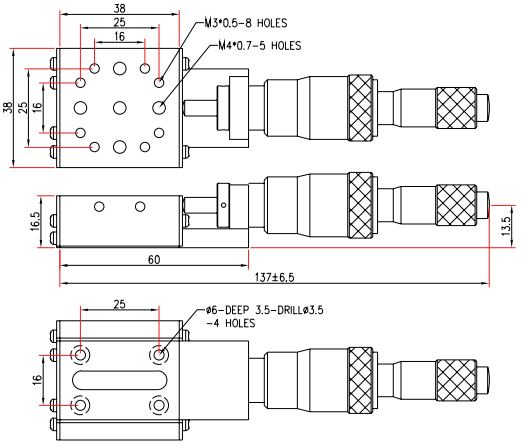


CT10AD

Equipped with a Differential Micrometer features a very high resolution of 0.5 μm

Model	CT10AD
Travel Range	13mm
Resolution	0.5 μm
Deviation	0.01 mm
Load Capacity	2.0 kg
Platform Size	38X38 mm^2
Weight	0.1kg

CT10AD

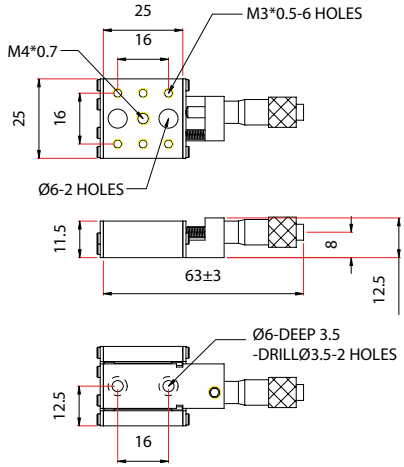


CT19A

- Smallest footprint in low profile.
- Hardened linear roller bearing,guided by steel rods.

Model	CT19A
Travel Range	6 mm
Resolution	0.01 mm
Deviation	0.01 mm
Load Capacity	1.0 kg
Platform Size	25X25 mm^2
Weight	0.03kg

CT19A

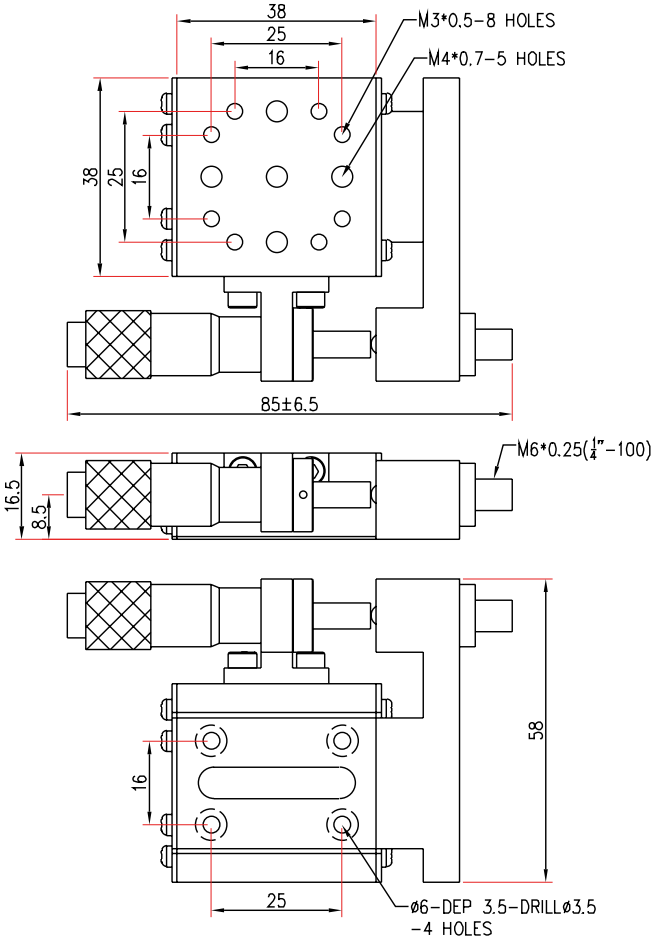


PRECISION SIDE-DRIVEN MINIATURE LINEAR STAGE

CT11A

- Travel range extended with a precision-machined screw
- Small footprint

CT11A



Model	CT11A
Travel Range	20 mm (With M6x0.25 mm Screw)
Resolution	0.01mm
Deviation	0.01 mm
Load Capacity	2.0 kg
Platform Size	38X38 mm^2
Weight	0.1kg

CHAPTER 5 OPTO-MECHANICS

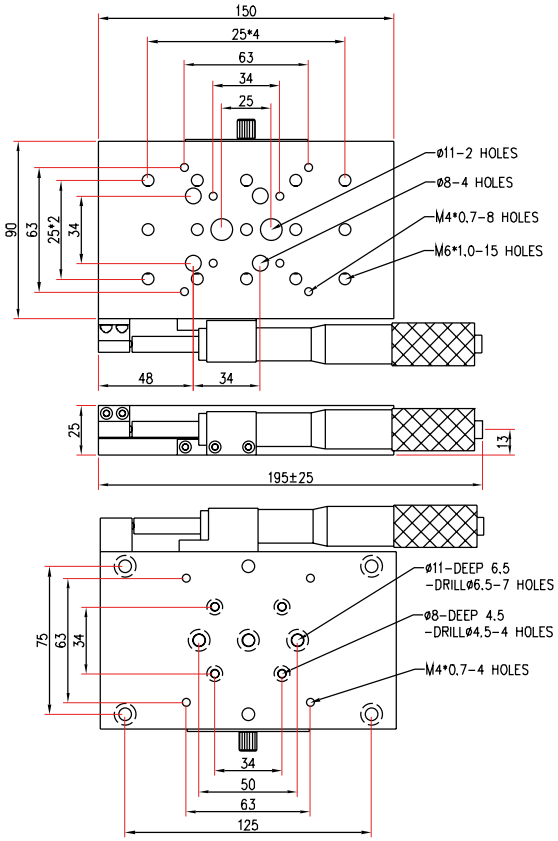
PRECISION LONG TRAVEL RANGE LINEAR STAGE

CT12A

- Linear bearing with hardened roller cages in V-shaped guide.
- Large platform and high load capacity.
- Thumbscrew lock design.

Model	CT12A
Travel Range	50 mm
Resolution	0.01 mm
Deviation	0.01 mm
Load Capacity	30 kg
Platform Size	150X90 mm^2
Weight	1.2kg

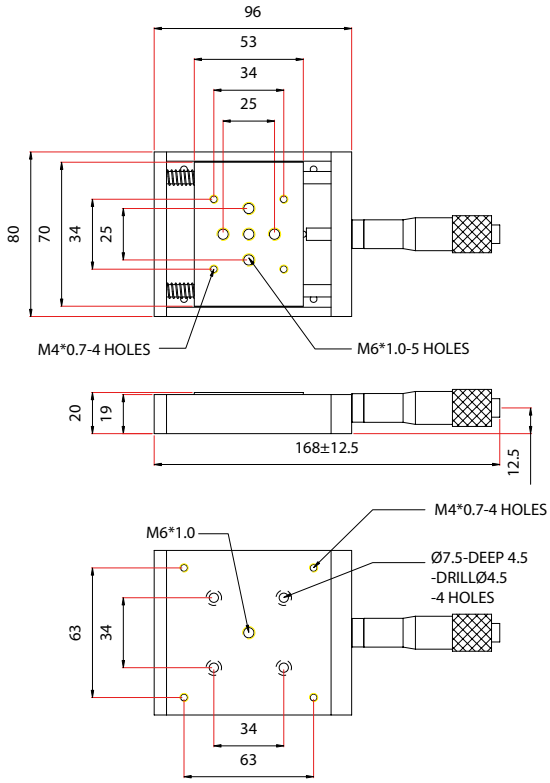
CT12A



LINEAR STAGES

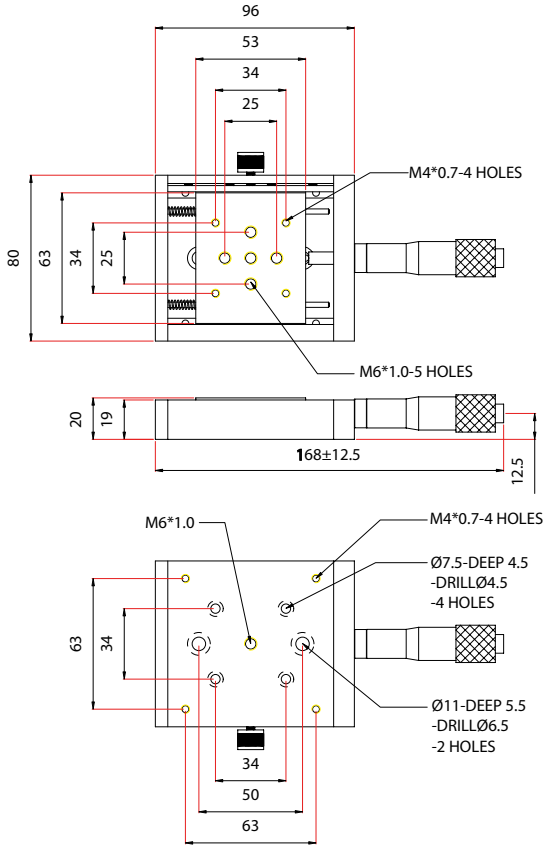
- Ball Bearing Linear Stage
- Precision ball bearing design provides high stability and resolution

CT07A



- Dovetail Linear Stage
- Dovetail slide design.
- A cost-effective alternative
- Thumbscrew lock design.

CT08A



Model	CT07A	CT08A
Travel Range	25 mm	
Resolution	0.01 mm	
Deviation	0.01 mm	0.1 mm
Load Capacity	2.0 kg	2.0 kg
Platform Size	53X70 mm^2	53X63 mm^2
Weight	0.4 kg	0.4 kg

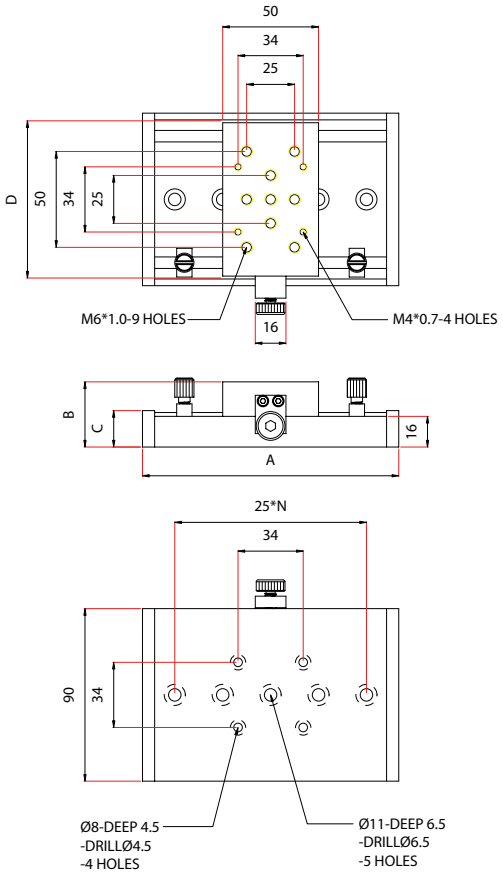
CHAPTER 5 OPTO-MECHANICS

TRANSLATION SLIDE

CT13-series stage feature linear bearings which hold the hardesed guide ways to provide a quick and precision linear motion. The CT13T-110 has a longer travel range, with a thumbscrew lock to be a limiter in motion.

CT13T

CT13T-110

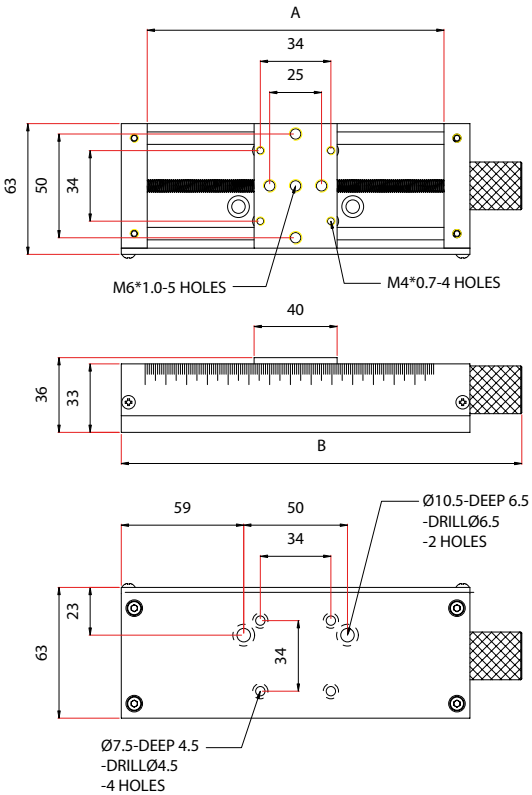


Model	CT13T	CT13T-110
Travel Range	70 mm	110 mm
Deviation	0.01 mm	
Load Capacity	5.0 kg	
Platform Size	50x80 mm^2	
Weight	0.7kg	0.9kg

Model	N	A	B	C	D
CT13T	4	140	34	19	82
CT13T-110	6	196	36	28	90

THREADED-SPINDLE LINEAR STAGES

CT09A series stages feature the ball bearing stracture driven with a threaded rod to provide high stability and long travel range. The CT09A-L has longer travel range of 200mm.



Model	CT09A	CT09A-L
A	143	243
B	193	293

CT09A

CT09A-L

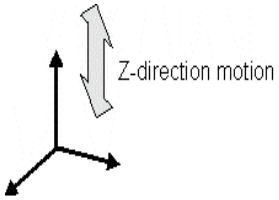
Model	CT09A	CT09A -L
Travel Range	100 mm	200 mm
Resolution	1 mm	
Deviation	1 mm	
Load Capacity	5.0 kg	
Platform Size	40X60 mm^2	
Weight	0.6kg	0.9kg

CHAPTER 5 OPTO-MECHANICS

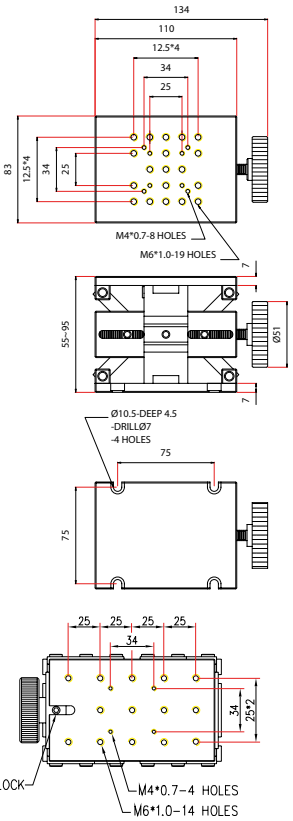
LAB JACKS

Onset provides precision driven mechanisms to function lab jacks: Dual-pantograph for CJ01 and CJ03.

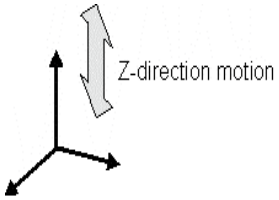
Pantograph design provides smooth and high-accurate vertical motion.



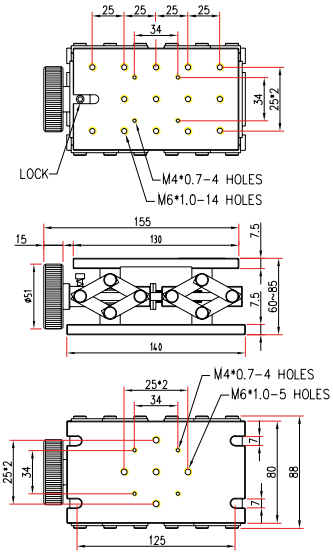
CJ01



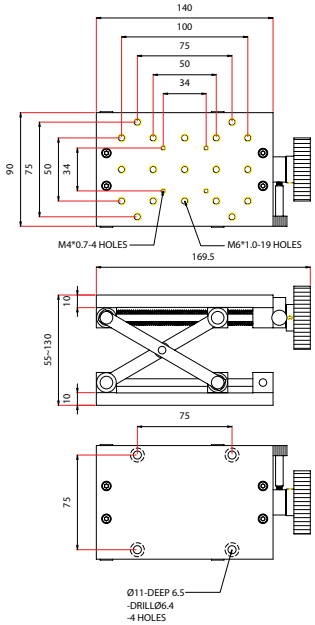
Pantograph design provides smooth and high accurate motion.



CJ03



CJ05

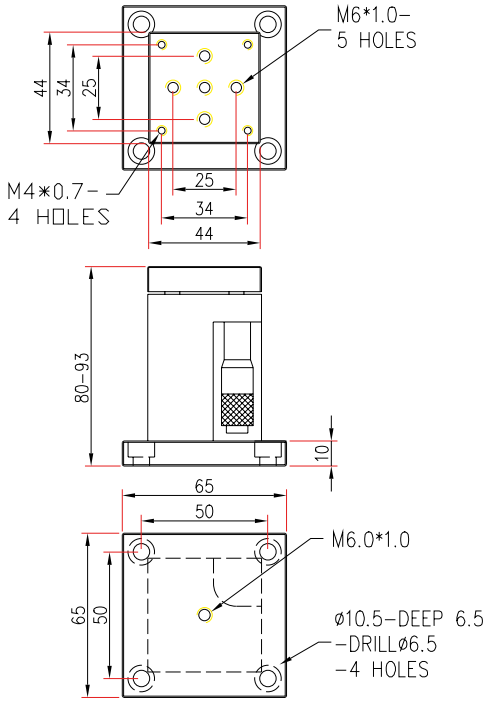


Model	CJ01	CJ03	CJ05
Travel Range	40 mm	25 mm	75 mm
Deviation	0.1mm	0.1mm	0.1mm
Load Capacity	20 kg	20 kg	10 kg
Platform Size	110X83mm^2	130X80 mm^2	140X90 mm^2
Weight	1.1 kg	1.1 kg	0.7 kg

PRECISION VERTICAL LINEAR STAGES

- Long-tube bearing with roller cages provides high stability and resolution.

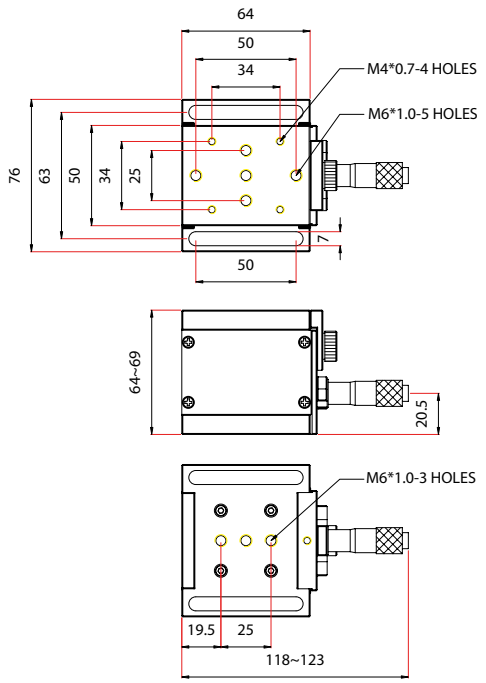
CV01A



Model	CV01A	CV02A
Travel Range	13 mm	5 mm
Resloution	0.01 mm	0.01 mm, 0.5 μm (option)
Deviation	0.1 mm	0.05 mm
Load Capacity	2 Kg	10 Kg
Platform Size	44X44 mm^2	50X64 mm^2
Weight	0.5 Kg	0.7 Kg

CV02A features a 30° inclined plane structure composed of two precision-machined opposing wedge blocks to provide stable and accurate vertical motion with high loading capacity.

CV02A



CHAPTER 5 OPTO-MECHANICS

GONIOMETERS

Goniometer are used to rotate an object or sample about point in space. The center of rotation is located over the center of the table and is not obscured by stage itself. In this way it is possible to have a clear and unimpeded access to the point of roataion.

Goniometer are offered with three different sizes,25,40 and 60mm square. They are also offered with three different center heights of rotation and can be stacked so that two orthogonal axes rotate about the same coincident point.

These goniometer are square in shape making them compact and convenient to use either alone or in conjunction with other stages and are ideally suited to OEM applications. A vernier scale is marked on the edge of the goniometers to indicate the angle from horizontal. The drive may be controlled by hand or by means of a hex screwdriver wrench. Every model is lockable.

GOHS-40 series are stainless steel goniometer with silicone vacuum lubricant for clean room or vacuum applications.

Stage Dimensions [mm]	Travel [°]	Lead of actuator [°/rotation]	Rotation center height [mm]	Rotation center displacement [mm]	Parallelism [mm]	Readable resolution [min]	Minimum resolution [min]	Max. load capacity Fz' [N]	Max. Moment Capacity Fx' [N · m]	Max. Moment Capacity Fy'[N · m]	Stiffness Fx" [arcsec/ N · cm]	Weight [kg]	Part Number
15 x 15	±20	about 5	10	ø0.1	0.05	-	5	9.8(1.0kgf)	0.03	0.05	-	0.02	GOH-15A10
25 x 25	±20	about 3.1	18	ø0.1	0.05	12	3	19.6(2.0kgf)	0.07	0.1	1	0.07	GOH-25A18
25 x 25	±15	about 2.17	30	ø0.1	0.05	12	3	19.6(2.0kgf)	0.07	0.1	1	0.06	GOH-25A30
25 x 25	±10	about 1.67	40	ø0.1	0.05	12	2	19.6(2.0kgf)	0.07	0.1	1	0.06	GOH-25A40
25 x 25	±20	about 3.1	18	ø0.1	0.05	12	3	19.6(2.0kgf)	0.07	0.1	1	0.07	GOH-25A18RNEW
25 x 25	±15	about 2.17	30	ø0.1	0.05	12	3	19.6(2.0kgf)	0.07	0.1	1	0.06	GOH-25A30RNEW
25 x 25	±10	about 1.67	40	ø0.1	0.05	12	2	19.6(2.0kgf)	0.07	0.1	1	0.06	GOH-25A40RNEW
40 x 40	±20	about 2.83	15	ø0.1	0.05	12	3	68.7(7.0kgf)	0.7	1	0.51	0.25	GOH-40A15
40 x 40	±20	about 1.74	35	ø0.1	0.05	12	2	68.7(7.0kgf)	0.7	1	0.51	0.2	GOH-40A35
40 x 40	±15	about 1.27	51	ø0.1	0.05	12	2	68.7(7.0kgf)	0.7	1	0.51	0.18	GOH-40A51
40 x 40	±20	about 2.83	15	ø0.1	0.05	12	3	68.7(7.0kgf)	0.7	1	0.51	0.25	GOH-40A15RNEW
40 x 40	±20	about 1.74	35	ø0.1	0.05	12	2	68.7(7.0kgf)	0.7	1	0.51	0.2	GOH-40A35RNEW
40 x 40	±15	about 1.27	51	ø0.1	0.05	12	2	68.7(7.0kgf)	0.7	1	0.51	0.18	GOH-40A51RNEW
60 x 60	±20	about 1.03	50	ø0.1	0.05	5	2	98.1(10.0kgf)	1	1.5	0.3	1	GOH-60A50
60 x 60	±15	about 0.71	84	ø0.1	0.05	5	1	98.1(10.0kgf)	1	1.5	0.3	0.9	GOH-60A84
60 x 60	±10	about 0.58	115	ø0.1	0.05	5	1	98.1(10.0kgf)	1	1.5	0.3	0.85	GOH-60A115
120 x 120	±5	about 0.33	182	ø0.05	0.1	1	0.25	294.0(30.0kgf)	19.6	44.1	0.02	2.1	GOH-120A182
120 x 120	±5	about 0.33	228	ø0.05	0.1	1	0.25	294.0(30.0kgf)	19.6	44.1	0.02	2.1	GOH-120A228

Stage Dimensions [mm]	Travel; α axis [°]	Travel; β axis [°]	Lead of actuator; α axis [°/ rotation]	Lead of actuator; β axis [°/rotation]	Rotation center height [mm]	Rotation center displacement [mm]	Parallelism [mm]	Readable resolution [min]	Minimum resolution [min]	Load Capacity Fz' [N]	Max. Moment Capacity Fx' [N · m]	Max. Moment Capacity Fy [N · m]	Weight [kg]	Part Number
25 x 25	±15	±20	about 2.17	about 3.1	18	ø0.1	0.1	12	3	19.6(2.0kgf)	0.07	0.07	0.13	GOH-25B18
25 x 25	±10	±15	about 1.67	about 2.17	30	ø0.1	0.1	12	3	19.6(2.0kgf)	0.07	0.07	0.12	GOH-25B30
25 x 25	±15	±20	about 2.17	about 3.1	18	ø0.1	0.1	12	3	19.6(2.0kgf)	0.07	0.07	0.13	GOH-25B18RNEW
25 x 25	±10	±15	about 1.67	about 2.17	30	ø0.1	0.1	12	3	19.6(2.0kgf)	0.07	0.07	0.12	GOH-25B30RNEW
40 x 40	±20	±20	about 1.74	about 2.83	15	ø0.1	0.1	12	2	68.7(7.0kgf)	0.7	0.7	0.45	GOH-40B15
40 x 40	±15	±20	about 1.27	about 1.74	35	ø0.1	0.1	12	2	68.7(7.0kgf)	0.7	0.7	0.38	GOH-40B35
40 x 40	±20	±20	about 1.74	about 2.83	15	ø0.1	0.1	12	2	68.7(7.0kgf)	0.7	0.7	0.45	GOH-40B15RNEW
40 x 40	±15	±20	about 1.27	about 1.74	35	ø0.1	0.1	12	2	68.7(7.0kgf)	0.7	0.7	0.38	GOH-40B35RNEW
60 x 60	±15	±20	about 0.7	about 1.03	50	ø0.1	0.1	5	2	98.1(10.0kgf)	1	1	1.9	GOH-60B50
60 x 60	±10	±15	about 0.58	about 0.71	84	ø0.1	0.1	5	2	98.1(10.0kgf)	1	1	1.75	GOH-60B84
120 x 120	±5	±5	about 0.33	about 0.33	182	ø0.1	0.2	1	0.25	294.0(30.0kgf)	19.6	19.6	4.2	GOH-120B182

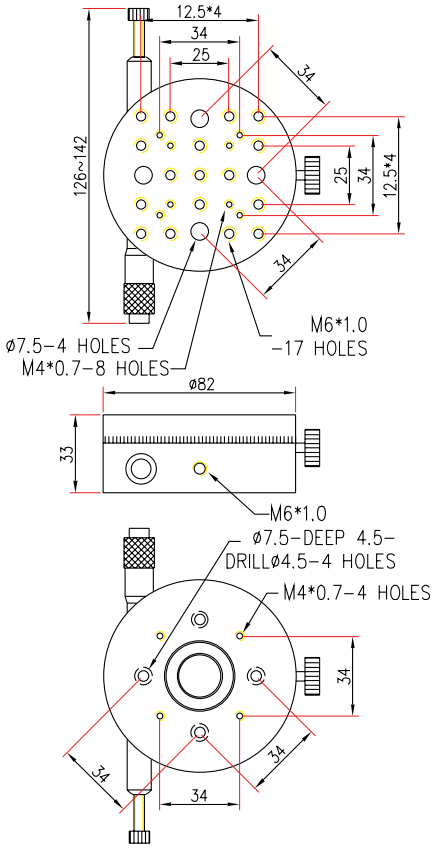
PRECISION ROTARY STAGE

CR01A

- Precision recirculating unit equipped with high-loading roller bearing provides smooth and accurate motion.
- Scale marked on the side with a vernier on the body measures the angular position with resolution of 2'

Model	CR01A
Travel Range	360° coarse, 20° fine
Deviation	2'
Load Capacity	5 kg
Platform Size	φ82 mm
Weight	0.5 kg

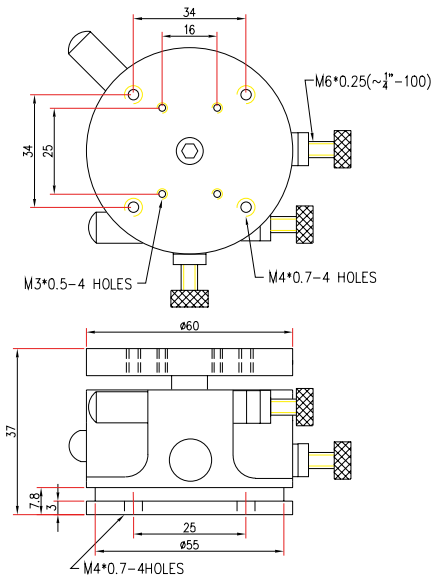
CR01A



Three-Axis, Rotary Stage (CR03S)

Model	CR03S
Travel Range	4°
Load Capacity	2 kg
Platform Size	φ50 mm
Weight	0.4 kg

CR03A



LARGE AREA ROTARY STAGE

Rotation stages permit the precise angular adjustment of components. A scale and a vernier around the circumference provide an indication of the angle. Once set approximately in place the stage may be locked by means of a clamp screw and then fine adjusted by a micrometer.

The 120 and 160mm stages have a 62 and 102mm central aperture so they can be mounted with an optical beam passing through their center. KSPB-906M, KSPB-1206MH and KSPB-1606MH utilize crossed roller bearings for high load capacity.

Table Dimensions [mm]	Travel [°]	Travel accuracy; Concentricity [mm]	Travel accuracy; Wobble [mm]	Parallelism [mm]	Readable resolution [arcmin | °]	Minimum resolution [arcsec]	Load Capacity Fz' [N]	Max. Moment Capacity Fx' [N · m]	Stiffness Fx" [arcsec/N · cm]	Weight [kg]
ø90(W/Aperture)	Coarse:360° 0.02Fine:±5° (micrometer)	0.02	0.05	5arcmin	20	147.0 (15.0kgf)	2	0.2	1.3	KSPB-906M
ø90(W/Aperture)	Coarse:360° Fine:±5°(Screw) 0.02	0.02	0.05	5arcmin	10	147.0 (15.0kgf)	2	0.2	1.3	KSPB-906FP
ø120(W/Aperture)	Coarse:360° Fine:±4° (micrometer) 0.03	0.03	0.06	5arcmin	15	196.0 (20.0kgf)	7.8	0.15	1.1	KSPB-1206MH
ø120(W/Aperture)	Coarse:360° Fine:±4°(Screw) 0.03	0.03	0.06	5arcmin	8	196.0 (20.0kgf)	7.8	0.15	1.1	KSPB-1206FPH
ø160(W/Aperture)	Coarse:360° Fine:±3° (micrometer) 0.03	0.03	0.06	5arcmin	15	196.0 (20.0kgf)	9.8	0.15	1.5	KSPB-1606MH
ø160(W/Aperture)	Coarse:360° Fine:±3°(Screw) 0.03	0.03	0.06	5arcmin	8	196.0 (20.0kgf)	9.8	0.15	1.5	KSPB-1606FPH

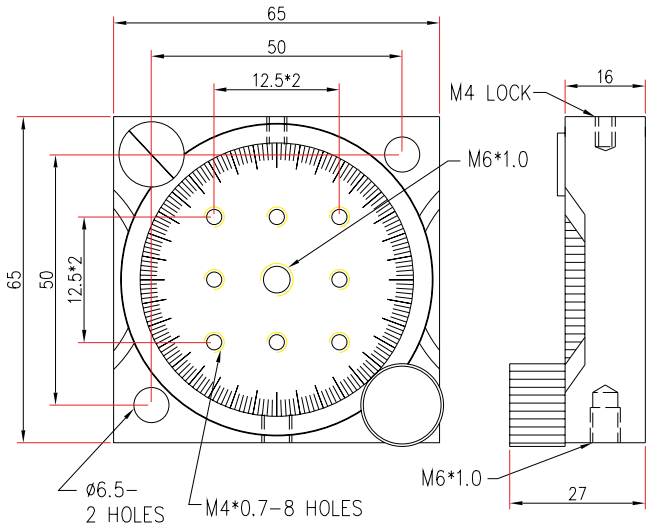
ROTARY STAGE

CR04C

Special bearing design provides highly stable motion.
Reading in unit of 1° provides accurate angular positioning.

Model	CR04C
Travel Range	360° coarse
Resolution	1°
Load Capacity	2 kg
Platform Size	φ55 mm
Weight	0.2kg

CR04C

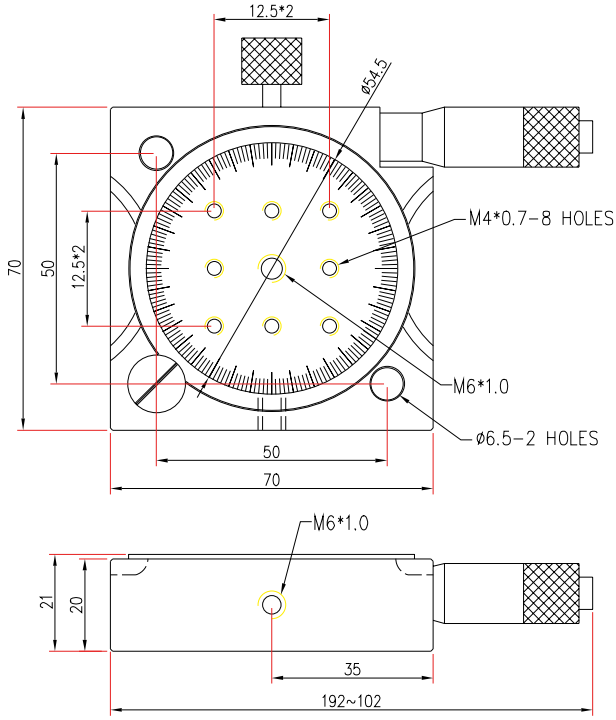


CR04C-P

Fine adjustment is driven with micrometers to provide precise and stable motion

Model	CR04C-P
Travel Range	360° coarse
Resolution	1°
Load Capacity	2 kg
Platform Size	φ55 mm
Weight	0.3kg

CR04C-P

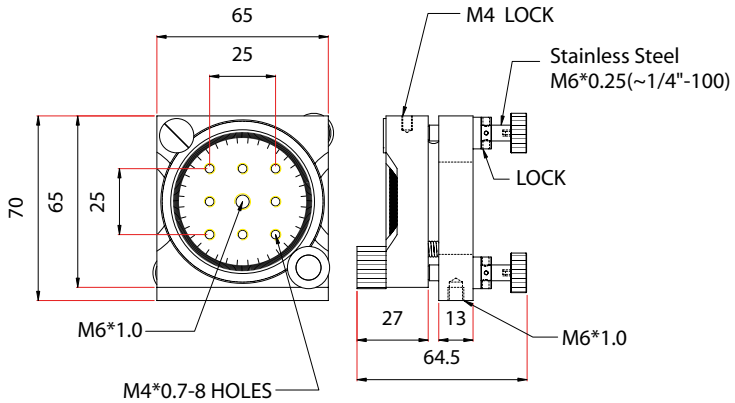


CR04C-T

- With added tilt mechanisms, CR04C-T stage provides more degrees of freedom and versatility of angular adjustment.

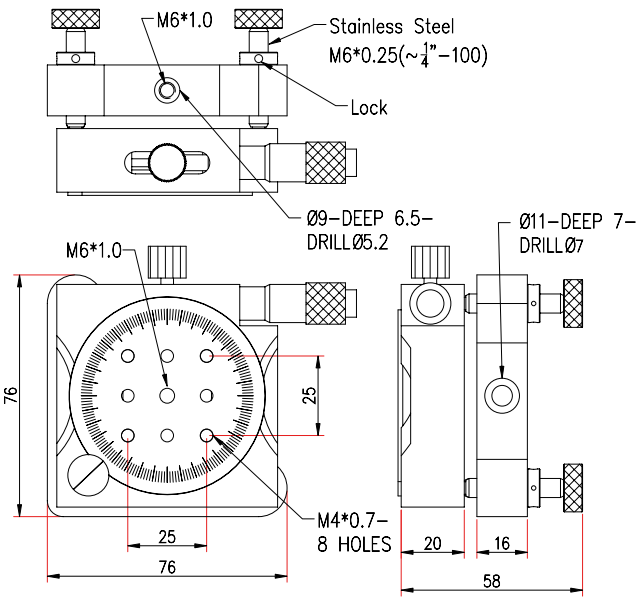
Model	CR04C-T
Travel Range	θ=360° T=2°
Resolution	1°
Load Capacity	200g
Platform Size	φ55 mm
Weight	0.4kg

CR04C-T



Model	CR04C-PT
Travel Range	θ=360° T=2°
Resolution	1°
Load Capacity	200 g
Platform Size	φ55 mm
Weight	0.5kg

CR04C-PT



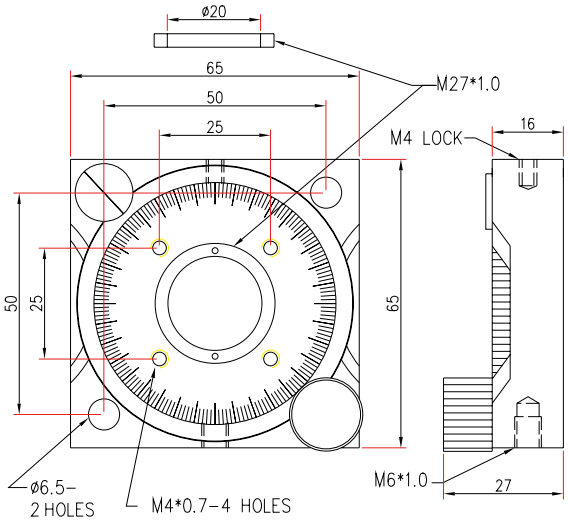
ROTARY STAGE

CR04D

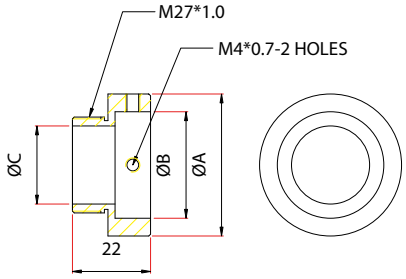
Special bearing design provides highly stable motion.
Reading in unit of 1° provides accurate angular positioning.
This stage accommodates 1 inch (25 mm) optics.
Lockscrew design.

Model	CR04D
Travel Range	360° coarse
Resolution	1°
Load Capacity	2 kg
Holding Size	φ25 mm
Weight	0.2kg

CR04D



EAD01~EAD04 Match With All CR04D Series. It Will Be Chosen Whenever Diameter Of Your Polarizer, Or Other Optics, Doen't Eaual To 25mm Or 1.0".



Model	ØA	ØB	ØC
EAD01	30mm	12.7mm	11mm
EAD02	38mm	25.4mm	24mm
EAD03	40mm	30mm	24mm
EAD04	48mm	38mm	24mm

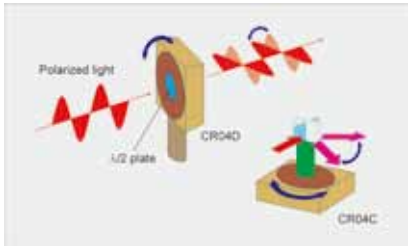
Polarizer Adaptor Option

EAD01~
EAD04

CR04D-P

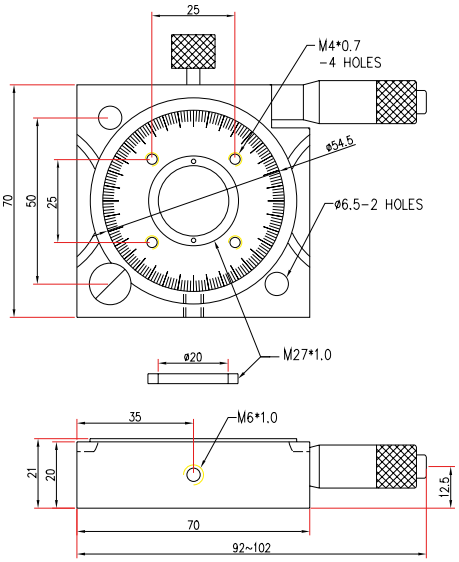
Fine adjustment is driven with micrometers to provide precise and stable motion.
This stage accommodates 1 inch (25 mm) optics.

Model	CR04D-P
Travel Range	360° coarse
Resolution	1°
Load Capacity	2 kg
Holding Size	φ25 mm
Weight	0.2kg



CR04D-P, accommodates 1 inch (25 mm) optics.

CR04D-P



CHAPTER 5 OPTO-MECHANICS

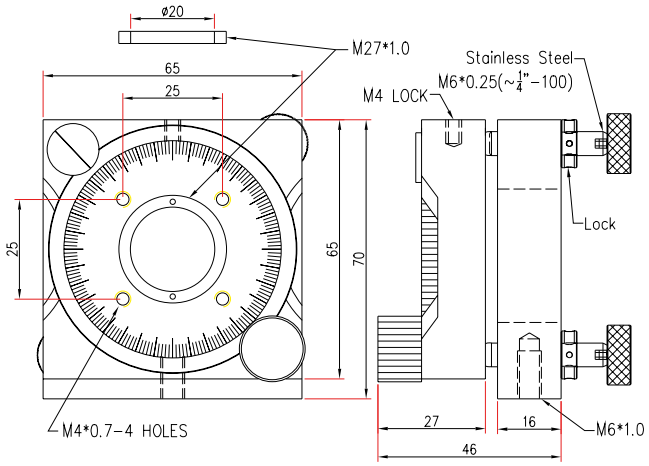
ROTARY STAGE

CR04D-T

CR04D-T, accommodates 1 inch (25 mm) optics. With added tilt mechanisms. This rotary stage provides more degrees of freedom and versatility of angular adjustment.

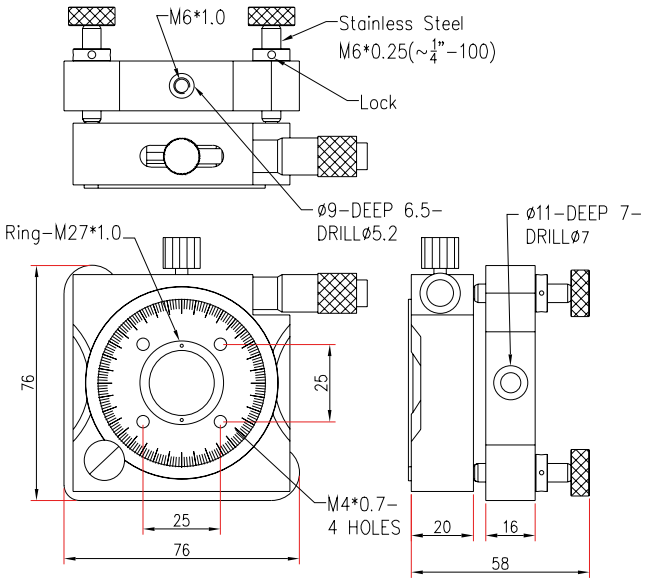
Model	CR04D-T
Travel Range	θ=360° T=2°
Resolution	1°
Load Capacity	200g
Holding Size	φ25 mm
Weight	0.4 kg

CR04D-T



Model	CR04D-PT
Travel Range	360° coarseT=2°
Resolution	1°
Load Capacity	200g
Holding Size	φ25 mm
Weight	0.5 kg

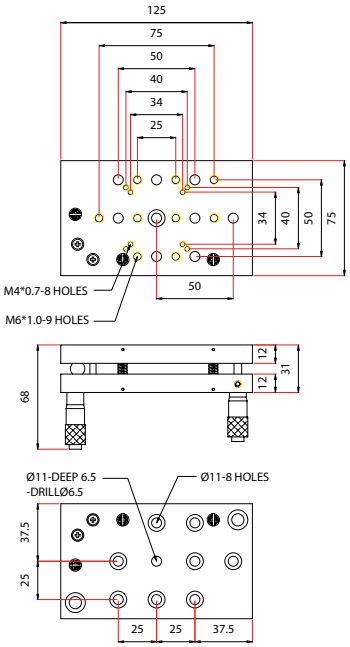
CR04D-PT



TILT PLATFORM

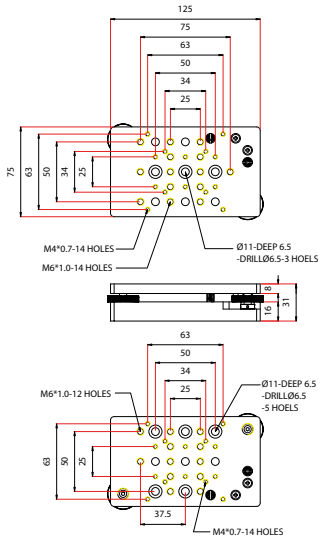
- 2-axes tilt platform driven with micrometers provides high-resolu tion angular adjustment.

CP01A



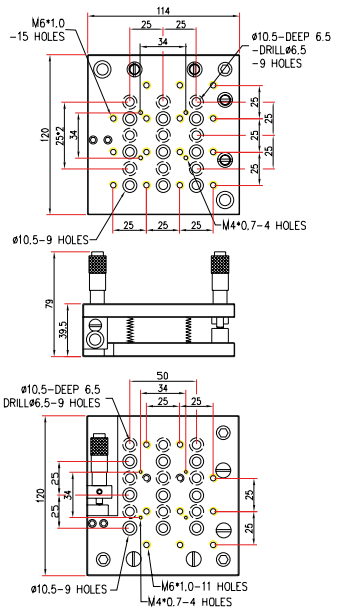
- 2-axes thumbscrew desige features very low profile.

CPW01B

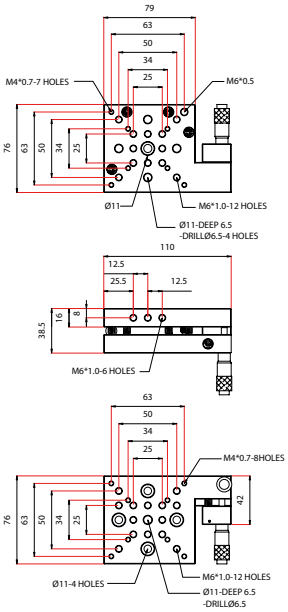


- Tree-axis
- Tilt platfrom

CP02A

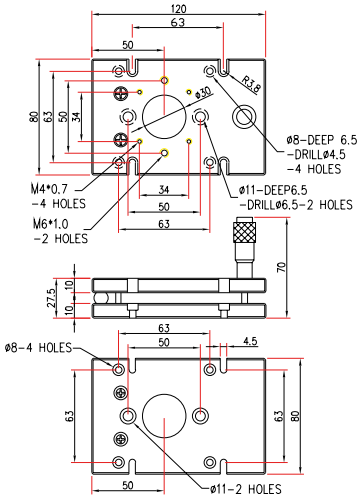


CP03A

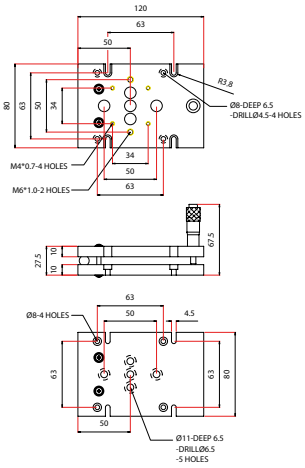


Fine adjustment with a pre-loaded disk-spring provides superior stability to a conventional spring

CI01A



CI02A

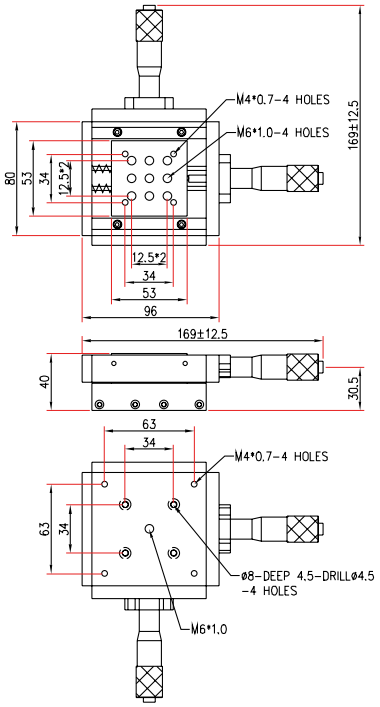


Model	CP01A	CP02A	CP03A	CI01A	CPW01B	CI02A
Travel Range	10°	6°	6°	10°	5°	10°
Load Capacity	5 kg	5kg	5 kg	5kg	5kg	5kg
Weight	0.7kg	0.8kg	0.6kg	0.5kg	0.25kg	0.5kg

PRECISION MODULAR PLATFORM-XY

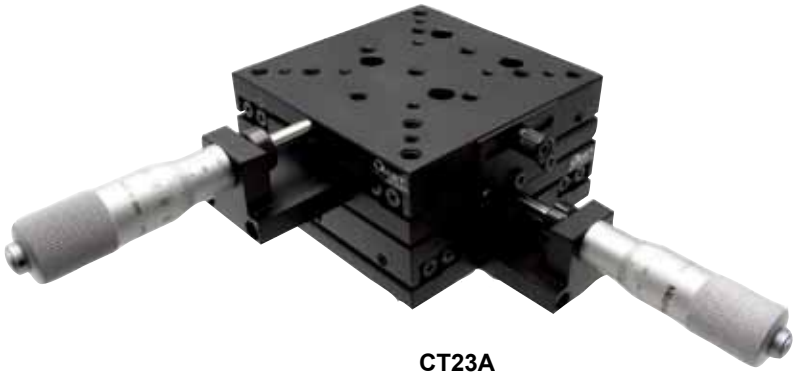
- Linear roller bearing in V-shaped guide and hardened ground steel rod design provide high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.

CT21A

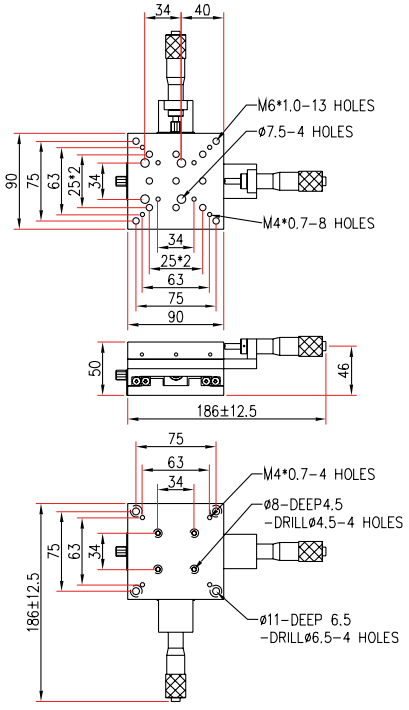


Model	CT21A	CT23A	CT25A	CT25AC
Travel Range	25 mm			
Resolution	0.01 mm(0.001 mm option)			
Deviation	0.01 mm			
Load Capacity	5 kg	10 kg	30 kg	30 kg
Platform Size	53X53 mm^2	90X90 mm^2	120X120 mm^2	120X120 mm^2
Weight	1.2 kg	1.4 kg	2.4 kg	2.4 kg

- Linear roller bearing in V-shaped guide provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Thumbscrew Lock design.

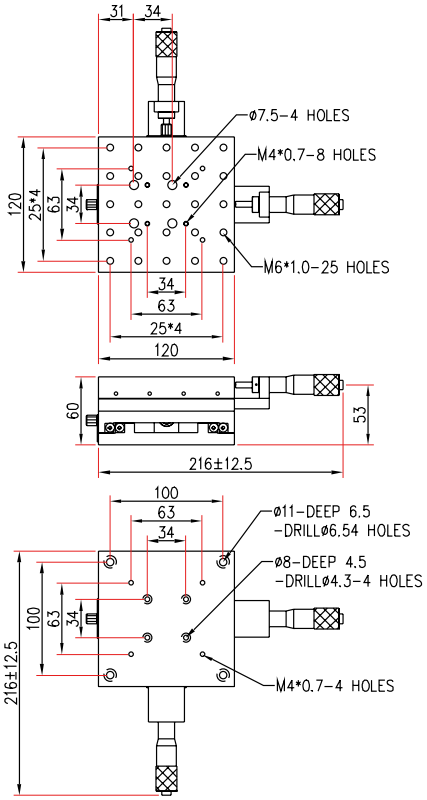


CT23A



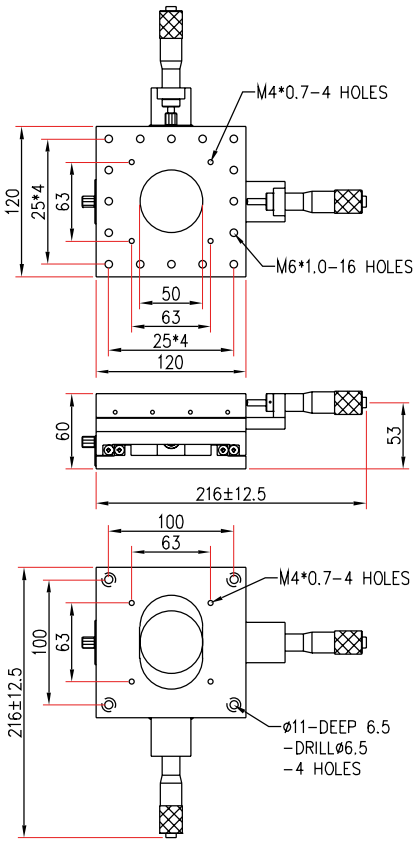
- Linear roller bearing in V-shaped guide provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Thumbscrew Lock.
- Large platform has higher loading capacity.

CT25A



- inear roller bearing in V-shaped guide provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- φ 50.0 mm apertured platform.
- Thumbscrew Lock.

CT25AC

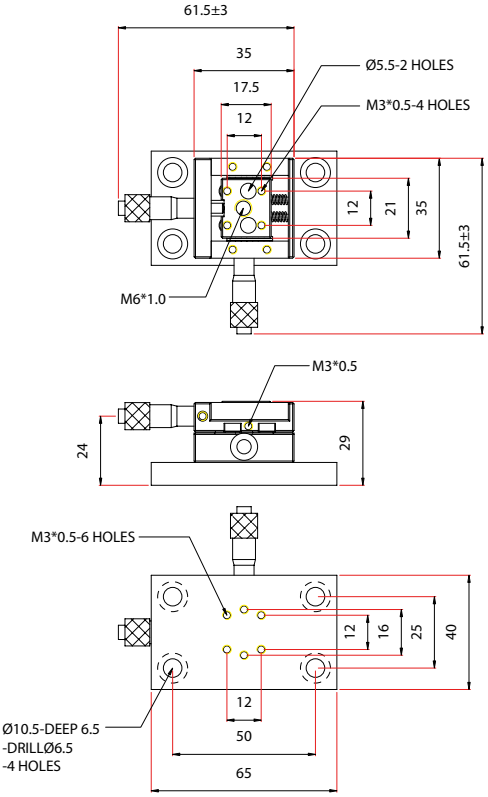


PRECISION MODULAR PLATFORM-XY

- Miniature platform in low profile.
- Hardened linear roller bearing guided by steel rods.

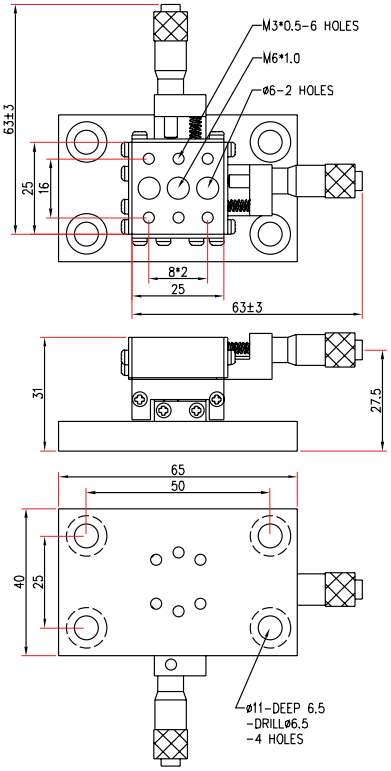
Model	CT21SA	CT219A	CT217A
Travel Range	6mm	6mm	13mm
Resolution		0.01mm	
Deviation		0.01mm	
Load Capacity	1kg	1kg	10kg
Platform Size	21x17 mm^2	25x25 mm^2	70x70 mm^2
Weight	0.17 KG	0.12KG	0.75 KG

CT21SA



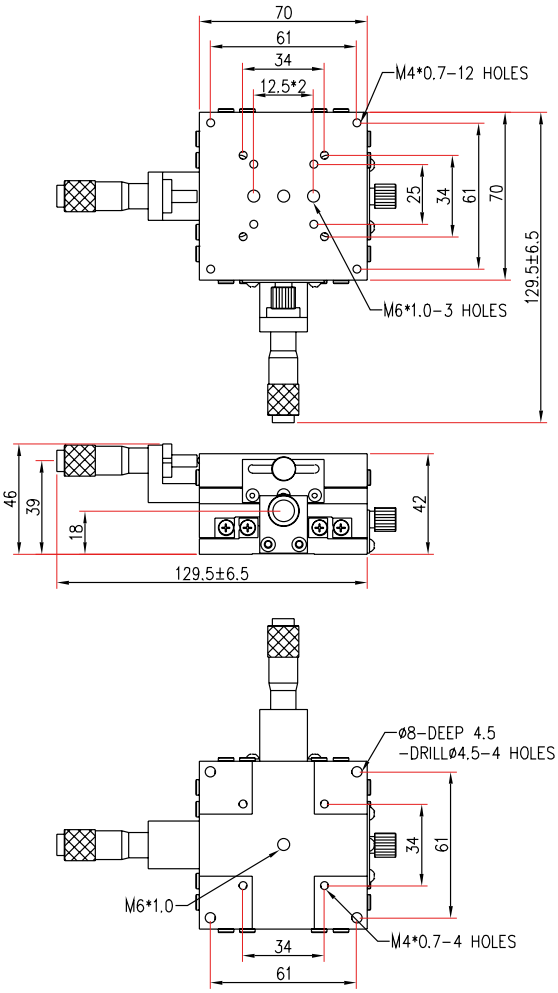
- Smallest footprint in low profile.
- Hardened linear roller bearing,guided by steel rods.

CT219A



- Large platform in low profile.
- Linear hardened roller cages in V-shaped guide provides smooth and accurate motion.
- Thumb screw lock design.
- Optional micrometer 25 mm.

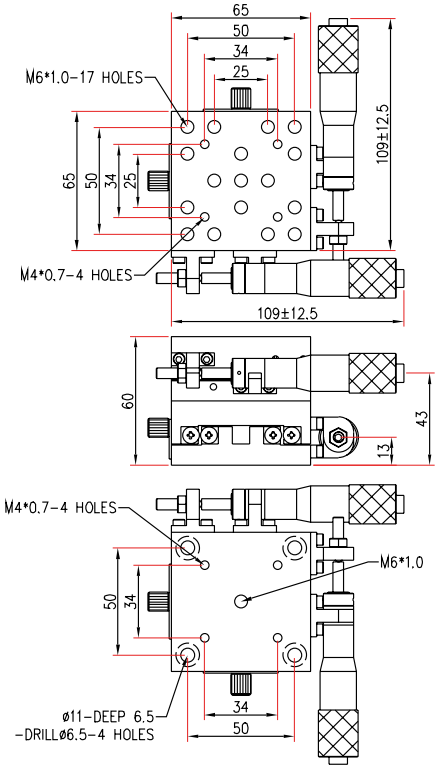
CT217A



PRECISION MODULAR SIDE-DRIVEN PLATFORM-XY

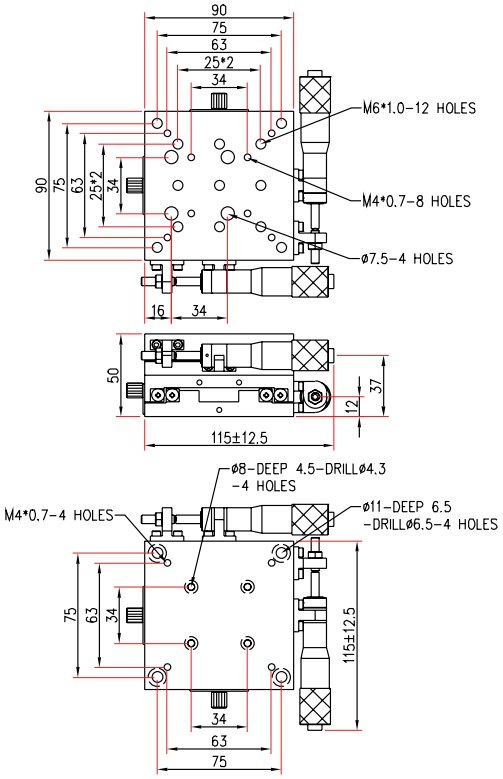
- Linear roller bearing design guided with hardened ground steel rod provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Small footprint.
- Thumbscrew Lock.

CT22A



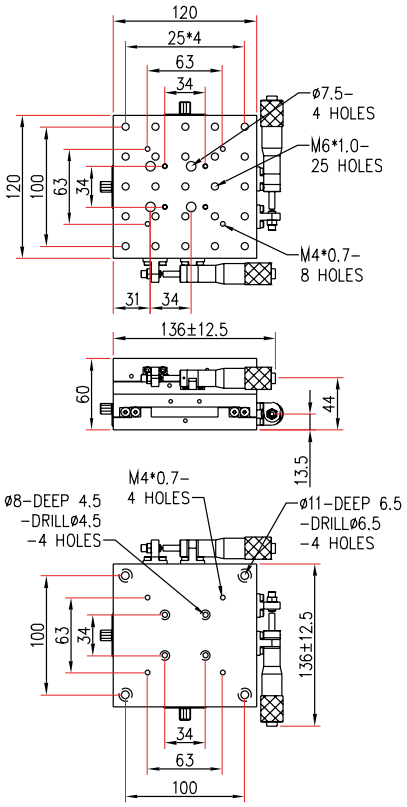
- Linear roller bearing in V-shaped guide provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Thumbscrew Lock.
- Small footprint.

CT24A



- Linear roller bearing in double-V-shaped guide provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Thumbscrew Lock.
- Small footprint.

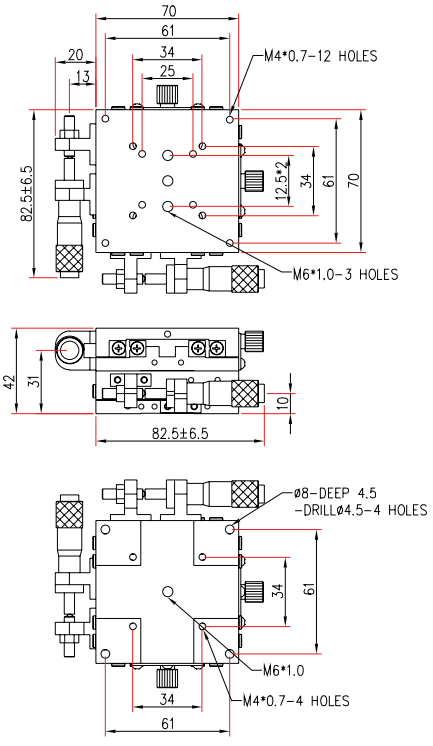
CT26A



Model	CT22A	CT24A	CT26A	CT218A
Travel Range	25 mm	25 mm	25 mm	13 mm
Resolution	0.01 mm(0.001 mm option)			0.01mm
Deviation	0.01 mm	0.01 mm	0.01 mm	0.01mm
Load Capacity	5 kg	10 kg	30 kg	10 kg
Platform Size	65X65 mm^2	90X90 mm^2	120X120 mm^2	70 x 70 mm^2
Weight	1.2 kg	1.4 kg	2.4 kg	0.8kg

- Small platform in low profile.
- Hardened linear roll bearing in V guide high loding capacity amd accurate positioning.
- Thumbscrew Lock.
- Compatible to C-series products,fit to varions applications.
- Optional micrometer 25 mm.

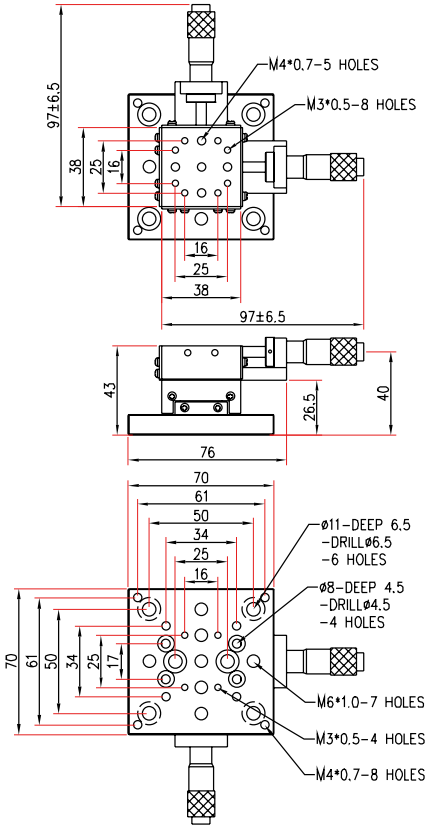
CT218A



PRECISION MODULAR MINIATURE LINEAR STAGES-XY

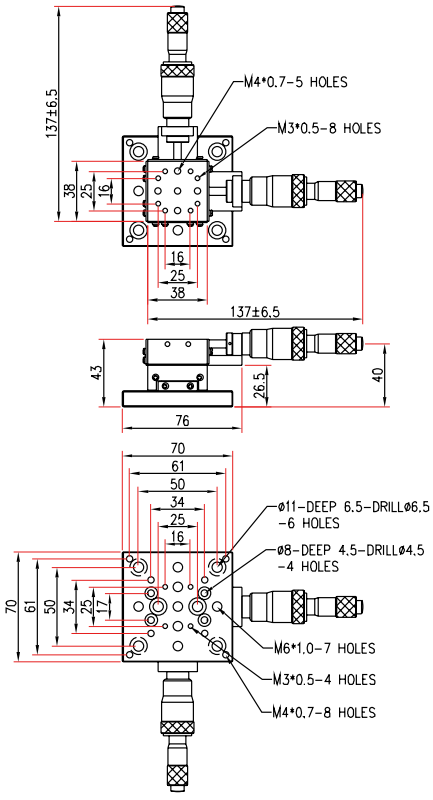
- Linear roller bearing in V-shaped guide and hardened ground steel rod design provide high loading capacity and accurate positioning.
- Compatible to C-series products, adequate for various applications.
- Miniature design ideal for applications within a limited space.

CT210A



- Linear roller bearing in V-shaped guide and hardened ground steel rod design provide high loading capacity and accurate positioning.
- Compatible to C-series products, adequate for various applications.
- Miniature design ideal for applications within a limited space.
- With differential micrometers, CT210AD provides higher resolution than 0.5μm.

CT210AD



Mode	CT210A	CT210AD
Travel Range	13 mm	13 mm
Resolution	0.01 mm	0.5μm
Deviation	0.01 mm	0.01 mm
Load Capacity	2 Kg	2 Kg
Platform Size	38X38 mm^2	38X38 mm^2
Weight	0.3 Kg	0.3 Kg

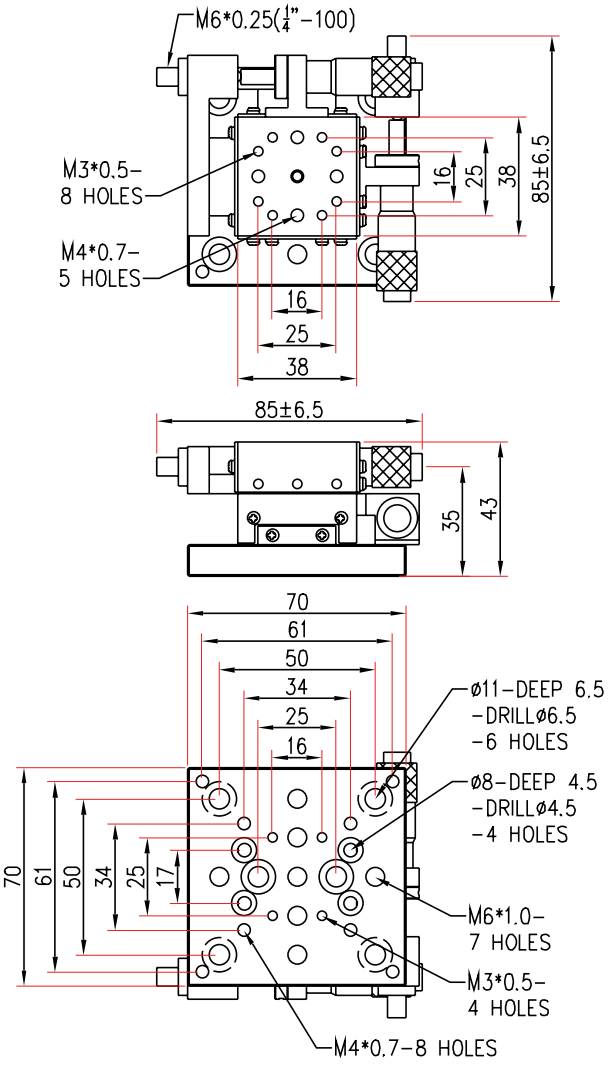
PRECISION SIDE-DRIVEN MINIATURE LINEAR STAGE

CT211A

- Travel range extended with a precision-machined screw.
- Smaller profile.

Model	CT211A
Travel Range	20 mm (With M6X0.25mm Screw)
Resolution	0.01mm
Deviation	0.01mm
Load Capacity	2 Kg
Platform Size	38X38 mm^2
Weight	0.4 Kg

CT211A



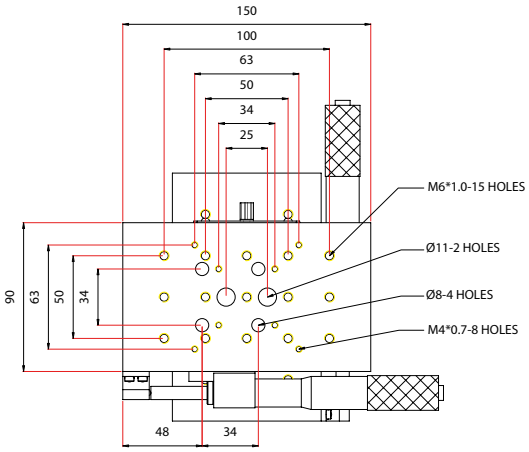
PRECISION MODULAR MINIATURE LINEAR STAGES-XY

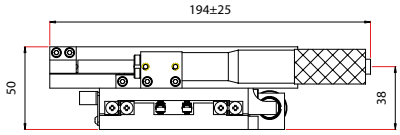
CT212A

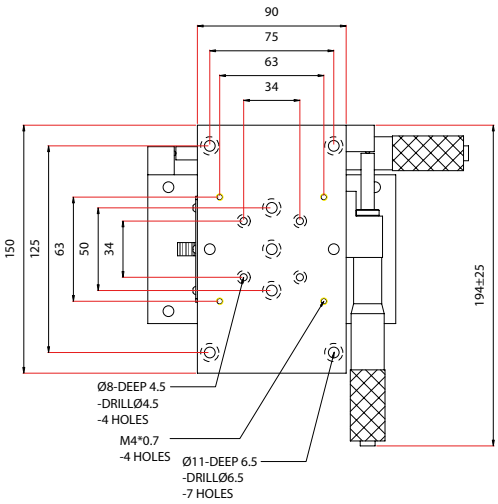
- Linear roller bearing in V-shaped guide provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Thumbscrew Lock.
- Large platform has higher loading capacity.

Model	CT212A
Travel Range	50mm
Resolution	0.01mm
Deviation	0.01mm
Load Capacity	30 Kg
Platform Size	90X150 mm^2
Weight	2.3Kg

CT212A







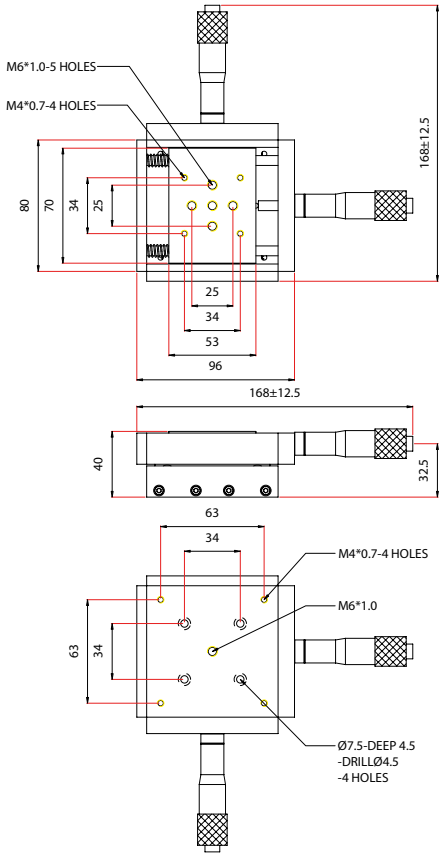
CHAPTER 5 OPTO-MECHANICS

MODULAR PLATFORMS-XY

- Precision linear ball bearing provides high stability and resolution.
- Compatible to C-series products, fit to various applications.

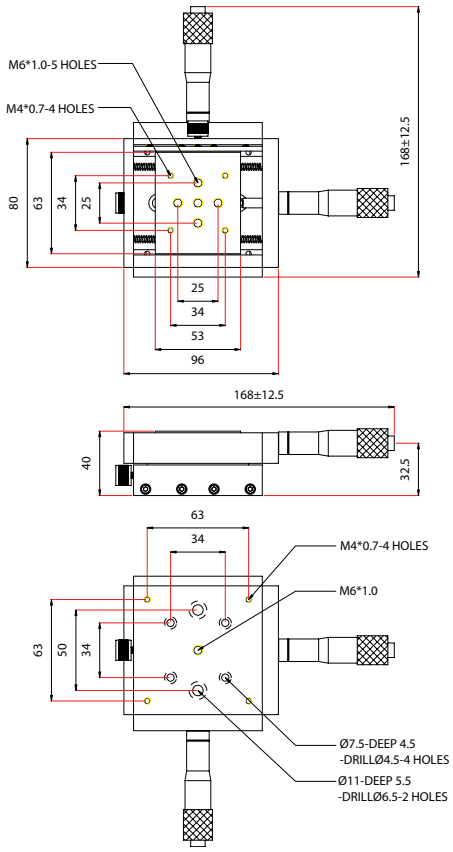
Model	CT27A	CT28A
Travel Range	25 mm	25 mm
Resolution	0.01 mm(0.001 mm option)	
Deviation	0.01 mm	0.1 mm
Load Capacity	5 kg	2 kg
Platform Size	53X70 mm^2	53X63 mm^2
Weight	0.9 kg	0.9 kg

CT27A



- Cost-effective dovetail slide design.
- Compatible to C-series products, fit to various applications.
- Thumbscrew Lock design.

CT28A



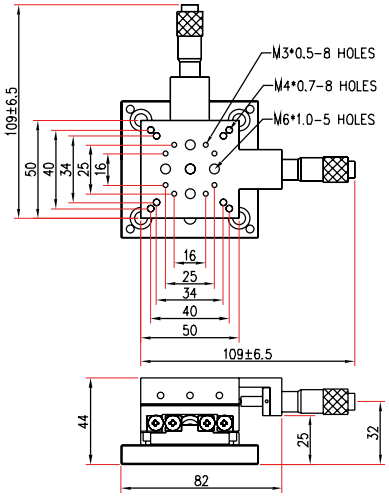
PRECISION MODULAR PLATFORM-XY

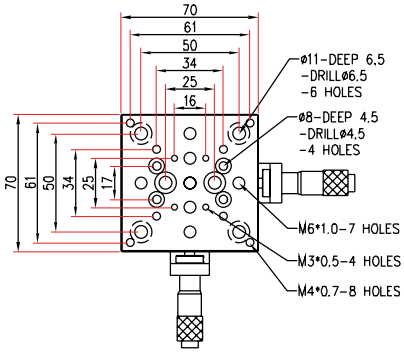
CT215A,CT215AD,CT216A are two-dimensional integrated linear stages. They features actuator-loaded design in lower profile. CT215AD has a differential micrometer of higher resolution than 0.5μm. The CT216A is the side-driven version of CT215A.

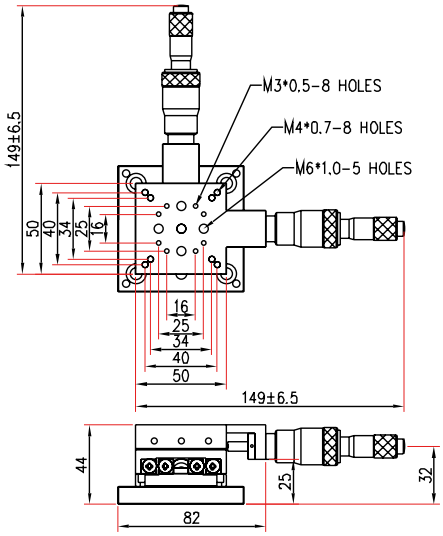
Model	CT215A	CT215AD
Travel Range	13mm	13 mm
Resolution	0.01 mm	0.5μm
Deviation	0.01 mm	0.01 mm
Load Capacity	5Kg	5 Kg
Platform Size	50X50 mm^2	50X50 mm^2
Weight	0.5Kg	0.6Kg

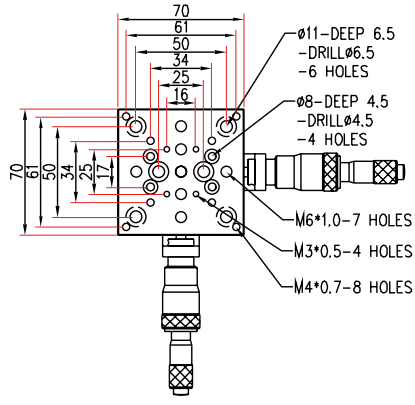
CT215A

CT215AD







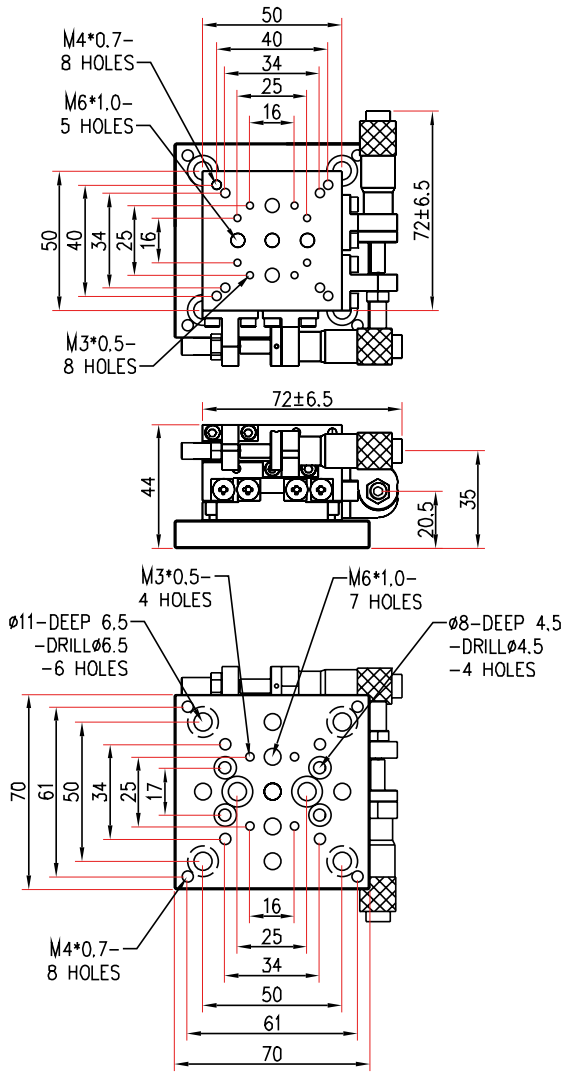


PRECISION SIDE-DRIVEN MINIATURE LINEAR STAGE

- Two-dimensional integrated linear stage.

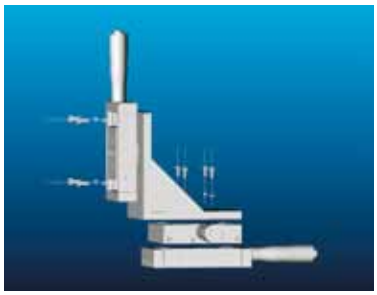
Model	CT216A
Travel Range	13mm
Resolution	0.01mm
Deviation	0.01mm
Load Capacity	5Kg
Platform Size	50X50 mm^2
Weight	0.4Kg

CT216A



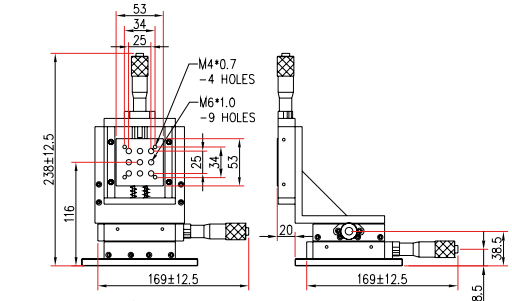
PRECISION MODULAR PLATFORM-XYZ

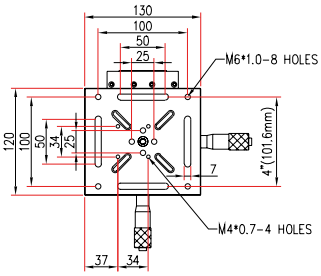
- Linear roller bearing guided in double-V-shaped grooves provides smooth and accurate motion.
- Compatible to C-series products, fit to various applications.



CT31SA

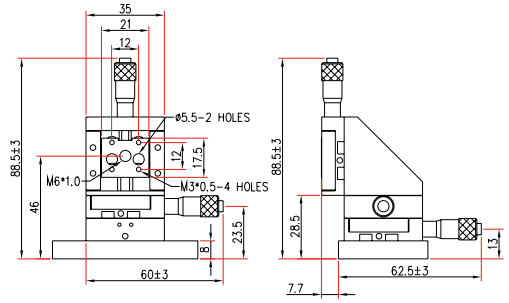
CT31A

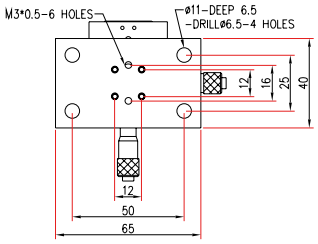


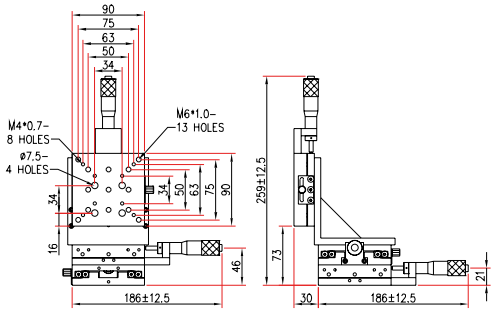


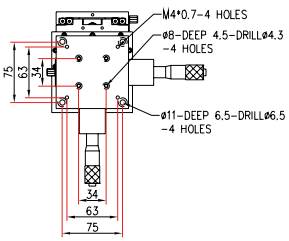
- Precision roller bearing in double V-guide provides high load capacity and smooth, stable motion.

CT33A









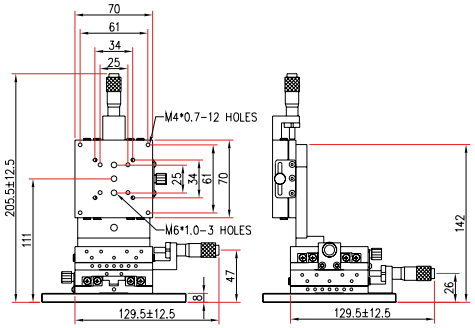
Model	CT31A	CT33A	CT31SA
Travel Range	25 mm		6 mm
Resolution	0.01 mm(0.001 mm option)		0.01 mm
Deviation	0.01 mm	0.01 mm	0.01 mm
Load Capacity	1 kg	1kg	0.5 kg
Platform Size	53X53 mm^2	90X90 mm^2	21X17 mm^2
Weight	2.5 kg	2.8 kg	0.24 kg

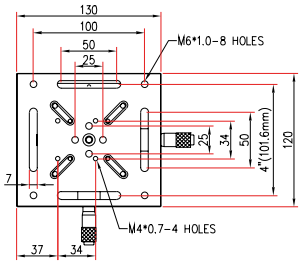
- Optional micrometer :25mm travel range.

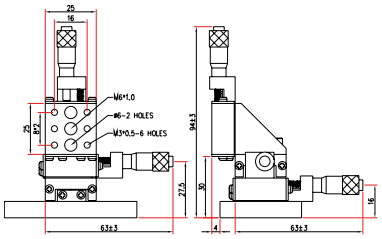
Model	CT317A	CT319A
Travel Range	13 mm	6 mm
Resolution	0.01 mm	
Deviation	0.01 mm	
Load Capacity	10kg	1kg
Platform Size	70x70mm^2	25x25mm^2
Weight	1.5 kg	0.18 kg

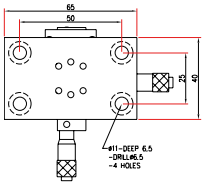
CT317A

CT319A







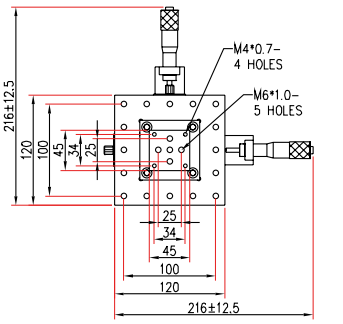


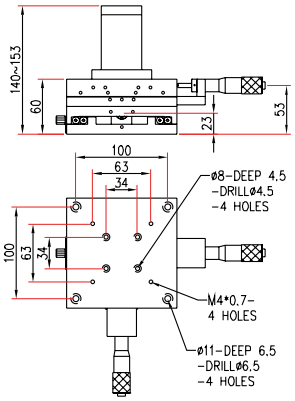
CV35A

CV35A uses CV01A to provide stable motion and for vertical movement high loading capacity.

Model	CV35A
Travel Range	25 mm XY,13 mm Z
Resolution	0.01 mm
Deviation	0.1 mm
Load Capacity	2 kg
Platform Size	45X45 mm^2
Weight	2.9 kg

CV35A





PRECISION MODULAR SIDE-DRIVEN PLATFORMS-XYZ

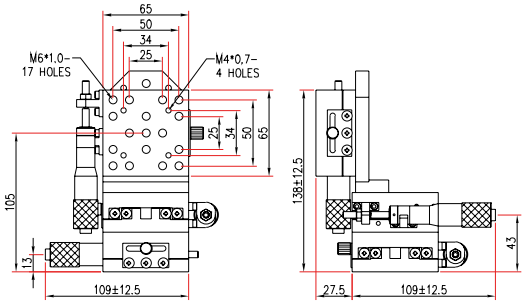
- CT32A,CT34A,CT318A are three-dimensional modular linear stages.
- They are constructed by Precision roller bearing in double V-guide provides high load capacity and smooth, stable motion.

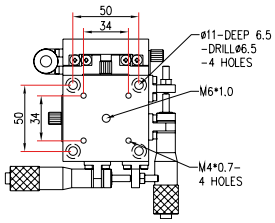
CT32A

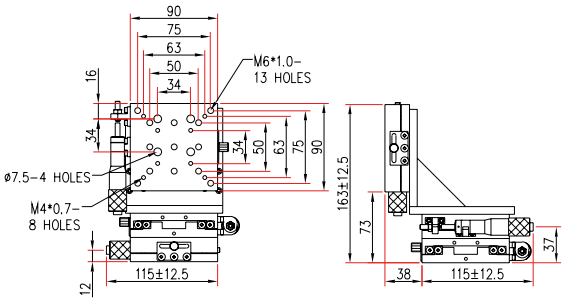
CT34A

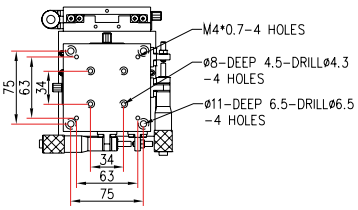
- Optional micrometer 25 mm.

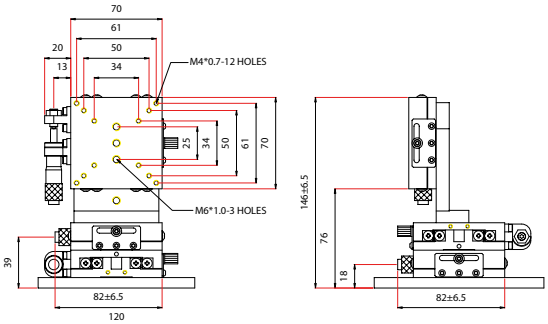
CT318A

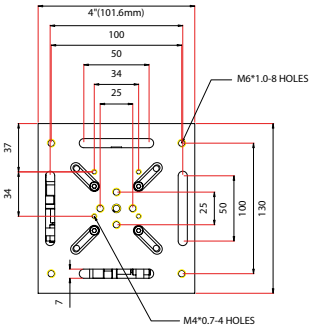












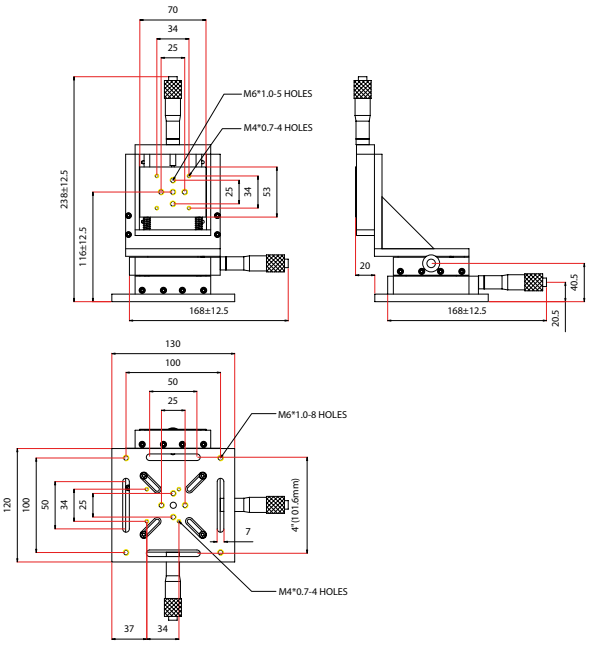
Model	CT32A	CT34A	CT318A
Travel Range	25 mm		13 mm
Resolution	0.01 mm(0.001 mm option)		0.01mm
Deviation	0.01 mm	0.01 mm	0.01mm
Load Capacity	1 kg	1 kg	1 kg
Platform Size	65X65 mm^2	90X90 mm^2	70X70 mm^2
Weight	1.6 kg	2.5 kg	1.5 kg

CHAPTER 5 OPTO-MECHANICS

MODULAR PLATFORMS-XYZ

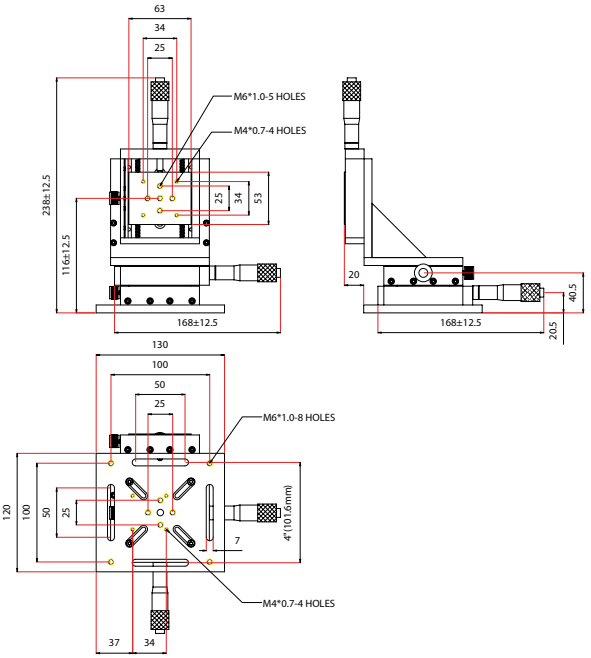
- Precision ball bearing design provides smooth and stable motion.
- Compatible to C-series products, fit to various applications.

CT37A



- Cost-effective dovetail slide design.
- Compatible to C-series products, adequate for various applications.

CT38A

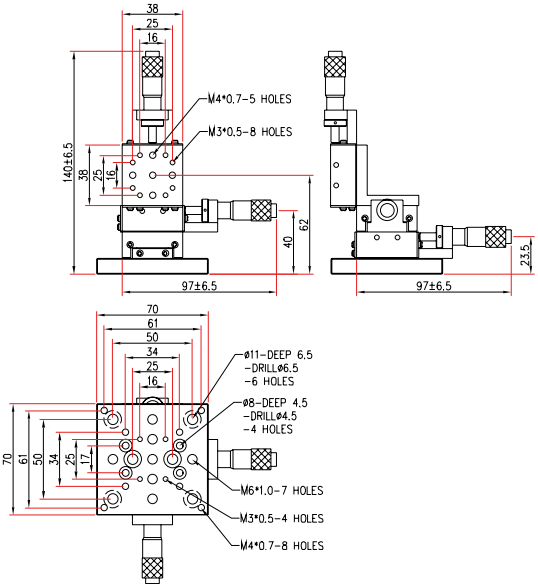


Model	CT37A	CT38A
Travel Range	25mm	
Resolution	0.01mm(0.001mm option)	
Deviation	0.01mm	0.1mm
Load Capacity	1kg	1kg
Platform Size	53x70mm^2	53x63mm^2
Weight	2.0kg	2.0kg

PRECISION MODULAR PLATFORM-XYZ

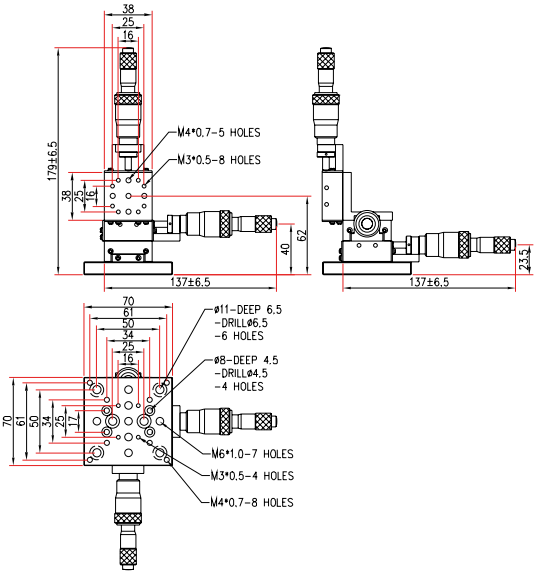
- Linear roller bearing guided with hardened steel rod provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Miniature design suitable for applications within small space.

CT310A



- Linear roller bearing design guided with hardened steel rod provides high loading capacity and accurate positioning.
- Compatible to C-series products, fit to various applications.
- Miniature design suitable for applications within small space.
- With differential micrometers, CT310AD provides higher resolution than 0.5μm.

CT310AD



Model	CT310A	CT310AD
Travel Range	13 mm	13 mm
Resolution	0.01 mm	0.5μm
Deviation	0.01 mm	0.01mm
Load Capacity	1.0 Kg	0.2Kg
Platform Size	38X38 mm^2	38X38 mm^2
Weight	0.4 Kg	0.5Kg

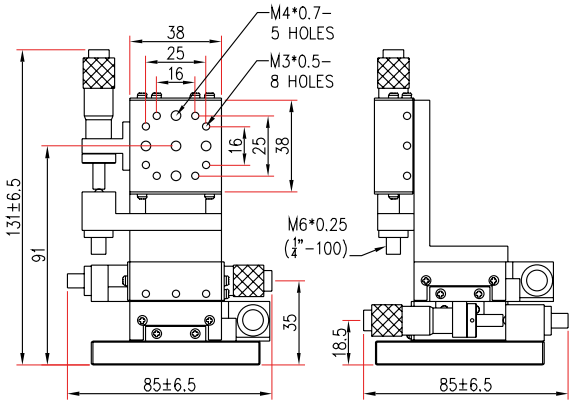
PRECISION MODULAR SIDE-DRIVEM MINIATURE STAGES-XYZ

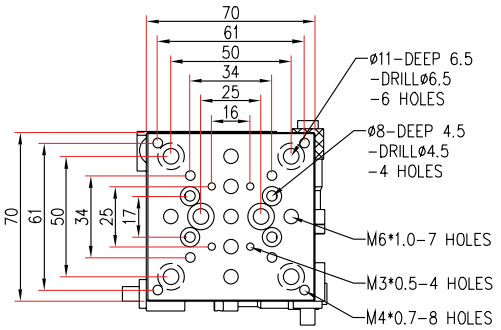
CT311A

- Miniature design adequate for applications within small space.
- Travel range extended with precision-machined screws.

Model	CT311A
Travel Range	20 mm (with M6X0.25mm Screw)
Resolution	0.01mm
Deviation	0.01mm
Load Capacity	1.0Kg
Platform Size	38X38 mm^2
Weight	0.6Kg

CT311A

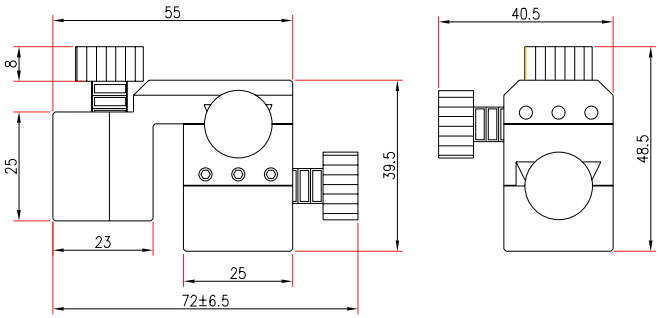


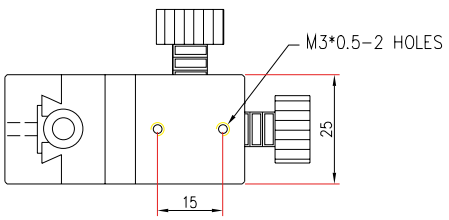


Integrated Compact Stage-XYZ (CT314B)

Model	CT314B
Travel Range	±5 mm
Resolution	N/A
Deviation	0.1 mm
Load Capacity	0.2Kg
Platform Size	25X25 mm^2
Weight	0.1Kg

CT314B





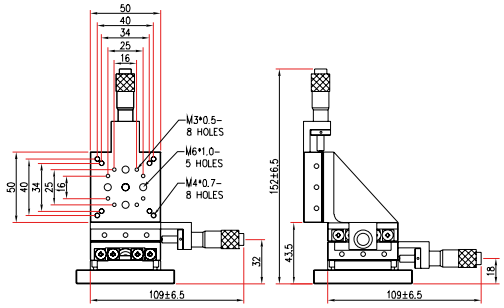
PRECISION INTEGRATED ACTUAYOR-LOADED LINEAR STAGE-XYZ

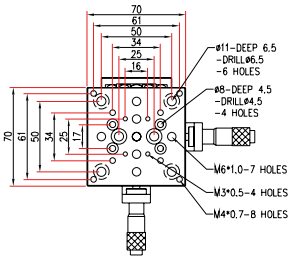
CT315A, CT315AD ,CT316A are three -axis integrated linear stages. They feature actuator-loaded design to provide high loading capacity on the vertical motion in a lower profile.
CT315AD have differential micrometers with higher resolution than 0.5μm.
CT316A is the side-driven version of CT315A.

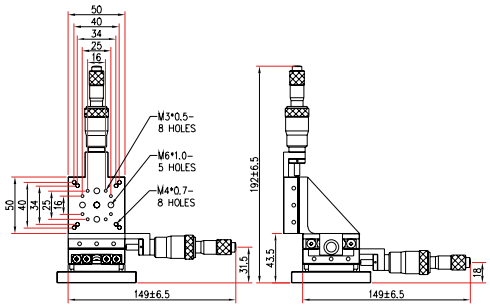
Model	CT315A	CT315AD
Travel Range	X=Y=Z=13 mm	X=Y=Z=13 mm
Resolution	0.01 mm	0.5μm
Deviation	0.01 mm	0.01 mm
Load Capacity	2 Kg	2Kg
Platform Size	50X50 mm^2	50X50 mm^2
Weight	0.7Kg	0.8Kg

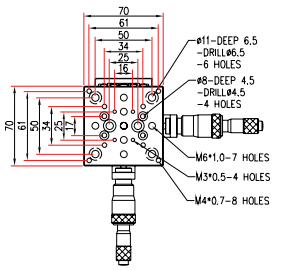
CT315A

CT315AD





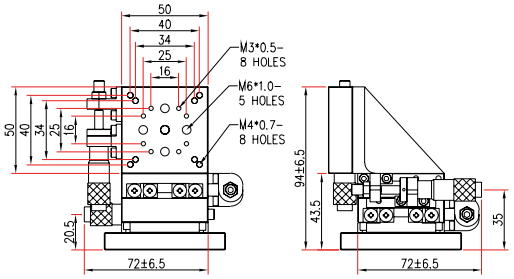


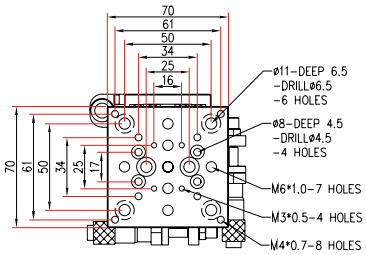


- Three-axes integrated linear stage.

Model	CT316A
Travel Range	X=Y=Z=13 mm
Resolution	0.01 mm
Deviation	0.01 mm
Load Capacity	2Kg
Platform Size	50X50 mm^2
Weight	0.7Kg

CT316A





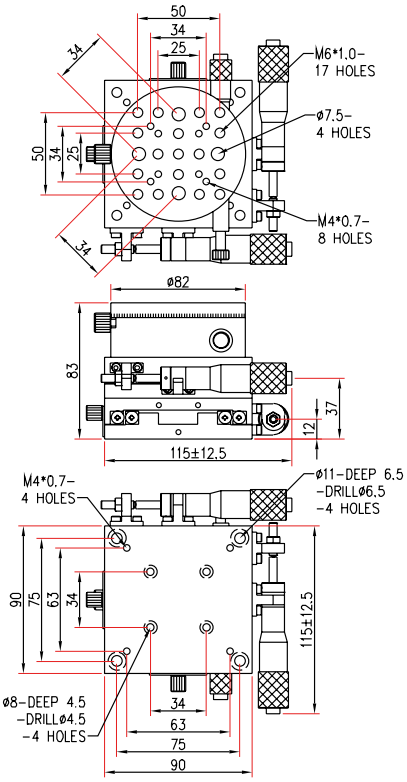
CHAPTER 5 OPTO-MECHANICS

PRECISION MODULAR PLATFORM-XY θ

CR34A

- Linear roller bearing guided in double V-shaped grooves for X/Y translation provides smooth and accurate motion.
- Utilization of precision roller bearing for a rotary motion provides excellent sta bility.
- Compatible to C-series products, fit to various applications.

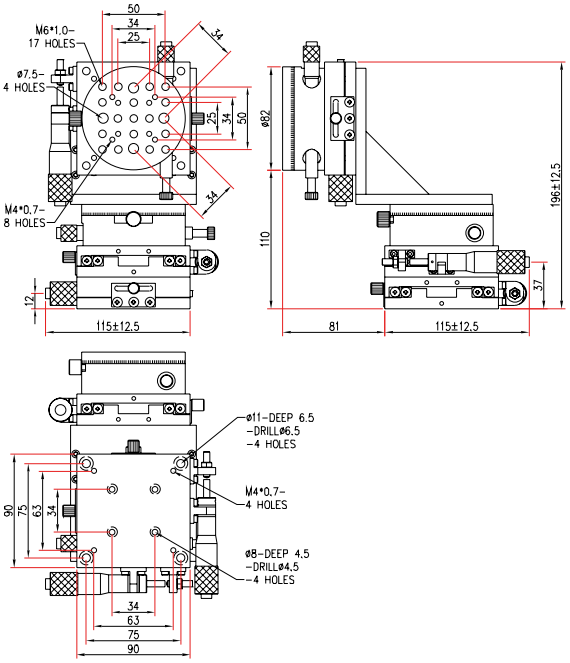
CR34A



Precision, Modular Platform - XYZθxθz (CR54A)

- Linear roller bearing guided in double V-grooves for X/Y/Z translation provides smooth and accurate motion.
- Utilization of precision roller bearing for θz/θx rotation provides excellent stability.

CR54A



Model	CR54A	CR34A
Travel Range	θx=θz=360°±10°; X=Y=25mm	θz=360°±10°; X=Y=25mm
Resolution	θx =θz =1'	θz =1'
	X=Y=0.01mm	X=Y=0.01mm
Deviation	0.1' ; 0.01 mm	
Load Capacity	200g	5kg
Platform Size	φ82mm	φ82mm
Weight	3.5kg	1.9kg

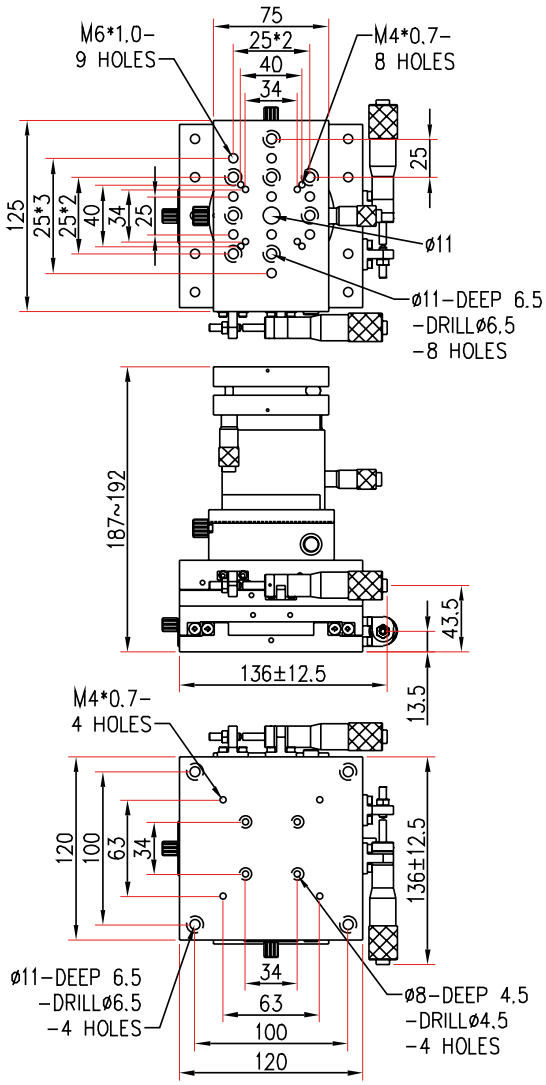
PRECISION MODULAR PLATFORM-XYZ θ TxTy

CP56A

- Linear roller bearing guided in double V-shaped grooves for X/Y/Z translation provides smooth and accurate motion.
- Utilization of precision roller bearing for a rotary motion provides excellent stability.
- Fine adjustment with micrometer design for tilt (T) direction provides high stability and accuracy.
- Compatible to C-series products, fit to various applications.

Model	CP56A
Travel Range	25 mm XY, 5 mm Z 360° θ,10° T
Resolution	1' ; 0.01 mm
Deviation	0.1' ; 0.01 mm
Load Capacity	5 kg
Platform Size	75X125 mm^2
Weight	3.2 kg

CP56A



CHAPTER 5 OPTO-MECHANICS

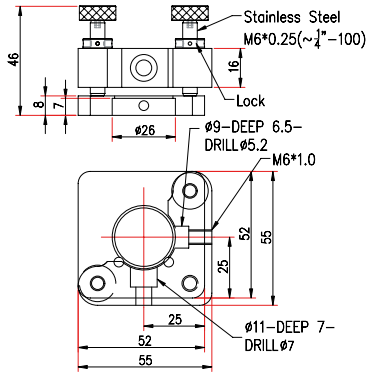
PRECISION OPTICS MOUNTS-Φ1”

The DM01 series mirror mounts feature the design of cone, V-groove and flat to provide true kinematic operation. Angular adjustment is driven with proprietary ULSTRA® stainless-steel actuators and can achieve 10° range in highly smooth and stable movement. Optics are mounted with three Teflon contacts free from stress and damage.

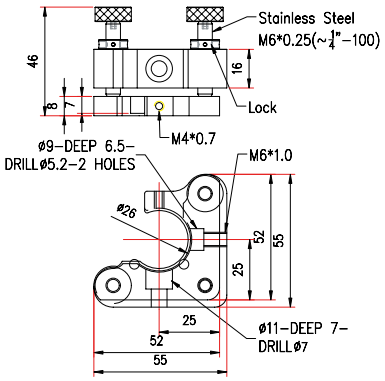
- DM01A and DM01C are standard 1” mirror mounts without/with clear quadrant. Both they have one Teflon-tipped setscrew and two Teflon pads to gently hold your optics.
- DM01R is retaining-ring version of DM01A.

Model	DM01A DM01A-K	DM01C DM01C-K	DM01R DM01R-K	DM01L DM01L-K
Holding Size	Φ25.0mm			
Micro screw	M6*0.25(100 Pitch/inch)			
Travel Range	± 3.5°			

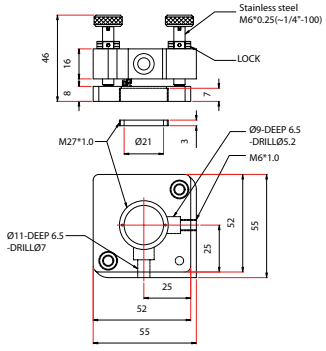
DM01A



DM01C



DM01R



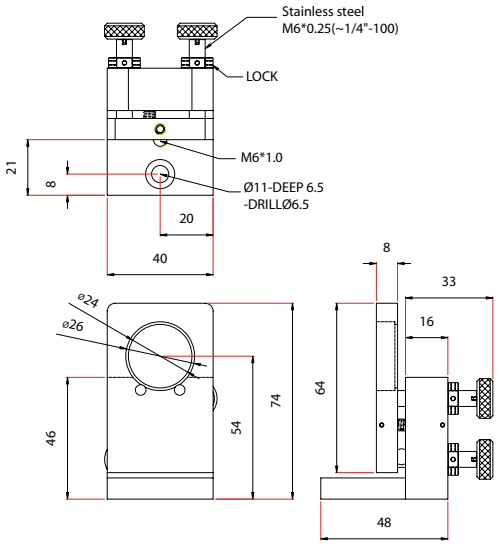
Allen-key version mirror mounts available.
Add”-K” in model number to specify this option.

Onset’s proprietary ULSTRA® stainless-steel actuators provide exceptional smooth and stable adjustment to meet varius tough demands. The 100-pitch threads are precisely machined to mate with an stainless-steel collet in 19 millimeters .With specially designed lubricant, these actuators provide even more smooth and precision movement with long-term stability and high durability. Onset offers two types of stainless-steel actuators; one is the standard adjustment screw, coming with knob. for sensitive adjustment by your finger-tips; the other is hex-head type for allen-key adjustment, add-K to the model number.

PRECISION PRECISION OPTICS MOUNTS-Φ1”

DM01L has its aperture shifted upward to allow light to pass without obstruction. It accommodates 0.5” optics.

DM01L

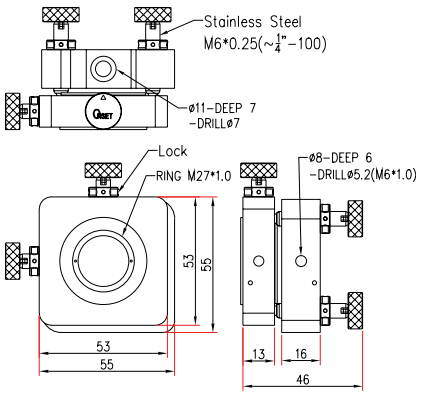


DHS01A has additional x/y positional features.

- It accommodates 1” optics.
- The optics are secured by the retaining.

Model	DHS01A DHS01A-K
Travel Range	+ - 1.5 mm
Holding size	25.0 mm
Micro screw	M6*0.25 (100 pitch / inch)
Travel Range	± 3.5°

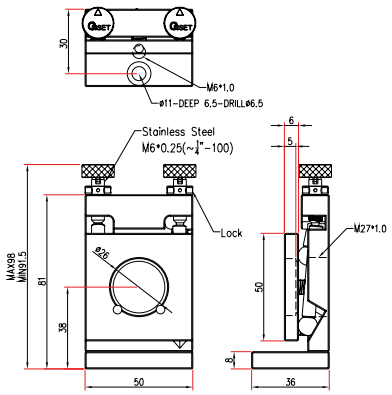
DHS01A



Model	DMV01A DMV01A-K
Holding size	25.0 mm
Micro screw	M6*0.25 (100 pitch / inch)
Travel Range	± 3.5°

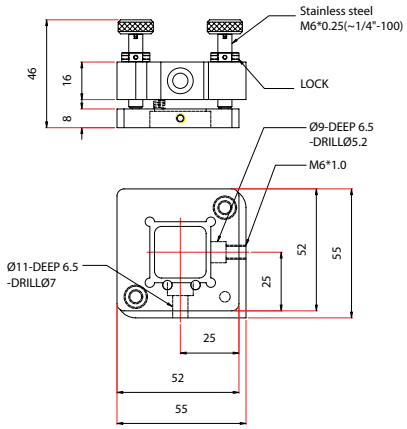
Specail vertical drives design keep the beam path clear and more sensitivity

DMV01A



Model	DM01Q DM01Q-K
Holding size	SQ. 25.0*25.0mm
Micro screw	M6*0.25 (100 pitch / inch)
Travel Range	± 3.5°

DM01Q



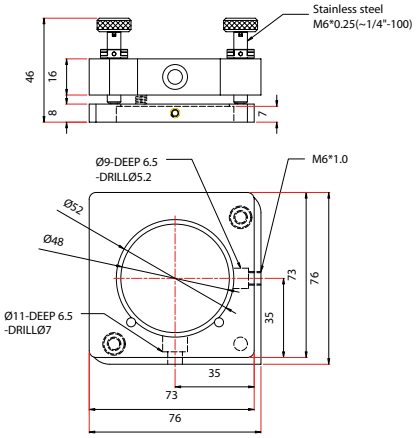
CHAPTER 5 OPTO-MECHANICS

PRECISION OPTICS MOUNTS-Φ2”

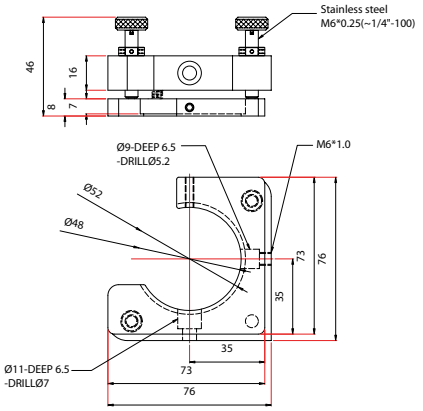
The DM02 series mirror mounts feature the design of cone, V-groove and flat to provide true kinematic operation. Angular adjustment is driven with proprietary ULSTRA® stainless-steel actuators and can achieve 10° range in highly smooth and stable movement. Optics are mounted with three Teflon contacts free from stress and damage.

Model	DM02A DM02A-K	DM02C DM02C-K	DM02R DM02R-K
Holding Size	Φ50.0mm		
Micro screw	M6*0.25(100 Pitch/inch)		
Travel Range	± 3.5°		

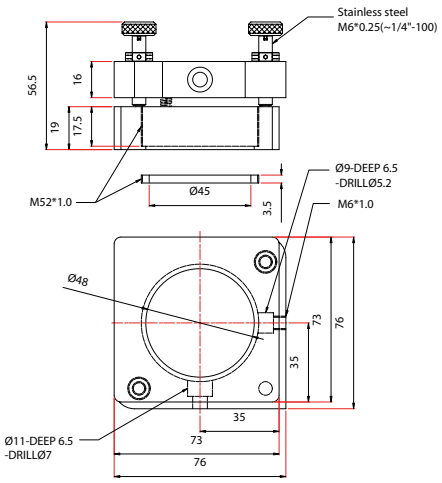
DM02A



DM02C



DM02R



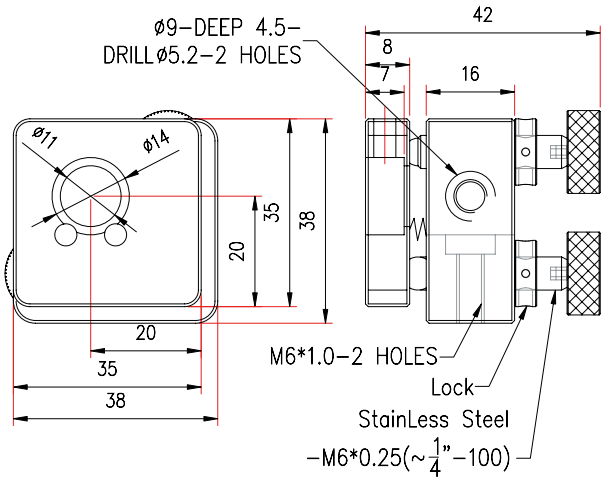
Allen-key version mirror mounts available.
Add”-K” in model number to specify this option.

PRECISION OPTICS MOUNTS-Φ0.5”

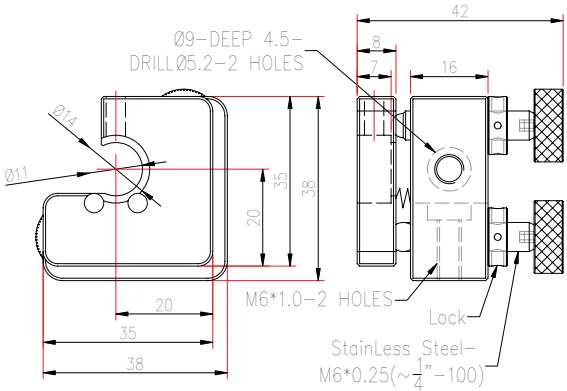
The DM005 series mirror mounts feature the design of cone, v-groove and flat to provide true kinematic operation. Angular adjustment is driven with proprietary stainless-steel actuators and can achieve 10° range in highly smooth and stable movement. Optics are mounted with three Teflon contacts free from stress and damage.

Model	DM005A	DM005C
Holding Size	Φ12.5mm	Φ12.5mm
Micro screw	M6*0.25(100 Pitch/inch)	
Travel Range	± 3.5°	

DM005A



DM005C



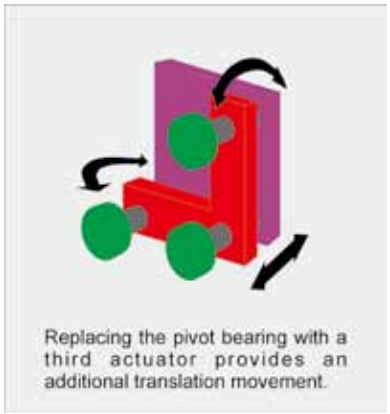
PRECISION THREE-ACTUATOR OPTICS MOUNTS-Φ1”

Replacing the pivot bearing with a third actuator provides an additional translation movement DMT01A and DMT01C are standard 1” mirror mounts without/with clear guadrant. Both they have one Teflon-tipped setscrew and two Teflon pads to gently hold your optics.

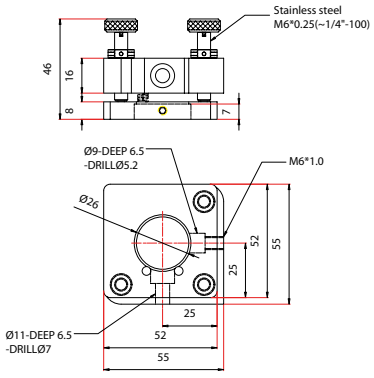
Angular adjustment can achieves 10° in three directions.

DMT01R includes retaining ring with protective rubber washer to mount optics.

Model	DMT01A DMT01A-K	DMT01C DMT01C-K	DMT01R DMT01R-K
Holding Size	Φ25.0mm		
Micro screw	M6*0.25(100 Pitch/inch)		
Travel Range	± 3.5°		

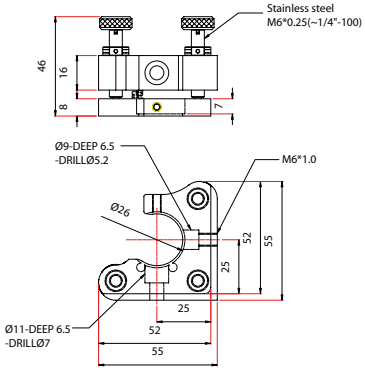


DMT01A

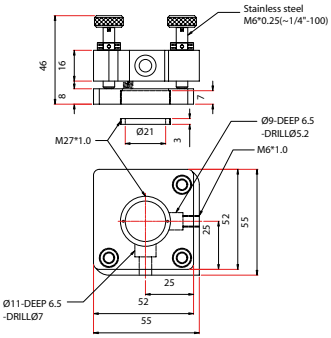


Allen-key version mirror mounts available.
Add”-K” in model number to specify this option.

DMT01C



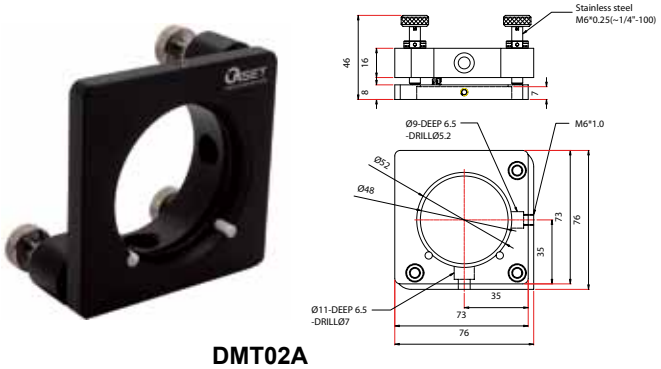
DMT01R



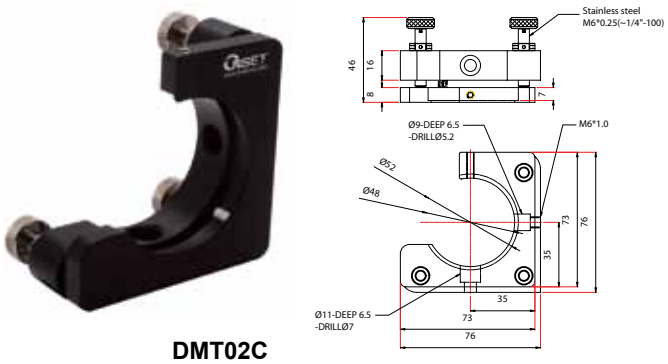
PRECISION THREE-ACTUATOR OPTICS MOUNTS-Φ2”

The DMT02 series mirror mounts feature the design of cone, V-groove and flat to provide true kinematic operation. Angular adjustment is driven with proprietary ULSTRA® stainless-steel actuators and can achieve 10° range in highly smooth and stable movement. Optics are mounted with three Teflon contacts free from stress and damage.

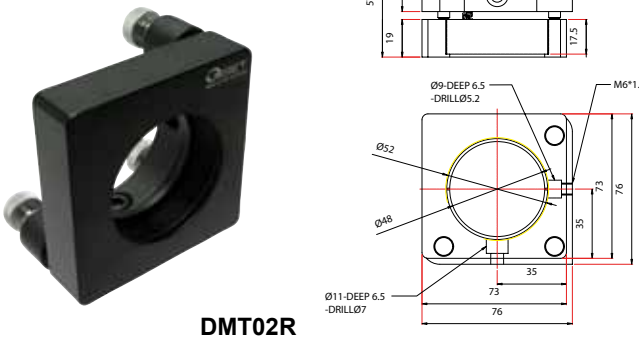
Model	DMT02A DMT02A-K	DMT02C DMT02C-K	DMT02R DMT02R-K	DFQ02
Holding Size	Φ50.0mm			SQ. 50.0*50.0mm
Micro screw	M6*0.25(100 Pitch/inch)			
Travel Range	± 3.5°			



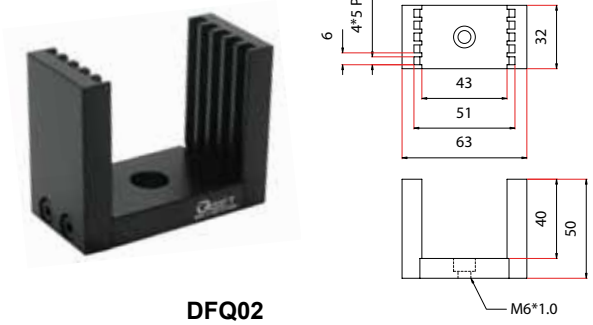
DMT02A



DMT02C



DMT02R



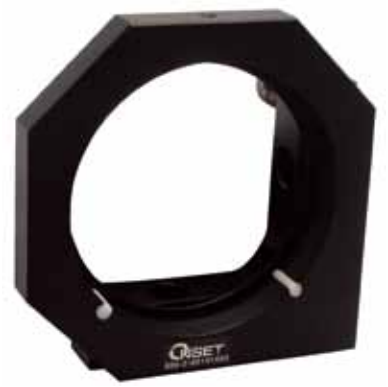
DFQ02

CHAPTER 5 OPTO-MECHANICS

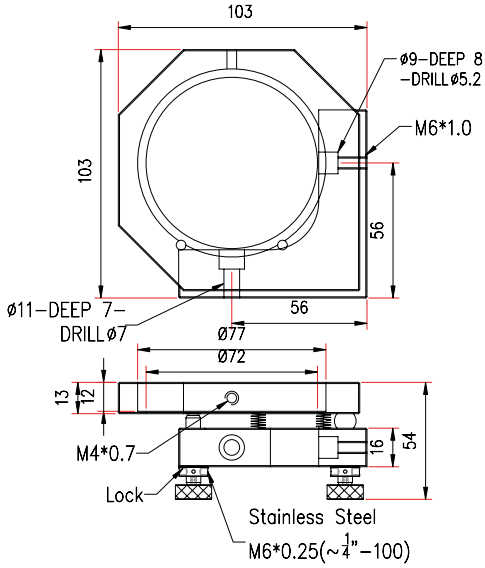
PRECISION OPTICS MOUNTS-Φ3",Φ4"

The DM03(4)E series mirror mounts feature the design of cone, V-groove and flat to provide true kinematic operation. Angular adjustment is driven with proprietary ULSTRA® stainless-steel actuators and can achieve 10° range in highly smooth and stable movement. Optics are mounted with three Teflon contacts free from stress and damage.

Model	DM03E-N	DM04E-N
Holding Size	Φ75mm	Φ100mm
Micro screw	M6*0.25(100 Pitch/inch)	
Travel Range	± 3.5°	



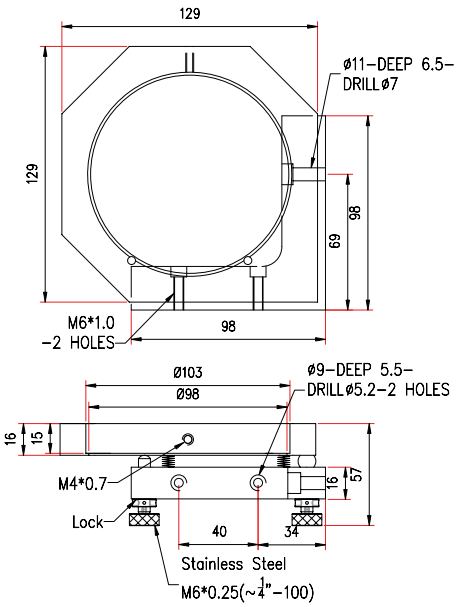
DM03E-N



Allen-key version mirror mounts available.
Add"-K" in model number to specify this option.

- Angular adjustment driven by precision-machined thumbscrews achieves 6°.
  Optics are mounted with three Teflon contacts free from stress and damage.

DM04E-N

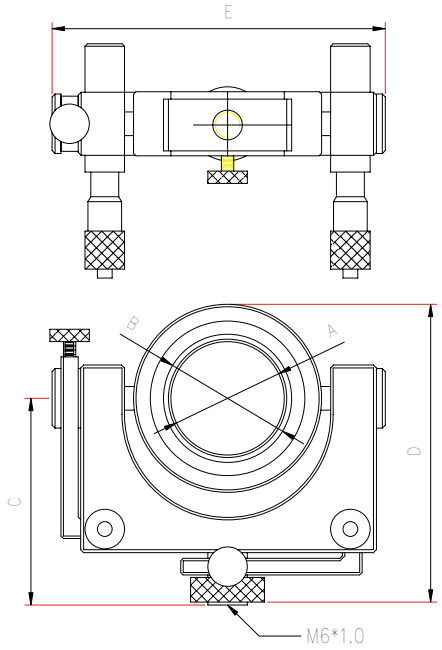


PRECISION GIMBAL MOUNT

DG01A ~ DG04A

- Continuius free rotation over 360°, with fine tuning of 4°.
- Gimbal dessign provides non-couped angular adjustment.

DG01A~DG01A



Model	DG01A	DG02A	DG03A	DG04A
Holding Size	Φ25mm	Φ50mm	Φ75mm	Φ100mm
Adjustable Range	360°, free 4°, Micrometer			

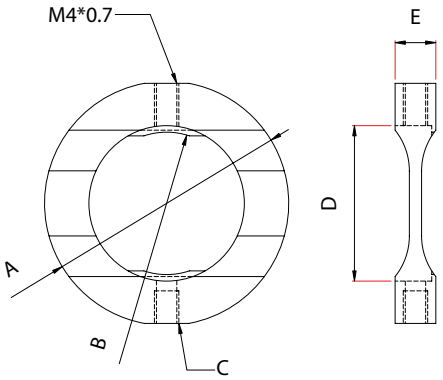
	A	B	C	D	E
DG01A	Ø21	M27*1.0	62	87	87
DG02A	Ø46	M52*1.0	84	124	138
DG03A	Ø70	M77*1.0	98	148	163.5
DG04A	Ø94	M102*1.0	108	172	188.5

WIDE ANGLE BEAMSPLITTER MOUNT

DS02

DS01

Side View of DS01 and DS02



Model	DS01	DS15	DS02
A	Ø44	Ø60	Ø65
B	Ø23	Ø35	Ø48
C	M4*0.7	M6*1.0	M6*1.0
D	Ø25.5	Ø38.2	Ø51
E	8	10	10

R.O.C. Patent number: M298714

Model	Holding Size
DS01	Φ25 mm
DS02	Φ50 mm

CHAPTER 5 OPTO-MECHANICS

ADJUSTABLE OPTICS MOUNT

DAM01B

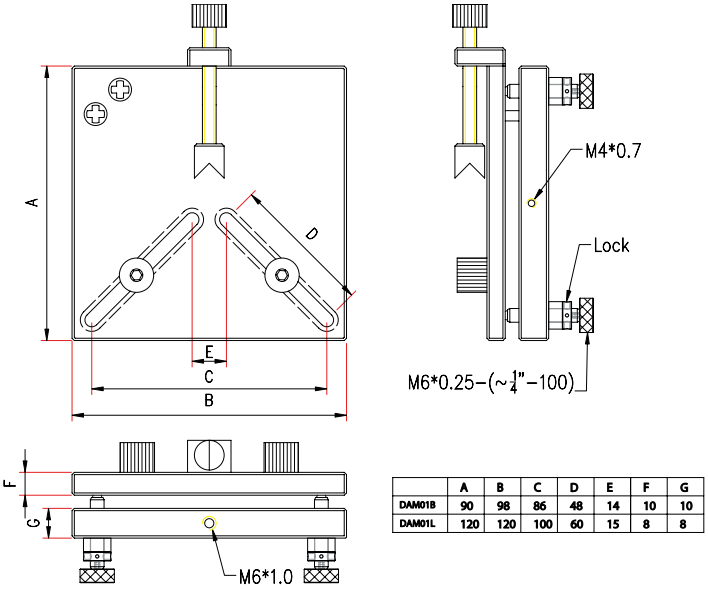
- Optics are mounted with three Teflon contacts free from stress and damage.
- Suitable for various shape.

DAM01B & DAM01L

Pad points can be adjusted to accommodate large size mirrors.

Model	Holding Size
DAM01B	Φ18-Φ60 mm
DAM01L	Φ20-Φ90 mm

DAM01B



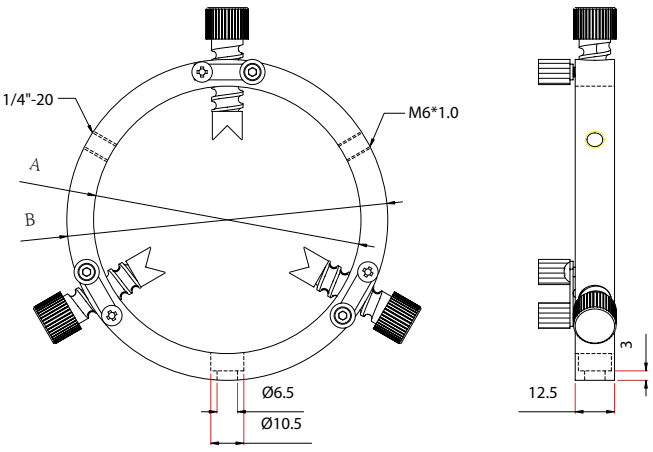
	A	B	C	D	E	F	G
DAM01B	90	98	86	48	14	10	10
DAM01L	120	120	100	60	15	8	8

DAC01 & DAC01L

- DAC01 series Lens holders features three adjustable Teflon setscrew to accommodate variable diameter lenes.
- DAM01 series holder hold variable diameter and almost any shape optics a with a spring-loaded adjustable height setscrew on bottom V-groove.

Model	Holding Size
DAC01	Φ25-Φ50 mm
DAC01L	Φ50-Φ70 mm

DAC01



	A	B
DAC01	Ø58	Ø75
DAC01L	Ø85	Ø102

ADJUSTABLE LENS HOLDER

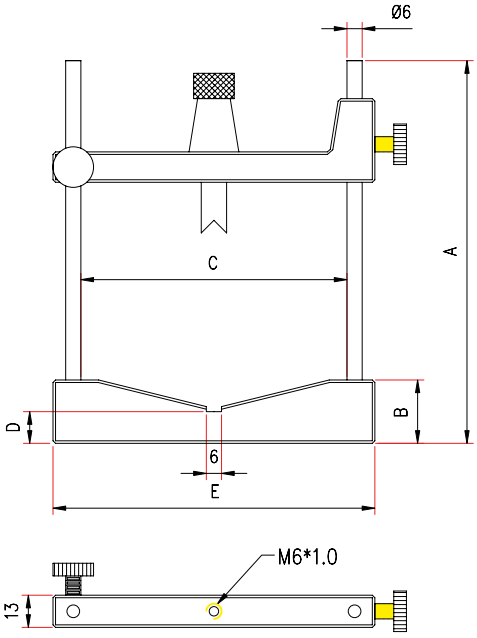
The spring-loaded design gently holds the optics and ensure the optics would be damaged by excessive force,two stainless-steel rods provides rigid and non-abrasive guide.

DA01

DA01L

DA01S

Model	Holding Size
DA01L	10-100 mm
DA01	5-75 mm
DA01S	5-50 mm



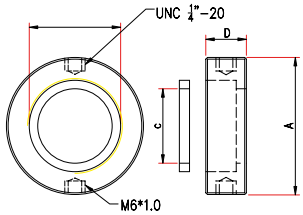
	A	B	C	D	E
DA01L	150	25	105	13.5	127
DA01	126	25	80	12	102
DA01S	100	19	54	13.5	76

Lens Mounting Ring (DR01~DR06)

- Threaded holder with retaining ring and retaining ring with protective rubber washer.
- To gently hold the optics.

Model	Holding Size
DR005	Φ13 mm
DR01	Φ25 mm
DR15	Φ38 mm
DR02	Φ50 mm
DR03	Φ75 mm
DR04	Φ100 mm
DR05	Φ125 mm
DR06	Φ150mm

DR01~DR06



	A	B	C	D
DR005	30	M14*1.0	8	10
DR01	44	M27*1.0	21	12
DR15	60	M39*1.0	32	12
DR02	65	M52*1.0	45	14
DR03	96	M78*1.0	68	15
DR04	121	M102*1.0	94	15
DR05	152	M129*1.0	119	18
DR06	190	M160*1.0	145	20

CHAPTER 5 OPTO-MECHANICS

PRECISION PRISM TABLE

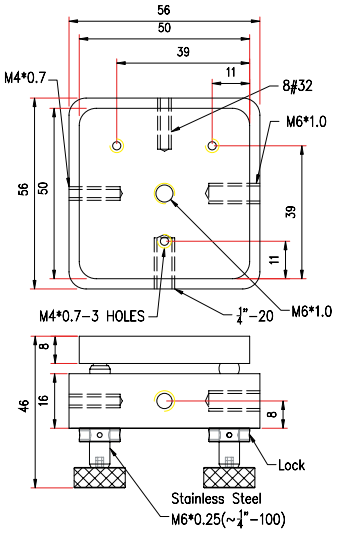
Angular adjustment is driven with proprietary stainless-steel actuators and achieves 10° tilt range in high smooth and stable movement.

DP01A features L-retaining design, convenient to use.

Model	DP01A DP01A-K	DP01L DP01L-K
Holding Size	50*50mm^2	38*38*38mm^3
Micro screw	M6*0.25(100 Pitch/inch)	
Adjustable Range	10°	

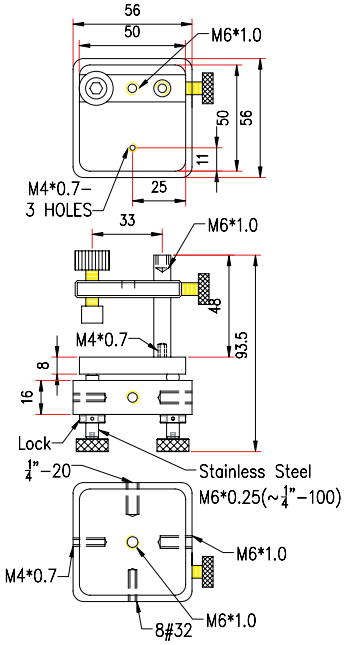
Allen-key version mounts available.
Add"-K" in model number to specify this option.

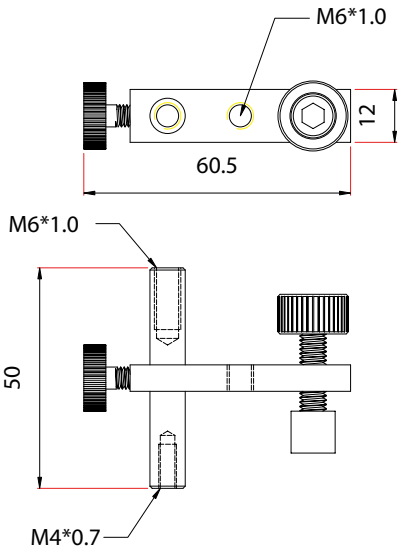
DP01A



EBC07

DP01L





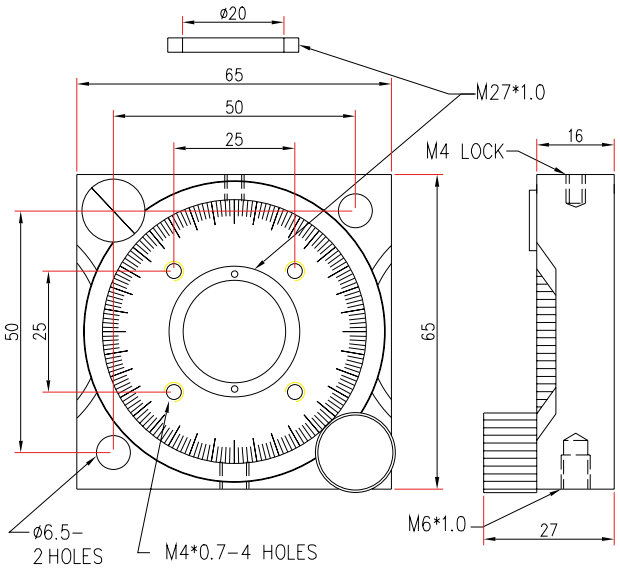
POLARIZER HOLDER

CR04D

- Special bearing design provides highly stable motion.
- Reading in unit of 1° provides accurate angular positioning.
- This stage accommodates 1 inch (25 mm) optics.
- Lockscrew design.

Model	CR04D
Travel Range	360° coarse
Load Capacity	2 kg
Hold Size	Φ 25 mm
Weight	0.20kg

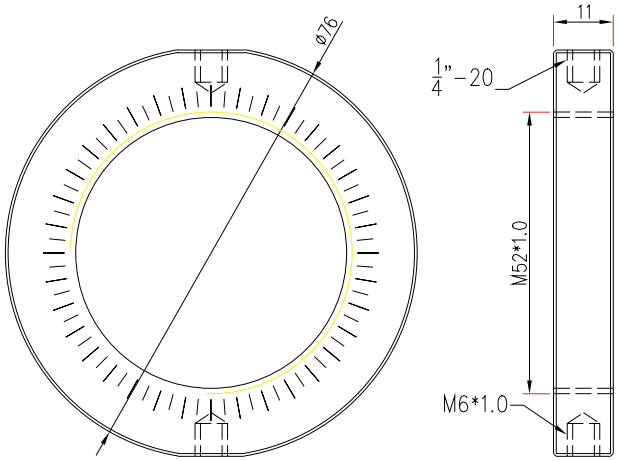
CR04D



DH01

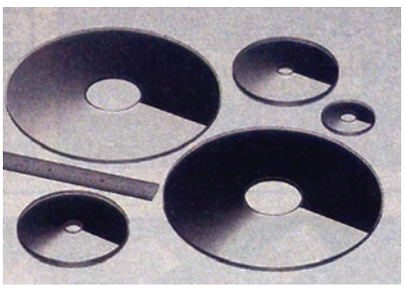
- 360° indication in 1° unit is precisely engraved at both sides.

DH01



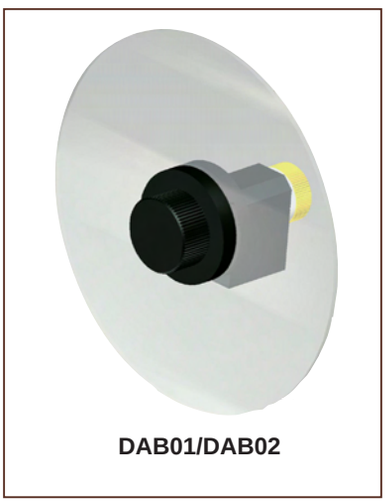
CHAPTER 5 OPTO-MECHANICS

CIRCULAR FILTER MOUNT



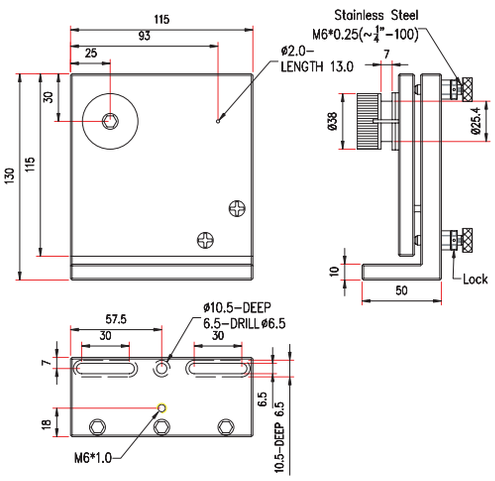
Special design for circularly variable attenuation filters and beamsplitters, with 1" inner diameter.

Model	Holding Size
DAB05	Φ50-125 mm outer Φ25.4mm inner
DAB01	Φ50-100 mm outer Φ25.4mm inner
DAB02	Φ25.4-50 mm outer Φ7.5mm inner

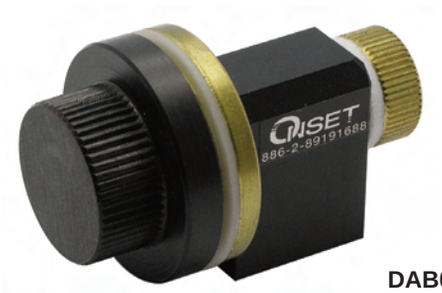


DAB01/DAB02

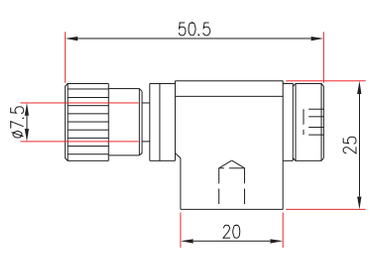
DAB05

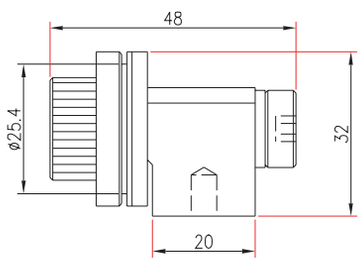


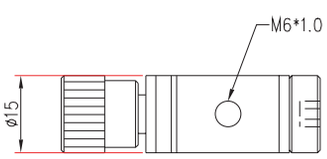
DAB02

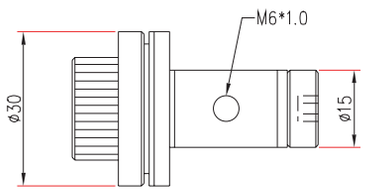


DAB01





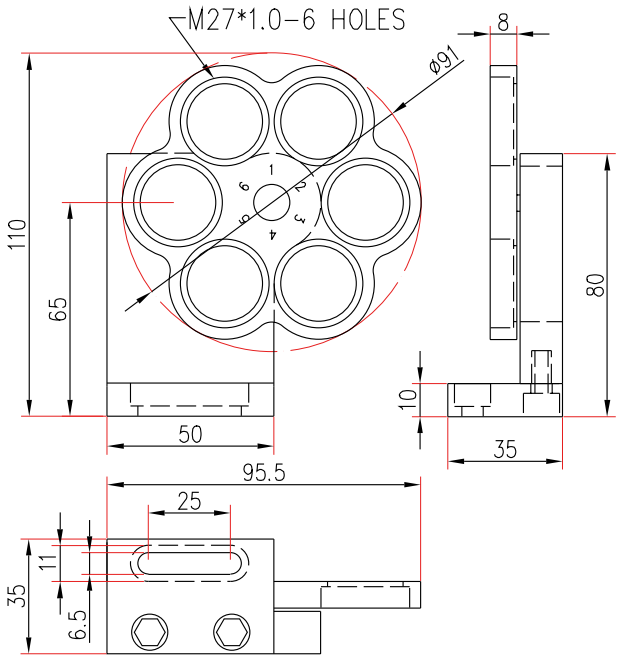




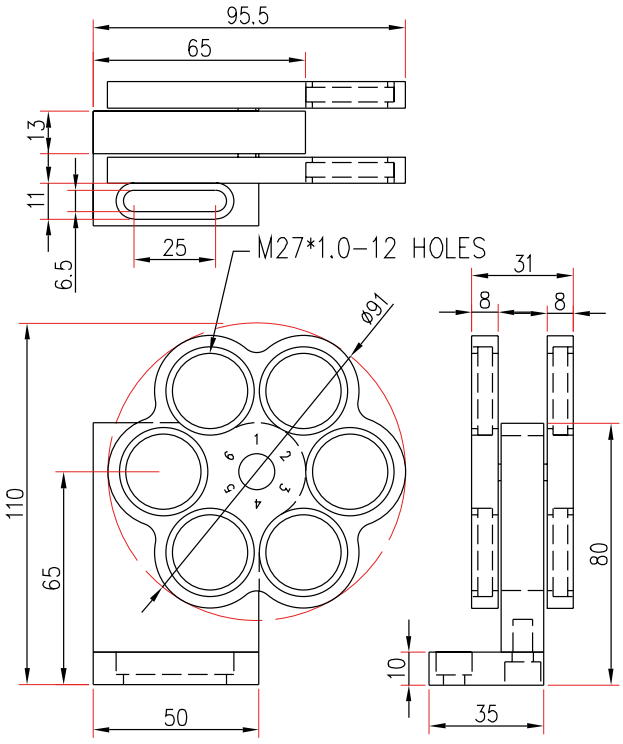
FILTER WHEELS

- DW01 accepts six one-inch optical filters; DW02 accepts twelve one-inch filters
- Optics are held by retaining rings with protective rubber washers.
- Multiple through-hold design renders all six apertures useable.

DW01



DW02



CHAPTER 5 OPTO-MECHANICS

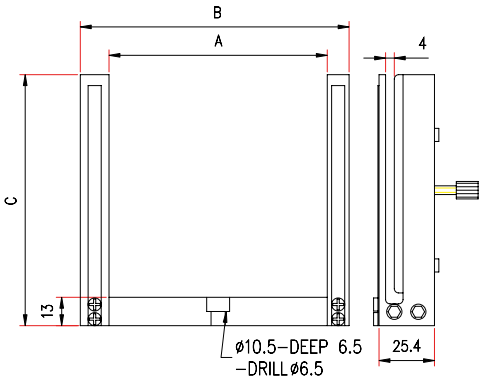
PLATE HOLDER

Dual type design: the front side is for flexible sheet plate, while the back side is for thick optics.

Model	Holding Size
DPH01	100*125 mm^2
DPH01S	50*50 mm^2

DPH01

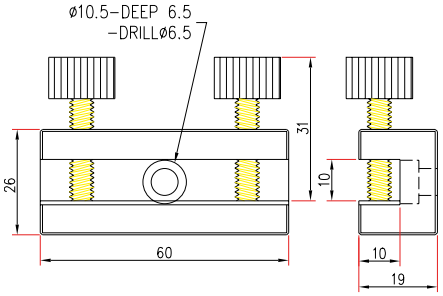
DPH01S



Model	A	B	C
DPH01	100	122	115
DPH01S	34	56	60

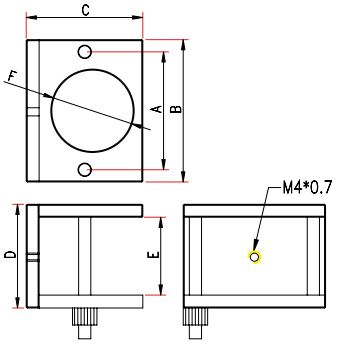
Model	DPH04S	DPH06S	DPH06
Holding Size	0-10mm	25*25mm^2	50*50mm^2

DPH04S



DPH06 & DPH06S

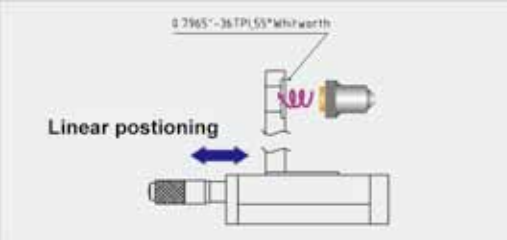
Convenient design with a fix plate and a sliding plate to hold various optics quick manner.



Model	A	B	C	D	E	F
DPH06	58	70	57.5	51	0~38	Ø41
DPH06S	32	45	32	32	0~19	Ø20

MICROSCOPE OBJECTIVE HOLDERS

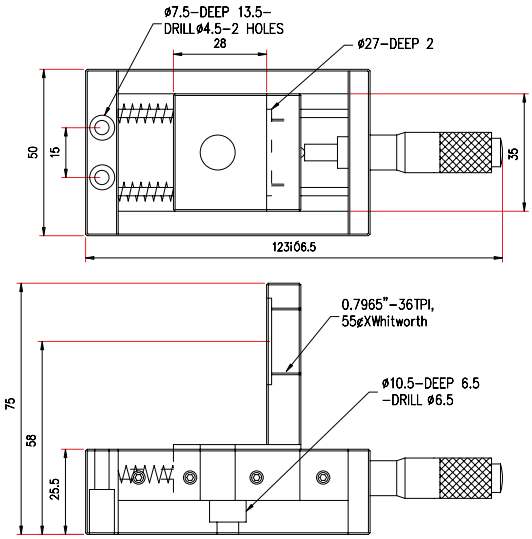
EMA01T includes a micrometer that gives fine adjustment.



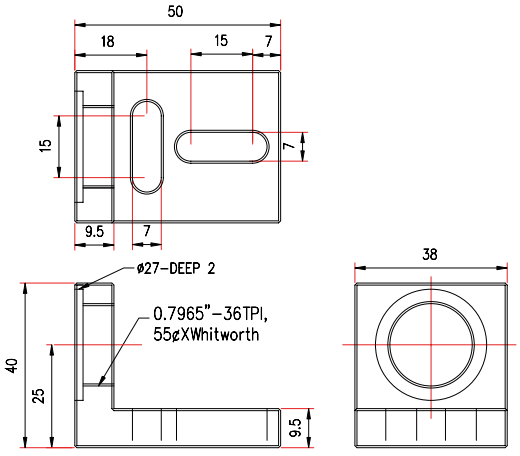
Design for 0.7965”-36TPI, whitworth objective.

Model	ES01A
Resolution	0.01 mm
Deviation	< 5 μm

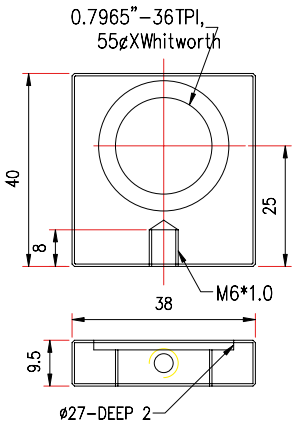
EMA01T



EMA01



EMA01S



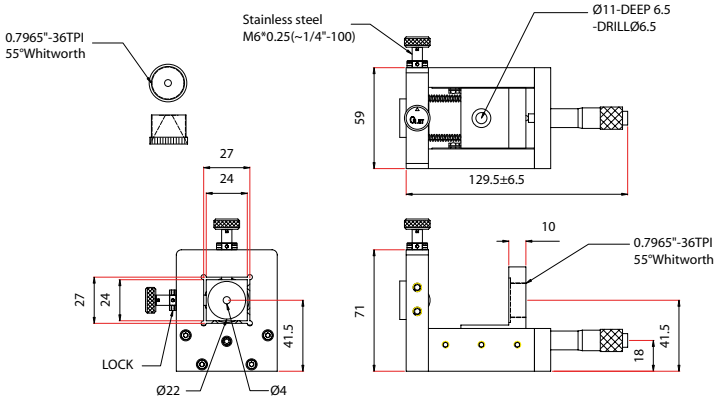
CHAPTER 5 OPTO-MECHANICS

PRECISION SPATIAL FILTERS

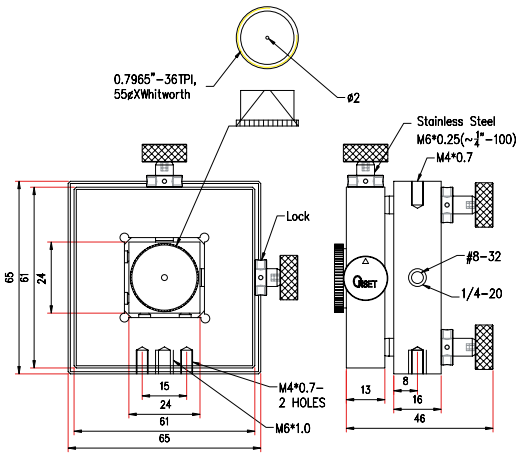
- Linear roller bearing in V-shaped guide and hardened ground steel rod design provide especially stable and accurate motion.
- Pin hole is positioned in both X/Y directions, driven with two precision-machined screws, easy to operate.

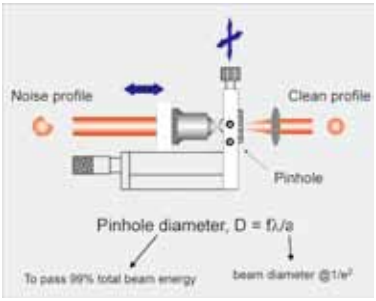
Model	ES01A
Resolution	0.01 mm
Deviation	< 5 μm

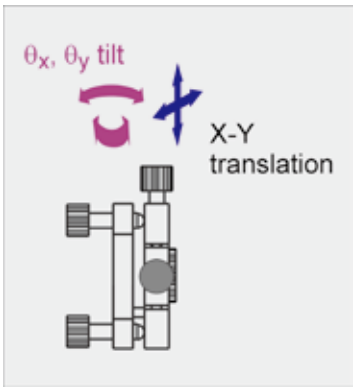
ES01A



ES01T

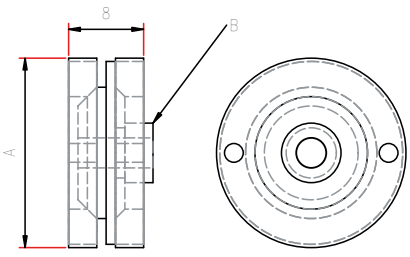






Allen-key version mounts available.
Add"-K" in model number to specify this option.

- FC or SMA Fiber Adaptors are Available
- Both ES01A and ES01T go with Pinhole Mount and Fiber Adaptors, Model EE-SMA, EE-FC, EM-SMA and EM-FC



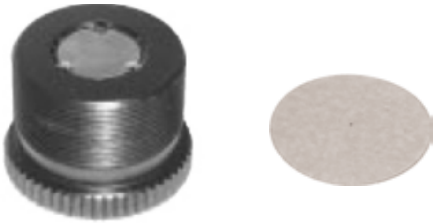
Model	EE-SMA	EE-FC	EM-SMA	EM-FC
A	0.8"-36TPI	0.8"-36TPI	M27X1.0	M27X1.0
B	SMA Connector	FC Connector	SMA Connector	FC Connector

LASER PINHOLES

Precision Pinholes

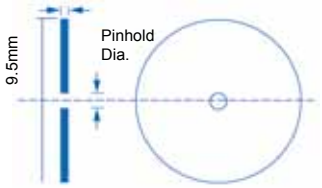
Stainless Steel, 3/8" (9.5mm) Dia., high quality aperture centered to ±0.002" (50 micron). Typical applications include leak detection, aerosol studies, laser aperturing, holography, fiber optics guides, spatial filtering, and research.

Model No.	Diameter	Tolerance	Thickness
IP001	1μm	±1/2μm	0.0005”
IP002	2μm	±1/2μm	0.0005”
IP005	5μm	±1μm	0.0005”
IP008	8μm	±1μm	0.0005”
IP010	10μm	±1μm	0.0005”
IP012	12.5μm	±5μm	0.0005”
IP015	15μm	±5μm	0.0005”
IP020	20μm	±5μm	0.0005”
IP025	25μm	±5μm	0.0005”
IP035	35μm	±5μm	0.001”
IP050	50μm	±5μm	0.001”
IP100	100μm	±5μm	0.001”
IP200	200μm	±5μm	0.001”
IP300	300μm	±5μm	0.001”
IP400	400μm	±5μm	0.001”
IP500	500μm	±5μm	0.001”
IP600	600μm	±5μm	0.001”
IP800	800μm	±5μm	0.001”
IP900	900μm	±5μm	0.001”
IP1000	1000μm	±5μm	0.001”



EPH01

Thickness



High Power Apertures

Gold plated copper disc, 3/8" (9.5mm) Dia., aperture is centered to ±0.005". Specifically used for laser aperturing of Nd:YAG and CO_2 lasers. One side of aperture is gold on polished copper for high reflectivity. The aperture thickness can withstand and quickly dissipate increased irradiation from high energy lasers. Densities as high as 100MW/cm^2 have been used without damage to the aperture-making it the best to hold off laser power for aperturing and spatial filtering.

Model No.	Diameter	Tolerance	Thickness
IPH005	5μm	±10%	0.0005”
IPH010	10μm	±10%	0.0005”
IPH025	25μm	±10%	0.0005”
IPH035	35μm	±10%	0.0005”
IPH050	50μm	±10%	0.0005”
IPH100	100μm	±5%	0.0005”
IPH200	200μm	±5%	0.0005”
IPH500	500μm	±5%	0.0005”
IPH1000	1000μm	±5%	0.0005”

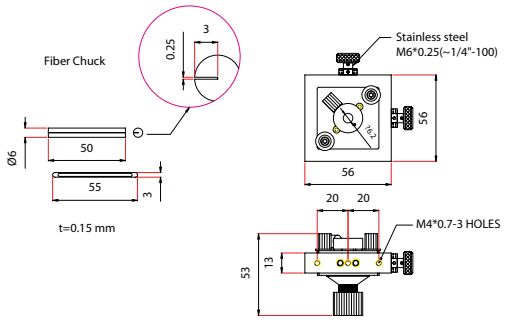
CHAPTER 5 OPTO-MECHANICS

PRECISION FIBER COUPLERS

Miniature design with X/Y positioning, especially suitable for precision fiber coupling.
Equipped with fiber chuck designed to hold bare optical fibers with a cladding diameter of 150 μm.

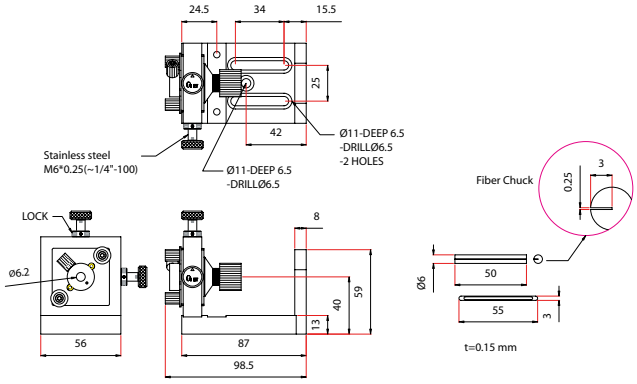
Model	EF01 EF01-K	EF01A EF01A-K	EF01T EP01T-K	EF01AT EF01AT-K
Mirco Screw	M6*0.25, 100 pitch			
Fiber Chuck	150 μm cladding diameter			

EF01



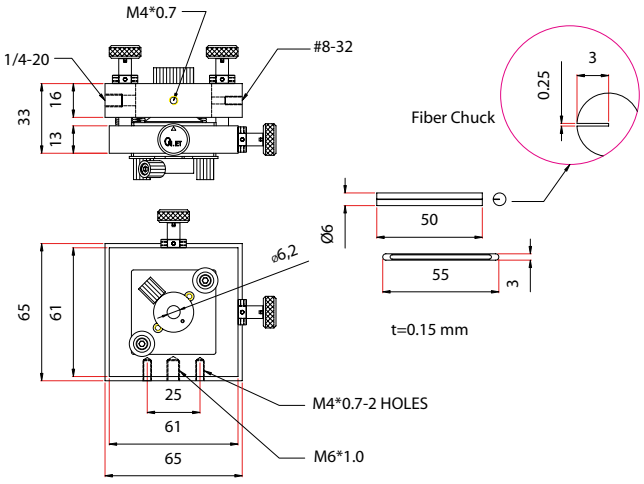
Allen-key version mounts available.
Add"-K" in model number to specify this option.

EF01A

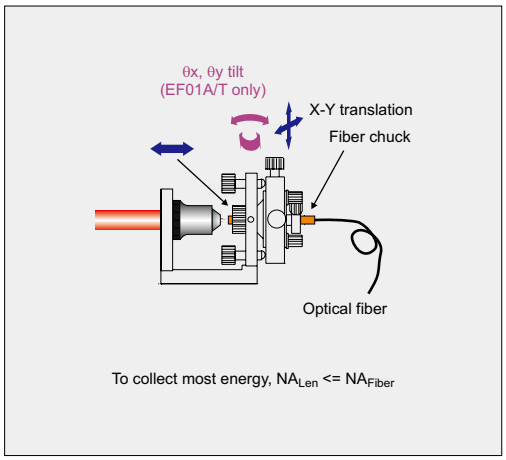


- Miniature design with four-axis positioning, especially suitable for precision fiber coupling.
- Equipped with fiber chuck designed to hold bare optical fibers with a cladding diameter of 150 μm.

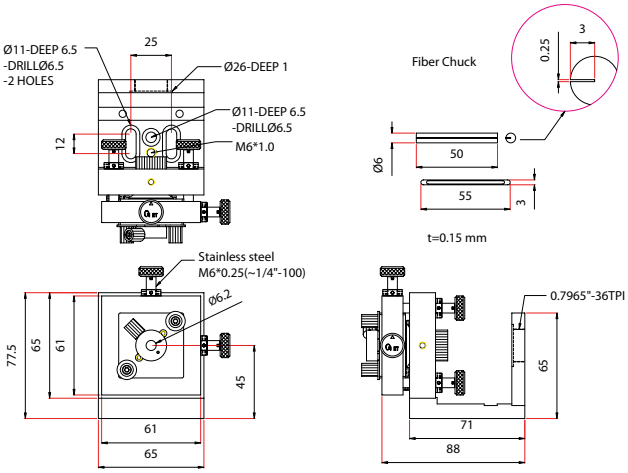
EF01T



Allen-key version mirror mounts available.
Add"-K" in model number to specify this option.



EF01AT

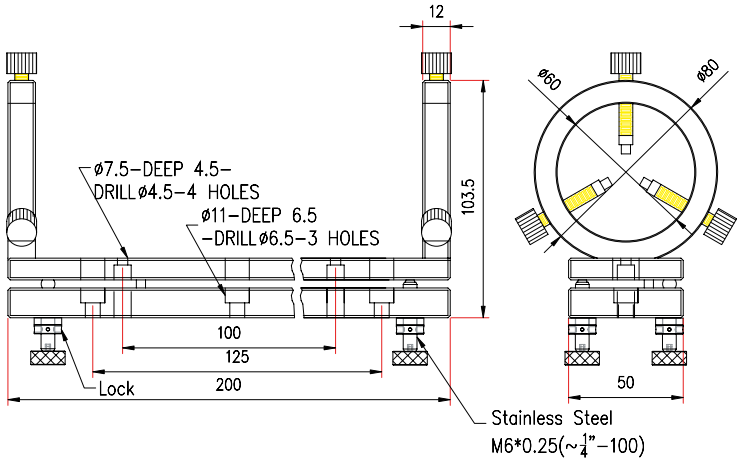


CHAPTER 5 OPTO-MECHANICS

LASER MOUNTS

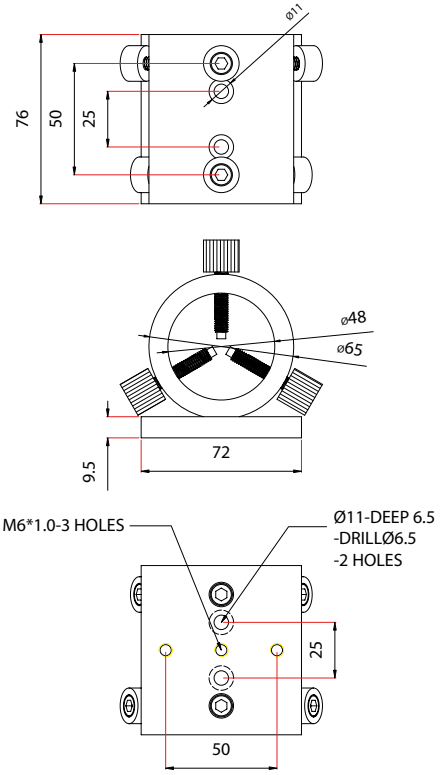
- The angular adjustment up to 10° with 100 pitch screws achieve high stability.
- EL01 series laser mounts provide a convenient way to hold cyliudrical lasers.
- For EL01A, laser is held by two sets of Teflon-tipped setscrews in surrounding rings on two side.

EL01A



EL01S directly locks the laser with two Teflon-tipped setscrews.

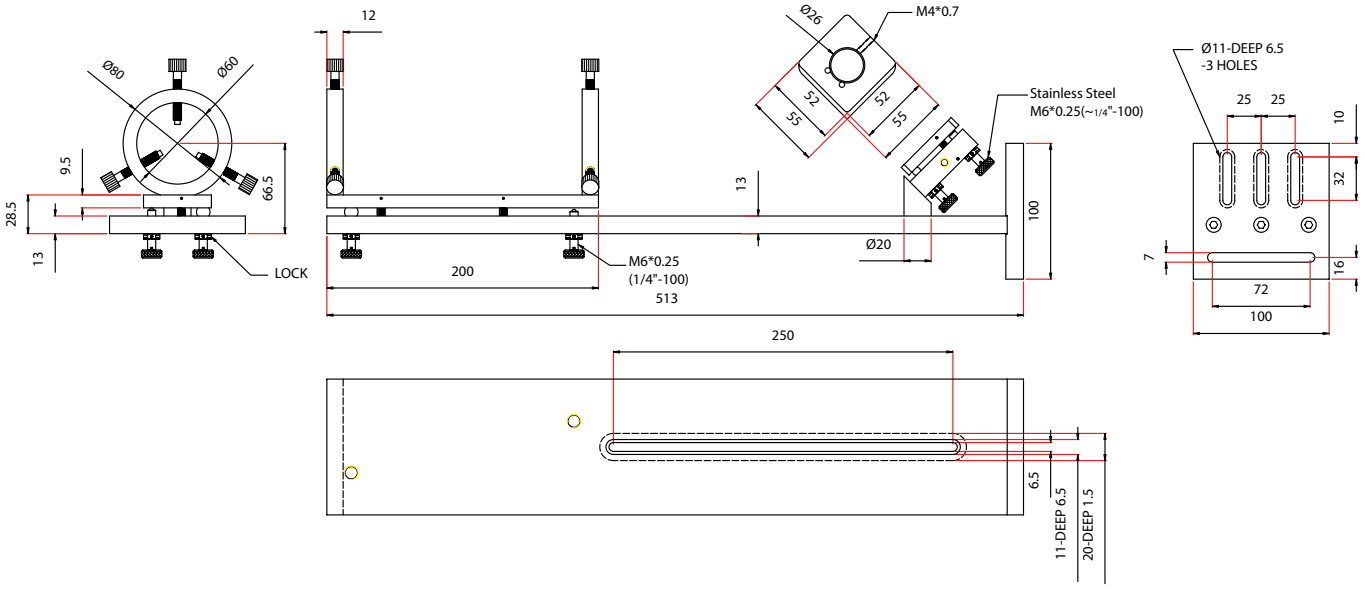
EL01S



Model	Holding Size	Holding Length
EL01A	<Φ 60mm	>100mm
EL01S	Φ6 ~Φ 48mm	>76mm
EL01V	<Φ 60mm	>100mm

- EL01V holds the laser head is a standing manner to save the table space. The laser beam is steered to your application with a 45° positioned mirror mount.

EL01V



CHAPTER 5 OPTO-MECHANICS

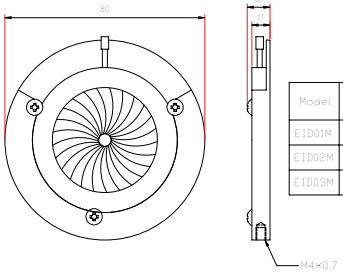
IRIS DIAPHRAGM

EID01M~EID03M

Ring holder provides rigid mounting.

Model	EID01M	EID02M	EID03M
Size	Φ 44mm	Φ 65mm	Φ 80mm
Aperture	0.8-18 mm	1.0-34 mm	1.2-42 mm

EID03M EID02M EID01M



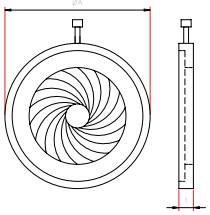
Model	MAX. Aperture	MIN. Aperture	ØA	t1	t2
EID01M	18mm	1.0mm	44mm	6.0mm	8.0mm
EID02M	34mm	2.0mm	65mm	6.0mm	9.0mm
EID03M	42mm	1.2mm	80mm	7.25mm	9.5mm

EID01S-EID03

These series of Iris diaphrams are held with a post to give a smaller profile.

Model	EID01S	EID01	EID02	EID03
Size	Φ 15mm	Φ28mm	Φ 49mm	Φ 58mm
Aperture	0.7-8 mm	0.8-18 mm	1.0-34 mm	1.2-42 mm

EID01S EID01 EID02 EID03



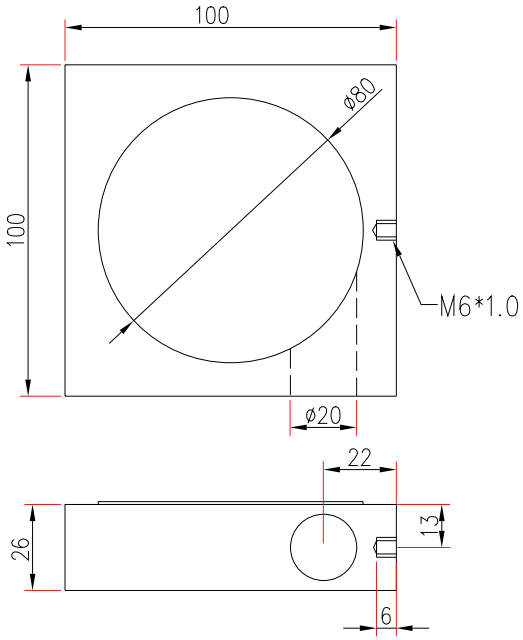
Model	MAX. Aperture	MIN. Aperture	ØA	t	Pin Dia. * Length
EID01S	8mm	1.0mm	15mm	5.4mm	1.5*5
EID01	18mm	1.0mm	28mm	5.0mm	3*13
EID02	34mm	2.0mm	49mm	6.5mm	3*13
EID03	42mm	1.2mm	58mm	6.5mm	3*12

BEAM DUMP

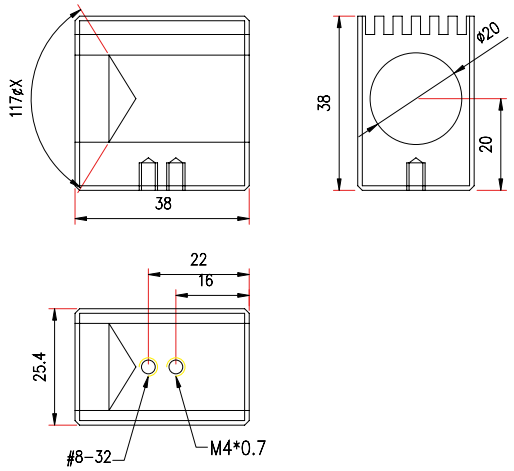
EPD01 is suitable for high-power lasers.

Model	Size	Aperture
EPD01	100*100*26 mm^3	Φ20 mm
EPD01S	40*38*25.4 mm^3	Φ20 mm

EPD01



EPD01S



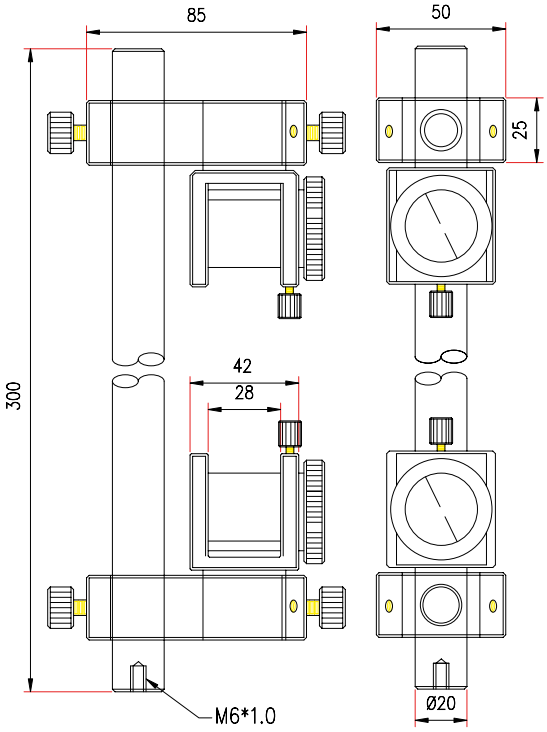
CHAPTER 5 OPTO-MECHANICS

BEAM STEERER

EB01

- Free rotation to any direction

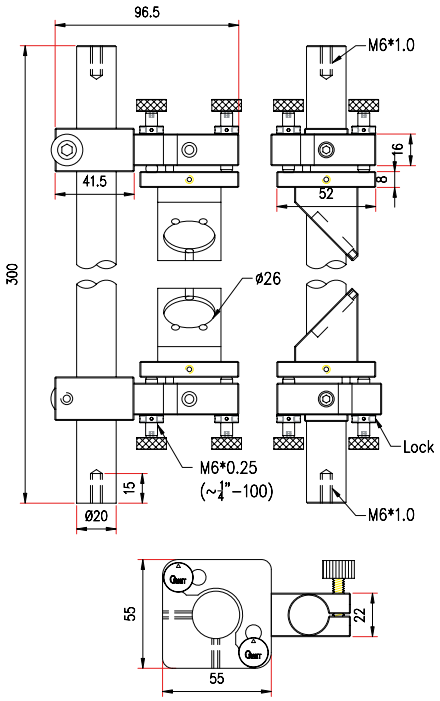
EB01



EB01S

- Free rotation to any direction.
- Beam direction is Fine adjusted by two precision mirror mounts.

EB01S



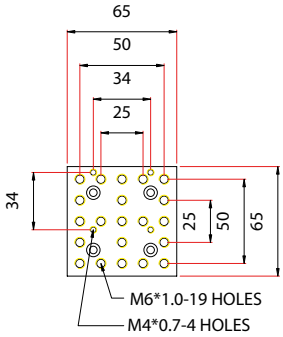
ROD POST

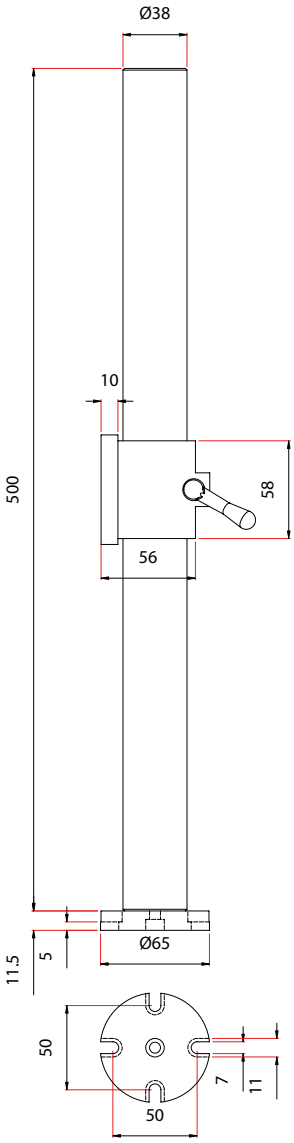
EP20A

- Stainless steel support heavy load with high stability.
- The rod clamp can be positioned at any height with high-precision, long bored interior that minimizes wobbles and chatter.

Model	EP20A
Diameter	Φ 38 mm
Length	500 mm(100-1000 mm option)

EP20A



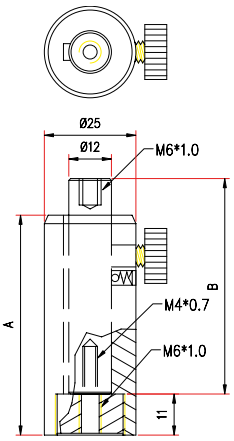


CHAPTER 5 OPTO-MECHANICS

POST AND HOLDER

Model	Height
EP01N	25mm
EP02N	50mm
EP03N	75mm
EP04N	100mm
EP05N	125mm
EP06N	150mm

	A	B
EP01N	36	25
EP02N	50	50
EP03N	75	75
EP04N	100	100
EP05N	125	125
EP06N	150	150

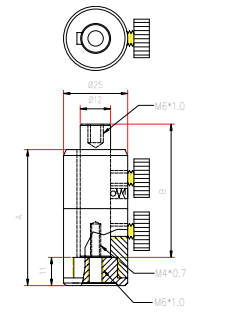


EP01N~EP06N

Rotary Post and Holder

- Spring-loaded design supports the post, even when the locking screw is loosened.
- All post holders are precisely bored, providing full two-line contact, to minimize wobble.
- Precision bearing design provides smooth rotation to arbitrary directions.

Model	Height
EP02R	50mm
EP03R	75mm
EP04R	100mm
EP05R	125mm
EP06R	150mm



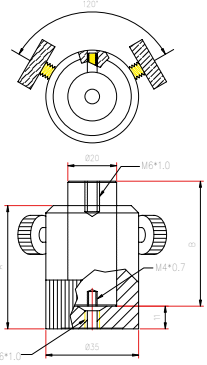
	A	B
EP02R	50	50
EP03R	75	75
EP04R	100	100
EP05R	125	125
EP06R	150	150

EP02R~EP06R

Post and holder (20mm-Dia)

- Spring-loaded design supports the post, even when the locking screw is loosened.
- All post holders are precisely bored, providing full two-line contact, to minimize wobble.

Model	Height
EP01	25mm
EP02	50mm
EP03	75mm
EP04	100mm
EP05	125mm
EP06	150mm



	A	B
EP01	25	25
EP02	50	50
EP03	75	75
EP04	100	100
EP05	125	125
EP06	150	150

EP01~EP06

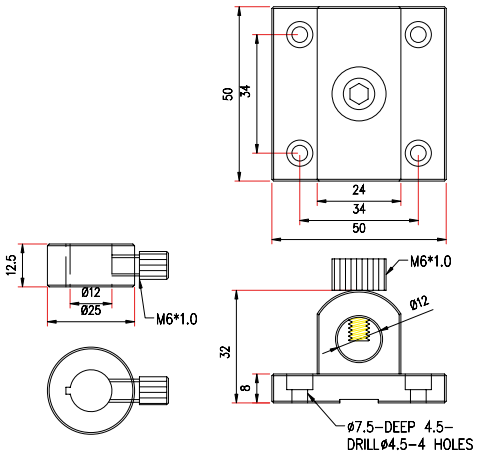
COLLARS AND POST ADAPTERS

COLLARS

Lock to specific post height.

EP01C

EP01D

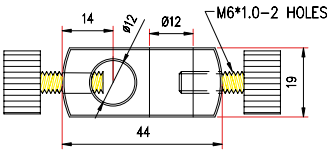


EP01C EP01D

Cross-Post Adaptor

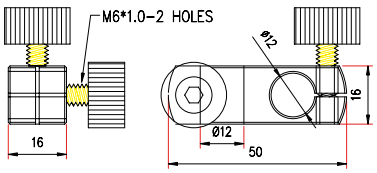
- EC01 and EC01S mount two posts at 90° with respect to each other.
- EC02 can hold two posts at an arbitrary angle with respect to each other.

EC01



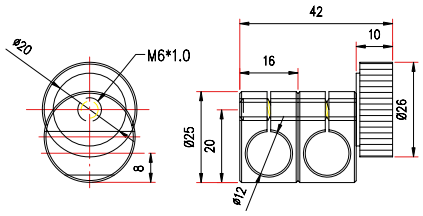
EC01

EC01S



EC01S

EC02

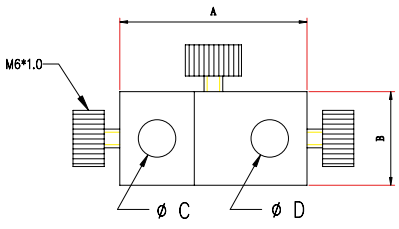


EC02

Universal ClamPS

Precision bearing design provides high stability and free rotation to arbitrary angle.

EU01 EU02 EU03



	A	B	C	D
EU01	60	30	12	12
EU02	70	36	20	12
EU03	76	36	20	20

CHAPTER 5 OPTO-MECHANICS

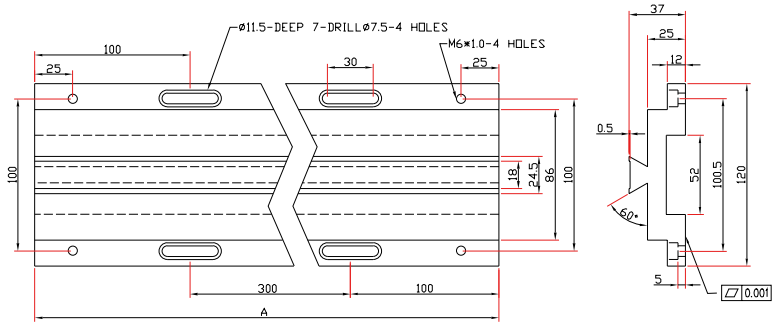
OPTICAL BENCH

EOB01~04

- Precision-machined anodized aluminum provides smooth and linear carrier translation.
- Reading in mm attached on the surface, convenient to use.

Model	Length
EOB01	50 cm
EOB02	100 cm
EOB03	150 cm
EOB04	200 cm

EOB01~04



Model	A(cm)
EOB01	50
EOB02	100
EOB03	150
EOB04	200

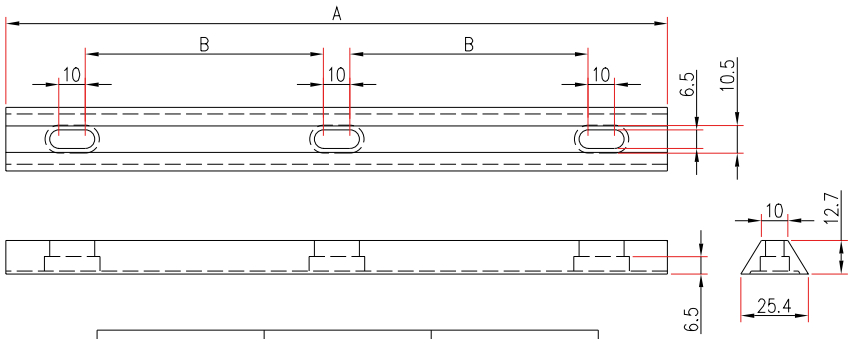
Small type

EOB01S/ EOB01X

Precision dovetail design allows component to be quickly held along the rail.

Model	EOB01S	EOB01X
Length	500 mm	250 mm

EOB01S/EOB01X



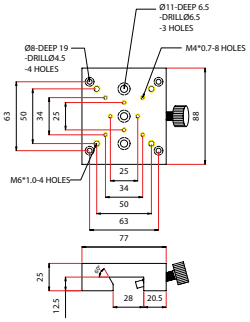
	A	B
EOB01S	500	140
EOB01X	250	90

CARRIER

Three different sizes fit to various application.

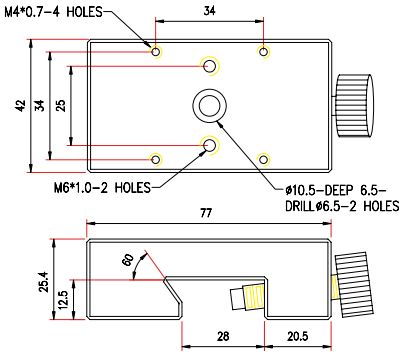
Model	Platform Size
ECR01	77*88 mm^2
ECR01S	77*42 mm^2
ECR01X	77*22 mm^2

ECR01



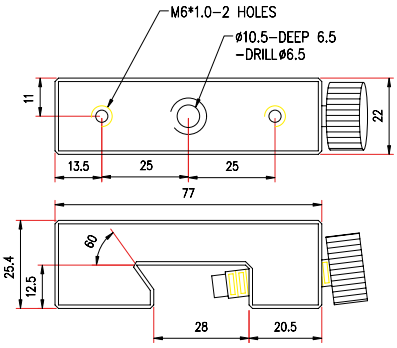
ECR01

ECR01S



ECR01S

ECR01X

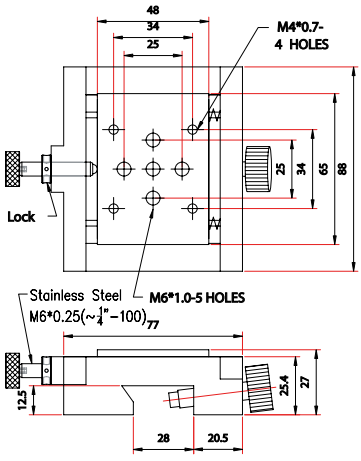


ECR01X

ECT01A

Linear roller bearing design with hardened and ground steel rod provides smooth and high accuracy motion.

Model	ECT01A
Platform	48*60 mm^2
Travel Range	10mm
Deviation	0.01mm

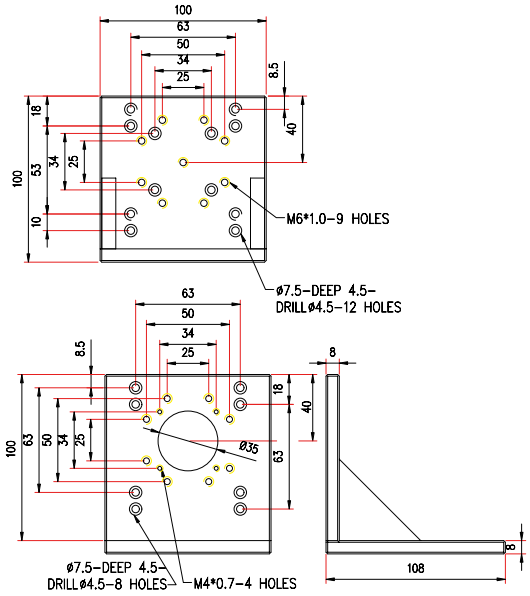


ECT01A

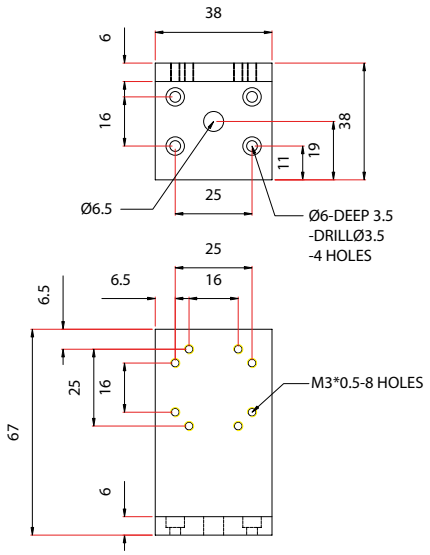
CHAPTER 5 OPTO-MECHANICS

RIGHT-ANGLED BRACKET

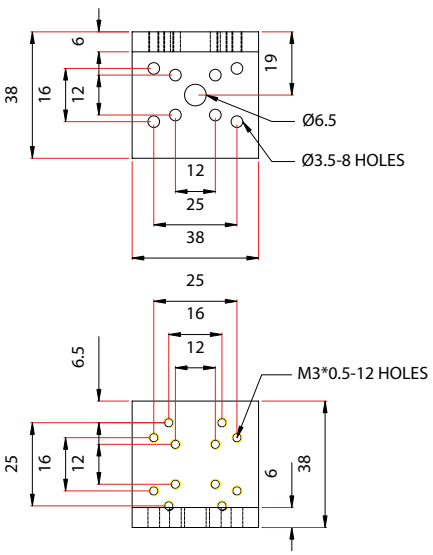
- Generous hole patterns is compatible to C-series products, fit to various applications.
- 90° bracket & adapters EA01.



EA01

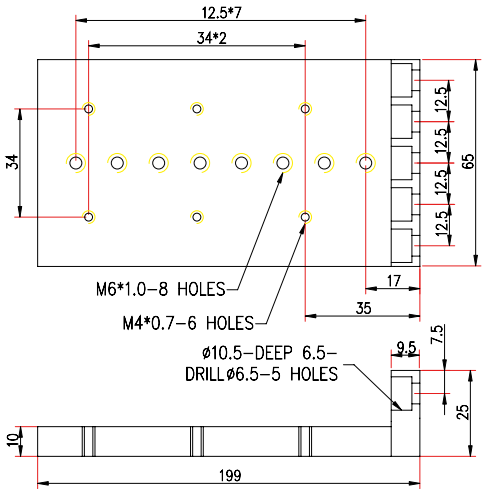


EA01SL

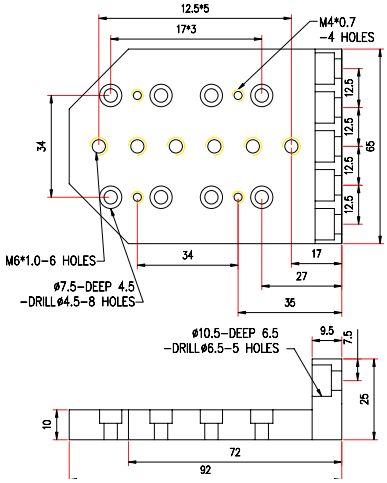


EA01s

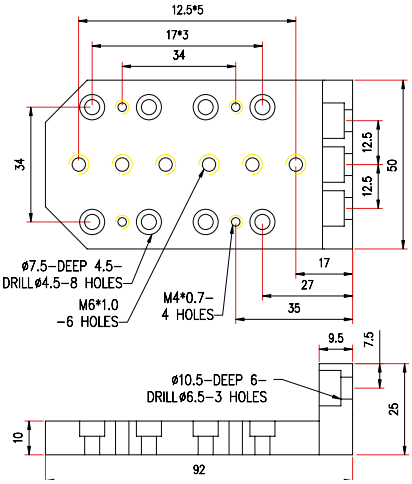
- Compatible to C-series products, fit to various applications.



EA02



EA02S

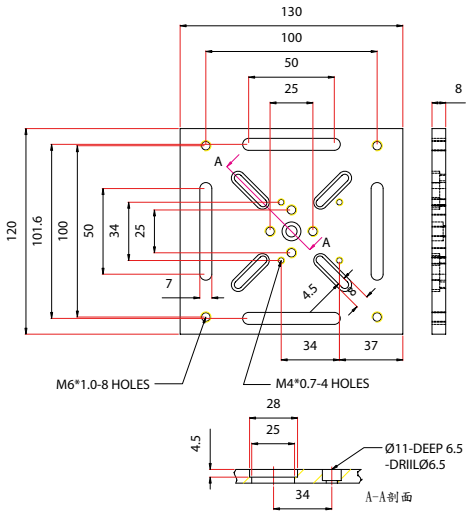


EA04S

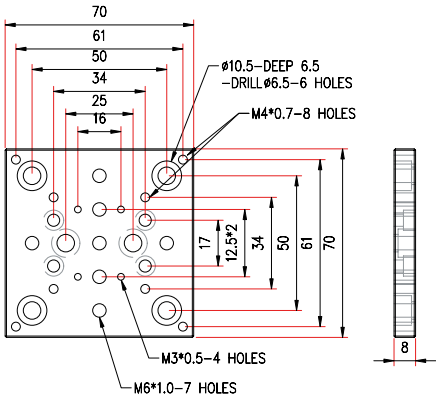
CHAPTER 5 OPTO-MECHANICS

UNIVERSAL ADAPTER

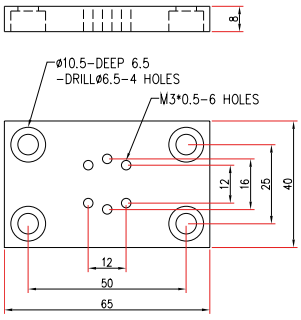
EUA01



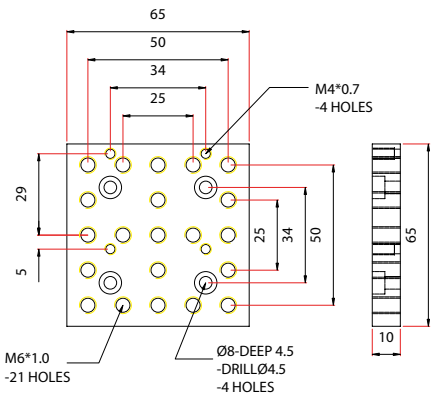
EUA01S



EUA02



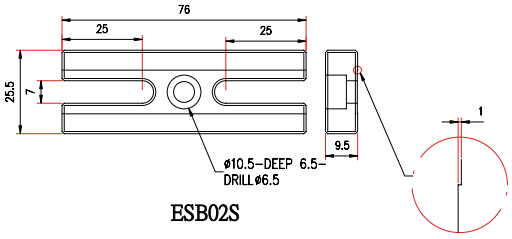
EUA05



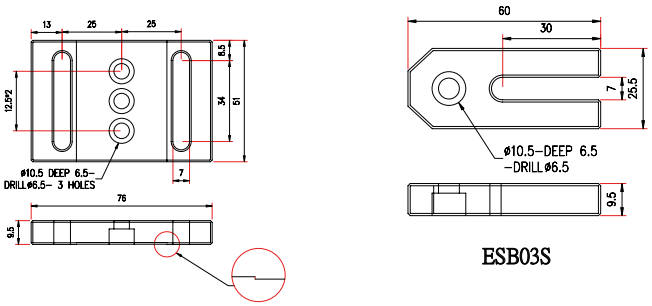
BASE PLATES AND MAGNETIC BASES

Base plates

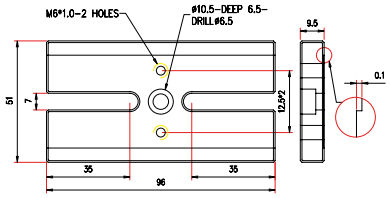
ESB03S ESB01 ESB02S ESB02



ESB01 ESB02S



ESB03S

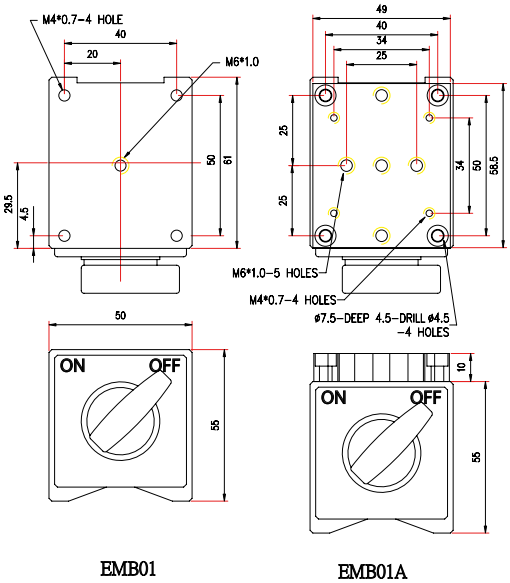


ESB02

Magnetic Bases

- The holding force achieves as high as 80 kgw.
- Instant clamp-down with strong holding force at ON state.
- Free reposition without magnetic flux leakage at OFF state.

EMB01 EMB01A



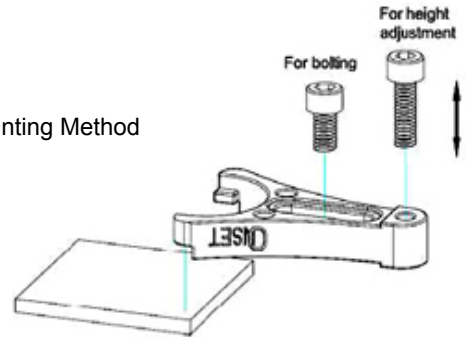
EMB01 EMB01A

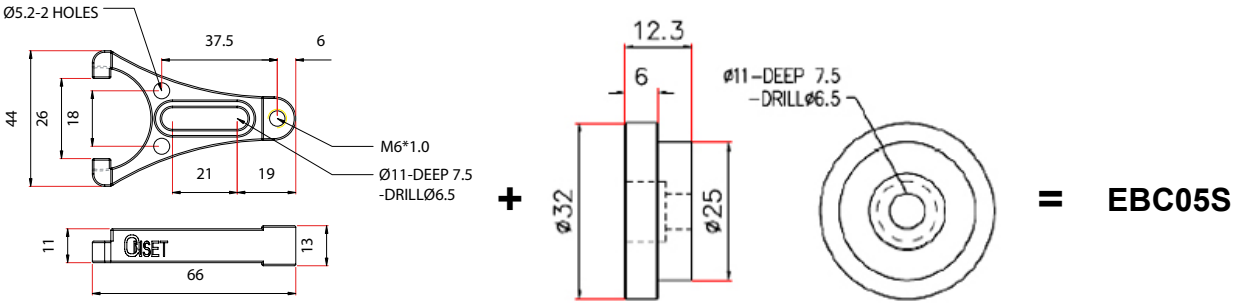
BASE CLAMPS

EBC05S / EBC05SM

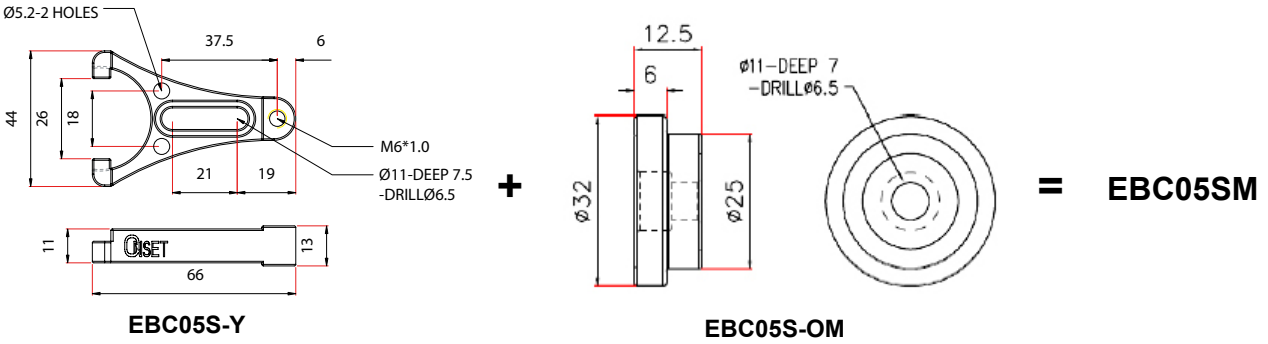
- EBC05S-Y Mounts EBC05S-O and **MAGNETIC** EBC05-OM.
- EBC05S-Y Can Mount Different Hight of Mechanisms
- EBC05S-Y R.O.C. Patent No. M358981

Diagram of EBC05S-Y Mounting Method

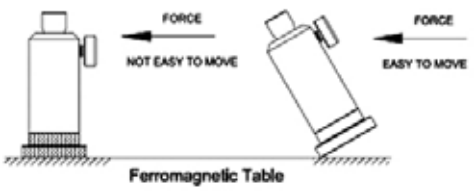




EBC05S-Y **EBC05S-O**



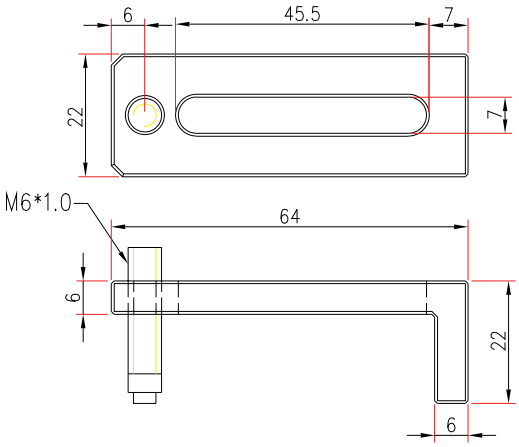
EBC05S-Y **EBC05S-OM**



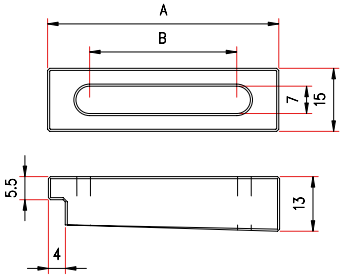
- EBC05S-OM is magnetic to ferromagnetic table which prevent post holders from falling down by external force
- R.O.C. Patnt of EBC05S-OM is being applied

Schematic Function of EBC05S-OM and EBC05S-O.

EBC01

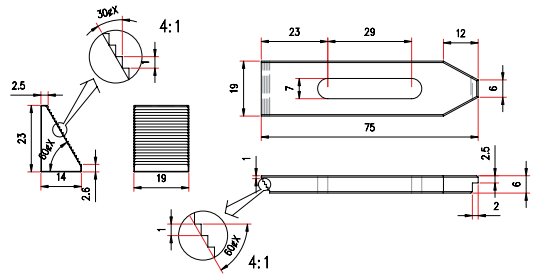


EBC02&EBC02S

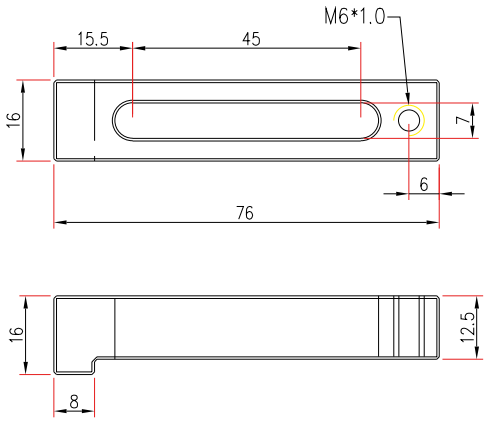


	A	B
EBC02	55	35
EBC02S	41	25

EBC03



EBC04



SCREW KIT

ESK01

ESK01-S
(Stainless steel)

Content and Quantity

M4-8 8pcs	M4-10 8pcs	M4-12 8pcs	M4-16 8pcs	M4-12 Set Screw 15pcs	M6-16 Set Screw 20pcs	
M6-8 20pcs		M6-12 20pcs		M6-16 20pcs	M6-25 15pcs	
Allen Wrench #5,#3,#2			Specical Wrench x2		M6 Washer 20pcs	M6 Nut 15pcs