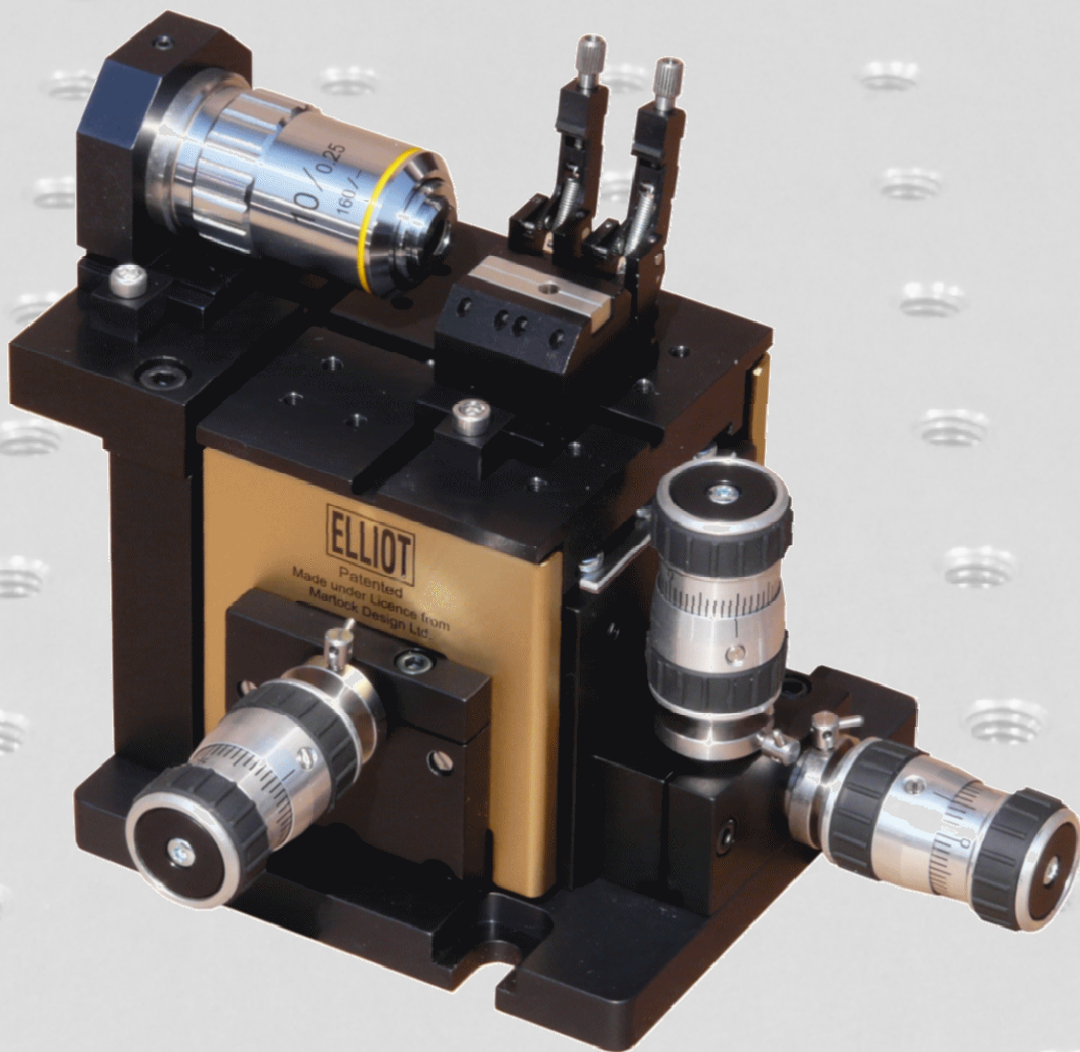




Elliot Scientific

Opto-Mechanics Catalogue



2019



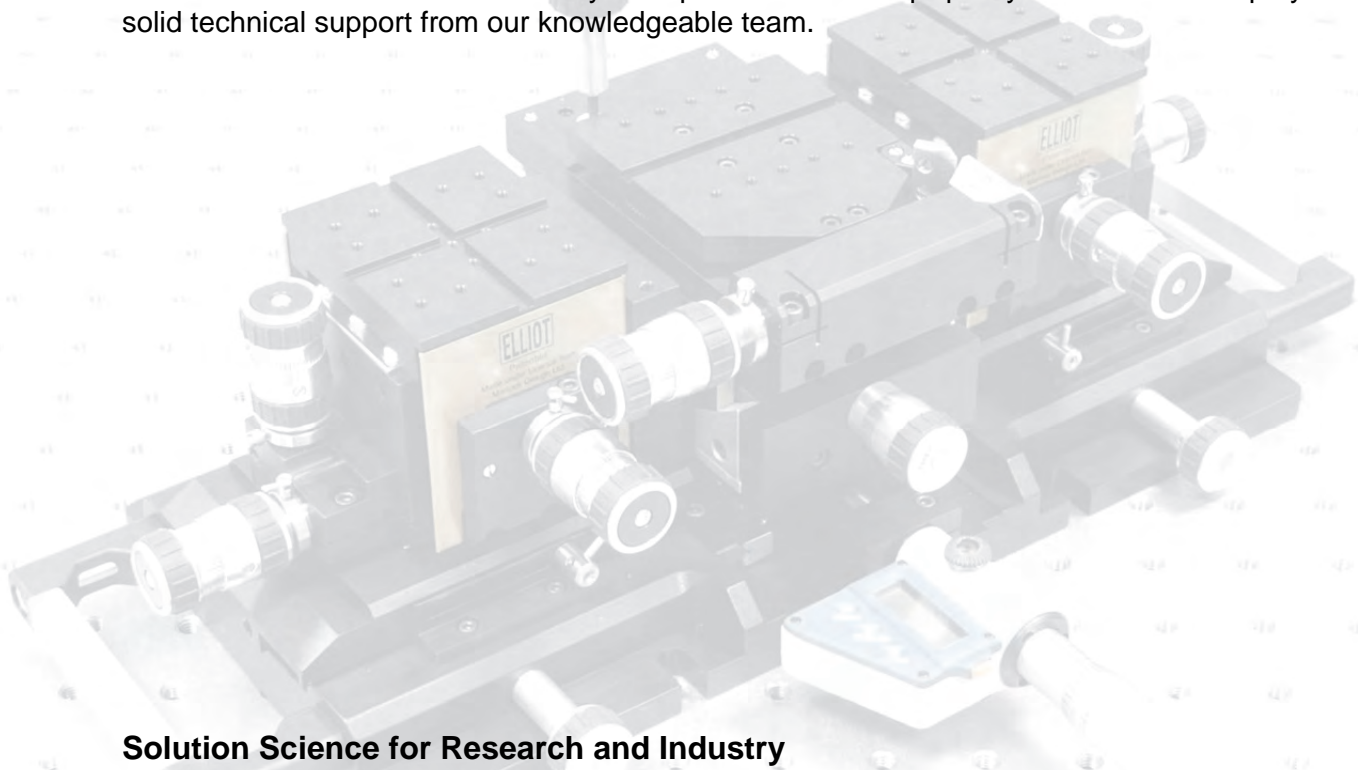
About Elliot Scientific

Elliot Scientific serves the UK and Ireland's academic research, commercial, and industrial communities as a major supplier of equipment dedicated to the science of light.

Lasers, LEDs and other high-power light sources, optical fibre and custom optics, positioning systems and opto-mechanics, instrumentation for cryogenic and magnetic research, as well as probes and sensors, are just some of the technologies we source from leading manufacturers.

We also design and build our own ranges that are marketed globally under the Elliot|Martock and Elliot Scientific brands. These include award-winning Optical Tweezers, world-renowned flexure stages, and class-leading micropositioners, fibre positioning components, automated alignment systems, and waveguide manipulators among others.

All of our customers - from academic institutions and government agencies through to commercial researchers and industry - are provided with a top-quality service backed up by solid technical support from our knowledgeable team.



Solution Science for Research and Industry

We pride ourselves in offering *Solution Science for Research and Industry*. We employ experienced people to help you match equipment to project for the perfect union.

Elliot Scientific's scientists and engineers will assist you with your product search or application, and offer accurate and balanced advice. The team have worked together for over a decade, bringing with them a huge amount of real-world know-how to help you achieve the desired result.

Our accounting and administration staff have also been recruited from the best to ensure that you are always served on-time and with integrity by the company.

Quality

We understand the need for continual improvement in services and traceability, both in distribution and manufacture, so our commitment to this ensures our standards are the highest in our industry.

Elliot Scientific has been ISO registered since 1993, gaining the latest BS EN ISO 9001:2015 accreditation in the summer of 2016.





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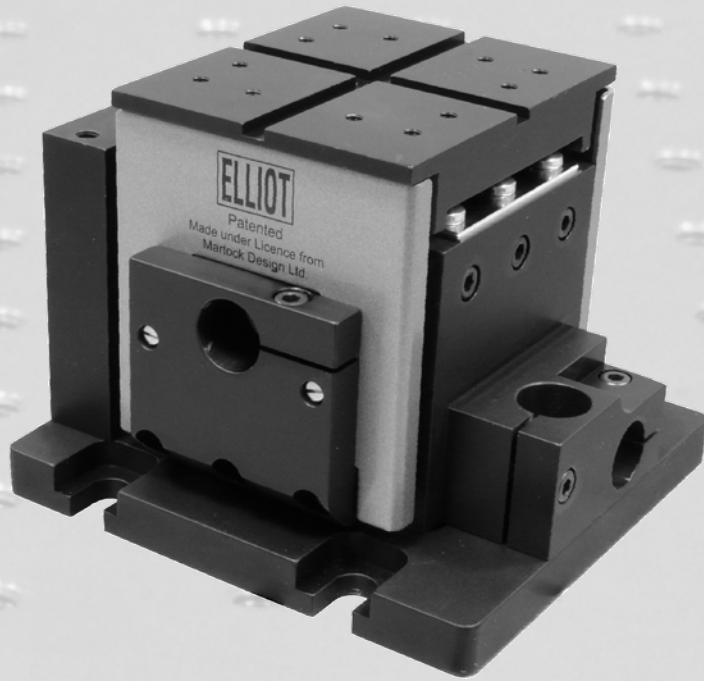
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Flexure Stages



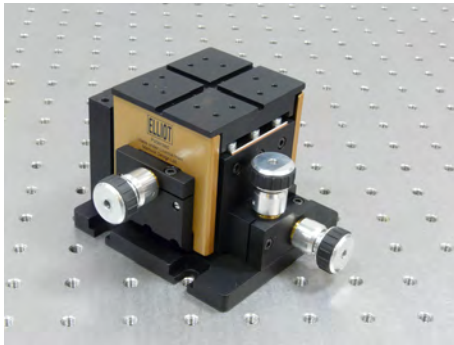
ELLIOT | MARTOCK

2019



Elliot Gold™ Series: XYZ Flexure Stages

MDE120 Standard XYZ Flexure Stage



ELLIOT MARTOCK

- 200 nm resolution
- 2 mm travel per axis
- 4.5 kg load capacity
- Minimal arcuate displacement
- Orthogonal alignment grooves
- Ultra-stable patented† design XYZ flexure stage

The MDE120 flexure stage is fitted with simple manual adjusters and provides 200 nm of adjustment resolution with 2 mm of travel in each of the three axes.

The Elliot Gold™ series XYZ flexure stage is a development of the immensely popular original stage invented and patented† by Martock Design, now a subsidiary of Elliot Scientific. Flexure stages are ideal for high precision device manipulation.

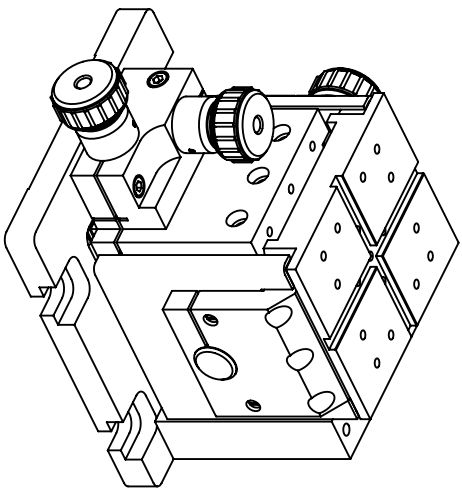
Applications range from fibre launch systems for single-mode, multimode and polarisation maintaining fibres as well as waveguide alignment, through to the manipulation of microstructures in bioscience. The arcuate displacement (vertical displacement due to longitudinal flexure motion) is up to 4 times better than competing products.

The optical axis height of all accessories is 18 mm above the top plate, placing the optical axis 94 mm above the bottom of the stage.

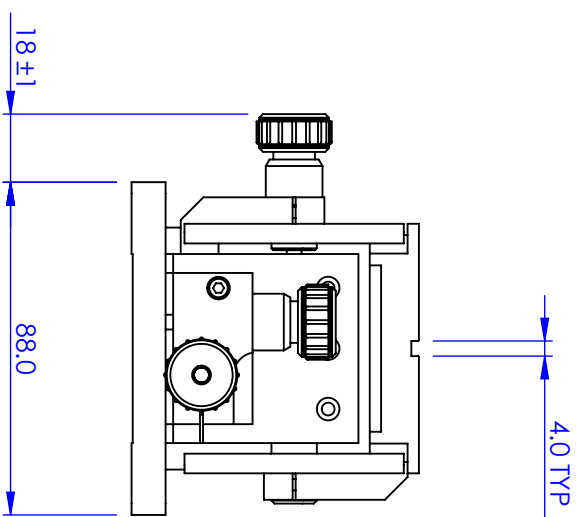
Specifications

Configuration	Right handed version
Adjuster Type	Three simple, manual adjusters, 0.25 pitch (MDE217)
Stage travel	2 mm in X, Y and Z axes
Resolution	200 nm
Load capacity	4.5 kg
Arcuate Displacement	X axis: 20 µm, Y & Z axes: 14 µm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Includes	MDE154 clamp set
Variants	Left-handed version available

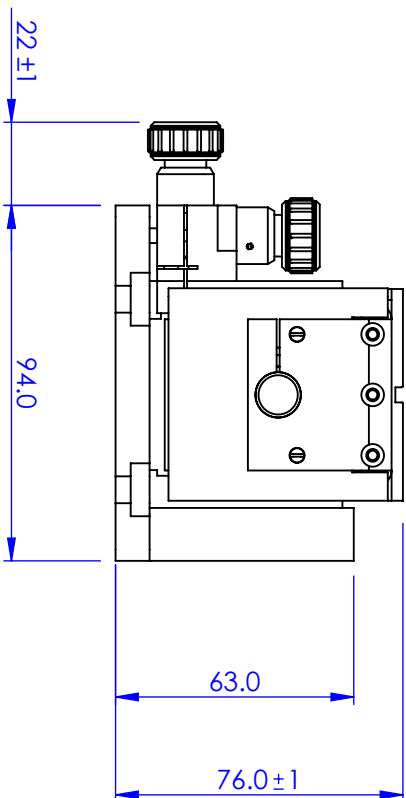
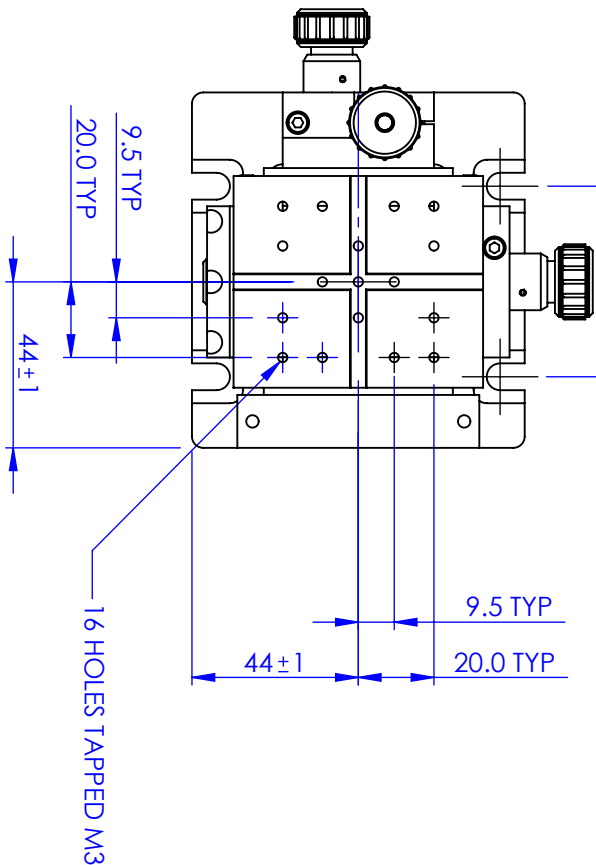
† Patent Nos. GB 2129955B & USA 4635887



GENERAL VIEW
SCALE: 1:2



50.4mm FOR METRIC
AND IMPERIAL MOUNTING




REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

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TITLE					
FLEXURE STAGE					
SIZE		DWG. NO.			
A4		MDE120			
SCALE: 1:2		THIRD ANGLE PROJECTION			
SHEET 1 OF					

Elliot Scientific

TITLE
FLEXURE STAGE
SIZE A4
DWG. NO. MDE120

Elliot Gold™ Series: XYZ Flexure Stages

MDE122 High-Precision XYZ Flexure Stage



ELLIOT MARTOCK

- 20 nm resolution
- 2 mm travel per axis
- 4.5 kg load capacity
- Minimal arcuate displacement
- Orthogonal alignment grooves
- Patented† high resolution adjusters
- Ultra-stable patented†† design XYZ flexure stage

The MDE122 flexure stage is fitted with simple manual adjusters and provides 20 nm of adjustment resolution with 2 mm of travel in each of the three axes.

The Elliot Gold™ series XYZ flexure stage is a development of the immensely popular original stage invented and patented† by Martock Design, now a subsidiary of Elliot Scientific. Flexure stages are ideal for high precision device manipulation.

Applications range from fibre launch systems for single-mode, multimode and polarisation maintaining fibres as well as waveguide alignment, through to the manipulation of microstructures in bioscience. The arcuate displacement (vertical displacement due to longitudinal flexure motion) is up to 4 times better than competing products.

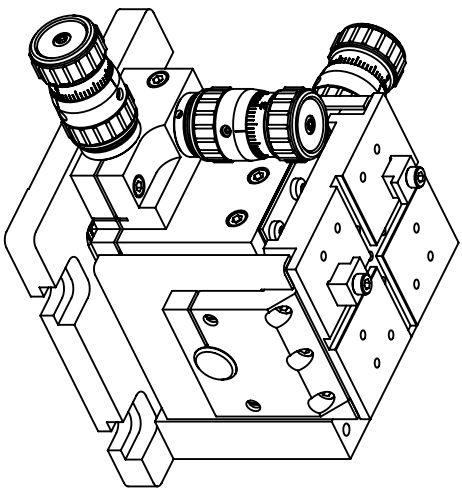
The optical axis height of all accessories is 18 mm above the top plate, placing the optical axis 94 mm above the bottom of the stage.

Specifications

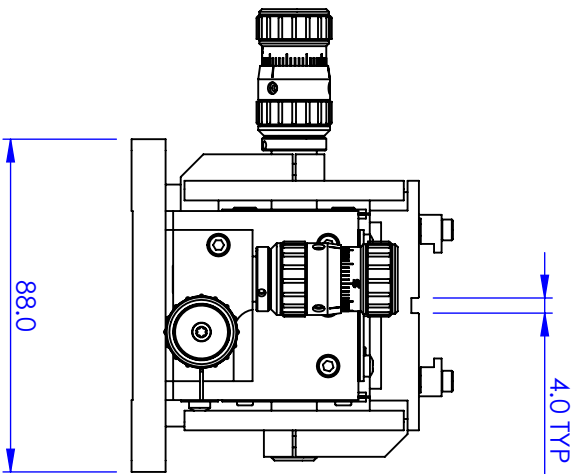
Configuration	Right handed version
Adjuster Type	Three high-precision adjusters (MDE216) with rotary fine and coarse control
Stage travel	2 mm in X, Y and Z axes
Resolution	20 nm
Load capacity	4.5 kg
Arcuate Displacement	X axis: 20 µm, Y & Z axes 14 µm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Includes	MDE154 clamp set
Variants	Left-handed version available

† Patent Nos. GB 2152616B & USA 4617833

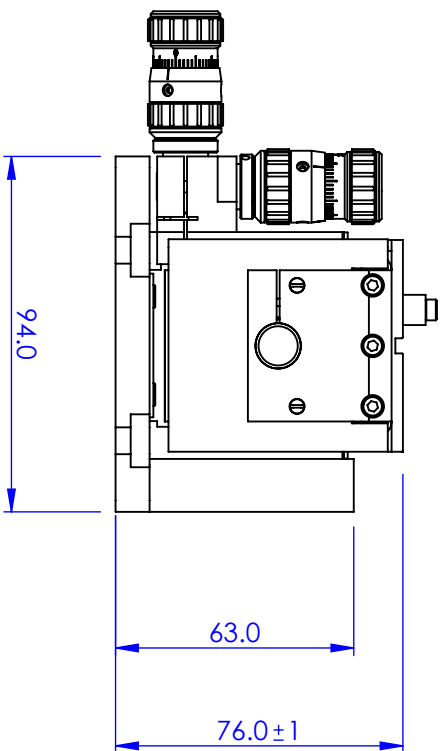
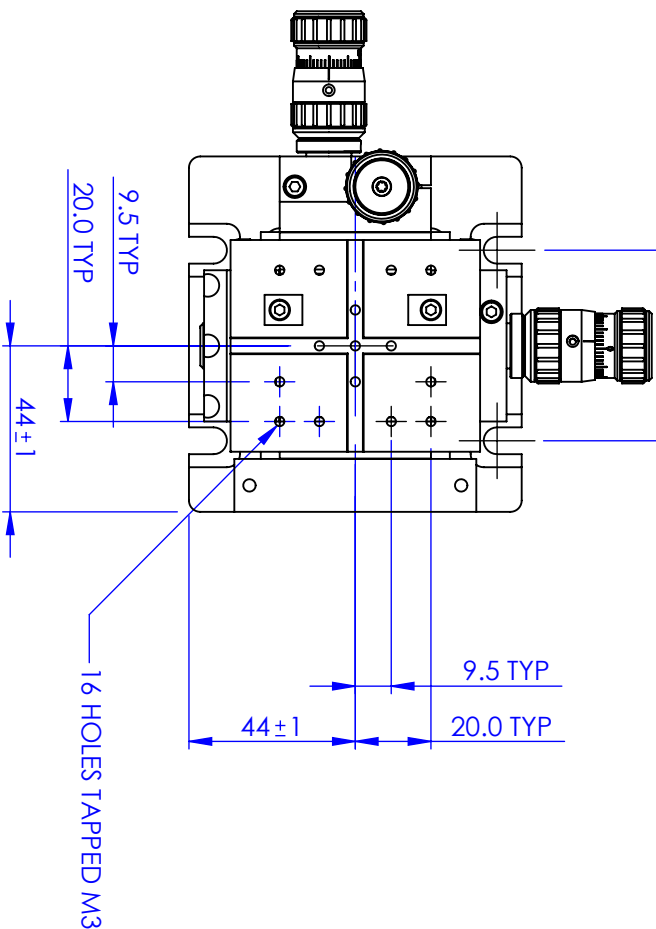
†† Patent Nos. GB 2129955B & USA 4635887



GENERAL VIEW
SCALE: 1:2



50.4mm FOR METRIC
AND IMPERIAL MOUNTING



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REV.	DESCRIPTION		

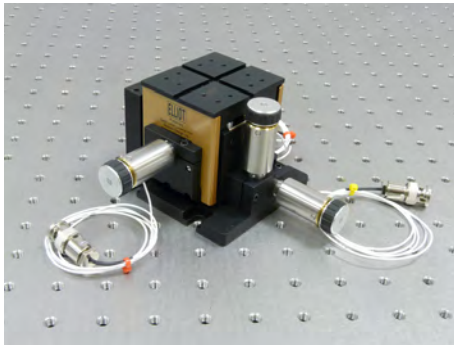
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TITLE		Eliot Scientific	
FLEXURE STAGE			
SIZE A4		DWG. NO. MDE122	
SCALE: 1:2		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Elliot Gold™ Series: XYZ Flexure Stages

MDE123 XYZ Flexure Stage with 25 µm Piezo Actuators



ELLIOT MARTOCK

- 10 nm resolution
- 25 µm Piezo adjustment travel
- 2 mm coarse travel per axis
- 4.5 kg load capacity
- Minimal arcuate displacement
- Orthogonal alignment grooves
- Ultra-stable patented† design XYZ flexure stage

The MDE123 flexure stage is fitted with piezo actuators providing 25 µm of piezo and 2 mm of manual adjustment in each of the three axes. This system can be controlled either via a simple piezo controller or an Elliot Scientific Device Automated Alignment System (DALi 3).

The Elliot Gold™ series XYZ flexure stage is a development of the immensely popular original stage invented and patented† by Martock Design, now a subsidiary of Elliot Scientific. Flexure stages are ideal for high precision device manipulation.

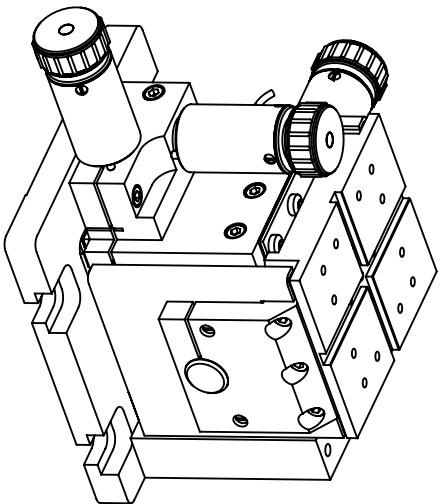
Applications range from fibre launch systems for single-mode, multimode and polarisation maintaining fibres as well as waveguide alignment, through to the manipulation of microstructures in bioscience. The arcuate displacement (vertical displacement due to longitudinal flexure motion) is up to 4 times better than competing products.

The optical axis height of all accessories is 18 mm above the top plate, placing the optical axis 94 mm above the bottom of the stage.

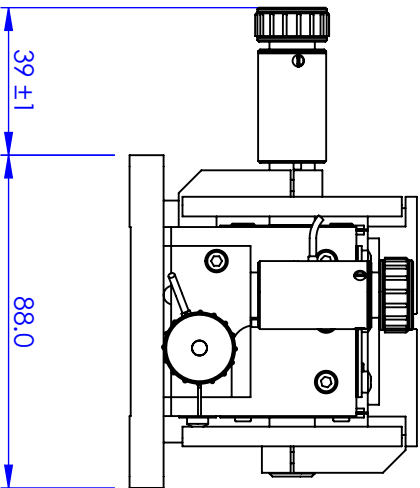
Specifications

Configuration	Right handed version
Adjuster Type	Three 0-150 V piezo with manual control (MDE218), piezo travel 25 µm
Stage travel	2 mm coarse manual travel (on 0.25 pitch thread) in X, Y and Z axes
Resolution	10 nm with piezo control (over 25 µm range)
Load capacity	4.5 kg
Arcuate Displacement	X axis: 20 µm, Y & Z axes: 14 µm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Includes	MDE154 clamp set
Variants	Left-handed version available

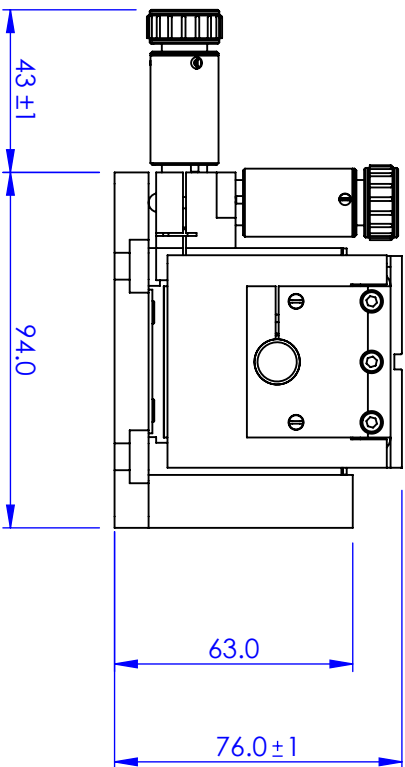
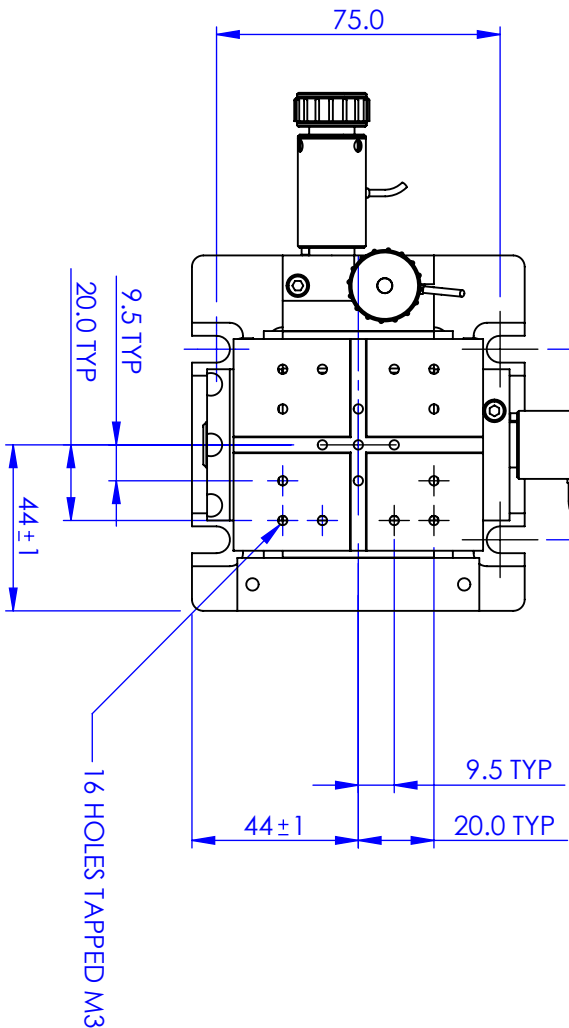
† Patent Nos. GB 2129955B & USA 4635887



GENERAL VIEW
SCALE:1:2



50.4mm FOR METRIC
AND IMPERIAL MOUNTING



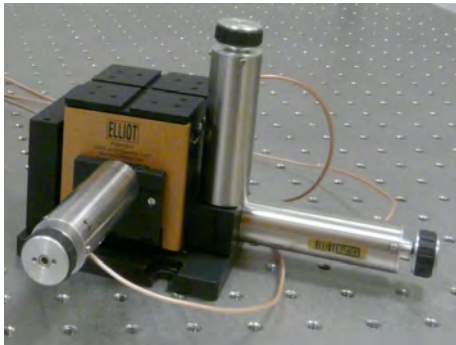
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TITLE			
FLEXURE STAGE			
SIZE			
A4			
DWG. NO.			
MDE123			
SCALE:1:2		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Elliot Gold™ Series: XYZ Flexure Stages

MDE125 XYZ Flexure Stage with 100 µm Piezo Actuators



ELLIOT MARTOCK

- 50 nm resolution
- 100 µm Piezo adjustment travel
- 2 mm coarse travel per axis
- 4.5 kg load capacity
- Minimal arcuate displacement
- Orthogonal alignment grooves
- Ultra-stable patented† design XYZ flexure stage

The MDE125 flexure stage is fitted with piezo actuators providing 100 µm of piezo and 2 mm of manual adjustment in each of the three axes. This system can be controlled either via a simple piezo controller or an Elliot Scientific Device Automated Alignment System (DALi 3).

The Elliot Gold™ series XYZ flexure stage is a development of the immensely popular original stage invented and patented† by Martock Design, now a subsidiary of Elliot Scientific. Flexure stages are ideal for high precision device manipulation.

Applications range from fibre launch systems for single-mode, multimode and polarisation maintaining fibres as well as waveguide alignment, through to the manipulation of microstructures in bioscience. The arcuate displacement (vertical displacement due to longitudinal flexure motion) is up to 4 times better than competing products.

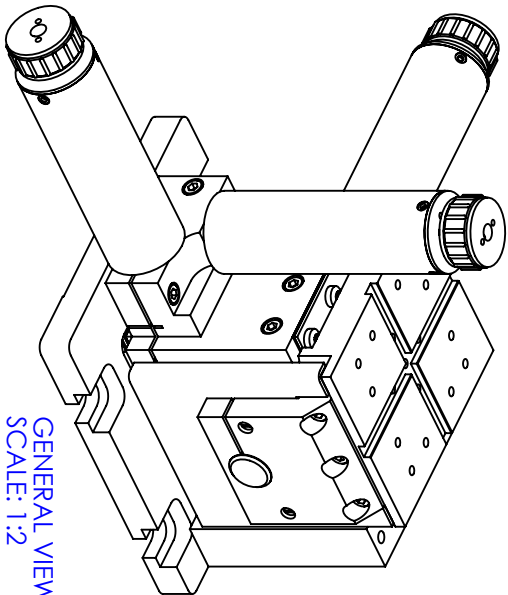
The optical axis height of all accessories is 18 mm above the top plate, placing the optical axis 94 mm above the bottom of the stage.

Specifications

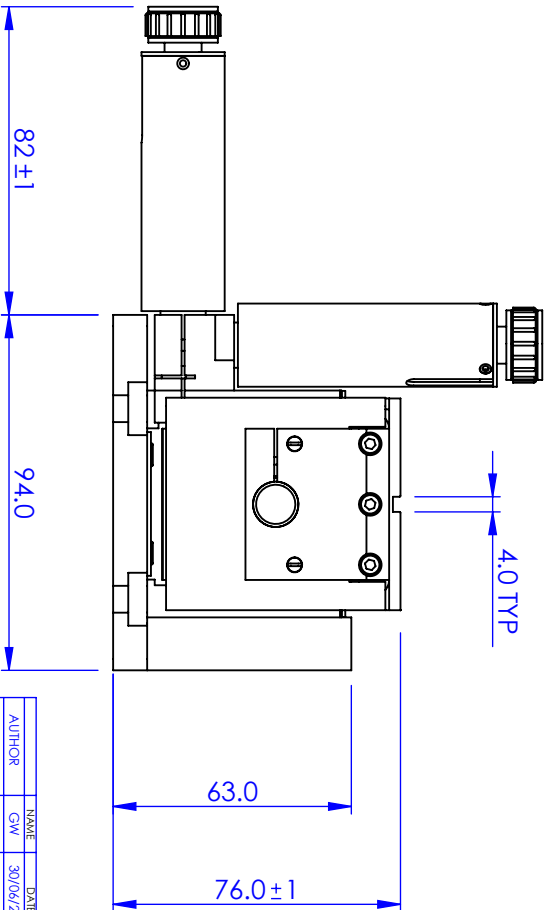
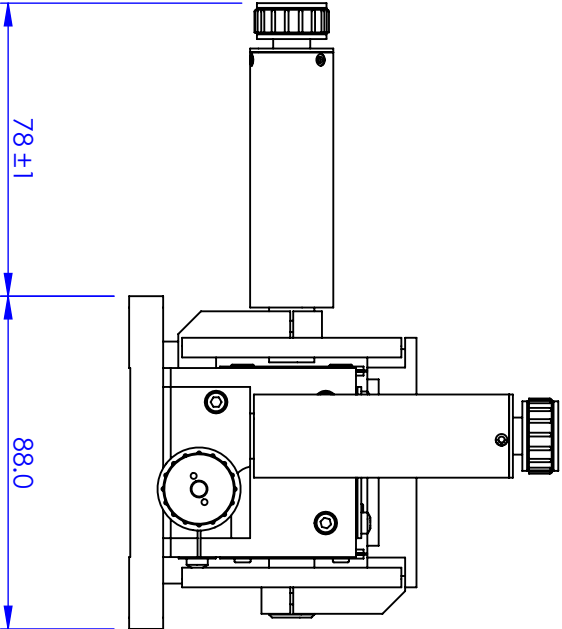
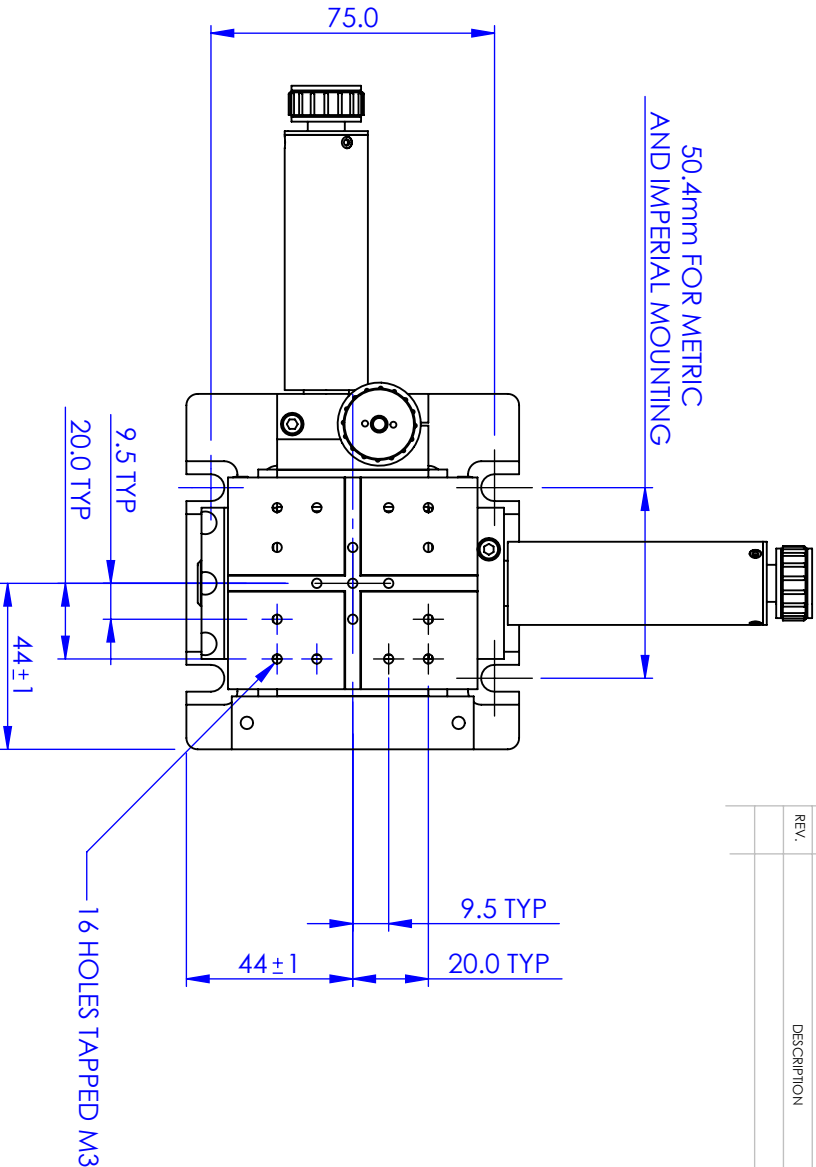
Configuration	Right handed version
Adjuster Type	Three 0-150 V piezo with manual control (MDE227), piezo travel 100 µm
Stage travel	2 mm coarse manual travel (on 0.25 pitch thread) in X, Y and Z axes
Resolution	50 nm with piezo control (over 100 µm range)
Load capacity	4.5 kg
Arcuate Displacement	X axis: 20 µm, Y & Z axes: 14 µm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Includes	MDE154 clamp set
Variants	Left-handed version available

† Patent Nos. GB 2129955B & USA 4635887

GENERAL VIEW
SCALE: 1:2



50.4mm FOR METRIC
AND IMPERIAL MOUNTING



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REV.	DESCRIPTION		

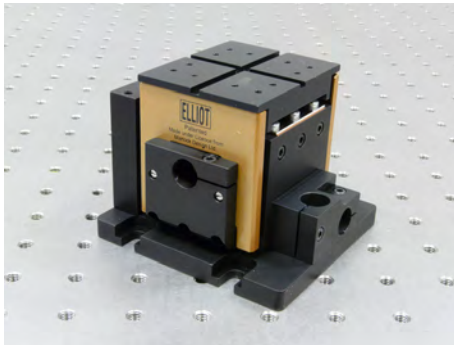
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TITLE		Eliot Scientific	
FLEXURE STAGE			
SIZE A4		DWG. NO. MDE125	
SCALE: 1:2		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Elliot Gold™ Series: XYZ Flexure Stages

MDE330 XYZ Flexure Stage without Adjusters



ELLIOT MARTOCK

- 2 mm coarse travel per axis
- 4.5 kg load capacity
- Minimal arcuate displacement
- Orthogonal alignment grooves
- Use any combination of Elliot Scientific adjuster types
- Ultra-stable patented† design XYZ flexure stage

The MDE330 flexure stage is supplied without adjusters, thereby permitting the user to choose and fit a different type of adjuster on each axis to match individual performance and cost requirements. For example, 1 manual and 2 piezo adjusters or 2 high-precision and 1 piezo. The MDE330 is compatible with all Elliot Scientific adjusters.

The Elliot Gold™ series XYZ flexure stage is a development of the immensely popular original stage invented and patented† by Martock Design, now a subsidiary of Elliot Scientific. Flexure stages are ideal for high precision device manipulation.

Applications range from fibre launch systems for single-mode, multimode and polarisation maintaining fibres as well as waveguide alignment, through to the manipulation of microstructures in bioscience. The arcuate displacement (vertical displacement due to longitudinal flexure motion) is up to 4 times better than competing products.

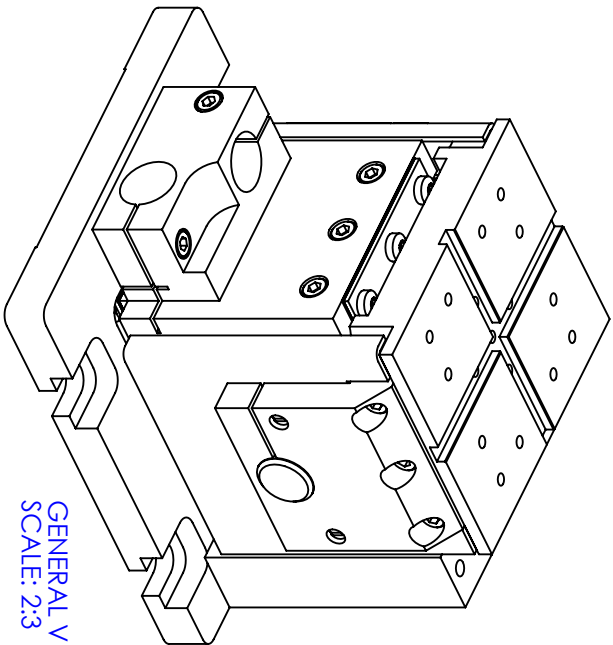
The optical axis height of all accessories is 18 mm above the top plate, placing the optical axis 94 mm above the bottom of the stage.

Specifications

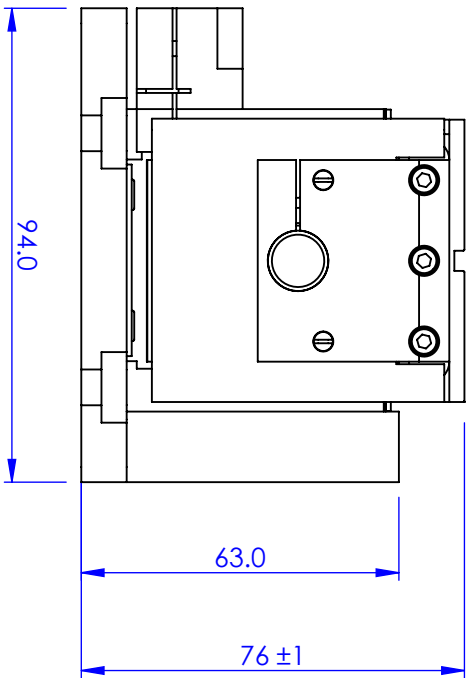
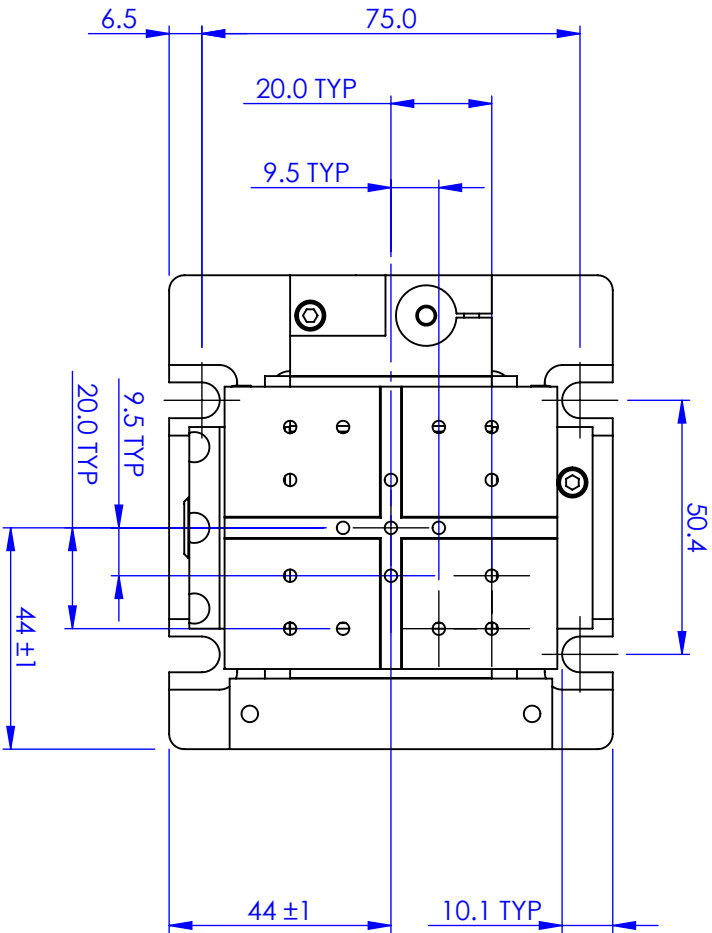
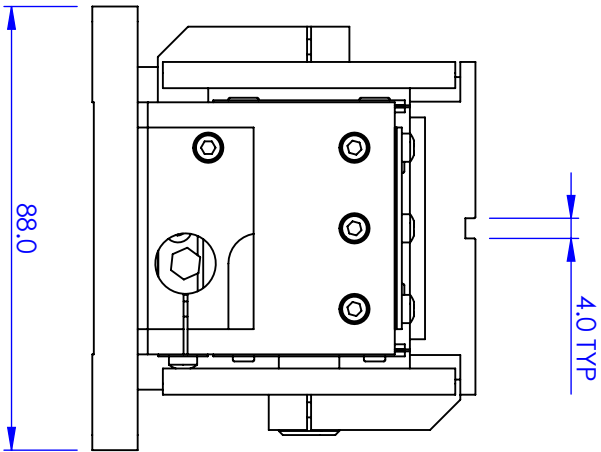
Configuration	Right handed version
Adjusters	None fitted
Stage travel	2 mm in X, Y and Z axes
Resolution	Adjuster dependent
Load capacity	4.5 kg
Arcuate Displacement	X axis: 20 µm, Y & Z axes: 14 µm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Includes	MDE154 clamp set

Options and Accessories

Flexure stage accessories - objective mounts, plates, clamps	Fibre launch systems
Alternative adjusters - simple, high precision, piezo or motorised	Fixed brackets
Left-handed version (To special order)	Fibre holders
Pitch and yaw add-on modules	Fibre rotators
† Patent Nos. GB 2129955B & USA 4635887	



GENERAL VIEW
SCALE: 2:3



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Eliot Scientific

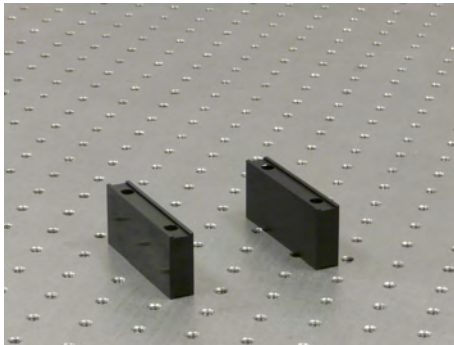
FLEXURE STAGE (No Adjusters)

SIZE **A4** DWG. NO. **MDE330**

SCALE: 2:3 THIRD ANGLE PROJECTION SHEET 1 OF 1

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE141 Riser Block Set



ELLIOT MARTOCK

This riser block set is used in conjunction with XYZ Flexure Stages to raise their optical axis height from 94 mm to 125 mm. This is required when using standard stages opposite the MDE183/MDE185 Pitch and Yaw Stages, or XYZ Flexure Stages mounted on an MDE889-60 Rack & Pinion Slide.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

Options and Accessories

MDE12x series XYZ Flexure Stages
MDE330 XYZ Flexure Stage
MDE183 Pitch & Yaw Stage
MDE185 Pitch & Yaw Stage

MDE889-60 Rack & Pinion Slide

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE147 Large Fixed Bracket with 60 mm Slot

- For X-axis use



The MDE147 is for mounting accessories along the X-axis of flexure stages. It attaches to front vertical pillar on the stage and provides a rigid mounting surface for other accessories. It has a slot of length 60 mm milled along it, a locating groove and threaded mounting holes. The package includes an MDE154 clamp set.

Fixed brackets are attached to the vertical pillar on flexure stages by using two M4 screws. They provide a convenient rigid surface for mounting standard Elliot or Martock accessories for alignment with items on the moving top plate of the flexure stage.

The fixed platform is often referred to as the "Fixed World", while the flexure stage top plate can be regarded as the "Moving World".

When mounting these brackets, a steel rule is a useful aid to ensure that they are in-line with the optical axis defined by the XYZ stage.

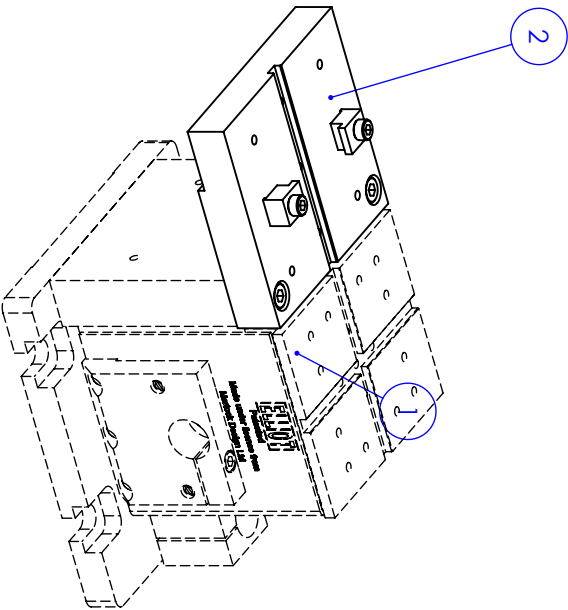
Options

MDE189 Fixed bracket

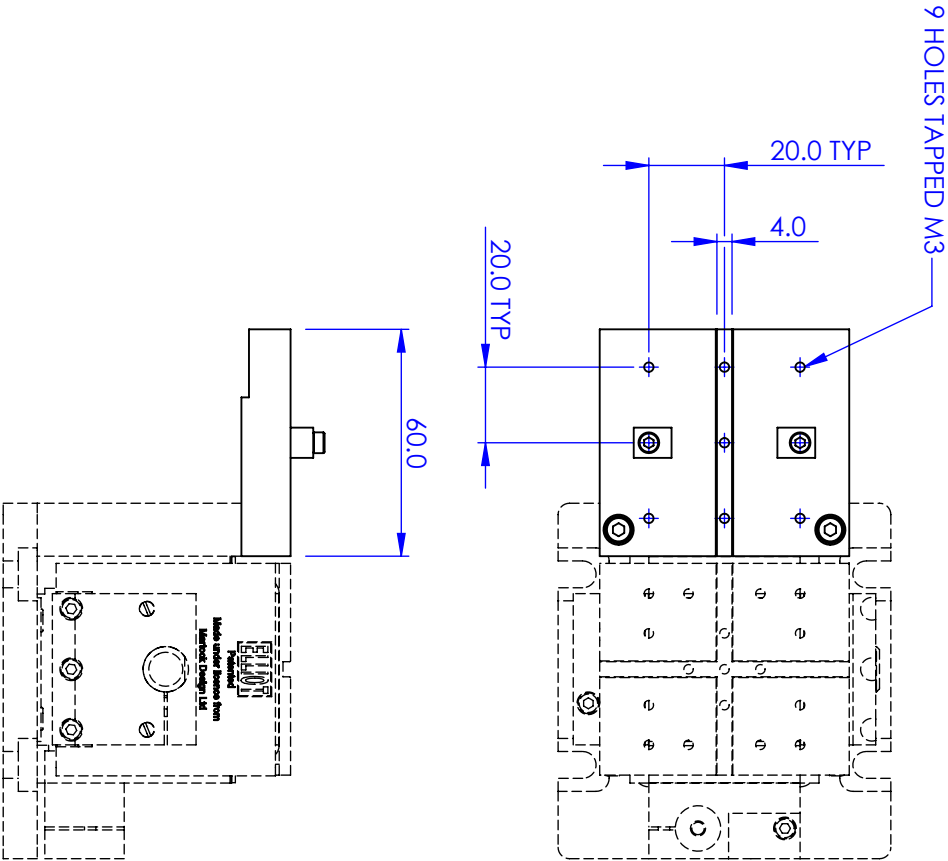
MDE190 Riser block

PART NO.	ITEM NO.	QTY	DESCRIPTION
MDE330	1	1	XYZ FLEXURE STAGE
MDE147	2	1	LARGE PLATFORM ASSEMBLY

NB FLEXURE STAGE NOT INCLUDED



GENERAL VIEW
SCALE: 1:2



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REV.	DESCRIPTION		

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AUTHOR GW	18/10/2005
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MATERIAL	
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TITLE	
LARGE FIXED PLATFORM	
SIZE A4	DWG. NO. MDE147
SCALE: 1:2	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE148 Small Fixed Bracket with 20 mm Slot

- For X-axis use



The MDE148 is for mounting accessories along the X-axis of flexure stages. It attaches to front vertical pillar on the stage and provides a rigid mounting surface for other accessories. It has a slot of length 20 mm milled along it, a locating groove and threaded mounting holes. The package includes an MDE154 clamp set.

Fixed brackets are attached to the vertical pillar on flexure stages by using two M4 screws. They provide a convenient rigid surface for mounting standard Elliot or Martock accessories for alignment with items on the moving top plate of the flexure stage.

The fixed platform is often referred to as the "Fixed World", while the flexure stage top plate can be regarded as the "Moving World".

When mounting these brackets, a steel rule is a useful aid to ensure that they are in-line with the optical axis defined by the XYZ stage.

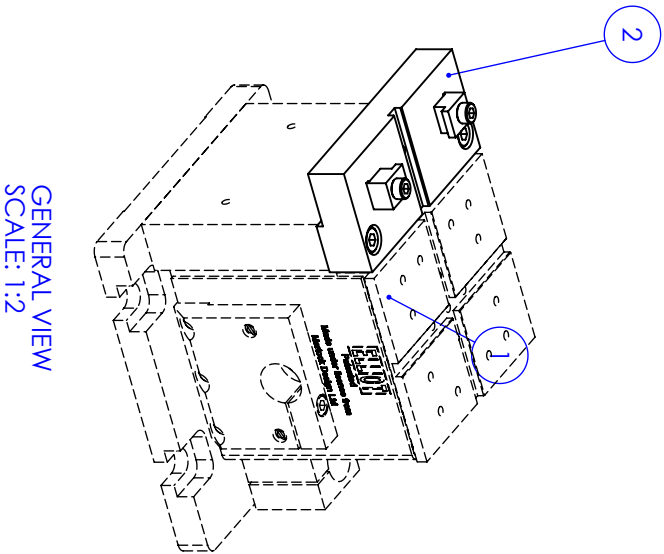
Options

MDE189 Fixed bracket

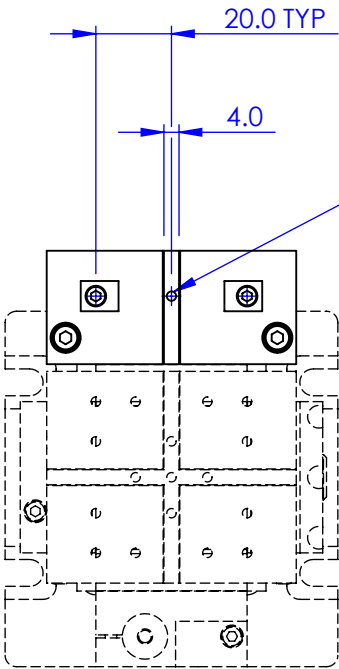
MDE190 Riser block

PART NO.	ITEM NO.	QTY	DESCRIPTION
MDE330	1	1	XYZ FLEXURE STAGE
MDE148	2	1	SMALL PLATFORM ASSEMBLY

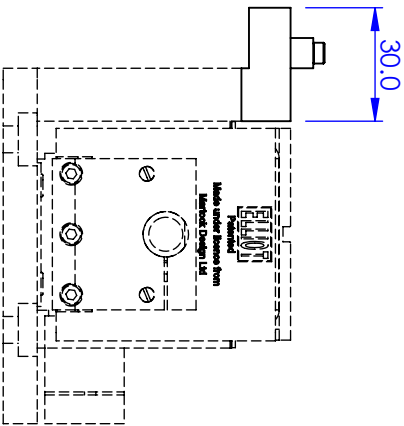
NB FLEXURE STAGE NOT INCLUDED



GENERAL VIEW
SCALE: 1:2



3 HOLES TAPPED M3



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SURFACE FINISH:
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NAME	DATE
AUTHOR GW	18/10/2005
CHECKED	
MATERIAL	
FINISH	
DO NOT SCALE DRAWING	
TITLE	
SMALL FIXED PLATFORM	
MDE148	
DWG. NO.	
SCALE: 1:2	
THIRD ANGLE PROJECTION	
SHEET 1 OF 1	

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE149 L-Shaped Bracket with 46 mm Slot

- For Y-axis use



The MDE149 is for mounting accessories along the Y-axis of flexure stages. It attaches to front vertical pillar on the stage and provides a rigid mounting surface for other accessories. It has a slot of length 60 mm milled along it, a locating groove and threaded mounting holes. The package includes an MDE154 clamp set.

Fixed brackets are attached to the vertical pillar on flexure stages by using two M4 screws. They provide a convenient rigid surface for mounting standard Elliot or Martock accessories for alignment with items on the moving top plate of the flexure stage.

The fixed platform is often referred to as the "Fixed World", while the flexure stage top plate can be regarded as the "Moving World".

When mounting these brackets, a steel rule is a useful aid to ensure that they are in-line with the optical axis defined by the XYZ stage.

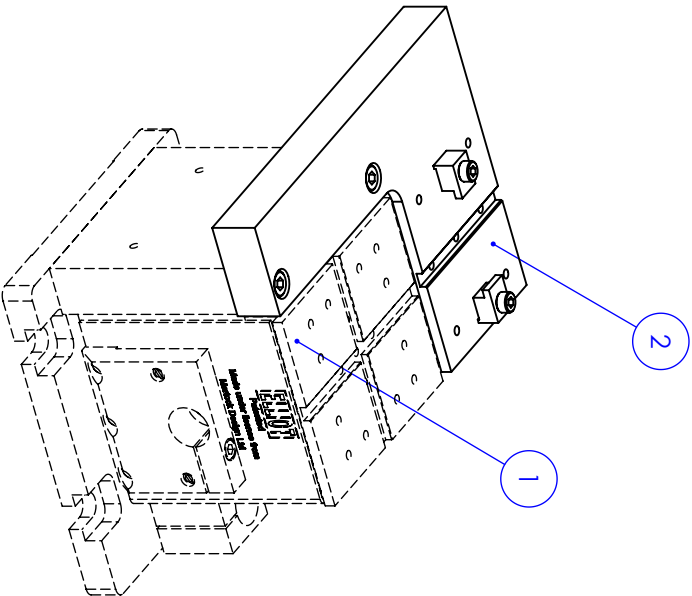
Options

MDE189 Fixed bracket

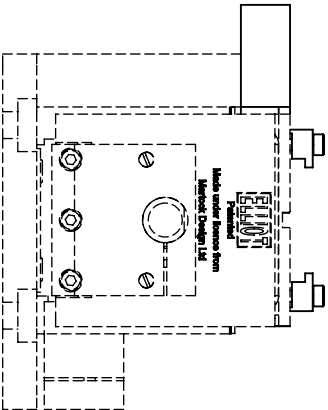
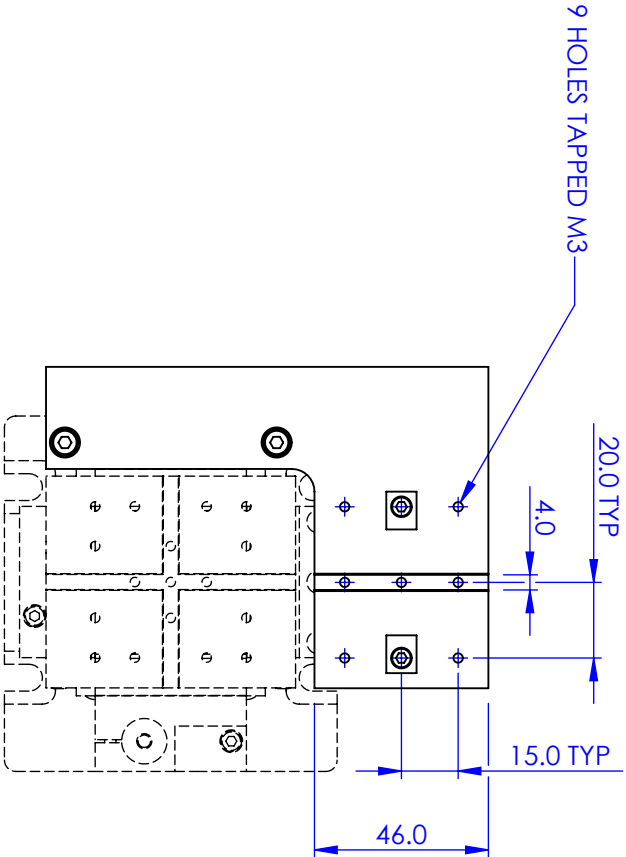
MDE190 Riser block

PART NO.	ITEM NO.	QTY	DESCRIPTION
MDE330	1	1	XYZ FLEXURE STAGE
MDE149	2	1	SIDE PLATFORM ASSEMBLY

NB FLEXURE STAGE NOT INCLUDED



GENERAL VIEW
SCALE: 1:2



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AUTHOR	GW	18/10/2005	
CHECKED	-	-	
MATERIAL			
FINISH			

DO NOT SCALE DRAWING			
TITLE		SIZE	DWG. NO.
SIDE PLATFORM		A4	MDE149
SCALE: 1:2		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE147E Large Fixed Bracket with Imperial Tapped Holes & 60 mm Slot

- For X-axis use



The MDE147E is for mounting accessories along the X-axis of flexure stages. It attaches to front vertical pillar on the stage and provides a rigid mounting surface for other accessories. It has a slot of length 60 mm milled along it, a locating groove and 6-32 threaded mounting holes. The package includes an MDE154 clamp set.

Fixed brackets are attached to the vertical pillar on flexure stages by using two M4 screws. They provide a convenient rigid surface for mounting standard Elliot or Martock accessories for alignment with items on the moving top plate of the flexure stage.

The fixed platform is often referred to as the "Fixed World", while the flexure stage top plate can be regarded as the "Moving World".

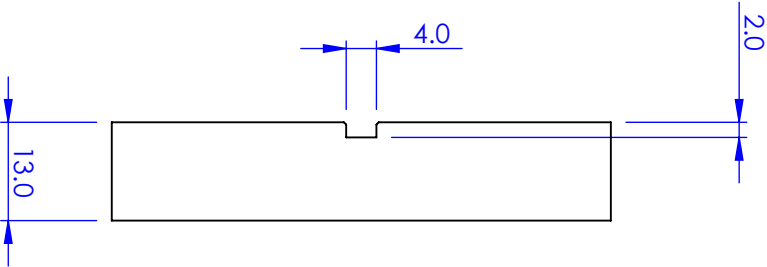
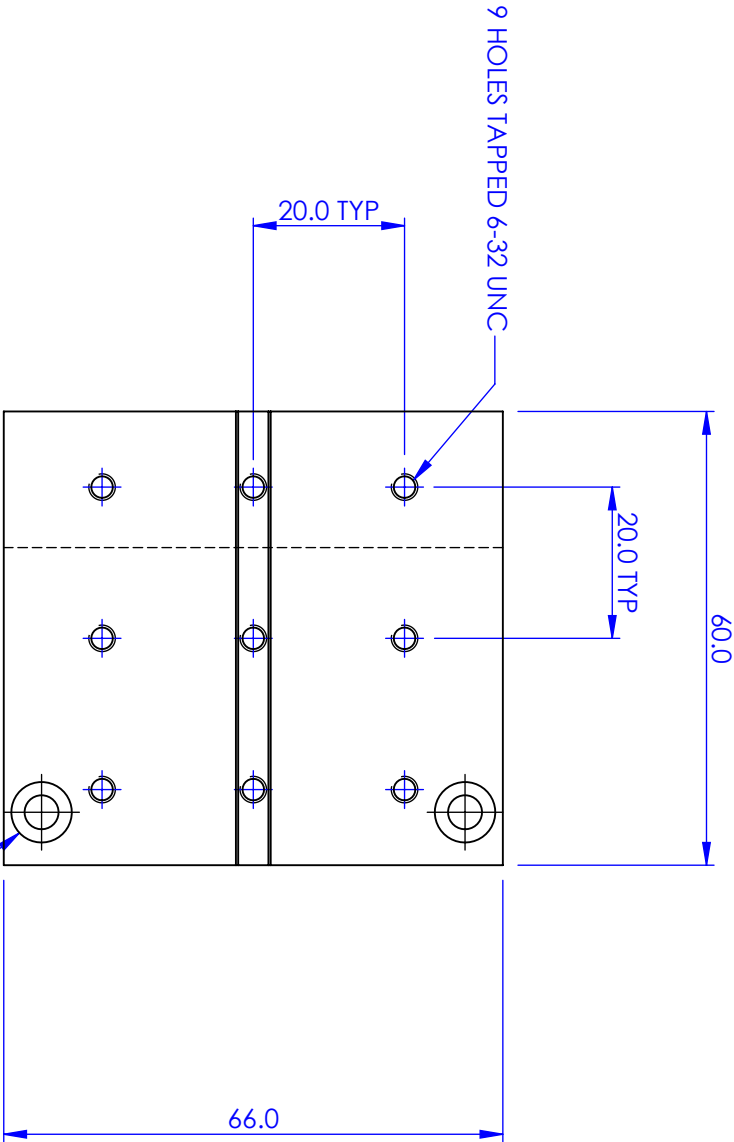
When mounting these brackets, a steel rule is a useful aid to ensure that they are in-line with the optical axis defined by the XYZ stage.

Options

MDE189 Fixed bracket

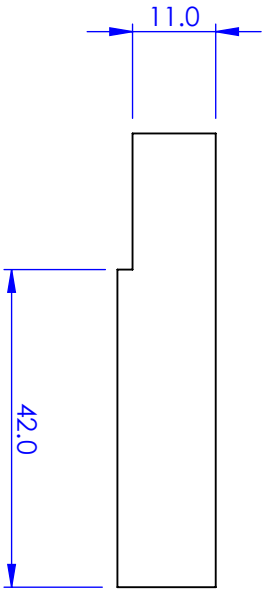
MDE190 Riser block

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



2 HOLES FOR MOUNTING
TO FLEXURE STAGE

PLATFORM SUPPLIED WITH 2 MOUNTING
SCREWS, CLAMP SET AND HEX KEY



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REMOVED

NAME	DATE	TITLE
AUTHOR	GW	12/07/2010
CHECKED	-	-
MATERIAL		ALUMINIUM ALLOY
FINISH		ANODISED BLACK
DO NOT SCALE		DRAWING
SCALE: 1:1		THIRD ANGLE PROJECTION
SHEET 1 OF 1		

Eliot Scientific

FIXED PLATFORM, LARGE

SIZE A4 DWG. NO. MDE147E

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE148E Small Fixed Bracket with Imperial Tapped Holes & 20 mm Slot

- For X-axis use



The MDE148E is for mounting accessories along the X-axis of flexure stages. It attaches to front vertical pillar on the stage and provides a rigid mounting surface for other accessories. It has a slot of length 20 mm milled along it, a locating groove and 6-32 threaded mounting holes. The package includes an MDE154 clamp set.

Fixed brackets are attached to the vertical pillar on flexure stages by using two M4 screws. They provide a convenient rigid surface for mounting standard Elliot or Martock accessories for alignment with items on the moving top plate of the flexure stage.

The fixed platform is often referred to as the "Fixed World", while the flexure stage top plate can be regarded as the "Moving World".

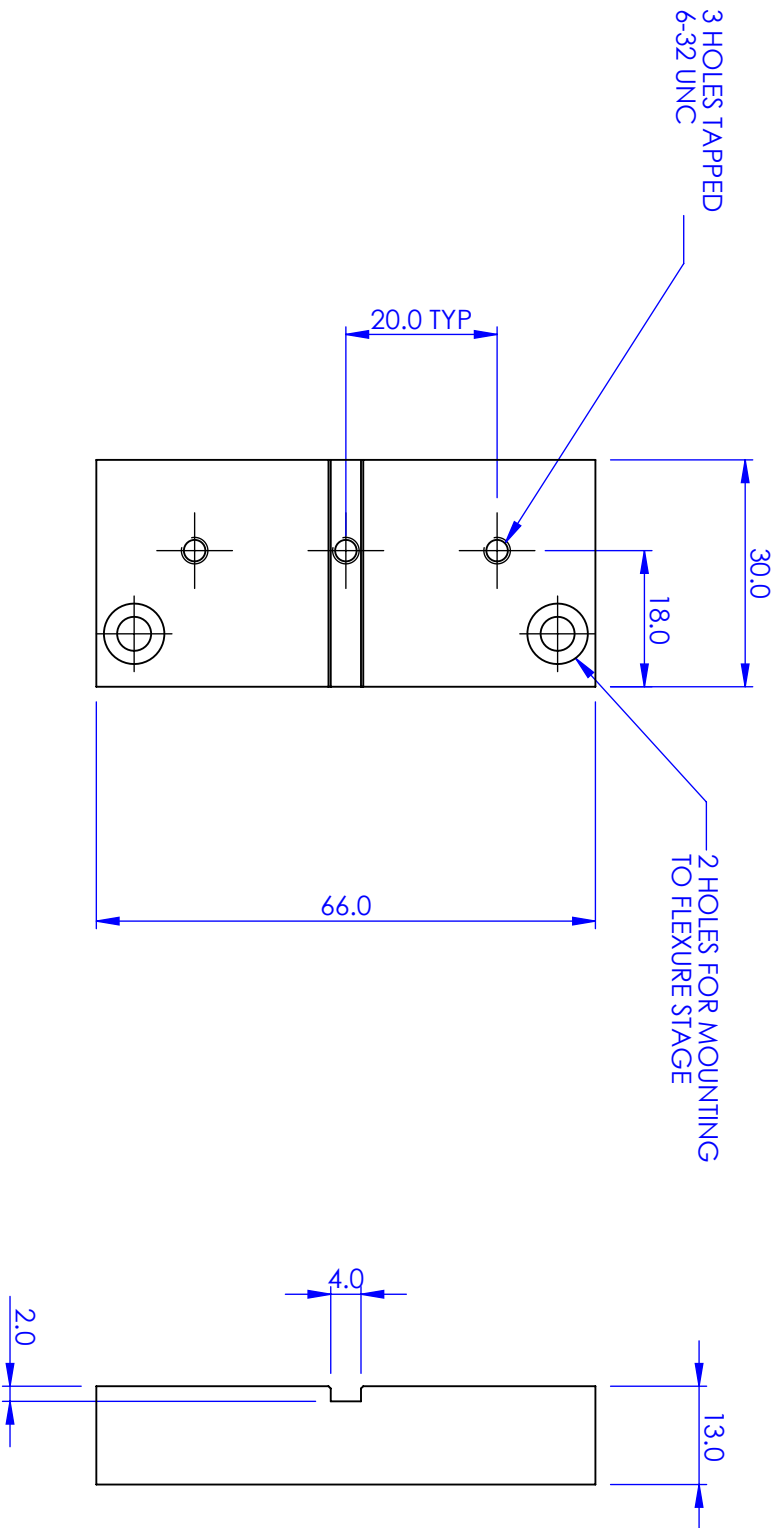
When mounting these brackets, a steel rule is a useful aid to ensure that they are in-line with the optical axis defined by the XYZ stage.

Options

MDE189 Fixed bracket

MDE190 Riser block

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



PLATFORM SUPPLIED WITH 2 MOUNTING
SCREWS, CLAMP SET AND HEX KEY

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MATERIAL ALUM ALLOY			TITLE		
FINISH BLACK ANODISED			FIXED PLATFORM, SMALL		
DO NOT SCALE DRAWING			SIZE A4	DWG. NO. MDE148E	THIRD ANGLE PROJECTION
			SCALE: 1:1		SHEET 1 OF 1

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE149E L-Shaped Bracket with Imperial Tapped Holes & 46 mm Slot

- For Y-axis use



The MDE149E is for mounting accessories along the Y-axis of flexure stages. It attaches to front vertical pillar on the stage and provides a rigid mounting surface for other accessories. It has a slot of length 60 mm milled along it, a locating groove and 6-32 threaded mounting holes. The package includes an MDE154 clamp set.

Fixed brackets are attached to the vertical pillar on flexure stages by using two M4 screws. They provide a convenient rigid surface for mounting standard Elliot or Martock accessories for alignment with items on the moving top plate of the flexure stage.

The fixed platform is often referred to as the "Fixed World", while the flexure stage top plate can be regarded as the "Moving World".

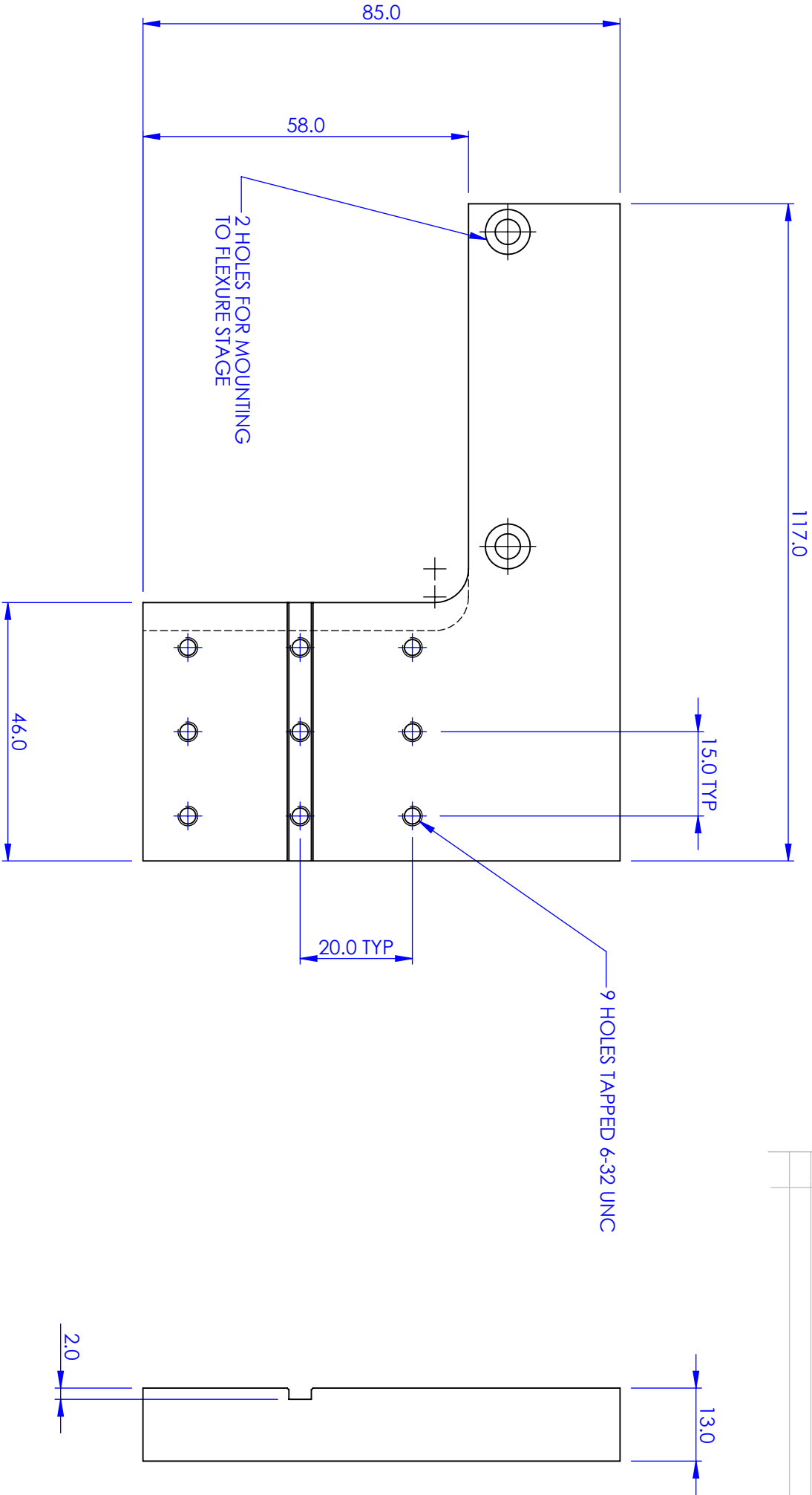
When mounting these brackets, a steel rule is a useful aid to ensure that they are in-line with the optical axis defined by the XYZ stage.

Options

MDE189 Fixed bracket

MDE190 Riser block

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PLATFORM SUPPLIED WITH 2 MOUNTING
SCREWS, CLAMP SET AND HEX KEY

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AUTHOR	NAME	DATE	
CHECKED	GW	12/07/2010	
MATERIAL ALUMINIUM ALLOY		TITLE SIDE PLATFORM	
FINISH ANODISED BLACK		SIZE A4	DWG. NO. MDE149E
DO NOT SCALE DRAWING		SCALE: 1:1	THIRD ANGLE PROJECTION
		SHEET 1 OF 1	

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE189 Fixed Bracket



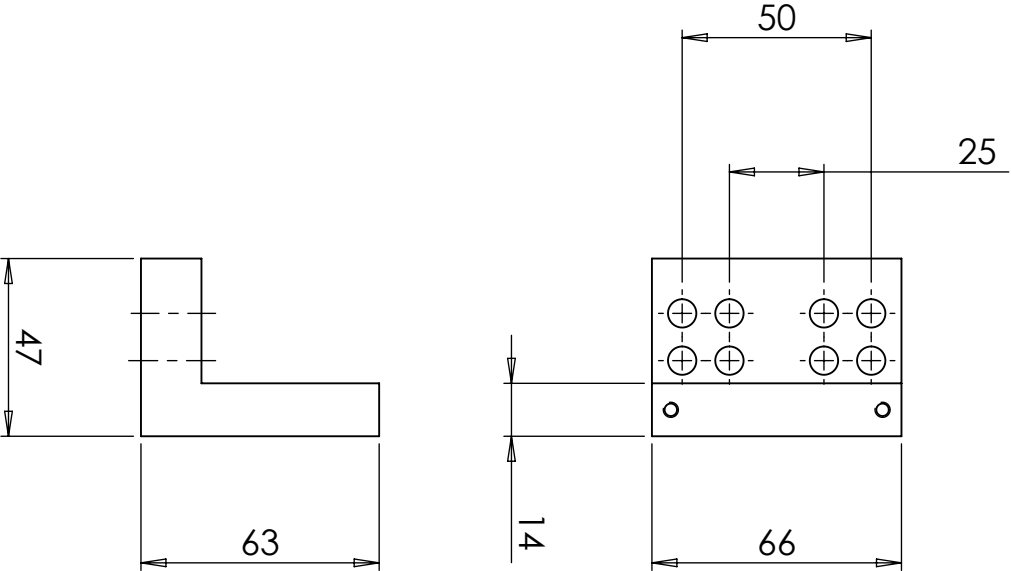
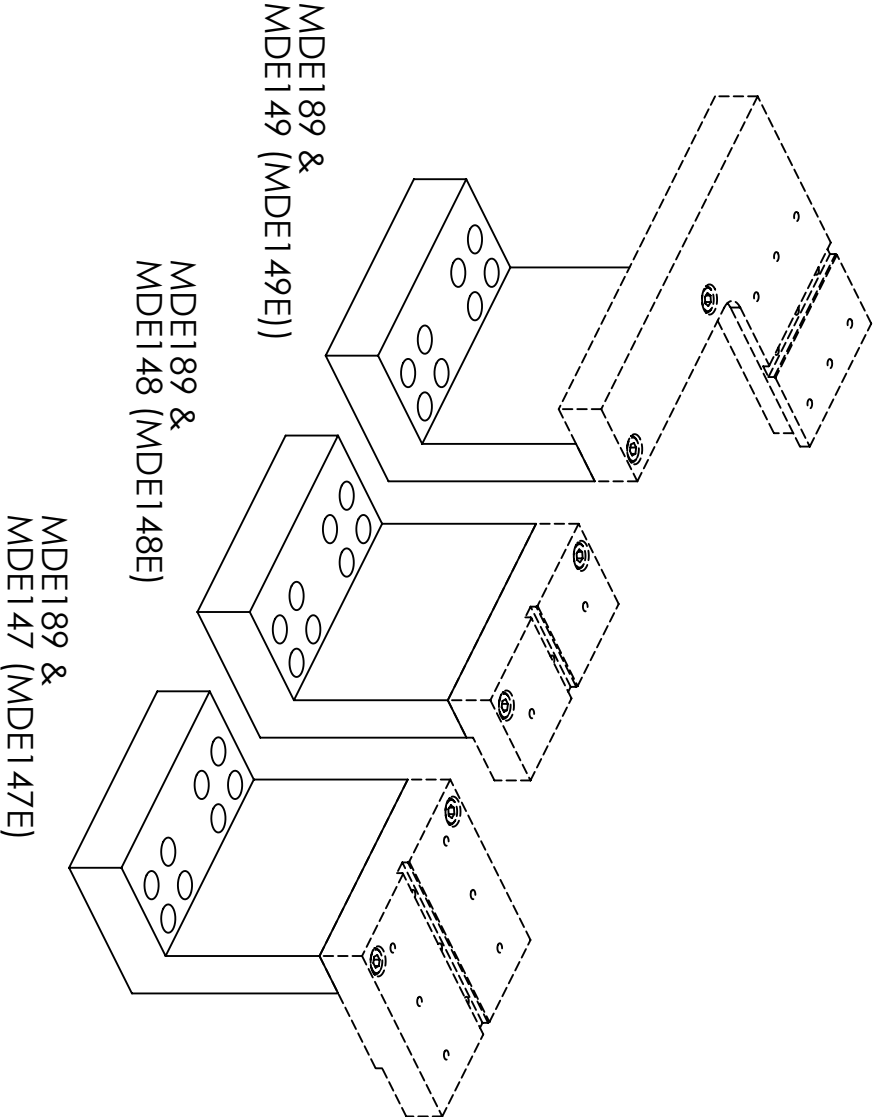
The MDE189 fixed bracket can be used with the MDE147, MDE148 and MDE149 fixed brackets to provide a simple fixed platform for mounting standard devices and fibre holders.

Bolted directly to an optical breadboard, the MDE189 provides an optical height of 94 mm (compatible with the Elliot Gold™ series flexure stages). Add Riser Block MDE190 to raise the axis to 125 mm for use with combinations of stages at 125 mm.

Options

- MDE190 Riser block
- MDE147 Large fixed bracket
- MDE148 Small fixed bracket
- MDE149 L-shaped bracket

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MDE189

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MATERIAL		ALUM ALLOY		TITLE		FIXED MOUNTING BRACKET	
FINISH		ANODISED BLACK		SIZE		DWG. NO.	
DO NOT SCALE DRAWING		SCALE:1:2		THIRD ANGLE PROJECTION		SHEET 1 OF 1	
		A4		MDE189			

Elliot Gold™ Series: XYZ Flexure Stages: Accessories

MDE190 Riser Block



A riser block is used in conjunction with the MDE189 to raise the optical axis to 125 mm. This is needed when configuring a 5 or 6 axis fibre launch with an MDE183 or MDE185 mounted on the "Moving World".

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

Options

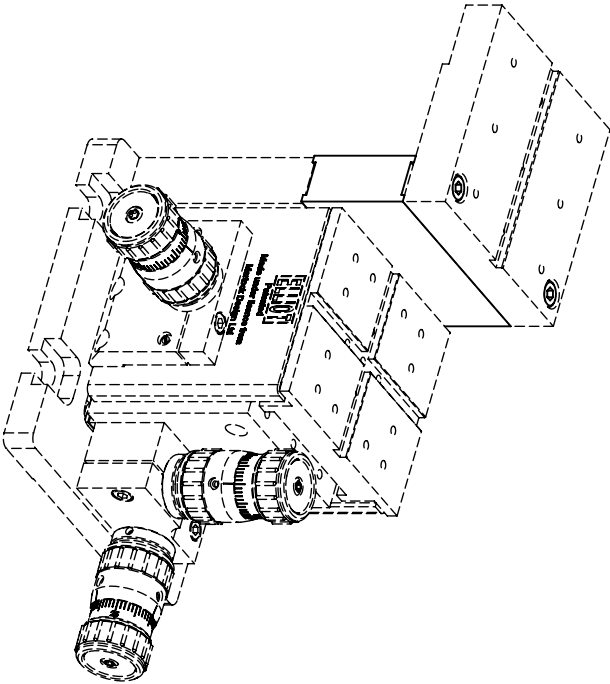
MDE147 Large fixed bracket

MDE148 Small fixed bracket

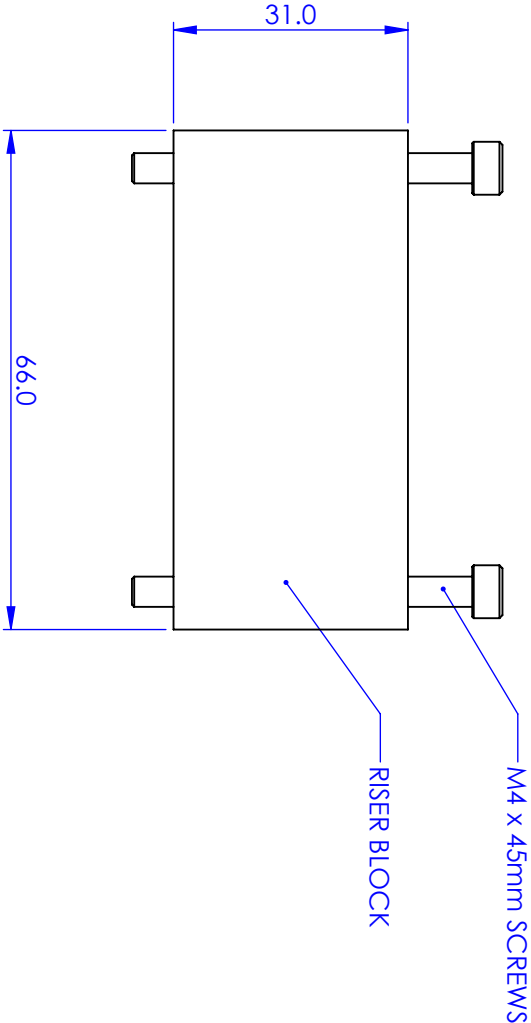
MDE149 L-shaped bracket

MDE189 Fixed bracket

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APPLICATION EXAMPLE



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MATERIAL				FINISH			
DO NOT SCALE DRAWING				TITLE			
SCALE: 1:1				THIRD ANGLE PROJECTION			
SHEET 1 OF 1				RISER BLOCK ASSEMBLY			
SIZE A4				DWG. NO. MDE190			

Elliot Gold™ Series: XYZ Flexure Stages: Piezo Systems

MDE623 3-Channel Piezo Controller with MDE123 XYZ Flexure Stage



- USB interface
- Channels: 3 independent
- Output voltage: 0-150 V
- Output current: 50 mA/channel
- Output noise: < 50 μ VRMS
- Digital readout on each channel
- Internal/external voltage control
- Ext. input voltage control 0 to 10 V
- Output stability: <0.01% over 5 hours
- Power requirements: 110-220 Vac 50/60 Hz



Complete system comprising the E1100 3-channel controller together with the MDE123 Elliot Gold™ series XYZ flexure stage fitted with piezo actuators providing 25 μ m of piezo travel with 10 nm resolution in each of the three axes.

Specifications

Please refer to the individual data sheets for full specifications:

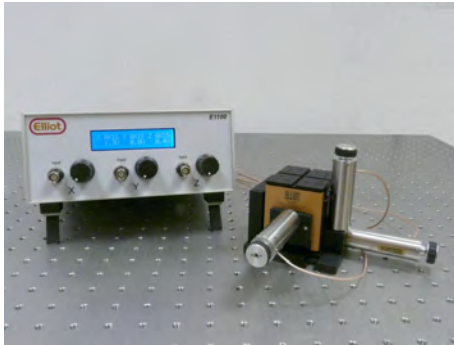
Flexure Stage	MDE123
Piezo Adjusters	MDE218
Piezo Controller	E1100
Includes MDE154 clamp set	

† Patent Nos. GB 2129955B & USA 4635887



Elliot Gold™ Series: XYZ Flexure Stages: Piezo Systems

MDE625 3-Channel Piezo Controller with MDE125 XYZ Flexure Stage



- USB interface
- Channels: 3 independent
- Output voltage: 0-150 V
- Output current: 50 mA/channel
- Output noise: < 50 μ VRMS
- Digital readout on each channel
- Internal/external voltage control
- Ext. input voltage control 0 to 10 V
- Output stability: <0.01% over 5 hours
- Power requirements: 110-220 Vac 50/60 Hz



Complete system comprising the E1100 3-channel controller together with the MDE125 Elliot Gold™ series XYZ flexure stage fitted with piezo actuators providing 100 μ m of piezo travel with 50 nm resolution in each of the three axes.

Specifications

Please refer to the individual data sheets for full specifications:

Flexure Stage	MDE125
Piezo Adjusters	MDE218
Piezo Controller	E1100
Includes MDE154 clamp set	

† Patent Nos. GB 2129955B & USA 4635887



Fibre Launch Systems



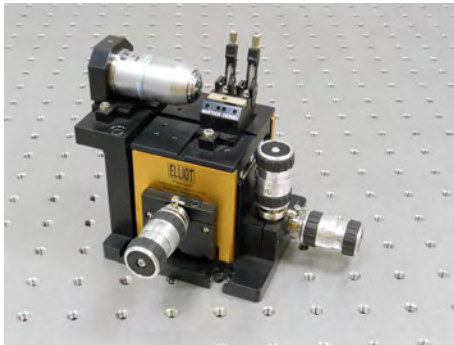
ELLIOT | MARTOCK

2019



Elliot Gold™ Series: Fibre Launch Solutions

MDE510 Fibre Launch System with High-Precision Adjusters



ELLIOT MARTOCK

- 20 nm resolution with patented† high resolution adjusters
- Ultra-stable patented†† design XYZ flexure stage
- Suitable for singlemode fibre (125/250 µm cladding/jacket)
- Orthogonal alignment grooves
- 2 mm travel per axis
- 4.5 kg load capacity

Elliot Gold™ series fibre launch system comprising: 3-axis high-precision manual flexure stage with adjustable force fibre holder, objective lens mount with RMS thread, and small fixed bracket. Suitable for launching free space light beams into singlemode fibre.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

System Constituents:

MDE710 Adjustable force fibre holder

MDE330 Elliot Gold™ series XYZ High Precision Flexure Stage

MDE216 High precision manual adjusters (x3)

MDE154 Clamp Set

MDE150 Objective mount (RMS thread)

MDE148 Small fixed bracket

Specifications

Configuration	Right handed version
Fibre holder (Standard)	Double V-groove & clamp arms for 125/250 µm cladding/jacket fibre. Adjustable spring-loaded clamp arm force
Fibre holder (Variants)	FC mount: Specify MDE510FC SMA mount: Specify MDE510SMA
Adjuster Type	Three high precision adjusters (MDE216) utilising a patented† lever system with rotary fine and coarse control
Stage travel	2 mm in X, Y and Z axes
Resolution	20 nm
Load capacity	4.5 kg
Arcuate Displacement	X axis 20 µm, Y and Z axes 14 µm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Objective mount	Removable stainless steel sleeve with RMS thread (0.800"-36). Allows on-axis adjustment and exchange of objectives or suitably mounted aspheric or ball lenses

Options

Left-handed version (to special order)

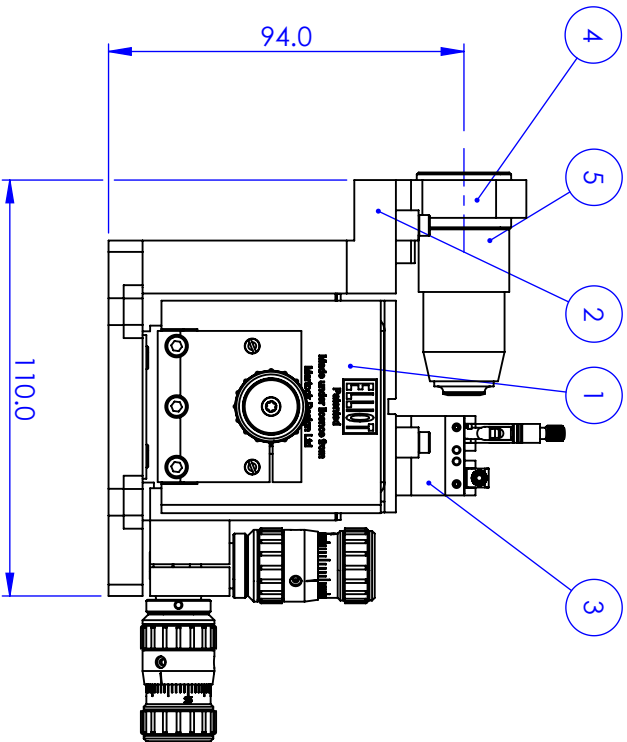
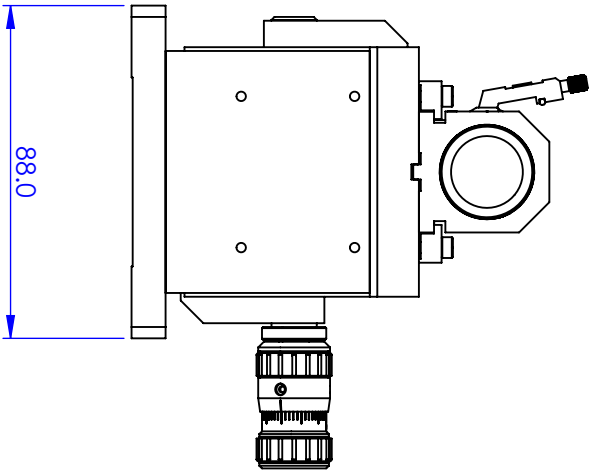
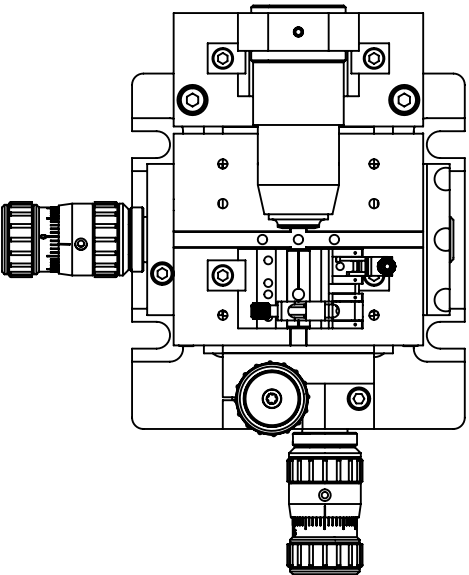
Custom sized V-grooves

† Patent Nos. GB 2152616B & USA 4617833

†† Patent Nos. GB 2129955B & USA 4635887

PART NO.	ITEM NO.	QTY.	DESCRIPTION
MDE122	1	1	XYZ STAGE WITH MDE216 ADJUSTERS
MDE148	2	1	SMALL PLATFORM ASSEMBLY
MDE150	4	1	OBJECTIVE MOUNT
MDE173*	5	1	ES OBJECTIVE
MDE710	3	1	FIBRE HOLDER

* MDE173 not included in MDE510



REV.	REVISIONS	DATE	APPROVED
	DESCRIPTION		

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AUTHOR	NAME	DATE
CHECKED		09/08/2010
MATERIAL		
FINISH		

ELIOT Scientific

FIBRE LAUNCH SYSTEM

SIZE **A4**
DWG. NO. **MDE510**

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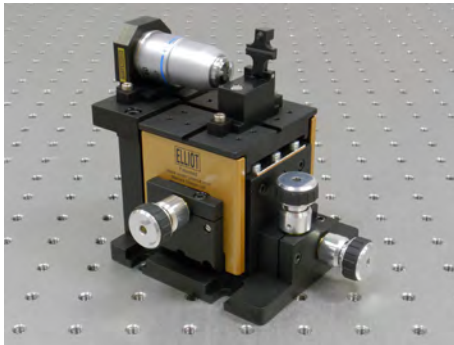
SCALE: 1:2

THIRD ANGLE PROJECTION

SHEET 1 OF 1

Elliot Gold™ Series: Fibre Launch Solutions

MDE511 Fibre Launch System with Simple Adjusters



ELLIOT MARTOCK

- Suitable for multimode fibre (125 μm)
- Orthogonal alignment grooves
- 200 nm resolution with 2 mm travel per axis
- 4.5 kg load capacity
- Ultra-stable patented† design XYZ flexure stage

Elliot Gold™ series fibre launch system comprising: 3-axis simple manual flexure stage with basic fibre holder, objective lens mount with RMS thread, and small fixed bracket. Suitable for launching free space light beams into multimode fibre.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

System Constituents:

MDE711 Fibre holder

MDE330 Elliot Gold™ series XYZ High Precision Flexure Stage

MDE217 Manual adjusters 0.25 pitch (x3)

MDE154 Clamp Set

MDE150 Objective mount (RMS thread)

MDE148 Small fixed bracket

Specifications

Configuration	Right handed version
Fibre holder	Single V-groove to suit 125 μm fibre with magnetic clamping arm.
Adjuster Type	Three imple manual adjusters, 0.25 pitch (MDE217)
Stage travel	2 mm in X, Y and Z axes
Resolution	200 nm
Load capacity	4.5 kg
Arcuate Displacement	X axis 20 μm , Y and Z axes 14 μm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Objective mount	Removable stainless steel sleeve with RMS thread (0.800"-36). Allows on-axis adjustment and exchange of objectives or suitably mounted aspheric or ball lenses

Options

Left-handed version (to special order)

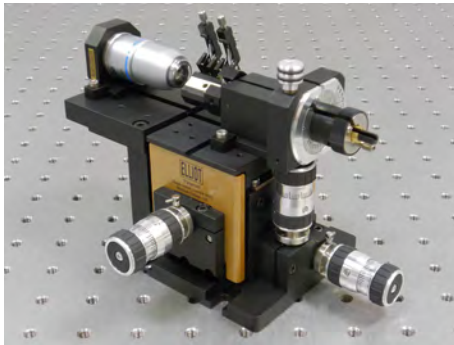
Custom sized V-grooves

† Patent Nos. GB 2129955B & USA 4635887



Elliot Gold™ Series: Fibre Launch Solutions

MDE520 High-Precision Polarisation Maintaining Fibre Launch System



ELLIOT MARTOCK

- 5 arc seconds rotational resolution
- Orthogonal alignment grooves
- 2 mm travel per axis
- Suitable for PM fibre (125/250 μm cladding/jacket)
- Ultra-stable patented[†] design XYZ flexure stage
- 20 nm linear resolution with patented^{††} high resolution adjusters

Elliot Gold™ series polarisation maintaining (PM) fibre launch system comprising: 3-axis high precision flexure stage with high precision fibre rotator, objective lens mount with RMS thread, and large fixed bracket. Suitable for launching free space light beams into PM fibre.

PM fibre requires that the roll axis be adjusted to ensure correct alignment of the laser polarisation and fibre polarisation axes.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

System Constituents:

MDE717 High precision fibre rotator

MDE330 Elliot Gold™ series XYZ High Precision Flexure Stage

MDE216 High precision manual adjusters (x3)

MDE154 Clamp Set x 2

MDE150 Objective mount (RMS thread)

MDE147 Large fixed bracket

Specifications

Configuration	Right handed version
Fibre holder	Double V-groove & clamp arms for 125/250 μm cladding/jacket fibre. Adjustable spring-loaded clamp arm force
Fibre rotation	Full 360° rotation Engraved scale $\pm 90^\circ$ Vernier reads to 30 arc minutes Fine adjustment screw with 5 arc seconds resolution
Range	$\pm 5^\circ$ V-block preset on axis with $< 1 \mu\text{m}$ concentricity error V-block can be re-centred by user
Adjuster Type	Three high precision adjusters (MDE216) utilising a patented ^{††} lever system with rotary fine and coarse control
Resolution	20 nm
Load capacity	4.5 kg
Arcuate Displacement	X axis 20 μm , Y and Z axes 14 μm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Objective mount	Removable stainless steel sleeve with RMS thread (0.800"-36). Allows on-axis adjustment and exchange of objectives or suitably mounted aspheric or ball lenses

Options

Left-handed version (to special order)

Custom sized V-grooves

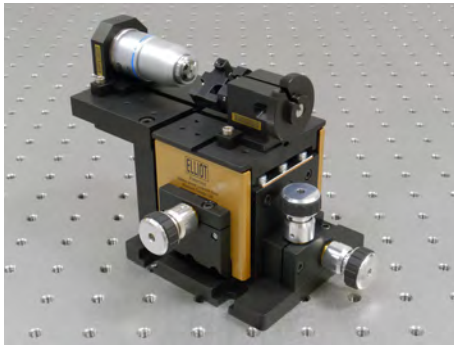
[†] Patent Nos. GB 2152616B & USA 4617833

^{††} Patent Nos. GB 2129955B & USA 4635887



Elliot Gold™ Series: Fibre Launch Solutions

MDE521 Standard Polarisation Maintaining Fibre Launch System



ELLIOT MARTOCK

- ~ 0.1 degrees rotational resolution
- Suitable for PM fibre (125 μm)
- Orthogonal alignment grooves
- 200 nm resolution
- 2 mm travel per axis
- 4.5 kg load capacity
- Ultra-stable patented† design XYZ flexure stage

Elliot Gold™ series polarisation maintaining (PM) fibre launch system comprising: 3-axis simple manual flexure stage with standard fibre rotator, objective lens mount with RMS thread, and small fixed bracket.

PM fibre requires that the roll axis be adjusted to ensure correct alignment of the laser polarisation and fibre polarisation axes.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

System Constituents:

MDE718 Fibre rotator

MDE330 Elliot Gold™ series XYZ High Precision Flexure Stage

MDE217 Manual adjusters 0.25 pitch (x3)

MDE154 Clamp Set

MDE150 Objective mount (RMS thread)

MDE148 Small fixed bracket

Specifications

Configuration	Right handed version
Fibre holder	V-groove & single clamp arm for 125 μm fibre. Adjustable spring-loaded clamp arm force up to 125 g
Fibre rotation	Full 360° rotation. Resolution approx 0.1 degrees
Adjuster Type	Three simple manual adjuster, 0.25 pitch (MDE217)
Stage travel	2 mm in X, Y and Z axes
Resolution	200 nm
Load capacity	4.5 kg
Arcuate Displacement	X axis 20 μm , Y and Z axes 14 μm (at maximum range of travel)
Optical axis	94 mm above the bottom of the stage
Objective mount	Removable stainless steel sleeve with RMS thread (0.800"-36). Allows on-axis adjustment and exchange of objectives or suitably mounted aspheric or ball lenses

Options

Left-handed version (to special order)

Custom sized V-grooves

† Patent Nos. GB 2129955B & USA 4635887



Elliot Gold™ Series: Automatic Alignment Systems

E2300 DALi 3 - Device Automatic Alignment System



- Dual-axis piezo controller for 150v actuators
- Software-driven
- Feature packed and flexible
- Ideal for development, test and production applications



The Elliot Scientific E2300 DALi 3 is a 2-axis piezo controller for photonic device alignment using an automated feedback routine. It is compatible with a wide range of external optical detectors and facilitates rapid and automated alignment of photonic components across a wide range of applications.

The E2300 DALi 3 is a sophisticated 3-axes piezo actuator controller, designed to complement the piezo-driven versions of the Elliot Gold™ Series range of flexure stages, but which is also suited to other piezo devices working on 0 - 150 V. It works by locating and optimizing an optical signal fed back from any suitable external detector.

DALI 3 incorporates the latest in electronics and uses complex software algorithms to quickly deliver precision automated alignment by locating and optimising an optical feedback signal derived from the components being aligned.

Options

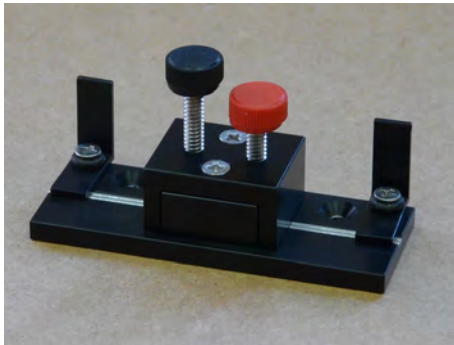
E2323 - DALi 3 E2300 with MDE123 piezo driven XYZ positioner (25 µm piezo travel)

E2325 - DALi 3 E2300 with MDE125 piezo driven XYZ positioner (100 µm piezo travel)



Elliot Gold™ Series: Fibre Launch Solutions: Accessory

ETB100 Fibre to Fibre Alignment Block



- Can be used with index matching gel to minimise coupling loss
- Quick and easy mechanical coupling of 2 bare fibres without splicing
- Simple and economical design

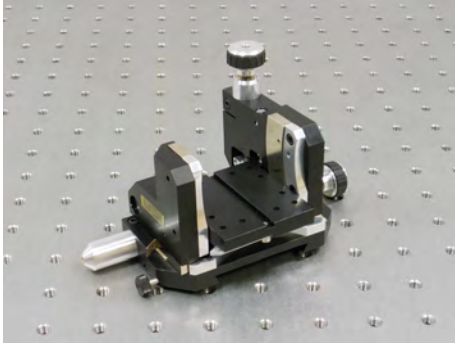


Designed to allow two bare fibres to be coupled quickly and easily without the need for splicing in applications such as OTDR testing.



Elliot Gold™ Series: 2 & 3-axis Rotation Modules

MDE183 Pitch and Yaw Stage with Simple Adjusters



- Pitch and yaw adjustment about a single point in space
- $\pm 3^\circ$ range in pitch (θ_y), $\pm 5^\circ$ range in yaw (θ_z)
- Resolution 2.0 arc seconds
- Rotation in a true arc - no cross-talk
- Excellent long-term stability
- Swing-out pointer identifies the centre of rotation
- For Elliot Gold™ Series XYZ flexure stage, adds 5- & 6-axis operation
- Right or left-handed configuration available
- Optional fibre or array rotation holders for roll axis adjustment
- Standard fibre holders fit top plate



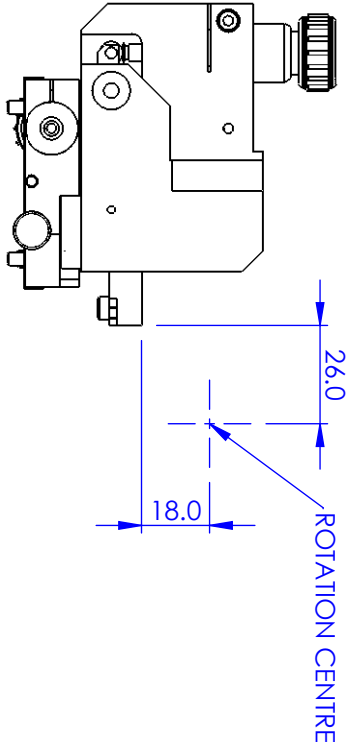
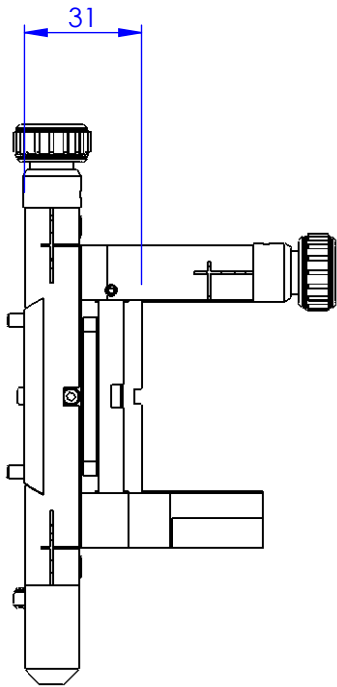
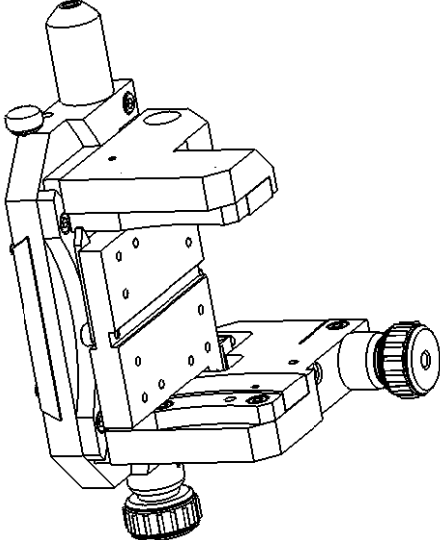
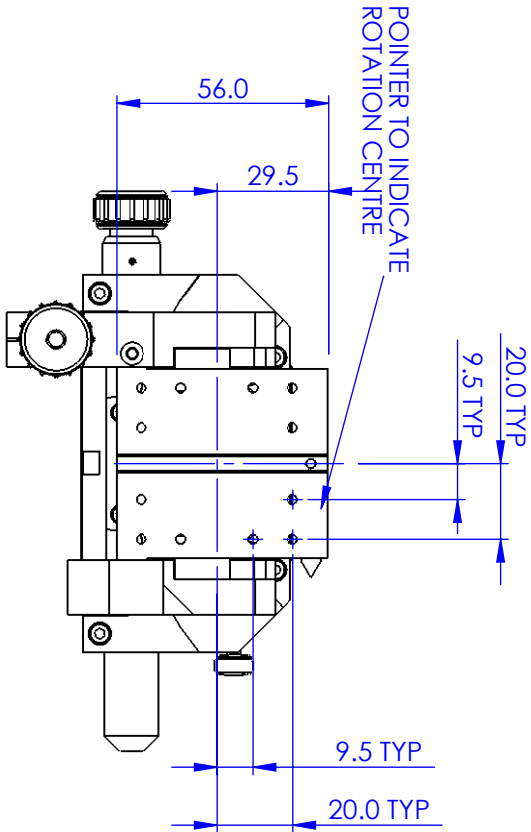
The MDE183 and MDE185 Rotation Stages add pitch and yaw adjustments to the Elliot Gold™ Series XYZ flexure stages. Applicable to a wide range of fibre and device alignment tasks requiring the ultimate in flexibility and precision control.

The MDE183 pitch and yaw module provides a $\pm 3^\circ$ range in pitch and a $\pm 5^\circ$ range in yaw, with a resolution of 2.0 arc secs. The module has a locating slot to accept Elliot/Martock standard top plate accessories such as fibre holders allowing bare fibre, ribbon cable and connectorised fibre to be used with the rotation module. A locating tongue on the base interfaces with the top plate of the flexure stages. When fitted with a fibre rotator and attached to a stage, the module allows 6-axis manipulation of a fibre about a single point in space. A swing-out pointer identifies the rotation centre for ease of use.

The MDE183 and MDE185 can be used with various top plate accessories from the Elliot/Martock range. These stages can also be mounted on riser blocks for 94 mm or 125 mm optical axis height. The MDE190 riser block is used to extend the axis height of an MDE147 or MDE148 bracket to 125 mm for 5 or 6 axis fibre launch applications.

All accessories are compatible with the flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and all accessories requiring attachment in this format are supplied with a clamp set.

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REV.	DESCRIPTION		



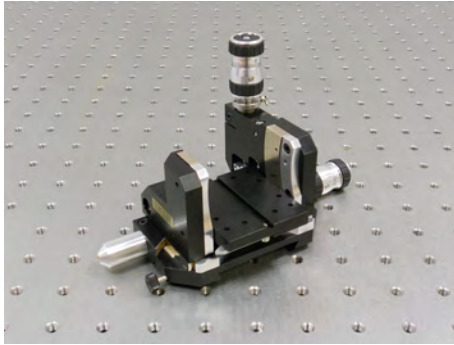
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NAME	DATE
AUTHOR	GW
CHECKED	26/02/2008
MATERIAL	
FINISH	
DO NOT SCALE DRAWING	
TITLE	
Elliott Scientific	
2 AXIS PITCH YAW MODULE	
SIZE	DWG. NO.
A4	MDE183
SCALE: 1:2	THIRD ANGLE PROJECTION
SHEET 1 OF 2	

Elliot Gold™ Series: 2 & 3-axis Rotation Modules

MDE185 Pitch and Yaw Stage with High Precision Adjusters



ELLIOT MARTOCK

- Pitch and yaw adjustment about a single point in space
- $\pm 3^\circ$ range in pitch (θ_y), $\pm 5^\circ$ range in yaw (θ_z)
- Resolution < 0.1 arc secs
- Rotation in a true arc - no cross-talk
- Excellent long-term stability
- Swing-out pointer identifies the centre of rotation
- For Elliot Gold™ Series XYZ flexure stage, adds 5- & 6-axis operation
- Right or left-handed configuration available
- Optional fibre or array rotation holders for roll axis adjustment

The MDE183 and MDE185 Rotation Stages add pitch and yaw adjustments to the Elliot Gold™ Series XYZ flexure stages. Applicable to a wide range of fibre and device alignment tasks requiring the ultimate in flexibility and precision control.

The MDE185 pitch and yaw module provides a $\pm 3^\circ$ range in pitch and a $\pm 5^\circ$ range in yaw, with a resolution of < 0.1 arc secs. The module has a locating slot to accept Elliot/Martock standard top plate accessories such as fibre holders allowing bare fibre, ribbon cable and connectorised fibre to be used with the rotation module. A locating tongue on the base interfaces with the top plate of the flexure stages. When fitted with a fibre rotator and attached to a stage, the module allows 6-axis manipulation of a fibre about a single point in space. A swing-out pointer identifies the rotation centre for ease of use.

The MDE183 and MDE185 can be used with various top plate accessories from the Elliot/Martock range. These stages can also be mounted on riser blocks for 94 mm or 125 mm optical axis height. The MDE190 riser block is used to extend the axis height of an MDE147 or MDE148 bracket to 125 mm for 5 or 6 axis fibre launch applications.

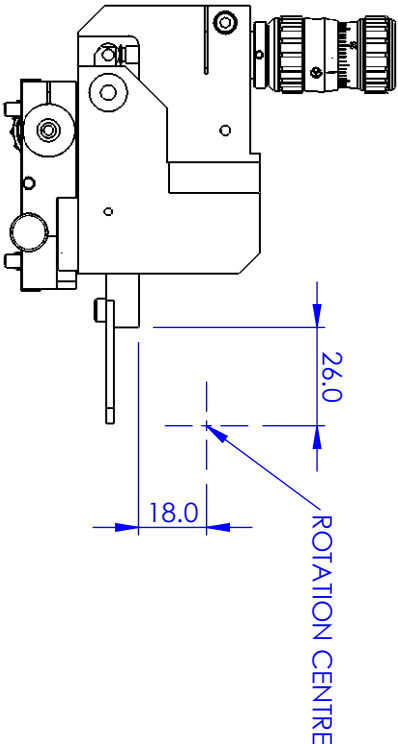
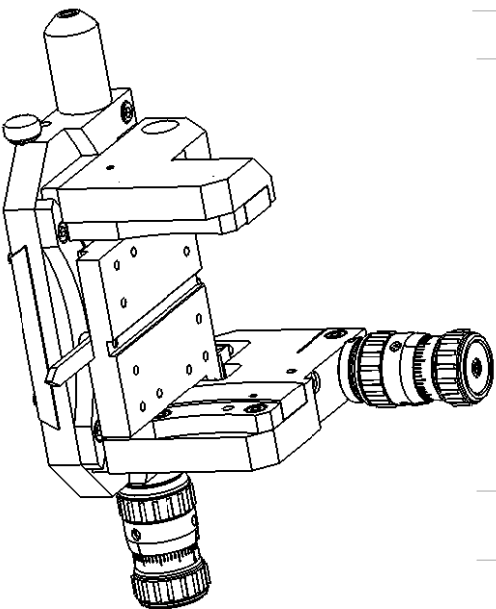
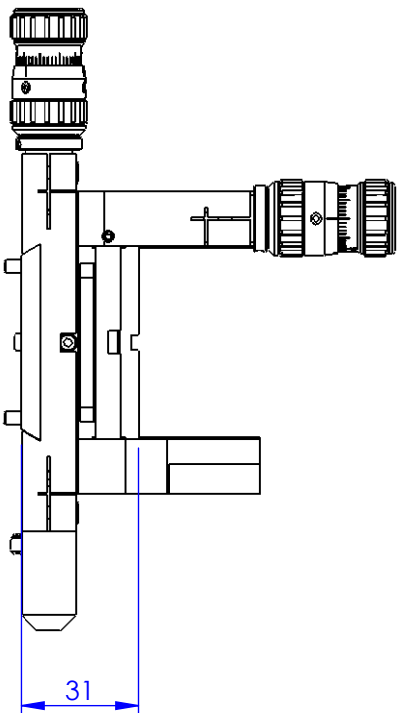
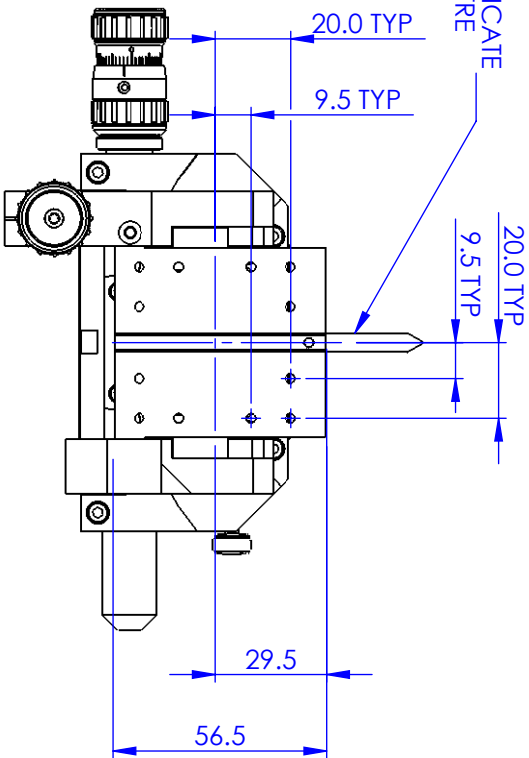
Specifications

Configuration	Right handed version
Adjuster Type	2x High precision adjusters (MDE216)
Range	
θ_z (yaw)	Coarse adjustment: $\pm 5^\circ$, Fine adjustment: $\pm 0.1^\circ$
θ_y (pitch)	Coarse adjustment: 3° , Fine adjustment $\pm 0.1^\circ$
Resolution	
θ_z (yaw)	Coarse adjustment: 5.5 arc seconds, Fine adjustment: < 0.1 arc seconds
θ_y (pitch)	Coarse adjustment: 5.5 arc seconds, Fine adjustment < 0.1 arc seconds
Optical axis	125 mm above the bottom of an Elliot Gold™ Series XYZ flexure stage
Cross-talk	No cross-talk - Rotation in a true arc

Options

Alternative adjusters (simple, high precision, motorised)	Fibre array rotator (MDE884LH)
Left-handed version (to special order)	Includes MDE154 clamp set
Fibre holders	
Fibre rotators	
† Patent Nos. GB 2152616B & USA 4617833	

POINTER TO INDICATE
ROTATION CENTRE



REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

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NAME	DATE
AUTHOR	GW
CHECKED	26/02/2008
MATERIAL	---
FINISH	---
DO NOT SCALE DRAWING	
TITLE	
2 AXIS PITCH YAW MODULE	
SIZE	DWG. NO.
A4	MDE185
SCALE: 1:2	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Rotators

MDE717 High Precision Fibre Rotator



ELLIOT MARTOCK

- Slotted design for easy insertion and removal of fibre
- Full 360° rotation
- Fine adjustment screw with 5 arc seconds resolution
- V-block preset on axis with < 1 µm concentricity error
- V-block can be re-centred by user
- Integrates with Elliot Gold™ series flexure stages

Designed for the most demanding rotation and alignment of angular sensitive components. It can be used anywhere that stable, accurate fibre rotation is needed.

The popular MDE717 fibre rotator is an updated version of the original and now offers the same highly accurate rotation in a more stable package.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

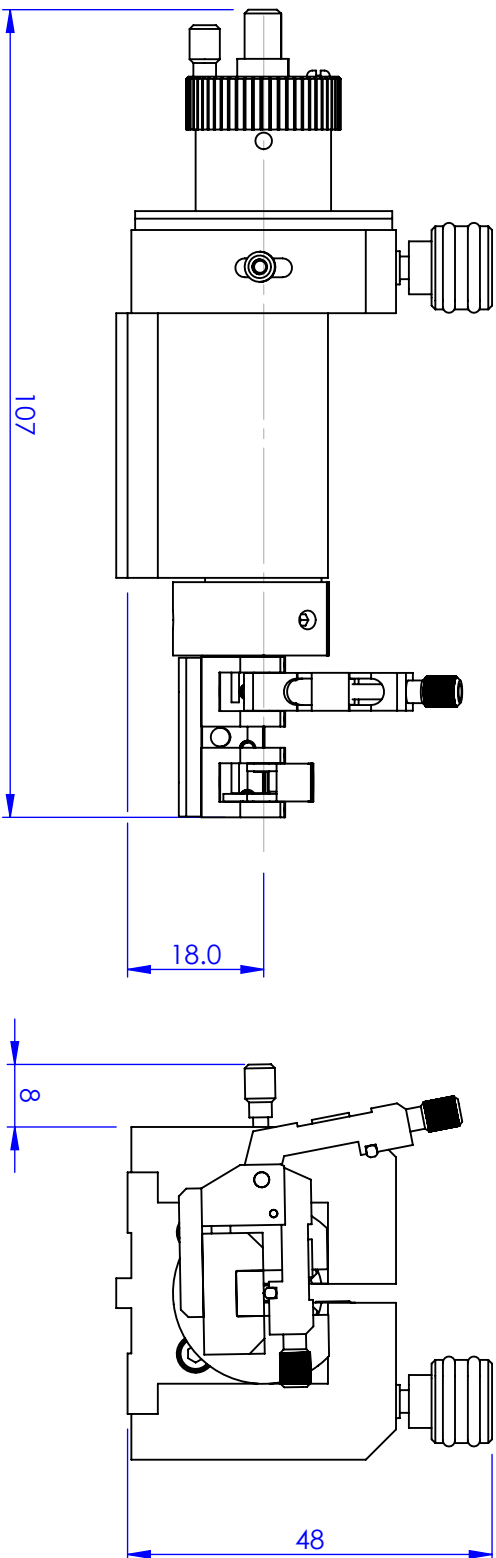
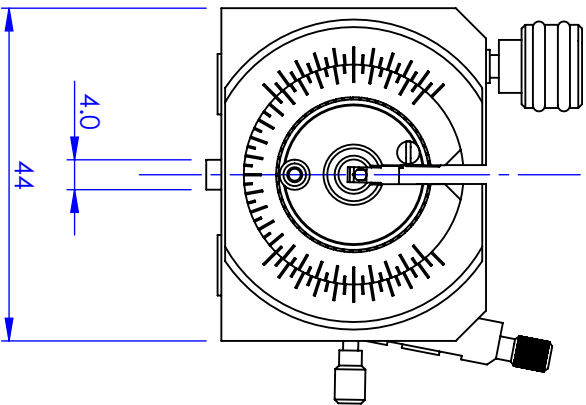
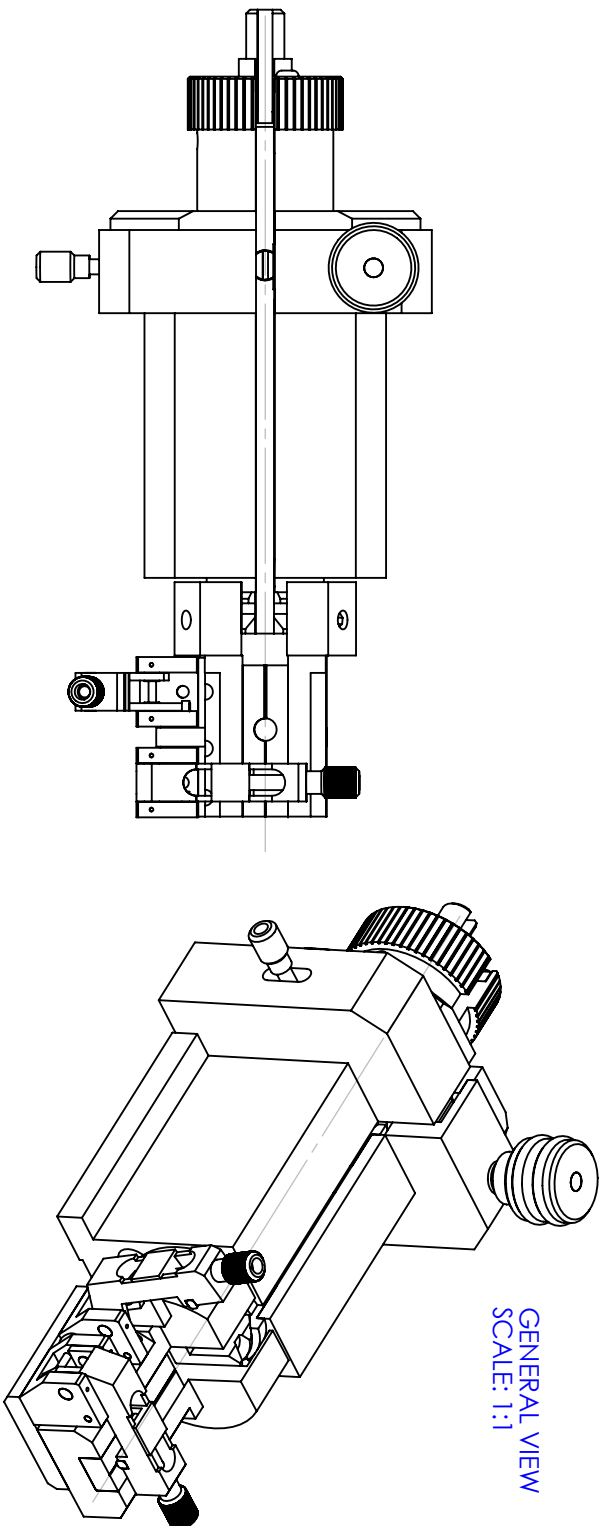
Specifications

Rotation adjustment	360°
Coarse adjustment	Engraved scale $\pm 90^\circ$, vernier reads to 30 arc minutes
Fine adjustment	Screw with 5 arc seconds resolution
Range	$\pm 5^\circ$
Fibre fixturing	Fibre held in double V-groove by two clamp arms
Clamp load	Adjustable 25 g to 125 g
V-block preset on axis with < 1 µm concentricity error	
V-block can be re-centred by user	
Standard V-groove for 125/250 µm fitted	
Split spring sleeve retains fibre in slot at the control end and prevents fouling during rotation	

Options

V-groove custom sizes available	Clamp set (MDE154)
OEM upgrade kits for fusion splicers to facilitate splicing of PM fibre	
Connectorised fibre version	
Custom configuration compatible with fibre chucks	

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REV.	DESCRIPTION			



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MATERIAL		—	—
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DO NOT SCALE DRAWING		TITLE	
SIZE		HIGH PRECISION FIBRE ROTATOR	
A4		DWG. NO.	
SCALE: 1:1		MDE717	
THIRD ANGLE PROJECTION		SHEET 1 OF 2	

Elliot Gold™ Series: Fibre Rotators

MDE235 Motorised Fibre Rotator



- Slotted design for easy insertion and removal of fibre
- Full 360° rotation
- Integral stepper motor drive
- Resolution <0.01 degrees
- Fibre held in variable-force V-groove clamps
- Standard V-groove for 125/250 µm fitted
- (Custom sizes available)
- V-block preset on axis with < 1 µm concentricity error
- Stepper drive controllers available with LabVIEW™ drivers
- Integrates with Elliot Gold™ series flexure stages

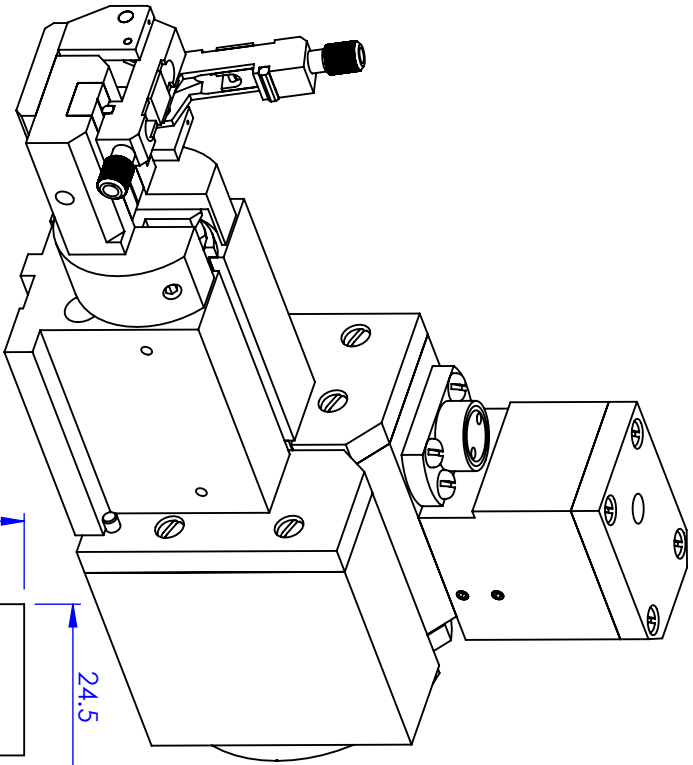
The MDE235 is a motorised version of the MDE717 fibre rotator. It includes all the features of the original with the addition of a smooth and accurate stepper motor drive. Designed for the demanding rotation and alignment of angular sensitive components. It can be used anywhere that stable, accurate fibre rotation is needed.

Specifications

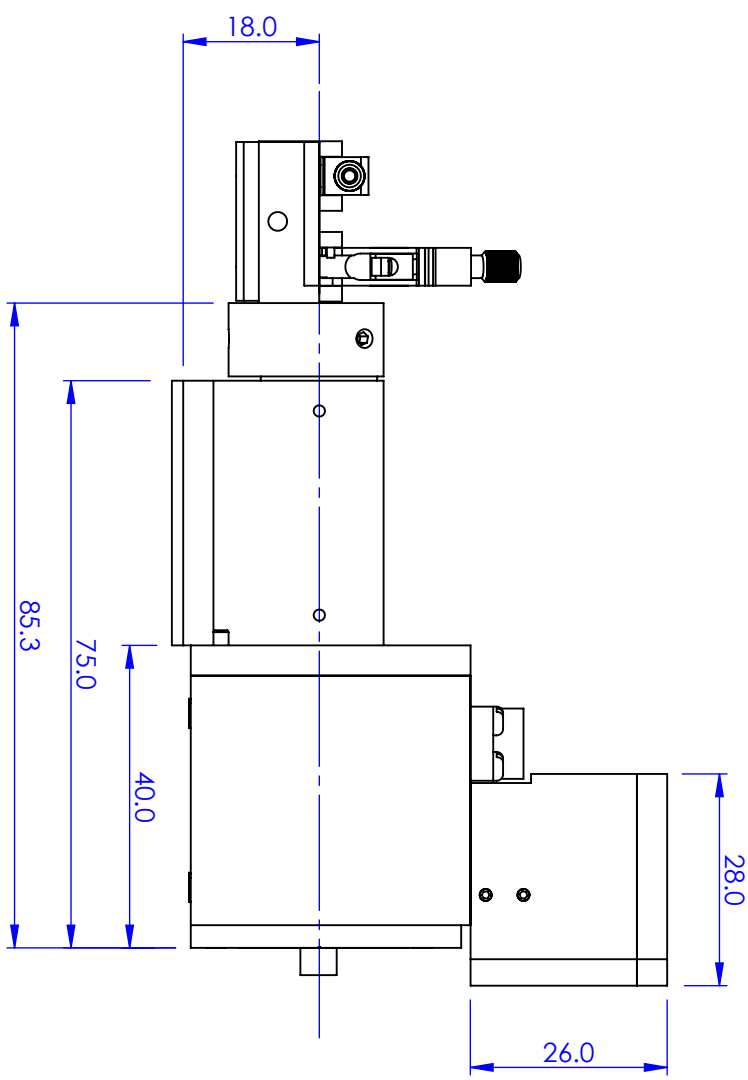
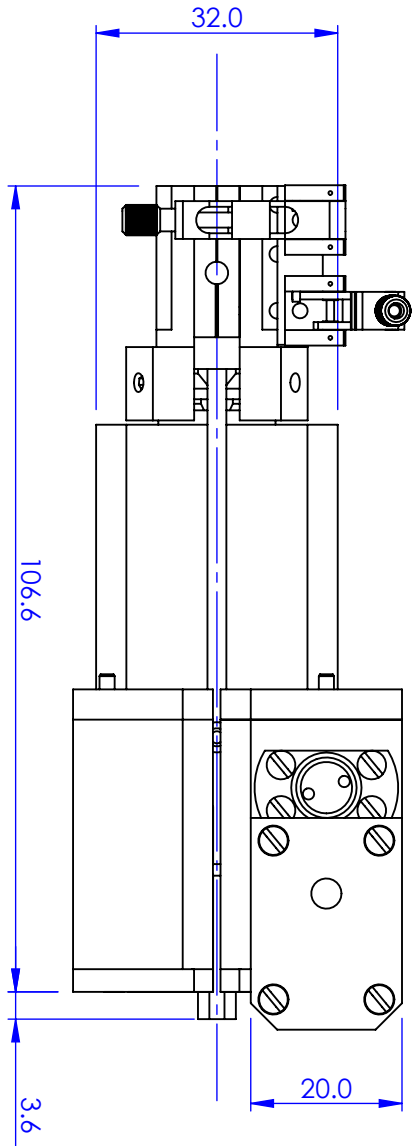
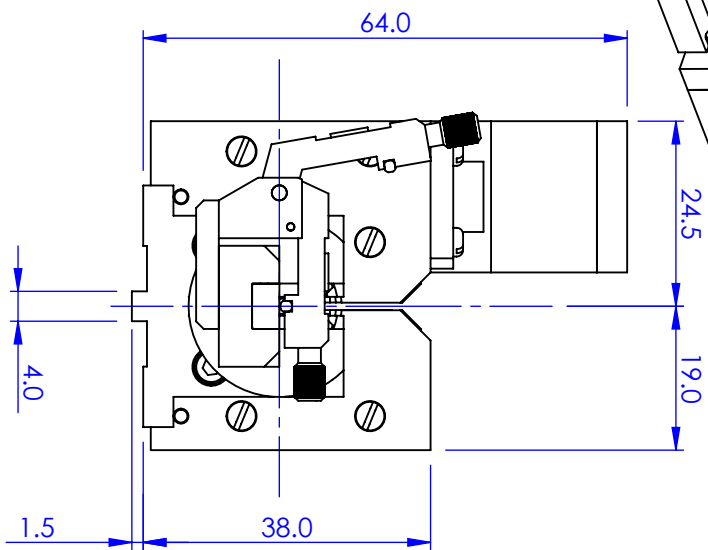
Actuator	Stepper motor
Rotation adjustment	Continuous 360°
Resolution	< 0.01° with full step controller
Fibre fixturing	Fibre held in V-groove by two variable force clamp arms
Clamp load	Adjustable 25 g to 125 g
V-block preset on axis with < 1 µm concentricity error	Standard V-groove for 125/250 µm fitted
Split spring sleeve retains fibre in slot at the control end	

Options

V-groove custom sizes available
 OEM upgrade kits for fusion splicers to facilitate splicing of PM fibre
 Custom versions compatible with fibre chucks



GENERAL VIEW
SCALE: 1:1



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AUTHOR	NAME	DATE
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	-	-
MATERIAL		

TITLE		
Eliot Scientific		
MOTORISED FIBRE ROTATOR		
SIZE	DWG. NO.	
A4	MDE235	
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION
SCALE: 1:1		SHEET 1 OF 1

Elliot Gold™ Series: Fibre Rotators

MDE718 Fibre Rotator



ELLIOT MARTOCK

- Slotted design for easy insertion and removal of fibre
- Full 360° rotation
- Resolution approximately 0.1 degrees
- Fibre held in V-groove by single clamp arm
- V-block can be re-centred by user
- Integrates with Elliot Gold™ series flexure stages

An economical fibre rotator designed for less demanding rotation alignment of angular sensitive components. It can be used anywhere that stable, accurate fibre rotation is needed.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms.

The clamp set (MDE154) is available separately if required.

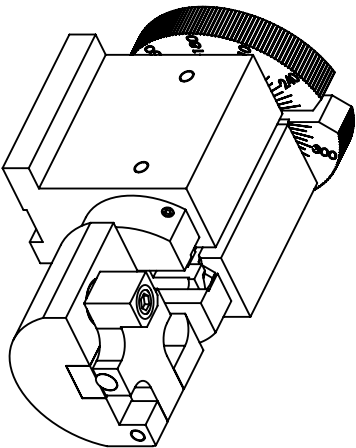
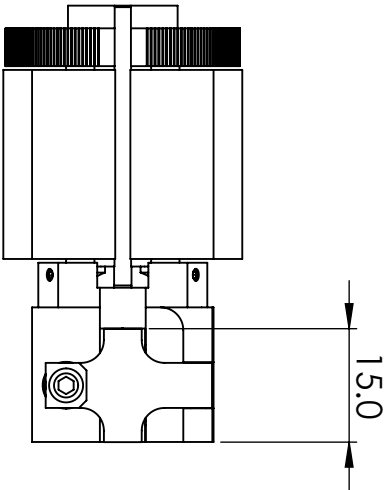
Specifications

Rotation adjustment	360°
Resolution	Approximately 0.1 degrees
Fibre fixturing	Fibre held in V-groove by single clamp arm
V-block can be re-centred by user	
Standard V-groove for 125 µm fibre fitted	

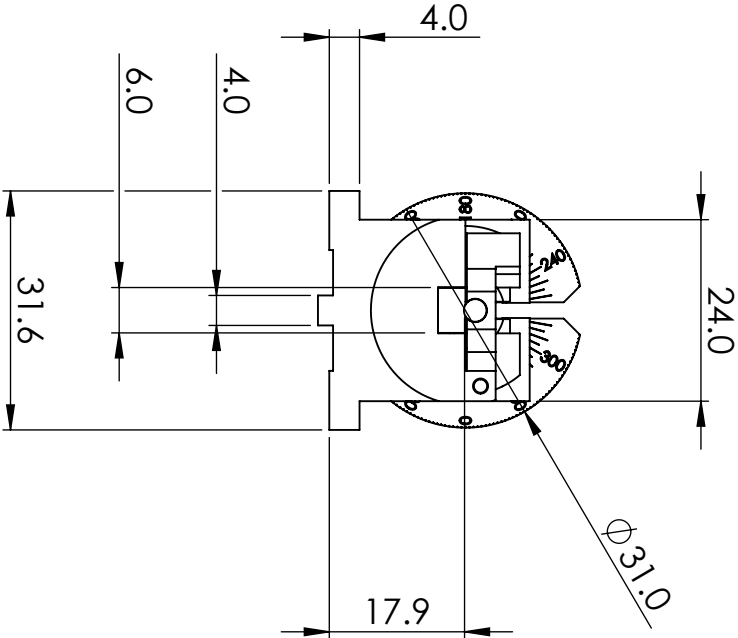
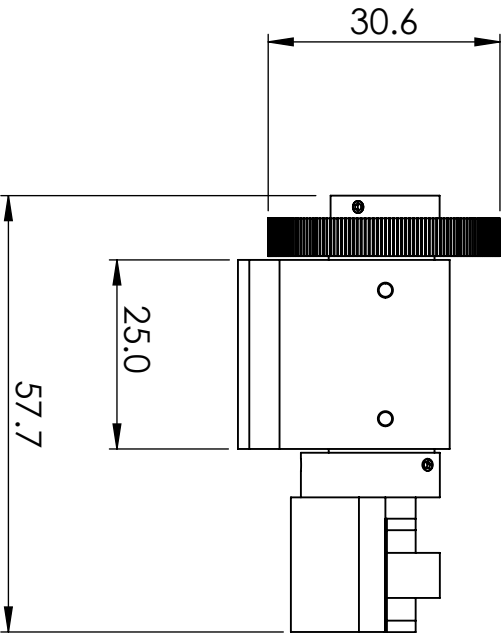
Options

V-groove custom sizes available (MDE712/nnn)
 OEM upgrade kits for fusion splicers to facilitate splicing of PM fibre
 Custom versions compatible with fibre chucks
 Clamp set (MDE154)

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE 1:1



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MATERIAL					
FINISH					

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TITLE	
FIBRE ROTATOR	
SIZE	DWG. NO.
A4	MDE718

SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	
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Elliot Gold™ Series: Fibre Array Rotators

MDE884LH Fibre Array / Crystal Rotator, Long Reach, Left Hand



- θ_x fibre array / crystal manipulator
- Rotates exactly on x-axis
- Maintains 18 mm centre height
- Right handed version available

ELLIOT MARTOCK

Unique roll mechanism ensures rotation is exactly about x-axis, and maintains 18 mm centre height. Right and left handed versions available. Can also be supplied with θ_y and θ_z adjustments. Front block is machined by Elliot Scientific or Customer to locate silicon V-groove block on the fibre ribbon.

The unique mechanical roll design features a decoupling of the linear adjuster travel from the roll motion, which minimises any radial offset during rotation. This ensures that angular movements are exactly about the x-axis and that no radial offset is introduced. The precision of motion results in a very high level of accuracy of the roll angle.

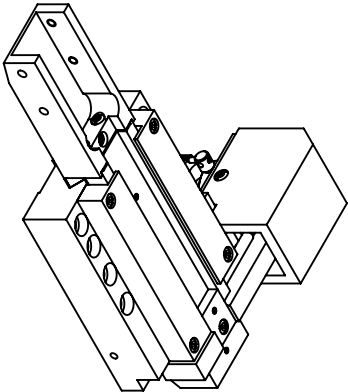
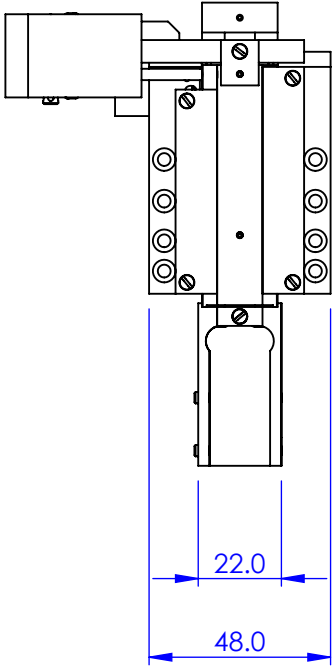
Specifications

Configuration	Left hand
Centre Height	Maintained at 18 mm
θ_x Rotation	
Coarse range	$\pm 4^\circ$
Fine range	± 10 arc minutes
θ_x Resolution (Coarse adjustment)	8 arc seconds
θ_x Resolution (Fine adjustment)	< 0.1 arc seconds

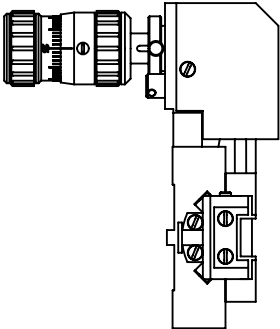
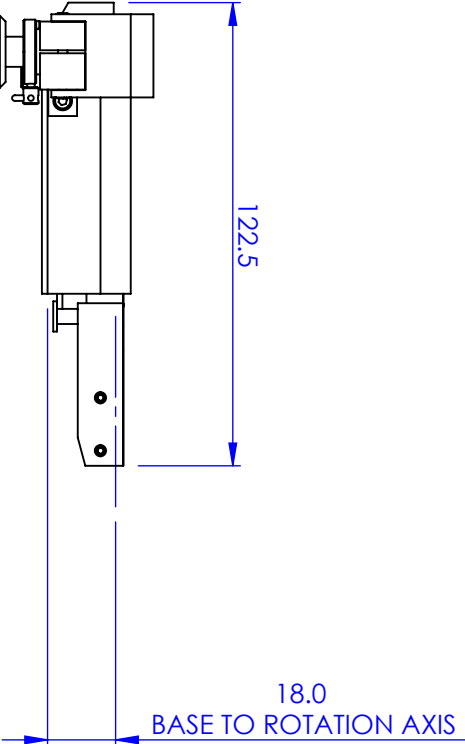
Options

θ_y and θ_z versions
Inverted drive version if space is limited

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:2



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AUTHOR		NAME	DATE
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MATERIAL		—	—
FINISH		—	—
DO NOT SCALE DRAWING		TITLE	
SIZE		RIBBON CABLE ROTATOR	
A4		DWG. NO. MDE884LH	
SCALE: 1:2		THIRD ANGLE PROJECTION	
SHEET 1 OF 1		Eliot Scientific	

Elliot Gold™ Series: Fibre Array Rotators

MDE884RH Fibre Array / Crystal Rotator, Long Reach, Right Hand



- θ_x fibre array / crystal manipulator
- Rotates exactly on x-axis
- Maintains 18 mm centre height
- Left handed version available

ELLIOT MARTOCK

Unique roll mechanism ensures rotation is exactly about x-axis, and maintains 18 mm centre height. Right and left handed versions available. Can also be supplied with θ_y and θ_z adjustments. Front block is machined by Elliot Scientific or Customer to locate silicon V-groove block on the fibre ribbon.

The unique mechanical roll design features a decoupling of the linear adjuster travel from the roll motion, which minimises any radial offset during rotation. This ensures that angular movements are exactly about the x-axis and that no radial offset is introduced. The precision of motion results in a very high level of accuracy of the roll angle.

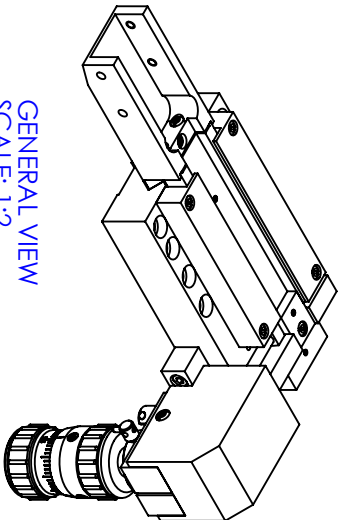
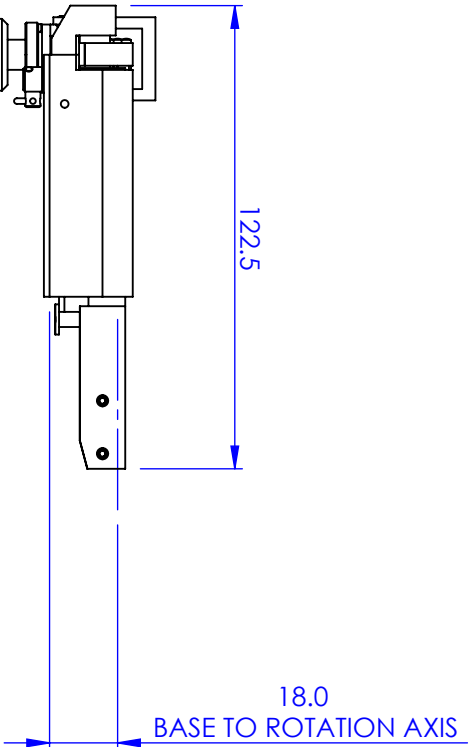
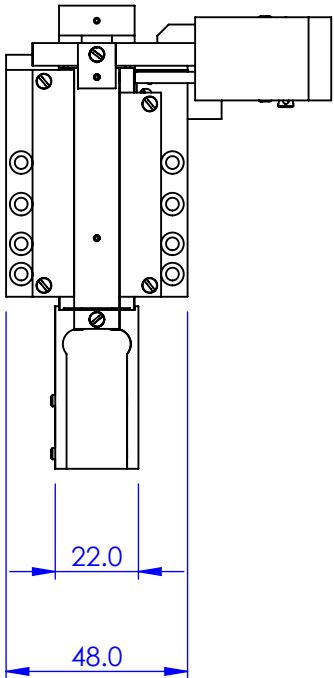
Specifications

Configuration	Right hand
Centre Height	Maintained at 18 mm
θ_x Rotation	
Coarse range	$\pm 4^\circ$
Fine range	± 10 arc minutes
θ_x Resolution (Coarse adjustment)	8 arc seconds
θ_x Resolution (Fine adjustment)	< 0.1 arc seconds

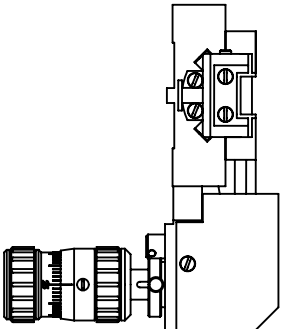
Options

θ_y and θ_z versions
Inverted drive version if space is limited

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:2



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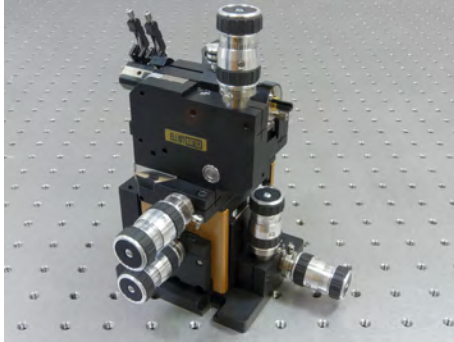
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GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
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REMOVED

MATERIAL	AUTHOR	NAME	DATE
	CHECKED	GW	03/06/2010
FINISH			

DO NOT SCALE DRAWING			
TITLE			
RIBBON CABLE ROTATOR			
SIZE			
A4			
DWG. NO.			
MDE884			
SCALE: 1:2			
THIRD ANGLE PROJECTION			
SHEET 1 OF 1			

Elliot Gold™ Series: Six-Axis Positioner

MDE187 Six-Axis Positioner fitted with High Precision Manual Adjusters



- 2 mm linear travel in XYZ axes with 20 nm resolution
- Roll adjustable through full 360° rotation
- Roll resolution 5 arc seconds
- Optical axis height 125 mm
- Slotted design for easy insertion and removal of fibre
- V-block preset on axis with < 1 µm concentricity error
- V-block can be re-centred by user
- Pitch and yaw resolution < 0.1 arc secs
- Pitch and yaw adjustments about a single point in space in a true arc with no cross-talk



The MDE187, six-axis positioner is built up from the Elliot Gold™ Series of micro-positioning precision components.

It facilitates precise manual adjustment in XYZ linear axes, plus pitch (θY), yaw (θZ) and roll (θX) with excellent accuracy and long term stability.

The Six-Axis positioner comprises:

MDE185 Pitch and Yaw Stage with High Precision Adjusters

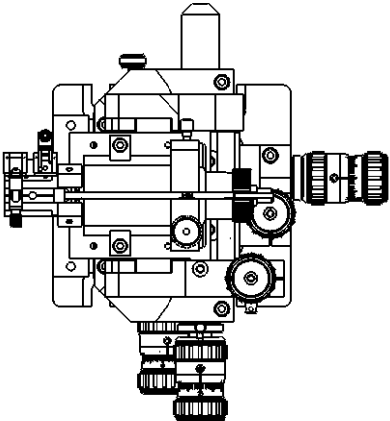
MDE717 High Precision Fibre Rotator

MDE154 Clamp Set

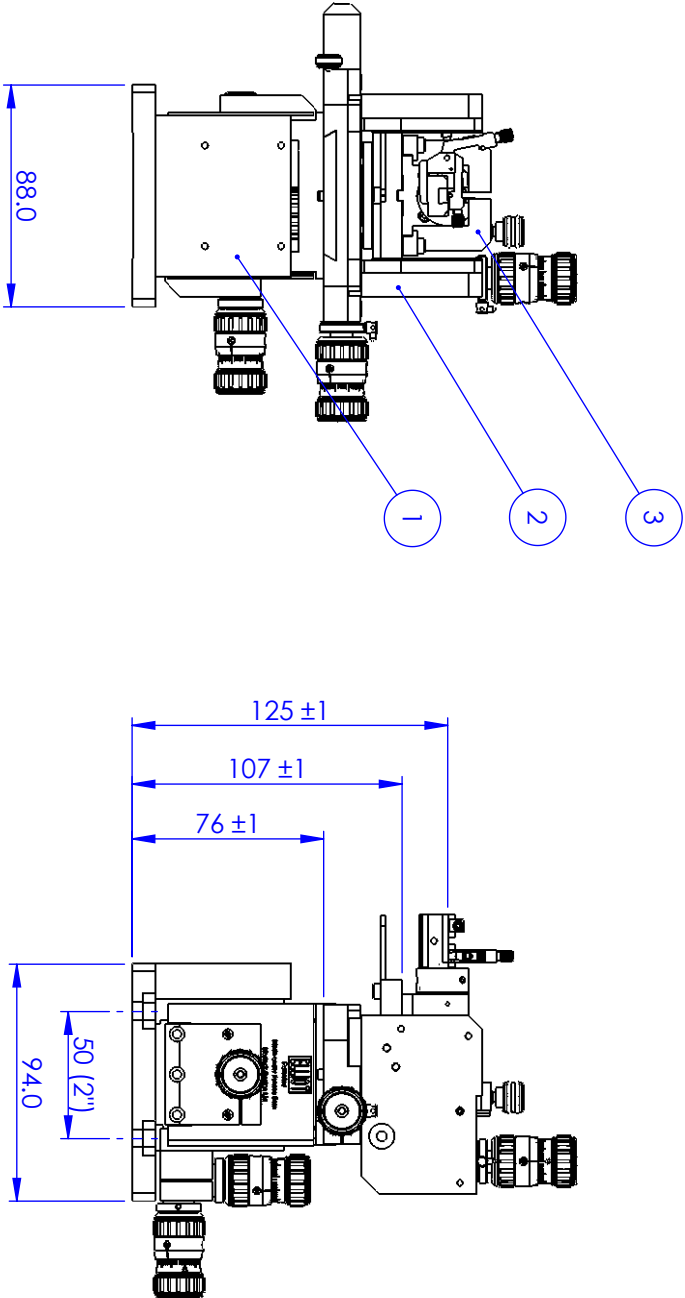
MDE122 Elliot Gold™ Series XYZ flexure stage fitted with high precision manual adjusters

† Patent Nos. GB 2129955B & USA 4635887

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



PART NO.	ITEM NO.	QTY.	DESCRIPTION
MDE122	1	1	XYZ FLEXURE STAGE
MDE185	2	1	PITCH & YAW MODULE
MDE717	3	1	FIBRE ROTATOR



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AUTHOR	NAME	DATE
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TITLE

6 AXIS POSITIONER

SIZE A4

DWG. NO. MDE187

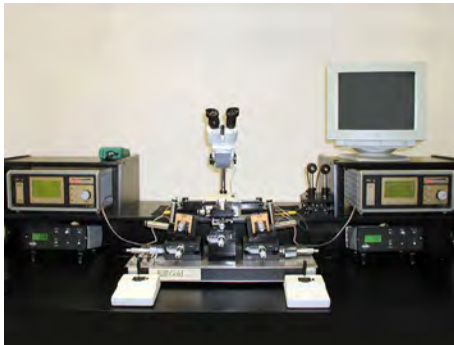
SCALE: 1:3

THIRD ANGLE PROJECTION

SHEET 1 OF 1

Elliot Gold™ Series: Alignment Systems: Multi-channel Optical Devices

E22884 E-Wedge™



- Automatic Alignment for Multi-channel Optical Devices

The E-Wedge™ system is designed to provide automatic alignment for multi-channel optical devices and fibre V-groove arrays. It includes automatic roll axis optimisation and compensation for angled device facets. The E-Wedge can be configured as a dual-ended automatic waveguide/device alignment workstation providing simultaneous alignment of input and output fibre arrays. The system can be customised to provide the number of axes needed for any particular devices. Holding fixtures are available for the full range of devices, fibres and v-groove arrays. Custom fixtures can also be provided.

Automatic alignment is provided by two E2300 DALi 3 controllers, designed to speed up and automate alignment in a wide range of applications such as laser diode to single-mode fibre, or input and output pigtailling to waveguide devices, couplers, splitters and WDMs. The E2300 includes a sophisticated 2-axis piezo actuator controller suitable for the piezo-actuated versions of our Elliot Gold™ Series flexure stages, and works by locating and optimising an optical signal fed back from any suitable detector.

The user is presented with a convenient software-driven system with full control over the scan parameters, and USB interfaces with LabVIEW drivers are provided for full remote control of the instrument, allowing it to be incorporated into automated test and measurement rigs or production alignment systems.

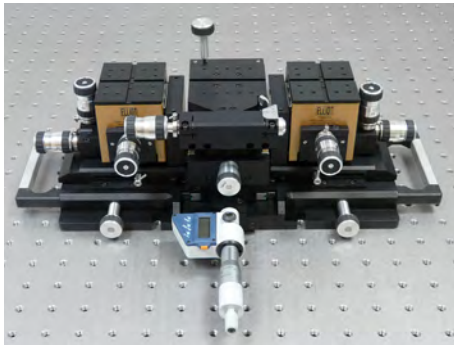
E-Wedge™ Resolution

25 µm piezo drive	10 nm in X, Y & Z axes
100 µm piezo drive	50 nm in X, Y & Z axes
Rotation	< 0.1 arc seconds



Elliot Gold™ Series: Alignment Systems: Waveguides

MDE881 Professional Workstation



ELLIOT MARTOCK

- 6-Axis precision manipulation
- All 6 axes are truly independent of each other
- No cross-talk
- Direct readout of waveguide Y axis position
- Portable & stable - no need for an optical table
- Fast rack & pinion drive enables easy access to central workstation for simple loading

Optical workstation with six independent axes of manipulation. Designed for precise alignment of both input and output fibres to an optical waveguide device.

Alignment of single mode fibres to photonic devices is a demanding task and the Elliot/Martock range of precision positioners was originally developed to address this application. With dual interface optical waveguide devices however, things become more complicated as it is necessary to align fibres (or fibre arrays) to both the input and output facets of a device.

The MDE881 Workstation has been designed specifically to provide the multiple degrees of motion required for this type of critical alignment and is suitable for use with a wide range of devices and fibre types for both characterisation and pigtailling applications.

For enhanced operator convenience and productivity, each of these XYZ flexure stages can be moved away from the central stage by 40 mm travel on a rack and pinion drive. This allows rapid outward movement of the XYZ stages holding the fibres in order to access the central stage and hence facilitates loading of the workstation.

Specifications

Configuration	Dual Elliot Gold™ Series XYZ Flexure Stages (MDE122), each mounted on a Rack & Pinion Slide Central 5-axis stage Integral base plate with carrying handles
Optical Axis Height	125 mm from bottom of base plate, coincident with a point 18 mm above the middle of the top plate of the θ_z rotation unit
Flexure Stages	See MDE122 Specifications
Central Workstation	See MDE883 Specifications
Rack & Pinion Slides	40 mm coarse travel in X axis. Lockable. Adjustable end-stop defines position to <1 μ m accuracy.

Options

MDE881-60 Workstation with 60 mm travel	Waveguide/Device Holders & Other Accessories
MDE747 Waveguide Mount with Pitch, Roll and Height Adjust	MDE884RH & MDE884LH Fibre Array / Crystal Rotator, Long Reach
MDE890 Waveguide Mount with θ_y and X Adjust	
MDE891 Waveguide Mount with θ_y plus X and Z Adjust	E2300 DALi 3 Device Automatic Alignment System
More detailed information about this product can be found on our website.	

Elliot Gold™ Series: Alignment Systems: Central Workstation

MDE883 Central Workstation with Rotation, Tilt and Transverse Motion



ELLIOT MARTOCK

- $\pm 4^\circ$ adjustment, 1 arc sec resolution for θ_x and θ_z
- $\pm 1^\circ$ for θ_y
- 25 mm travel, 0.5 μm resolution for Y axis
- Direct readout of device Y linear travel position
- 6 mm travel, $> 2 \mu\text{m}$ resolution for Z axis
- Mounts directly onto 25 mm or 1" pitch table

The Central Workstation provides roll (θ_x) and pitch (θ_y) at a height of 125 mm from the bottom of the base plate and these both coincide with the yaw (θ_z) axis at a height of 18 mm above the middle of the top plate of the θ_z rotation unit. Rotation axes are defined by curved bearings hence rotation is always in a true arc. Digital readout of the Y travel is provided to allow the operator to read waveguide positions. Thus stepping the fibre across the substrate to locate individual waveguides becomes a simple task.

The MDE883 Central Workstation was designed to be a key part of the MDE881 6-axes manipulator. However for applications where the geometry of the standard MDE881 is not suitable we offer the system in its key component parts, allowing custom set-ups to be configured on an optical table or breadboard. This approach means that the system can be purchased in parts as required.

Thus the MDE883 can be used in situations where the standard in-line configuration of the MDE881 is not suitable. For example when the waveguide inputs and outputs are angled at 90 degrees. Alternatively, building the system in kit form provides greater flexibility in adapting the modules to a wider range of applications.

Specifications

θ_x	$\pm 4^\circ$ rotation with 1 arc sec resolution
θ_z	$\pm 4^\circ$ rotation with 1 arc sec resolution
θ_y	$\pm 1^\circ$ rotation adjustable by hex key supplied with MDE881. Adjustment is useful for aligning to waveguides mounted on epoxy in packages where device is not necessarily sitting flat.
Y-travel	25 mm standard (MDE883) with 0.5 μm resolution and direct digital read-out of position to 1 μm (with digital micrometer)
Z-travel	6 mm with 2 μm resolution by means of hex key adjuster
Axis Height	125 mm from bottom of base plate
Includes	MDE154 clamp set

Options

MDE883-60 with 60 mm of Y-travel

MDE890 and MDE891 can be used to extend the rotation range - useful for holding components such as Fabry-Perot filters

More detailed information about this product can be found on our website.



Elliot Gold™ Series: Alignment Systems: Polarising Maintaining Fibres

MDE2350 PM Fibre Alignment



- Slotted design for easy insertion and removal of fibre
- Full 360° rotation
- Integral stepper motor drive
- Resolution < 0.01° single step
- Maximum speed 18°/s (20 s for 360°)
- Fibre held in variable-force V-groove clamps
- Standard V-groove for 125/250 µm fitted. (Custom sizes available.)
- V-block preset on axis with < 1 µm concentricity error
- Stepper drive controllers available with LabVIEW drivers for auto rotation alignment



The MDE2350 comprises an MDE235 motorised fibre rotator mounted on an Elliot Gold™ Series 3-axis piezo-driven flexure stage. A DALi alignment system is used to maintain alignment while the fibre is rotated.

Designed for the alignment of angular-sensitive components, the MDE2350 is particularly effective for the alignment of polarisation-maintaining fibre and components.



Elliot Gold™ Series: Alignment Systems: Fibre Collimators**MDE9183 Fibre Collimator Aligner**

- Slotted design for easy insertion and removal of fibre
- Full 360° rotation
- Integral stepper motor drive
- Resolution <0.01° single step
- Maximum speed 18°/s (20s for 360°)
- Fibre held in variable-force V-groove clamps
- Standard V-groove for 125/250µm fitted. (Custom sizes available.)
- V-block preset on axis with < 1µm concentricity error
- Stepper drive controllers available with LabVIEW drivers for auto rotation alignment



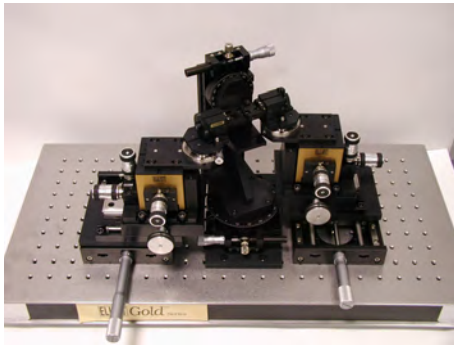
The MDE9183 is configured for the alignment of fibre collimators. It utilises the accurate MDE185 two axis pitch and yaw stage in combination with Elliot Gold™ Series flexure stages giving accurate 5-axis control.

Includes model MDE154 clamp set.



Elliot Gold™ Series: Alignment Systems: Semiconductor Optical Amplifiers

MDE22885 Semiconductor Optical Amplifier Aligner



ELLIOT MARTOCK

- Slotted design for easy insertion and removal of fibre
- Full 360° rotation on all rotational axes
- Piezo drives available for linear axes
- Can be configured for variable facet angle
- Fibre held in V-groove clamps
- Standard V-groove for 125/250 μm fitted. (Custom sizes available.)

The MDE22885 is a specialised system for the alignment of SOAs (semiconductor optical amplifiers) and other similar dual-ended devices with angled facets.

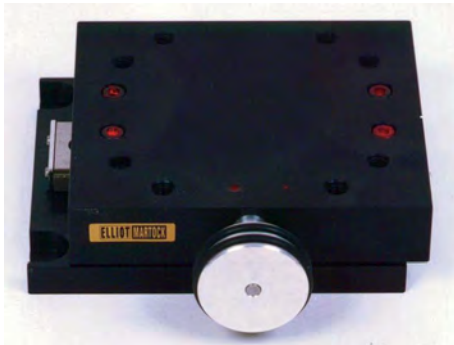
The system comprises two 5-axis stages with Elliot Gold™ Series flexure stages, long-travel base platforms and a 2-axis fibre rotation mount. The central unit is a 2-axis rotation device mount configured for mounting of passive or active single- or multi-channel planar devices.

The linear axes of the flexure stages can be automated with a E2200 DALi alignment controller and piezo adjusters. Automated alignment is of particular benefit when working with lensed fibres.



Elliot Gold™ Series: Slide

MDE889 Rack & Pinion Slide – 60 mm



ELLIOT MARTOCK

- 60 mm travel
- Adjustable end-stop defines position to < 1 µm accuracy
- Lockable
- Bolts directly to optical table
- Large thumbwheel for faster positioning

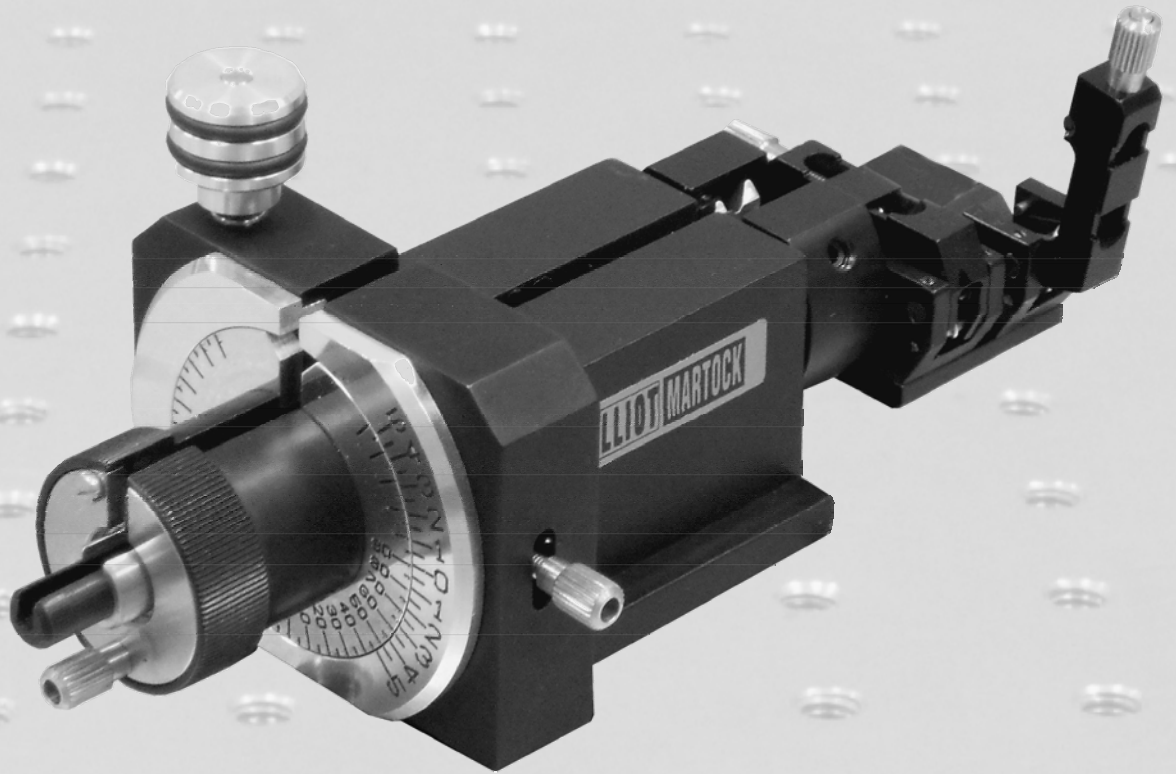
A precision translation unit designed for mounting directly to the optical table. The large mounting area can be quickly moved to and fro via the thumbwheel mechanism.

Specifications

Travel 60 mm Lockable
End stop accuracy < 1 µm



Gold Series Accessories



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Elliot Gold™ Series: Platforms & Mounts

MDE150 Objective Lens Mount. Standard RMS 0.800"-36 Thread



ELLIOT MARTOCK

Objective lens mount fitted with a removable stainless steel sleeve cut with the microscope objective thread. Allows easy adjustment and exchange of objectives or other components having the standard RMS 0.800"-36 thread.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

Options

Extension tube (MDE156)

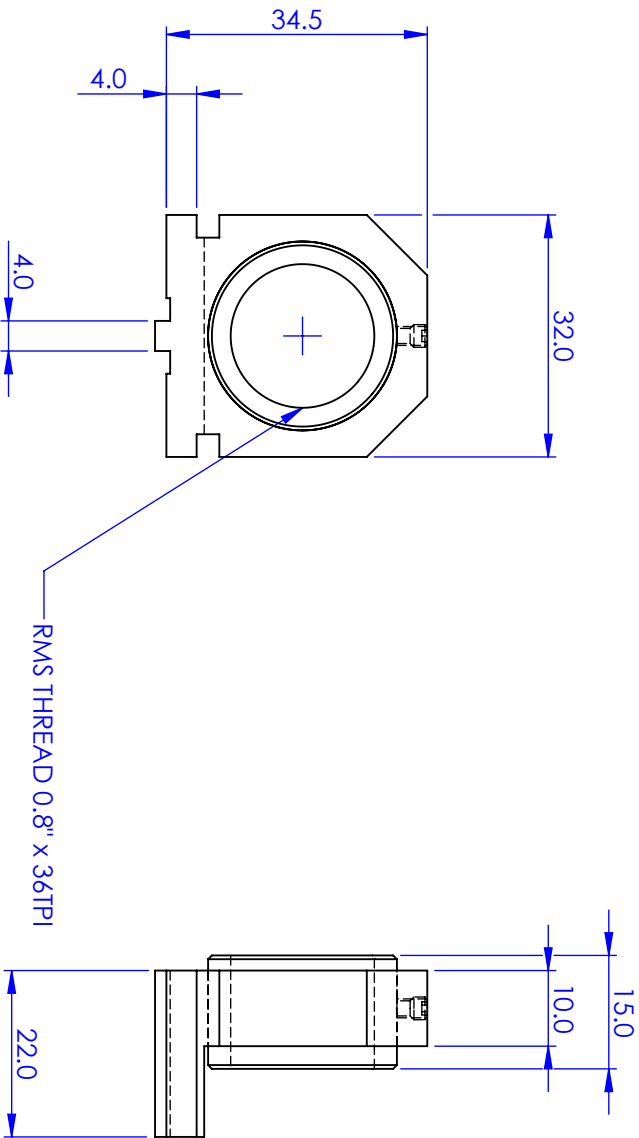
Flange insert for machining (MDE152)

Plain mount with 25mm bore (MDE151)

Adaptor plate for post holder (MDE155)


Clamp set (MDE154)

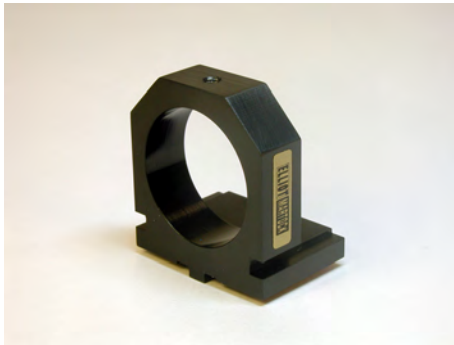
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REV.	DESCRIPTION		



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AUTHOR	NAME	DATE	<div></div>	
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MATERIAL ---			TITLE	
FINISH ---			SIZE	DWG. NO.
DO NOT SCALE DRAWING			A4	MDE150
			SCALE: 1:1	THIRD ANGLE PROJECTION
				SHEET 1 OF 1

Elliot Gold™ Series: Platforms & Mounts**MDE151 Plain Mount****ELLIOT MARTOCK**

Plain mount fitted with a 25 mm bore that will hold 25 mm components such as Component Flange MDE152.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

Options

Extension tube (MDE156)

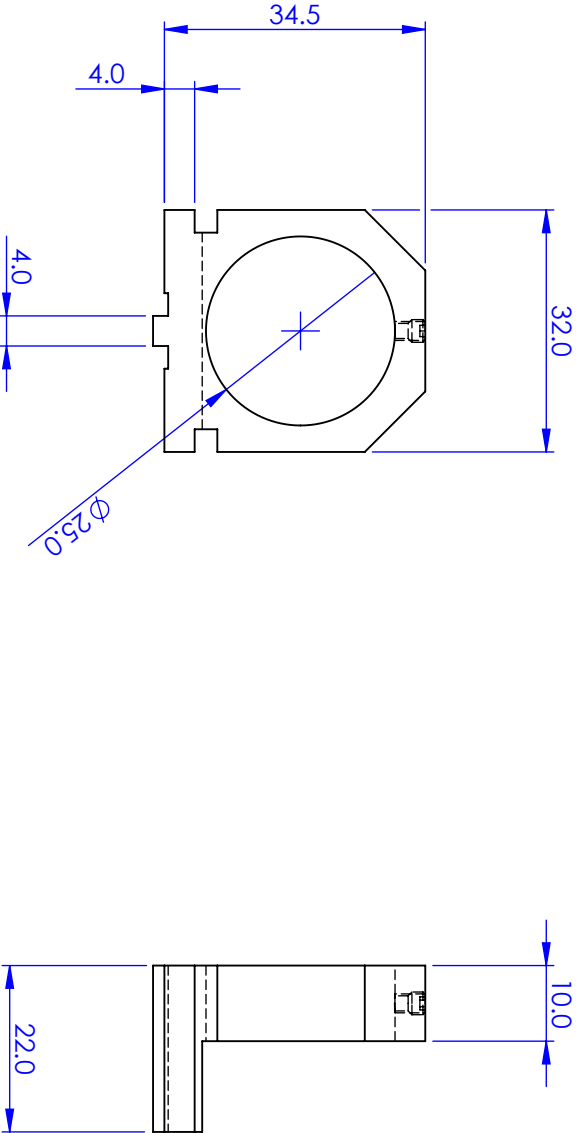
Flange insert for machining (MDE152)

Clamp set (MDE154)

Adaptor plate for post holder (MDE155)


Extension tube (MDE156)

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



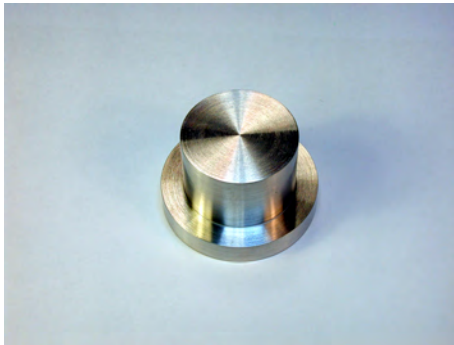
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AUTHOR	NAME	DATE	<div></div> <div>TITLE PLAIN MOUNT MDE151</div>		
ORIGINAL	GW	11/02/2008			
3D MODEL					
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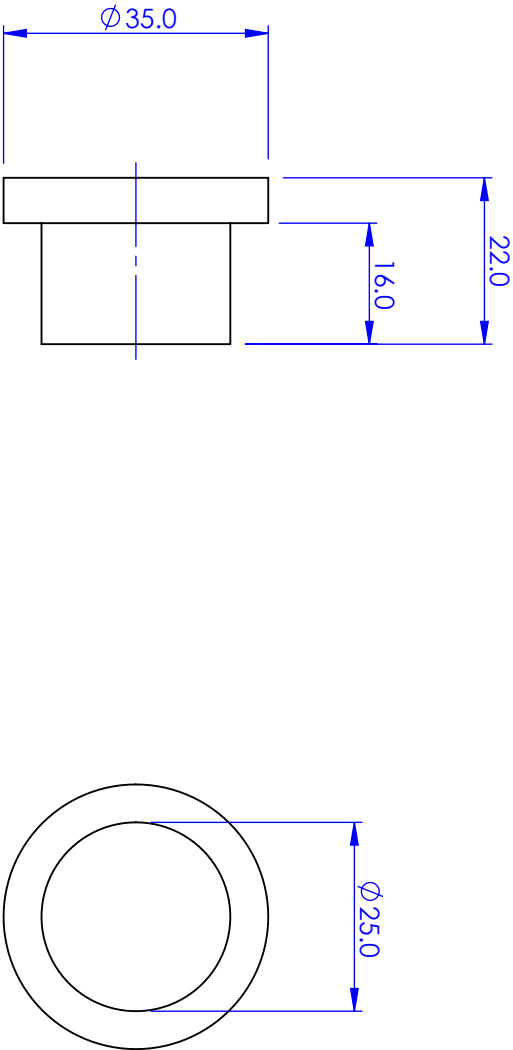
Elliot Gold™ Series: Platforms & Mounts

MDE152 Component Flange




Aluminium alloy flange insert which can be machined by Elliot Scientific or customer to hold components such as fibre chucks. For use with Plain Mount MDE151 or Objective/Ball Lens Mount MDE150.

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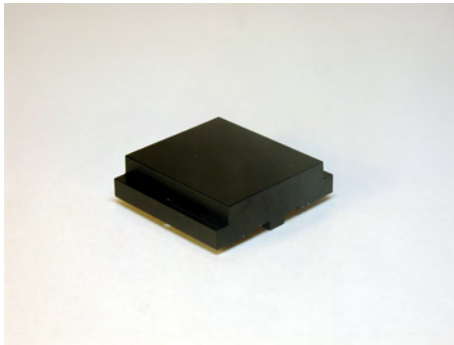
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REMOVED

AUTHOR	NAME	DATE	<div><div><div>TITLE</div><div>COMPONENT FLANGE</div></div></div>		
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3D MODEL	GW	11/02/2008			
MATERIAL ALUM ALLOY					
FINISH			SIZE A4	DWG. NO. MDE152	
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Elliot Gold™ Series: Platforms & Mounts

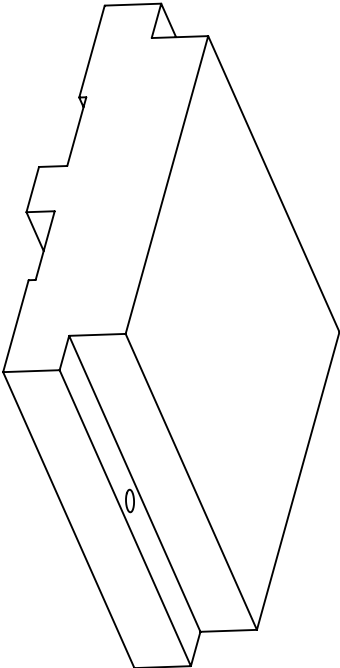
MDE153 Component Plate



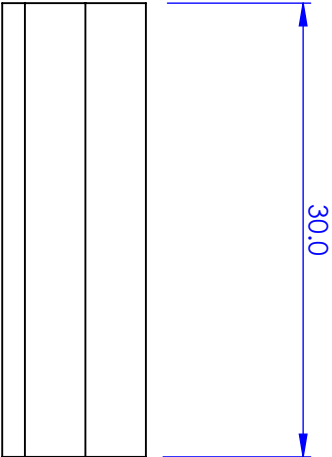
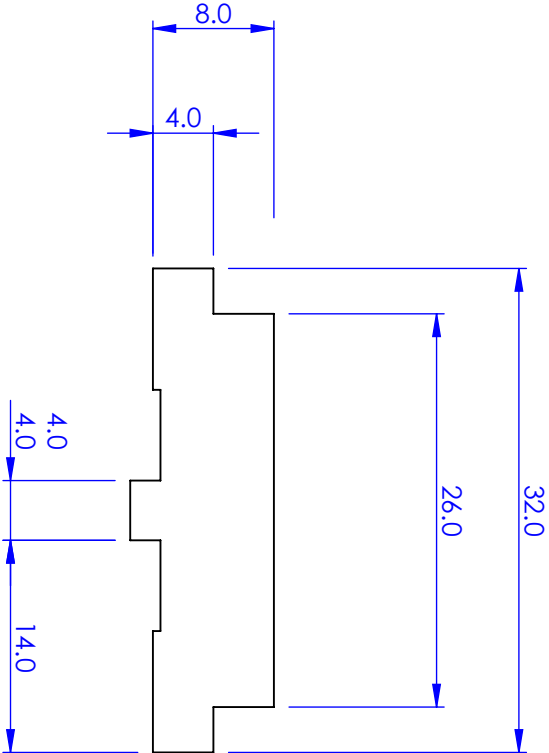
Component plate that clamps to Elliot Gold™ series flexure stages. Provides a basic platform for mounting of non-standard components.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary, a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

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GENERAL VIEW
SCALE: 2:1



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AUTHOR	NAME	DATE		
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MATERIAL ALUM. ALLOY			COMPONENT PLATE	
FINISH ANODISED BLACK			SIZE	DWG. NO.
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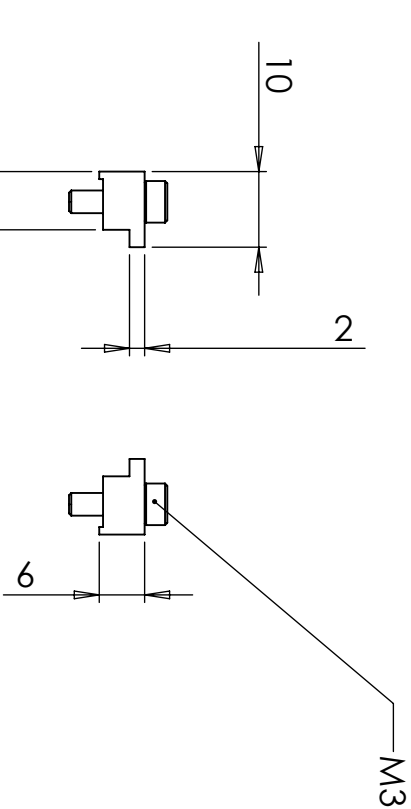
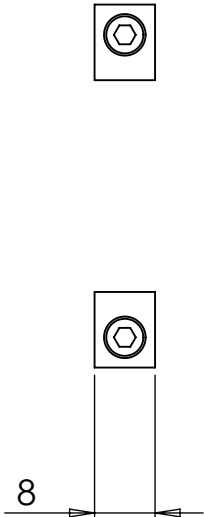
Elliot Gold™ Series: Platforms & Mounts

MDE154 Clamp Set



Clamp set for use with XYZ Flexure Stage accessories. Includes two clamps plus screws and a socket key. One clamp set is supplied with each of the flexure stages and accessory platforms.

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MDE154

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ANGULAR TOLERANCES: \pm
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SCALE: 1:1		THIRD ANGLE PROJECTION		
SHEET 1 OF 1				

CLAMP SET	
SIZE	DWG. NO.
A4	MDE154

Elliot Gold™ Series: Platforms & Mounts

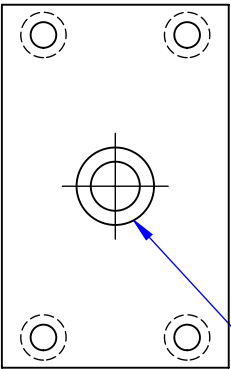
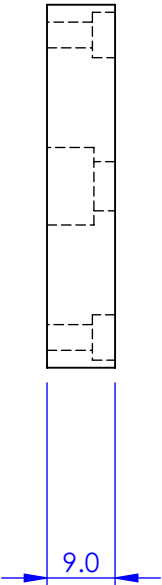
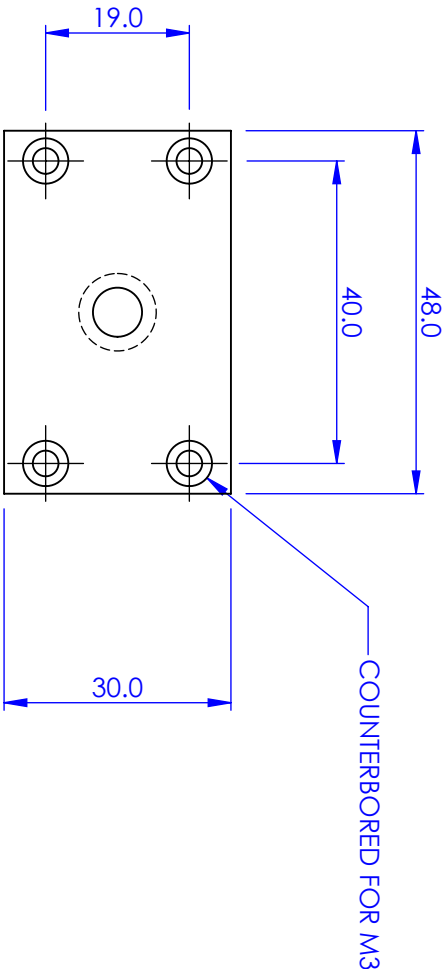
MDE155 Adaptor Plate: M6 Post Holder to Elliot Gold™ Flexure Stage



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Adaptor plate that clamps to Elliot Gold™ series flexure stages. Enables M6 table post holders to fit XYZ flexure top. All accessories are compatible with the Elliot Gold™ series flexure stages.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



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ANGULAR TOLERANCES: \pm
SURFACE FINISH:
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NAME		DATE	
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CHECKED	-	-	
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FINISH			
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DO NOT SCALE DRAWING			
TITLE			
ADAPTER PLATE			
SIZE			
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SHEET 1 OF 1			

Elliot Gold™ Series: Platforms & Mounts

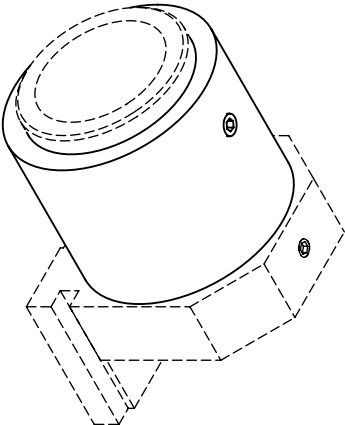
MDE156 Extension Tube



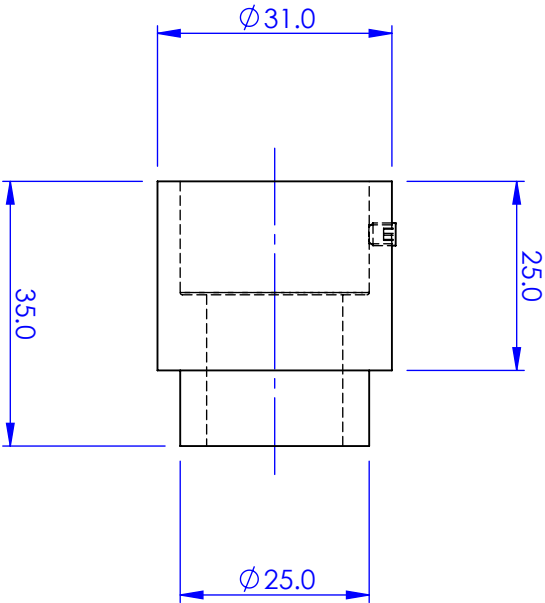
Extension tube for use on MDE150 Objective/Ball Lens mount and MDE151 Plain Mount. Extends reach by 25 mm allowing access to components on wide platforms.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary, a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



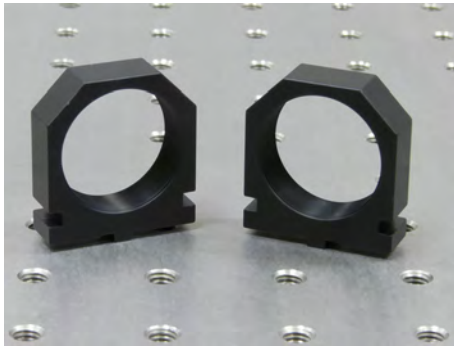
GENERAL VIEW
SCALE: 1:1
(SHOWN WITH MDE150)



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MATERIAL		ALUM ALLOY		TITLE			
FINISH ANODISED BLACK				EXTENSION TUBE			
DO NOT SCALE DRAWING		SIZE	DWG. NO.	THIRD ANGLE PROJECTION			SHEET 1 OF 1
		A4	MDE156				
SCALE: 1:1							

Elliot Gold™ Series: Platforms & Mounts

MDE157 Threaded Optic Mount. SM1 Series 1.035"-40 Thread

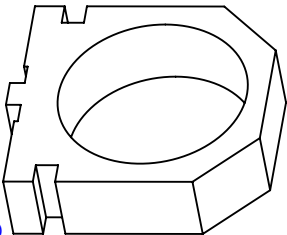


ELLIOT MARTOCK

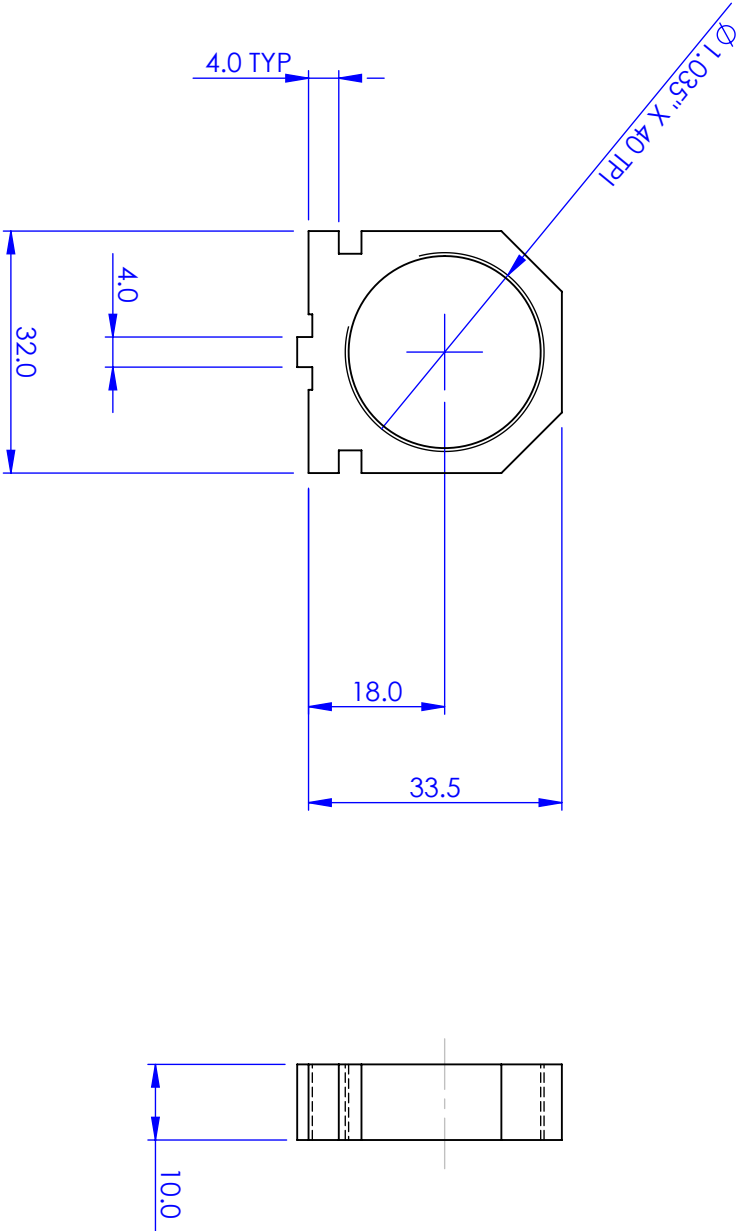
- Designed to interface with Thorlabs SM1 series lens tubes and accessories. This mount has a 1.035"-40 thread.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:1



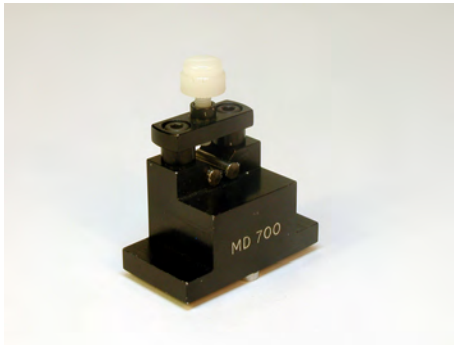
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AUTHOR	NAME	DATE	
CHECKED	GW	24/03/2006	
MATERIAL ALUM ALLOY			
FINISH ANODISED BLACK			
DO NOT SCALE DRAWING			



TITLE THREADED MOUNT	
SIZE A4	DWG. NO. MDE157
SCALE: 1:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Holders

MDE700 2 ~ 4.5 mm diameter Ferrule Holder

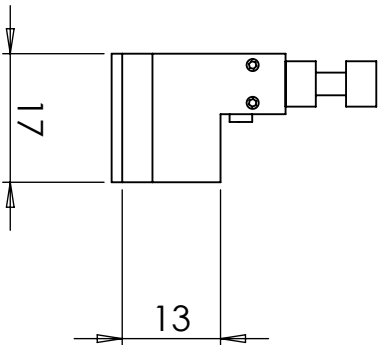
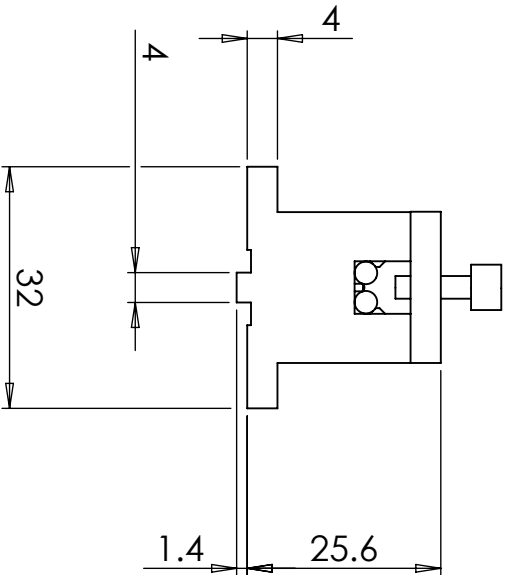
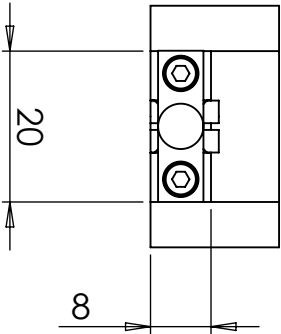


- Can also be used to hold GRIN lenses
- V-groove formed by two 9 mm stainless steel rods
- Nylon clamp screw avoids damage to component being held
- Holds optical fibre terminated with a cylindrical ferrule
- Fibre held in user-replaceable V-groove by spring clamps



All accessories are compatible with the Elliot Gold™ Series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			

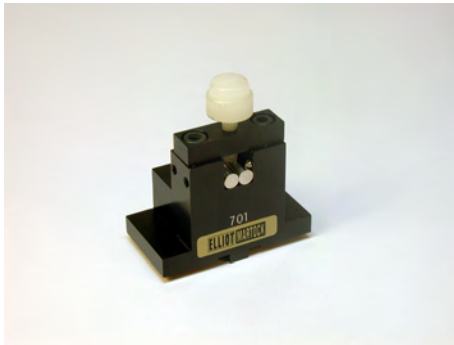


MDE700
(FERRULES \varnothing 2.0mm TO \varnothing 4.5mm)

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AUTHOR	NAME	DATE	FINISH	TITLE			
CHECKED	GW	09/08/2010	---	FERRULE HOLDER			
MATERIAL				SIZE	DWG. NO.	THIRD ANGLE PROJECTION	
DO NOT SCALE DRAWING				A4	MDE700	SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Holders

MDE701 1 ~ 2 mm diameter Ferrule Holder

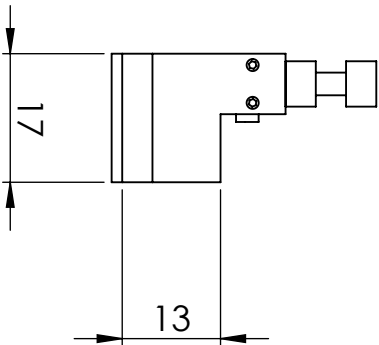
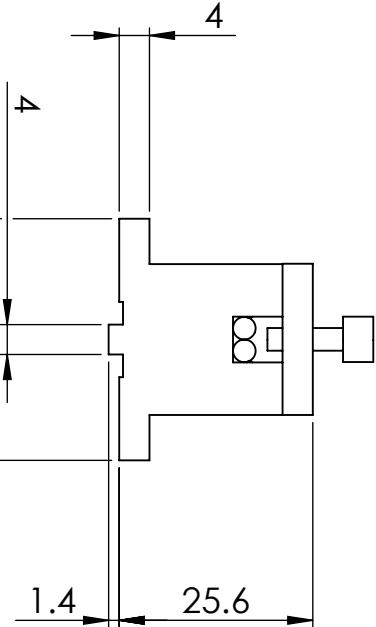
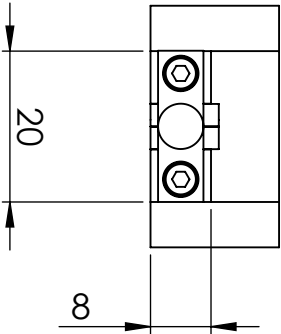


- Can also be used to hold GRIN lenses
- V-groove formed by two 9 mm stainless steel rods
- Nylon clamp screw avoids damage to component being held
- Holds optical fibre terminated with a cylindrical ferrule
- Fibre held in user-replaceable V-groove by spring clamps



All accessories are compatible with the Elliot Gold™ Series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



MDE701
(FERRULES ϕ 1.0mm TO ϕ 2.0mm)

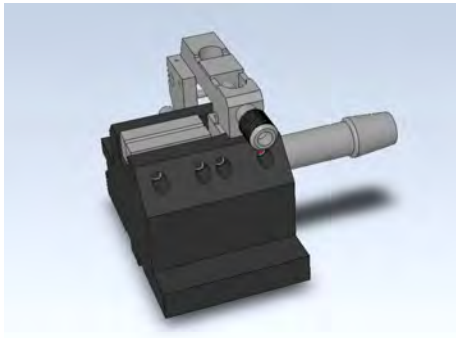
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AUTHOR		NAME	DATE
CHECKED		GW	09/08/2010
MATERIAL			
FINISH			
DO NOT SCALE DRAWING			
TITLE			
FERRULE HOLDER			
SIZE		DWG. NO.	
A4		MDE701	
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Elliot Gold™ Series: Fibre Holders

MDE705 Fibre Holder (Vacuum & Mechanical)



ELLIOT MARTOCK

- Very easy to use
- Very low forces on fibre
- Clamp force adjustable from 25 to 125 g
- Vacuum V-groove can be dismantled for cleaning
- Holds 125/250 μm fibre with a jacket up to 1 mm diameter
- Clamp arm swings clear of V-groove for easy loading of fibre
- Vacuum is applied through a fine slot for even clamping of fibre

The MDE705 Fibre Holder is designed to cradle 125/250 μm fibre with a jacket up to 1 mm diameter. The unit utilises a slotted vacuum V-groove that holds the 125/250 μm bare fibre evenly, together with a clamp arm that grips the fibre jacket. The clamp force of the arm can be adjusted to relieve the pull of the trailing cable. These features combine to produce very low forces on the fibre.

The fibre holder is designed to complement the Elliot Gold™ series XYZ flexure stages, but can also be mounted on a conventional 25 mm pitch optical table using adaptor plate MDE860, or M4 post using the same adaptor.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

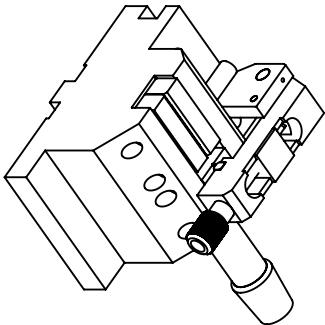
Specifications

Configuration	Vacuum V cladding and clamp arm for jacket
Fibre size	125/250 μm fibre with up to 1 mm jacket
Vacuum V-groove	Double V-groove to suit 125/250 μm fibre
Vacuum slot length	7.5 mm for even clamping of the fibre
Vacuum connection	4 mm bore pipe or M5 port
Fibre Clamp	Single clamp arm with adjustable force
Clamp force	Adjustable from 25 to 125 g
Optical Axis	94 mm when mounted on an Elliot Gold™ series XYZ flexure stage

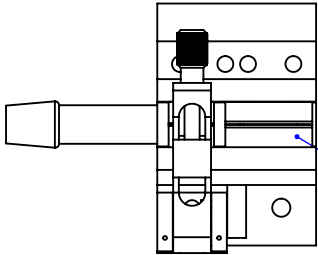
Options

Custom sized V-grooves

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



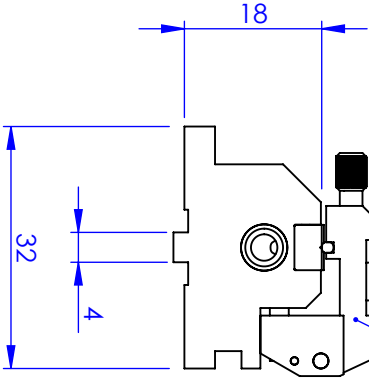
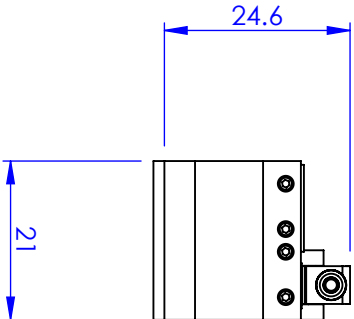
GENERAL VIEW
SCALE 1:1



VACUUM 'V' GROOVE

VACUUM PIPE

CLAMP ARM



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NAME		DATE	
AUTHOR		GW	
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MATERIAL			
FINISH		---	
DO NOT SCALE DRAWING			
TITLE			
VACUUM AND ARM FIBRE CLAMP			
SIZE			
A4			
DWG. NO.			
MDE705			
SCALE 1:1			
THIRD ANGLE PROJECTION			
SHEET 1 OF 1			

Elliot Gold™ Series: Fibre Holders

MDE709 Bare Fibre Holder (Mechanical)



ELLIOT MARTOCK

- Very easy to use
- Clamp force adjustable from 25 to 125 g
- Contact point on fibre is a resilient pad
- Holds 125/250 µm fibre (other sizes to order)
- Clamp arm swings clear of V-groove for easy loading of fibre

The MDE709 Fibre Holder features a double V-groove and single clamp arm to hold 125 µm fibre. The clamp arm swings clear of the V-groove, and the clamp forces can be adjusted from 25 to 125 g, making the unit very easy to use. The single clamp arm holds the 125 µm stripped section of fibre.

The fibre holder is designed to complement the Elliot Gold™ series XYZ flexure stages, but can also be mounted on a conventional 25 mm pitch optical table using adaptor plate MDE860 or M4 post using the same adaptor.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

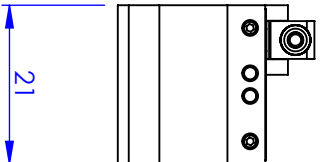
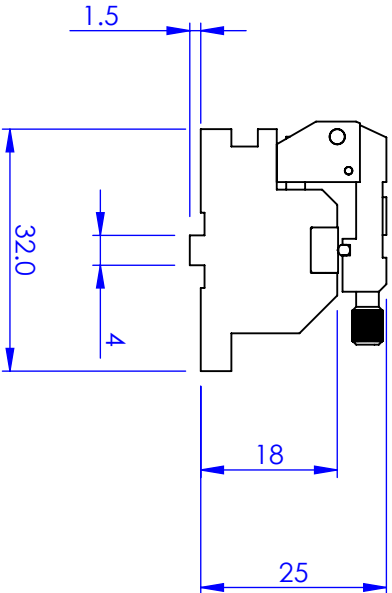
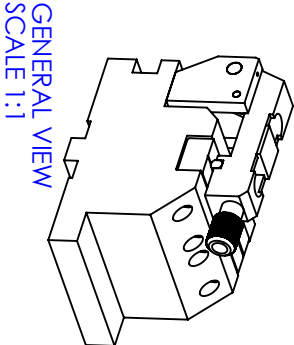
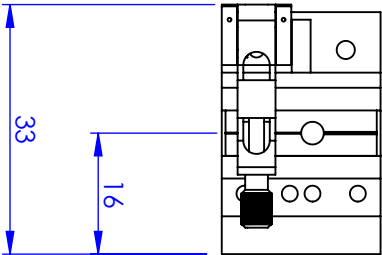
Specifications

Configuration	Double V-groove single clamp arm
Fibre size	125/250 µm fibre (other sizes to order)
Fibre clamp	Single clamp arm with adjustable force
Clamp force	Adjustable from 25 to 125 g
Optical Axis	94 mm when mounted on an Elliot Gold™ series XYZ flexure stage

Options

Custom sized V-grooves

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



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AUTHOR		NAME	DATE
CHECKED		GW	04/06/2007
MATERIAL		—	—
FINISH		—	—
DO NOT SCALE DRAWING		TITLE	
SIZE		SINGLE ARM FIBRE HOLDER	
A4		DWG. NO.	
SCALE 1:1		MDE709	
THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Holders

MDE710 Jacketed Fibre Holder (Mechanical)



ELLIOT MARTOCK

- Very easy to use
- Clamp force adjustable from 25 to 125 g
- Contact point on fibre is a resilient pad
- 125/250 µm fibre with a jacket up to 1 mm diameter
- Clamp arm swings clear of V-groove for easy loading of fibre

The MDE710 Fibre Holder features a double V-groove and clamp arms to hold 125/250 µm fibre with a jacket up to 1 mm diameter. The clamp arms swing clear of the V-groove, and the clamp forces can be adjusted from 25 to 125 g, making the unit very easy to use.

The fibre holder is designed to complement the Elliot Gold™ series XYZ flexure stages, but can also be mounted on a conventional 25 mm pitch optical table using adaptor plate MDE860 or M4 post using the same adaptor.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

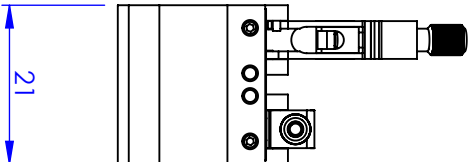
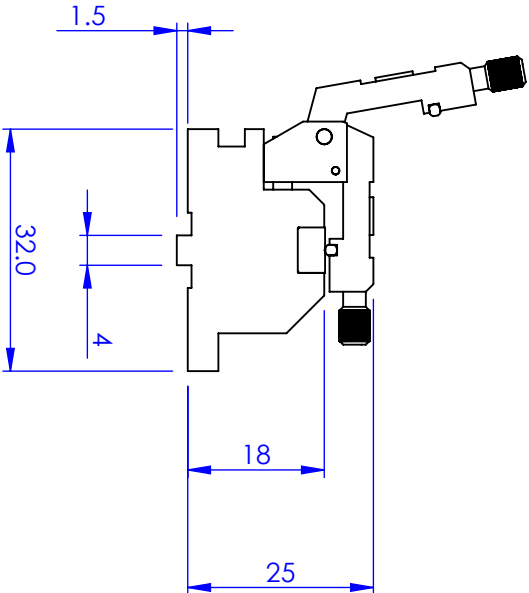
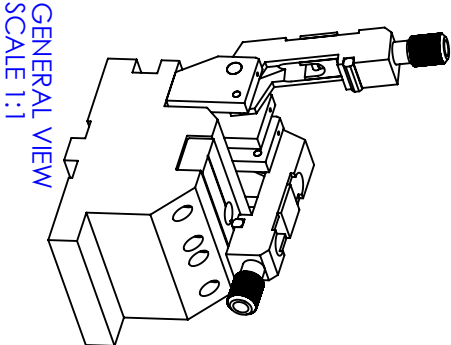
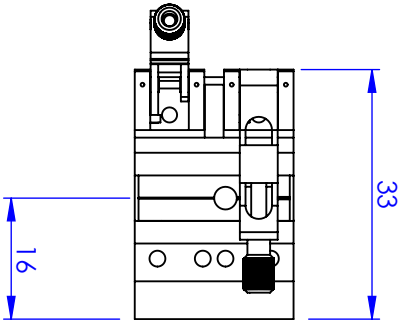
Specifications

Configuration	Double V-groove and clamp arms for cladding and jacket
Fibre size	125/250 µm fibre with up to 1 mm jacket
Fibre clamp	Double clamp arms with adjustable force
Clamp force	Adjustable from 25 to 125 g
Optical Axis	94 mm when mounted on an Elliot Gold™ series XYZ flexure stage

Options

MDE860 Adaptor
V-groove custom sizes available
Clamp set (MDE154)

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AUTHOR		NAME		DATE	
CHECKED		GW		09/08/2010	
MATERIAL					
FINISH					

DO NOT SCALE DRAWING					
TITLE					
DOUBLE 'V' FIBRE HOLDER					
SIZE		DWG. NO.			
A4		MDE710			
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Holders

MDE711 Fibre Holder



ELLIOT MARTOCK

- Simple economical design
- Single fixed size V-groove for 250 µm fibre

The MDE711 is an economical fibre holder with a machined 250 µm V-groove and magnetic clamp arm for less critical applications. The fibre holder is designed to complement the Elliot Gold™ series XYZ flexure stages, but can also be mounted on a conventional 25 mm pitch optical table using adaptor plate MDE860 or M4 post using the same adaptor.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

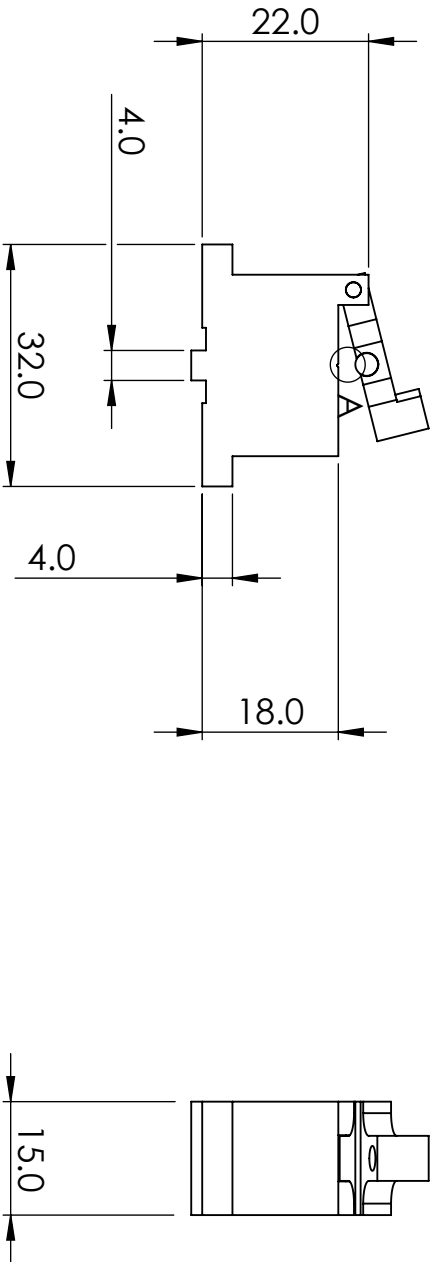
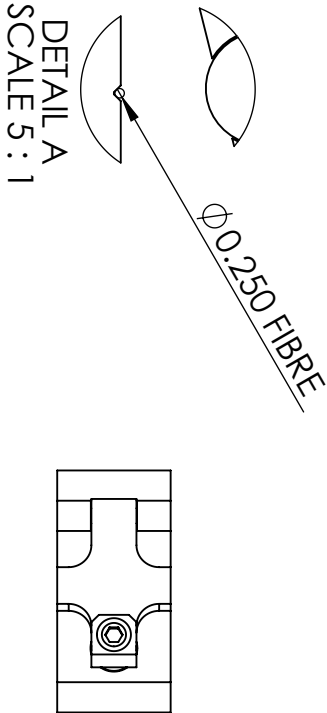
Specifications

Configuration	Single machined V-groove and magnetic clamp arm
Fibre size	250 µm
Fibre clamp	Single magnetic clamp arm
Optical Axis	94 mm when mounted on an Elliot Gold™ series XYZ flexure stage

Options

Custom sized V-grooves

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			




MDE711

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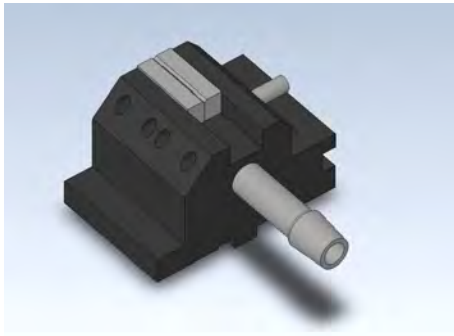
DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AUTHOR		NAME		DATE	
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MATERIAL					
FINISH					

DO NOT SCALE DRAWING					
TITLE					
					
FIBRE HOLDER					
SIZE					
A4					
DWG. NO.					
MDE711					
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Holders

MDE715 Fibre Holder (Vacuum)



ELLIOT MARTOCK

- Very easy to use
- Very low forces on fibre
- Vacuum V-groove can be dismantled for cleaning
- Holds 125 to 400 μm bare fibre
- Vacuum is applied through a fine slot for even clamping of fibre

The MDE715 Fibre Holder is designed to cradle bare fibre ranging from 125 to 400 μm diameter. The unit utilises a slotted vacuum V-groove that holds the fibre evenly and with very low force.

The fibre holder is designed to complement the Elliot Gold™ series XYZ flexure stages, but can also be mounted on a conventional 25 mm pitch optical table using adaptor plate MDE860, or M4 post using the same adaptor.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

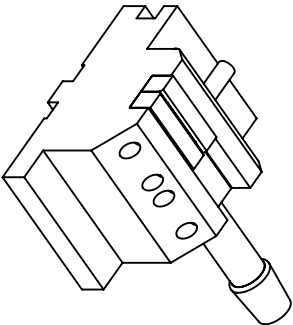
Specifications

Configuration	Vacuum V for cladding only
Fibre size	125 to 400 μm diameter bare fibre
V-groove	Vacuum V-groove
Vacuum slot length	7.5 mm for even clamping of the fibre
Vacuum connection	4 mm bore pipe or M5 port
Optical Axis	94 mm when mounted on an Elliot Gold™ series XYZ flexure stage

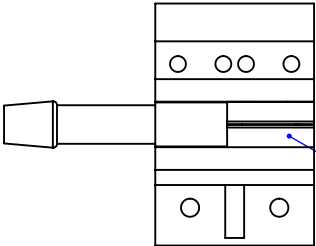
Options

MDE860 Adaptor
V-groove custom sizes available
Clamp set (MDE154)

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			

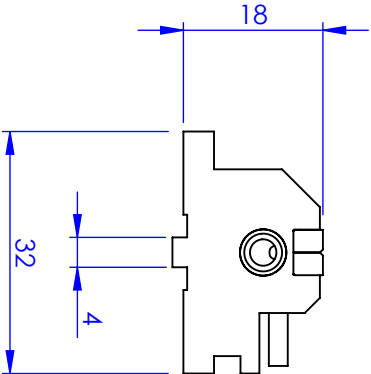
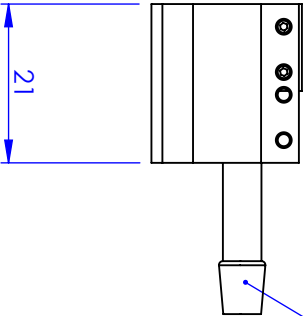


GENERAL VIEW
SCALE 1:1



VACUUM 'V' GROOVE

VACUUM PIPE



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AUTHOR		NAME	DATE
CHECKED		GW	10/08/2010
MATERIAL		—	—
TITLE			
VACUUM FIBRE CLAMP			
FINISH		—	
SIZE		A4	
DWG. NO.		MDE715	
SCALE: 1:1		THIRD ANGLE PROJECTION	
DO NOT SCALE DRAWING		SHEET 1 OF 1	

Elliot Gold™ Series: Fibre Holders

MDE724 Fibre Holder (Mechanical) for Melles Griot/Thorlabs Flexure Stages



ELLIOT MARTOCK

- Very easy to use
- Clamp force adjustable from 25 to 125 g
- Contact point on fibre is a resilient pad
- Fits Melles Griot and Thorlabs flexure stages
- 125/250 μm fibre with a jacket up to 1 mm diameter
- Clamp arm swings clear of V-groove for easy loading of fibre

The MDE724 Fibre Holder is designed to fit the Melles Griot/Thorlabs flexure stages and features a double V-groove and clamp arms to hold 125/250 μm fibre with a jacket up to 1 mm diameter. The clamp arms swing clear of the V-groove, and the clamp forces can be adjusted from 25 to 125 g, making the unit very easy to use.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

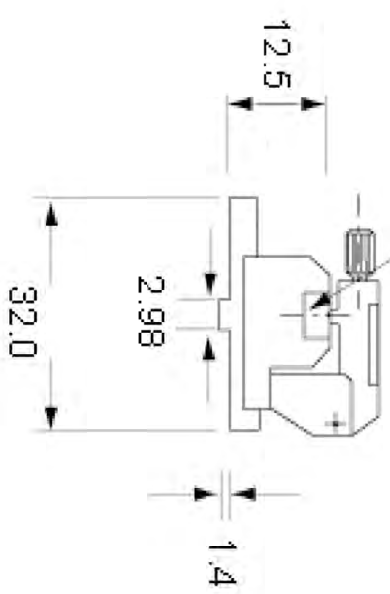
Specifications

Configuration	Double V-groove and clamp arms for cladding and jacket
Fibre size	125/250 μm fibre with up to 1 mm jacket
Fibre clamp	Double clamp arms with adjustable force
Clamp force	Adjustable from 25 to 125 g
Optical Axis	12.5 mm centre height
Mount	Location tongue 3mm wide on base Fits Melles Griot/Thorlabs flexure stages

Options

Custom sized V-grooves

Fitted with MDE720
mm/mm V-groove



Elliot Gold™ Series: Fibre Holders

MDE725 Fibre to Fibre Alignment V-Block with Clamps



- Includes V-block clamps
- Can be used with index matching gel to minimise coupling loss
- Quick and easy mechanical coupling of two bare fibres without splicing



The MDE725 is designed to allow two bare fibres to be coupled quickly and easily without the need for splicing in applications such as OTDR testing. Typical losses are 0.8 dB (0.3 dB best).

Each fibre is initially gripped in the outer thumb-loaded clamps. The left hand clamp moves smoothly along the X-axis moving the fibre along the V-groove into contact with the fixed fibre. This movement can be clamped if required. Index matching gel can be used in the V-groove to improve the coupling efficiency. Once aligned, the two central V-block fibre clamps can be used to hold the fibre ends firmly in the V-groove while a measurement is made.

Specifications

Configuration	Fibre to fibre alignment V-block with twin thumb loaded clamps and dual V-block clamps
Fibre size	Continuous V-groove for 125 µm fibre

Options

V-grooves to suit fibres in the range 125 to 400 µm
 Custom configurations to couple two different size fibres
 MDE725A with thumb loaded clamps only

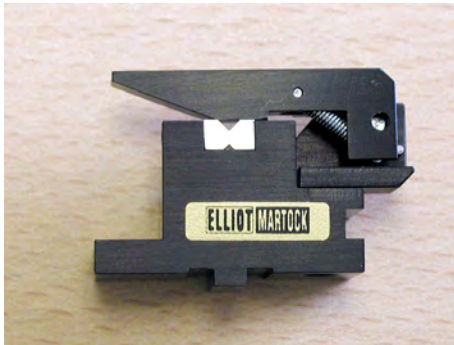
Note

Ordering information: Please state fibre diameter 'nnn' in µm (MDE725-nnn)



Elliot Gold™ Series: Fibre Holders

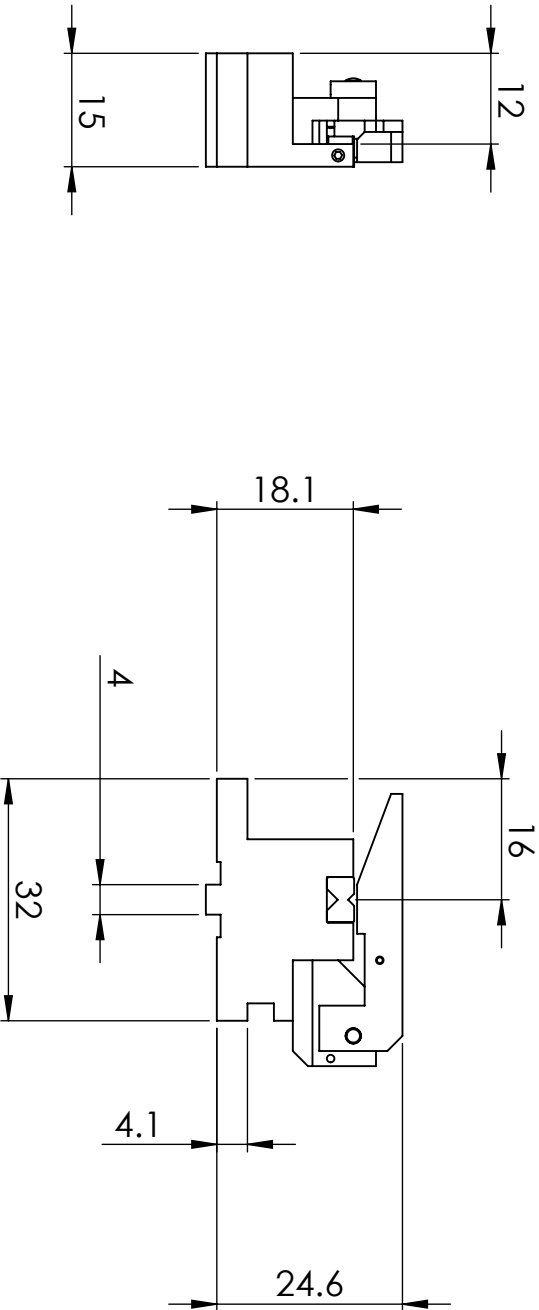
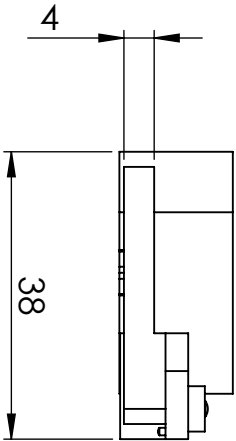
MDE734 Grin Lens Holder




- Optical axis height 18 mm
- Reversible V-block 4 mm long
- To hold GRIN lenses of diameter 1 - 2 mm & 2 - 3 mm

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

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MDE734

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				GENERAL TOLERANCES: ± 0.1			
				ANGULAR TOLERANCES: \pm			
				SURFACE FINISH:			
ALL BURS, SHARP EDGES AND CORNERS TO BE REMOVED				MATERIAL			
AUTHOR		NAME		DATE		FINISH	
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DO NOT SCALE DRAWING				TITLE			
<div></div>							
GRIN LENS HOLDER							
SIZE		DWG. NO.		MDE734			
A4							
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1			

Elliot Gold™ Series: Fibre Holders

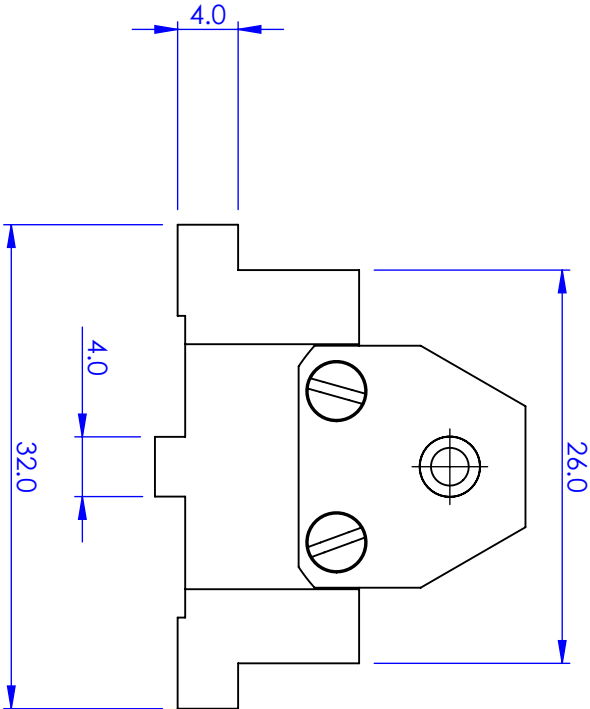
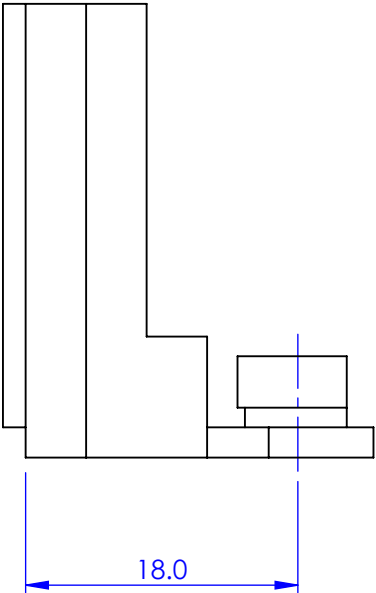
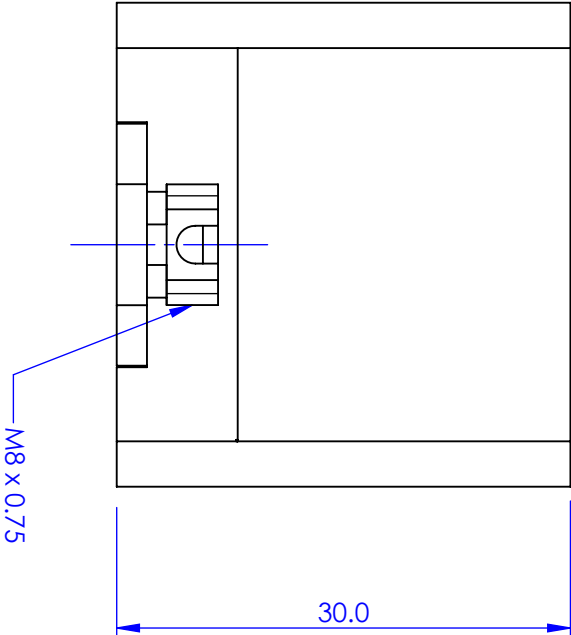
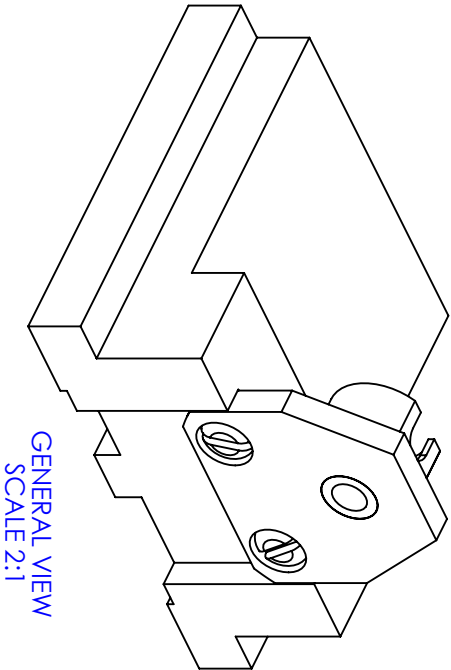
MDE735 Connectorised Fibre Holder FC/PC



All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms.

The clamp set (MDE154) is available separately if required.

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MATERIAL					

FINISH					

DO NOT SCALE DRAWING					
SCALE:2:1					
THIRD ANGLE PROJECTION					
SHEET 1 OF 1					

	
TITLE	
CONNECTOR MOUNT FC/PC	
SIZE	DWG. NO.
A4	MDE735

Eliot Scientific

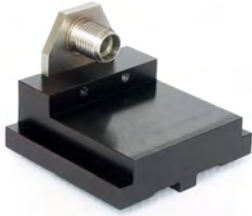
TITLE
CONNECTOR MOUNT FC/PC

SIZE
A4

DWG. NO.
MDE735

Elliot Gold™ Series: Fibre Holders

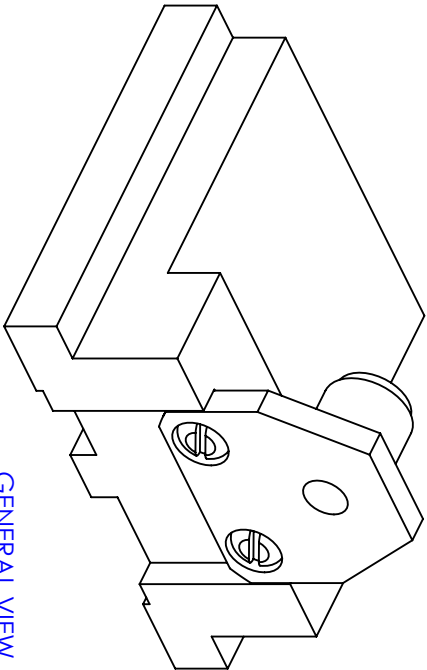
MDE736 Connectorised Fibre Holder SMA



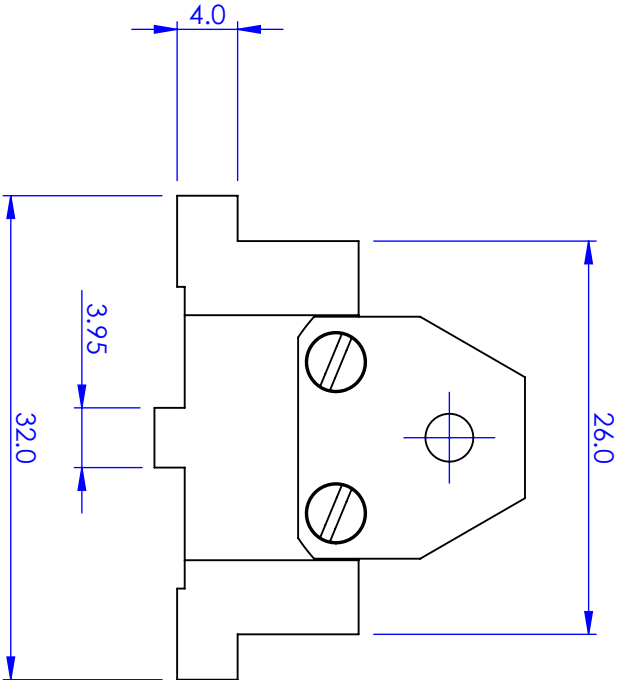
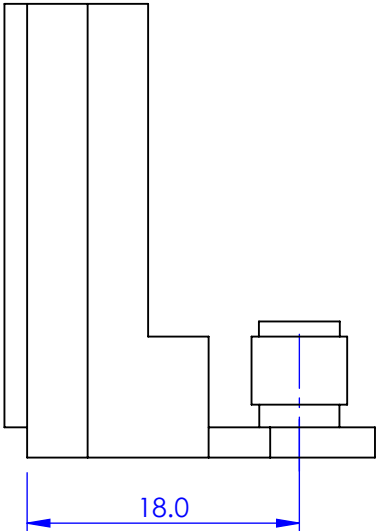
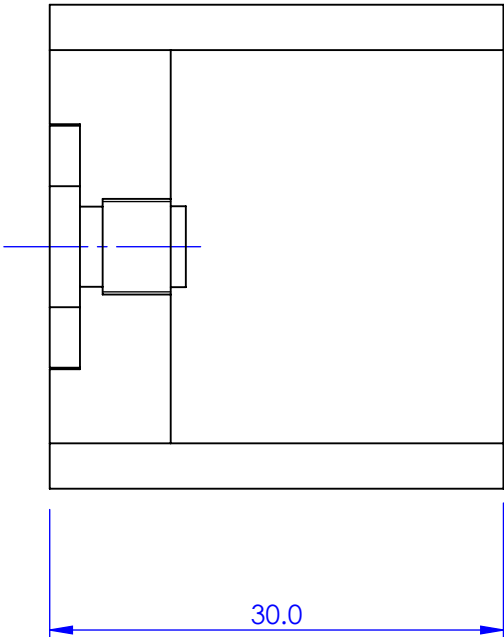
All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms.

The clamp set (MDE154) is available separately if required.

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GENERAL VIEW
SCALE 2:1



ELLIOT SCIENTIFIC			
TITLE CONNECTOR MOUNT SMA			
SIZE A4		DWG. NO. MDE736	
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			
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DIMENSIONS ARE IN mm			
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Elliot Gold™ Series: Fibre Holders

MDE737 Connectorised Fibre Holder ST

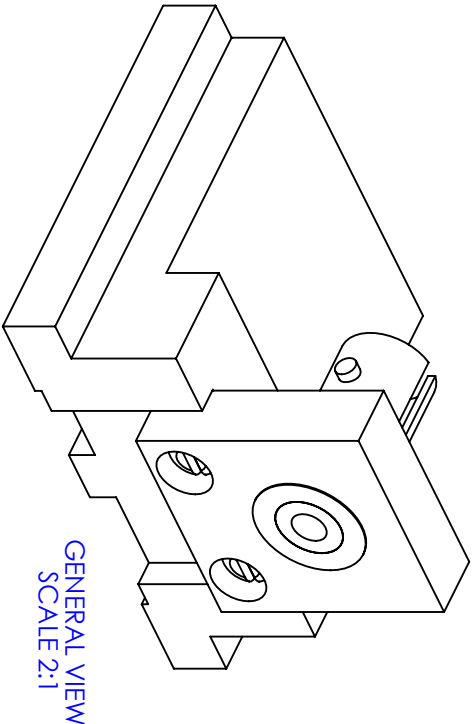


ELLIOT MARTOCK

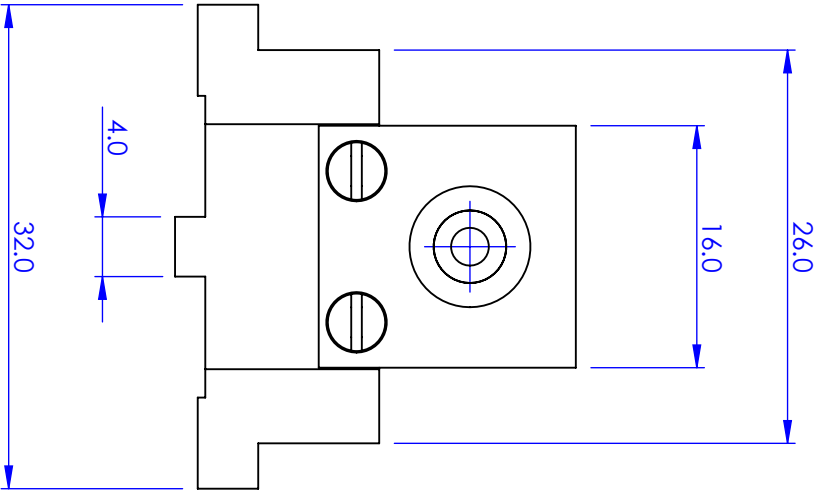
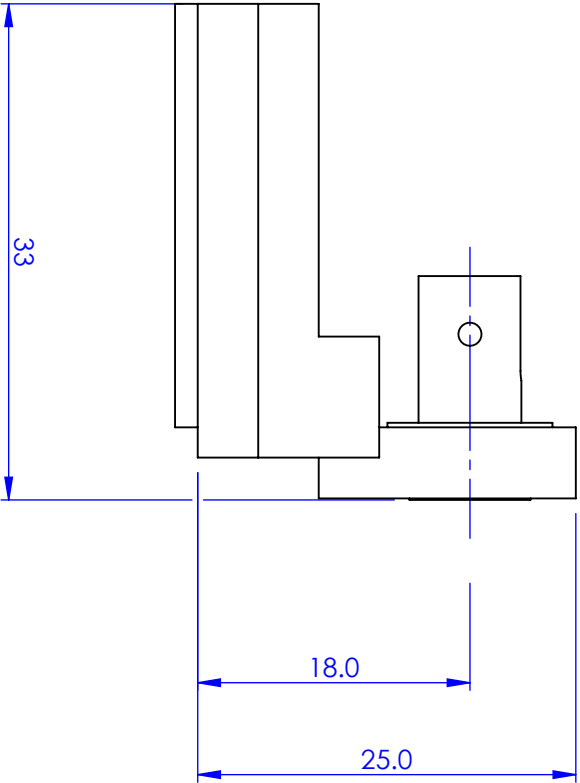
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The clamp set (MDE154) is available separately if required.

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GENERAL VIEW
SCALE 2:1



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TITLE			
CONNECTOR MOUNT			
SIZE		DWG. NO.	
A4		MDE737	
SCALE:2:1	THIRD ANGLE PROJECTION		SHEET 1 OF 1

Eliot Scientific

TITLE
CONNECTOR MOUNT

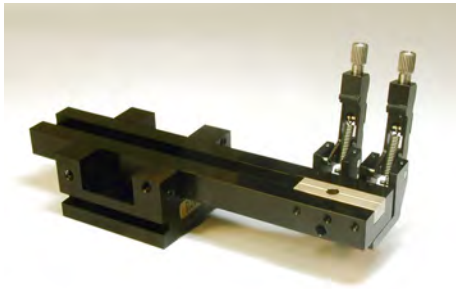
SIZE
A4

DWG. NO.

MDE737

Elliot Gold™ Series: Fibre Holders

MDE750 Bare Fibre Holder (Mechanical), Long Reach



- Very easy to use
- Clamp force adjustable from 25 to 125 g
- Contact point on fibre is a resilient pad
- 125/250 µm fibre with a jacket up to 1 mm diameter
- Fibre held in user-replaceable V-groove by spring clamps
- Clamp arm swings clear of V-groove for easy loading of fibre



Long reach fibre holder for bare fibre. Fibre held in user-replaceable V-groove by spring clamps (as on MDE710). Includes Universal Base MDE752 which allows fibres to be located offset from central axis.

The MDE750 Fibre Holder features a double V-groove and clamp arms to hold 125/250 µm fibre with a jacket up to 1 mm diameter. The clamp arms swing clear of the V-groove, and the clamp forces can be adjusted from 25 to 125 g, making the unit very easy to use.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ Series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

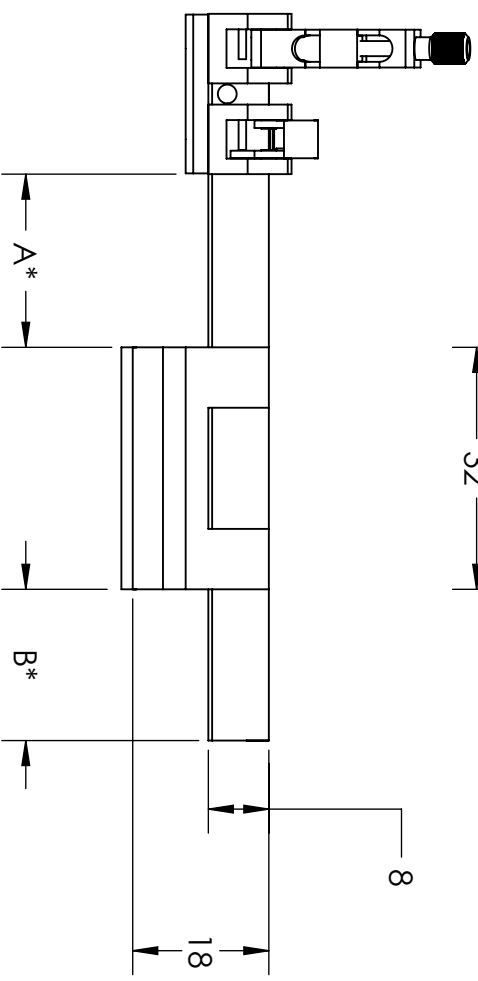
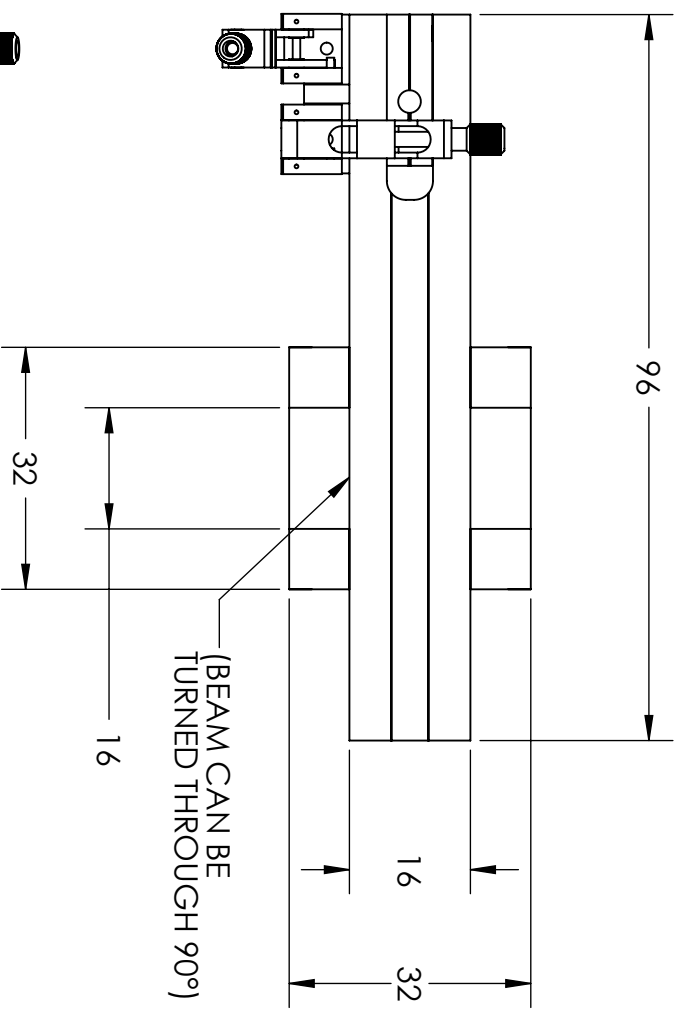
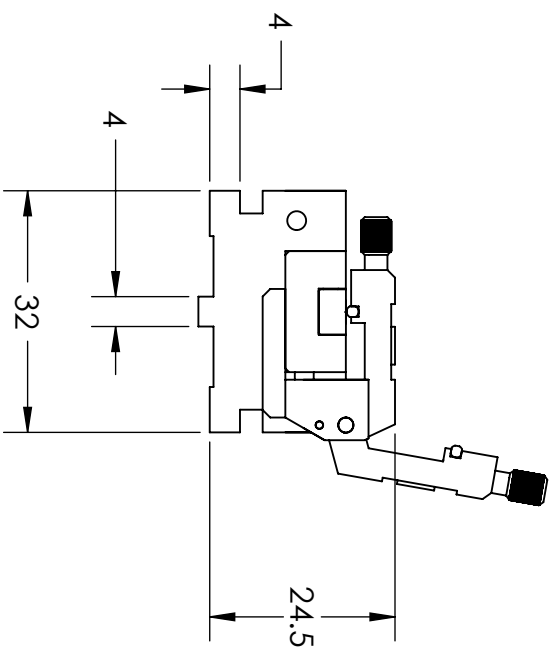
A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

Specifications

Configuration	Double V-groove and clamp arms for cladding and jacket
Fibre size	125/250 µm fibre with up to 1mm jacket
Fibre clamp	Double clamp arms with adjustable force
Clamp force	Adjustable from 25 to 125 g

Options

Universal Base MDE752 (included)

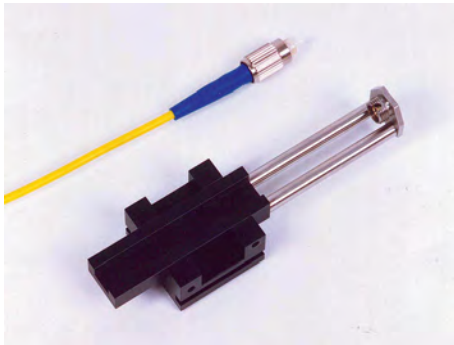


* ADJUSTABLE OVERHANG
A + B = 45mm

MDE750

Elliot Gold™ Series: Fibre Holders

MDE751 FC/PC Connector Fibre Holder (Mechanical), Long Reach



- Very easy to use
- Holds standard FC/PC Patchcords
- Other connector types available
- Custom grooves available
- Fibre held in user-replaceable V-groove by spring clamps

ELLIOT MARTOCK

Long reach fibre holder for FC/PC connectorised patchcords. Holds standard patchcords. Other connector types available on request. Includes Universal Base MDE752 which allows fibres to be located offset from central axis.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ Series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.

Specifications

Configuration	Long reach fibre holder for FC/PC Patchcords
Fibre size	125/250 µm fibre with up to 1mm jacket
Fibre clamp	Double clamp arms with adjustable force
Clamp force	Adjustable from 25 to 125 g

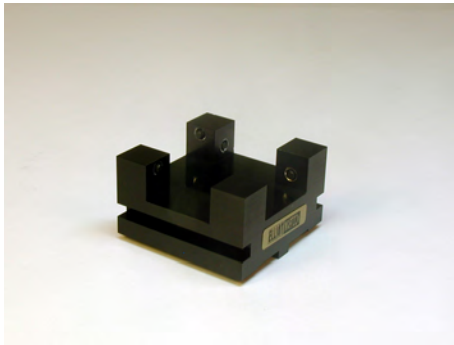
Options

Universal Base MDE752 (included)
 Alternative connector versions
 Clamp set (MDE154)



Elliot Gold™ Series: Fibre Holders

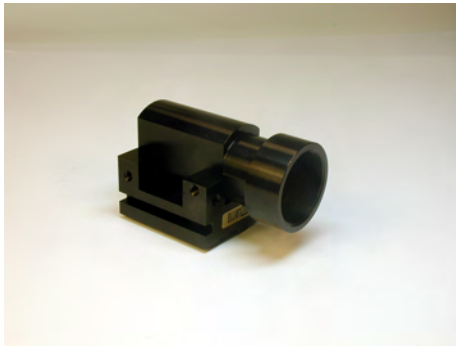
MDE752 Universal Base



Universal base for holding components on top of flexure stages. Locates in either of the two orthogonal slots on flexure stage top plate for offset component mounting.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.



Elliot Gold™ Series: Fibre Holders**MDE753 Long Reach Microscope Objective Holder**

- Facilitates offset mounting of objectives
- Ideal for DWDM component inspection



The Long Reach Microscope Objective Holder fits onto an MDE752 as shown, allowing the objective to be placed in positions offset to the optical axis. An internal RMS thread is machined for easy mounting of objectives. Recommended for DWDM component inspection.

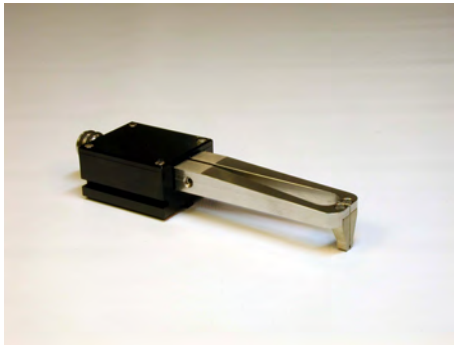
All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory.

A standard clamp system is used and is supplied with the flexure stages and accessory platforms. The clamp set (MDE154) is available separately if required.



Elliot Gold™ Series: Fibre Holders

E770 Fibre Gripper



- Compact design with rapid loading and unloading feature
- Repeatability gripping force
- Minimal gripped length to maximise package accessibility
- Integrates with Elliot Gold™ series flexure stages
- Gripping arms contoured to allow a clear view and/or tool access
- Extended reach for restricted access laser diode alignment tasks
- Interchangeable grips accommodate all sizes of fibre & ferrules
- Grips a wide range of fibre configurations from clad fibres to ferrules

The E770 Fibre Gripper is designed to fit on Elliot Gold™ series flexure stages for demanding fibre alignment tasks.

Interchangeable grips accommodate a wide variety of fibre configurations ranging from clad fibres, to ferrules in excess of 3 mm diameter.

Specifications

Standard Grip Size	To fit 125 µm fibre
Max Jaw Opening	10 mm
Grip Length	3.5 mm

Options and Accessories

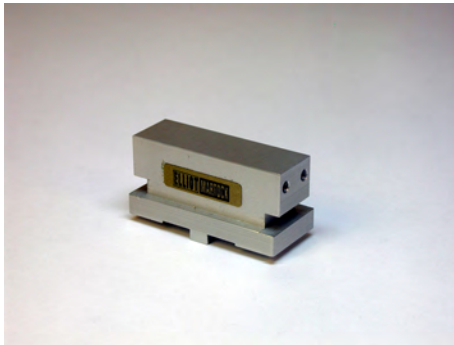
Fibre Grips (E781-nnnn, please specify fibre diameter)

Ferrule Grips (E782-nnnn, please specify ferrule diameter)



Elliot Gold™ Series: Waveguide Holders

MDE741-10 Basic Waveguide/Device Holder - 10 x 15 mm



- 10 mm waveguide length
- 15 mm nominal height
- Adhesive or tape mounting



The MDE741 series is a basic waveguide/substrate mount for use with the central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets. Affix device with tape or bond with adhesive.

Specifications

Length	10 mm
Height	15 mm

Options

Other waveguide lengths: 14 mm and 30 mm

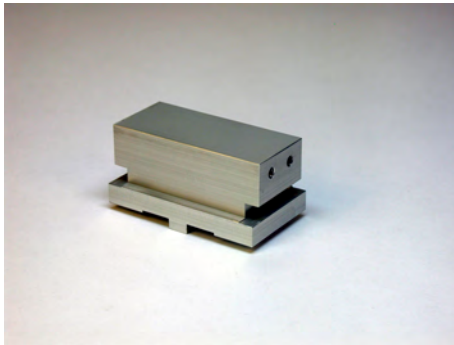
Alternative mounting: vacuum or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE741-14 Basic Waveguide/Device Holder - 14 x 15 mm



- 14 mm waveguide length
- 15 mm nominal height
- Adhesive or tape mounting



The MDE741 series is a basic waveguide/substrate mount for use with the central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets. Affix device with tape or bond with adhesive.

Specifications

Length	14 mm
Height	15 mm

Options

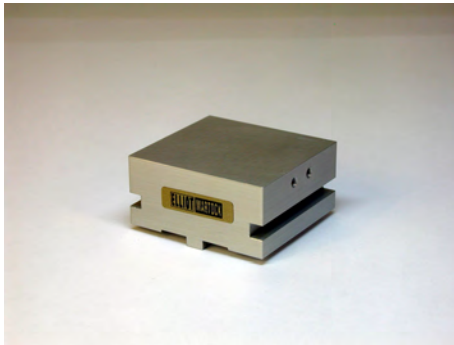
Other waveguide lengths: 10 mm and 30 mm

Alternative mounting: vacuum or mechanical clamp

Also available manufactured in copper

Elliot Gold™ Series: Waveguide Holders

MDE741-30 Basic Waveguide/Device Holder - 30 x 15 mm



- 30 mm waveguide length
- 15 mm nominal height
- Adhesive or tape mounting



The MDE741 series is a basic waveguide/substrate mount for use with the central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets. Affix device with tape or bond with adhesive.

Specifications

Length	30 mm
Height	15 mm

Options

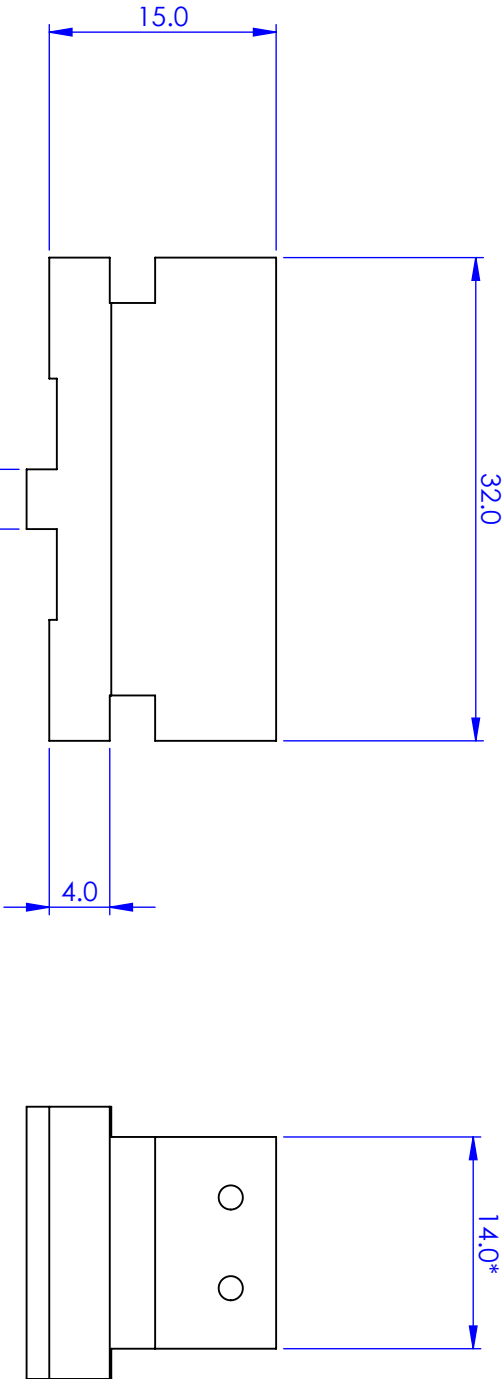
Other waveguide lengths: 10 mm and 14 mm

Alternative mounting: vacuum or mechanical clamp

Also available manufactured in copper

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REV.	DESCRIPTION		

*STANDARD WIDTHS AVAILABLE
ARE 10mm, 14mm AND 30mm.
ORDER MDE741/10, MDE741/14 AND MDE741/30 RESPECTIVELY



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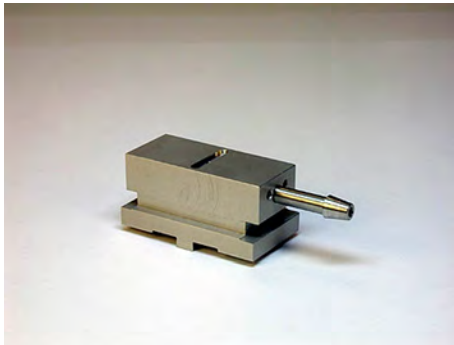
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MATERIAL		---	---

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TITLE			
WAVEGUIDE/SUBSTRATE MOUNT			
SIZE		DWG. NO.	
A4		MDE741	
SCALE2:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Elliot Gold™ Series: Waveguide Holders

MDE742-10 Vacuum Waveguide/Device Holder - 10 x 15 mm



- 10 mm waveguide length
- 15 mm nominal height
- Vacuum mounting
- Hold-down groove custom cut for application

ELLIOT MARTOCK

The MDE742 series is a vacuum waveguide mount for central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets. Vacuum hold-down groove cut to suit application.

Specifications

Length	10 mm
Height	15 mm

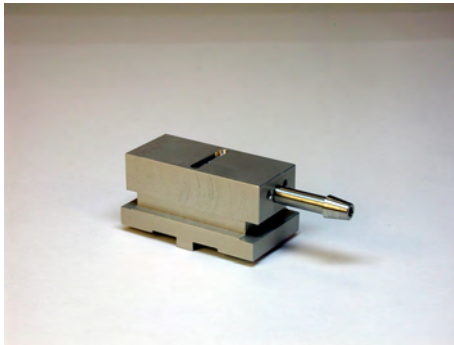
Options

Other waveguide lengths: 14 mm and 30 mm

Alternative mounting: adhesive/tape or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders**MDE742-14 Vacuum Waveguide/Device Holder - 14 x 15 mm**

- 14 mm waveguide length
- 15 mm nominal height
- Vacuum mounting
- Hold-down groove custom cut for application

ELLIOT MARTOCK

The MDE742 series is a vacuum waveguide mount for central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets. Vacuum hold-down groove cut to suit application.

Specifications

Length	14 mm
Height	15 mm

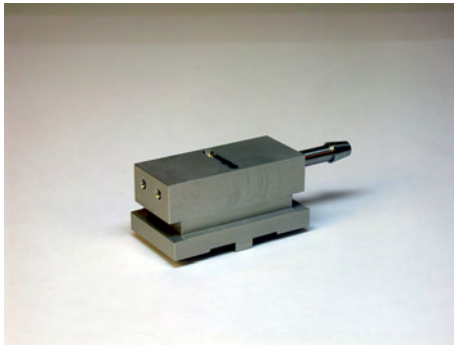
Options

Other waveguide lengths: 10 mm and 30 mm

Alternative mounting: adhesive/tape or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders**MDE742-30 Vacuum Waveguide/Device Holder - 30 x 15 mm**

- 30 mm waveguide length
- 15 mm nominal height
- Vacuum mounting
- Hold-down groove custom cut for application

ELLIOT MARTOCK

The MDE742 series is a vacuum waveguide mount for central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets. Vacuum hold-down groove cut to suit application.

Specifications

Length	30 mm
Height	15 mm

Options

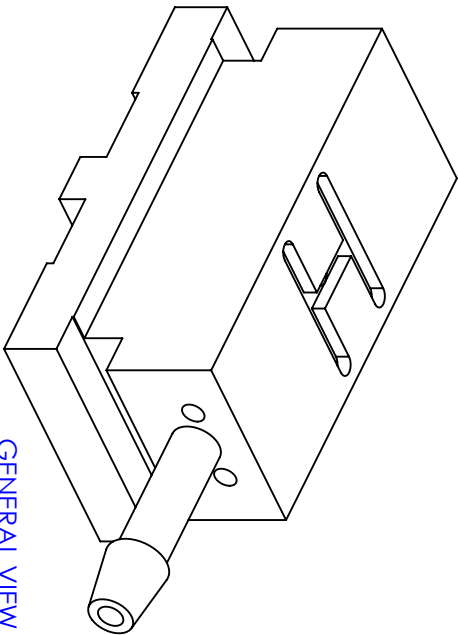
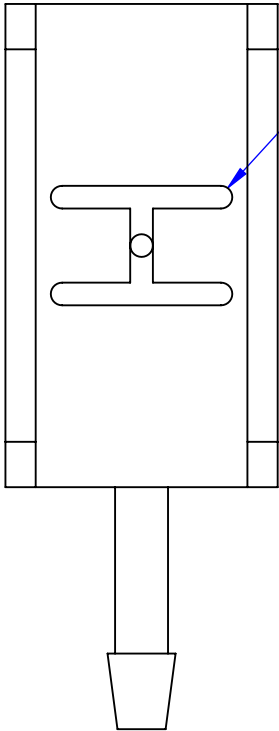
Other waveguide lengths: 10 mm and 14 mm

Alternative mounting: adhesive/tape or mechanical clamp

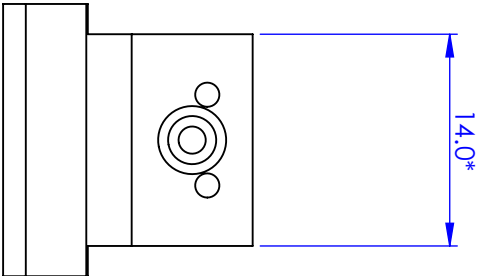
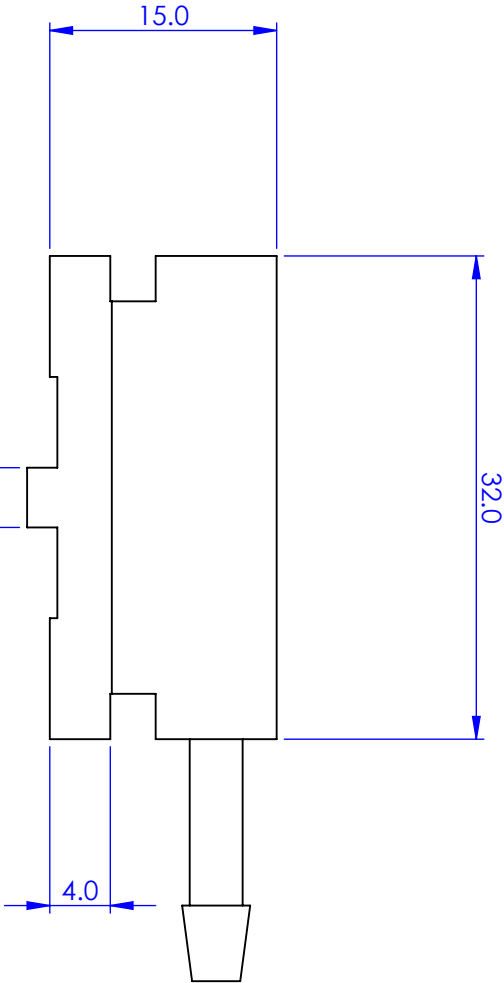
Also available manufactured in copper

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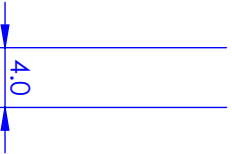
SHAPE AND SIZE OF
VACUUM CUT-OUT
CAN BE CUSTOMISED



GENERAL VIEW
SCALE 2:1



*STANDARD WIDTHS AVAILABLE
ARE 10mm, 14mm AND 30mm.
ORDER MDE742/10, MDE742/14 AND MDE742/30 RESPECTIVELY



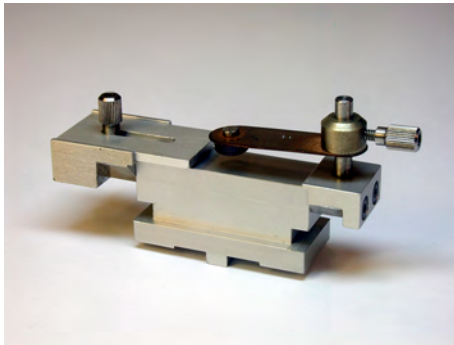
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DO NOT SCALE DRAWING		SCALE 2:1	THIRD ANGLE PROJECTION
SHEET		SIZE	A4
DWG. NO.		MDE742	
TITLE		VACUUM WAVEGUIDE MOUNT	
ELLIOT Scientific		SHEET 1 OF 1	

Elliot Gold™ Series: Waveguide Holders

MDE743-10 Mechanical Waveguide/Device Holder - 10 x 15 mm



- 10 mm waveguide length
- 15 mm nominal height
- Mechanical clamp mounting
- Adjustable end stop

ELLIOT MARTOCK

The MDE743 series is a waveguide/substrate mount with mechanical clamp arm and adjustable end-stop for use with the central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets.

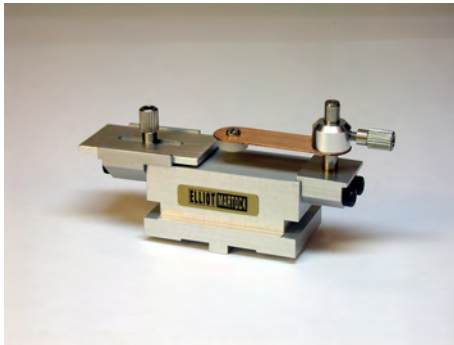
Specifications

Length	10 mm
Height	15 mm

Options

Other waveguide lengths: 14 mm and 30 mm
Alternative mounting: adhesive/tape or vacuum
Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders**MDE743-14 Mechanical Waveguide/Device Holder - 14 x 15 mm**

- 14 mm waveguide length
- 15 mm nominal height
- Mechanical clamp mounting
- Adjustable end stop

ELLIOT MARTOCK

The MDE743 series is a waveguide/substrate mount with mechanical clamp arm and adjustable end-stop for use with the central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets.

Specifications

Length	14 mm
Height	15 mm

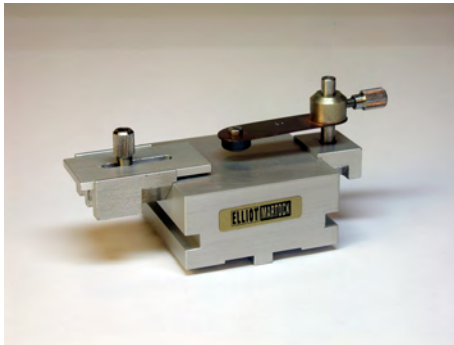
Options

Other waveguide lengths: 10 mm and 30 mm
Alternative mounting: adhesive/tape or vacuum
Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE743-30 Mechanical Waveguide/Device Holder - 30 x 15 mm



- 30 mm waveguide length
- 15 mm nominal height
- Mechanical clamp mounting
- Adjustable end stop

ELLIOT MARTOCK

The MDE743 series is a waveguide/substrate mount with mechanical clamp arm and adjustable end-stop for use with the central workstations MDE881 and MDE883, and for Elliot Gold™ series flexure stages. Also fits MDE147, MDE148 and MDE149 brackets.

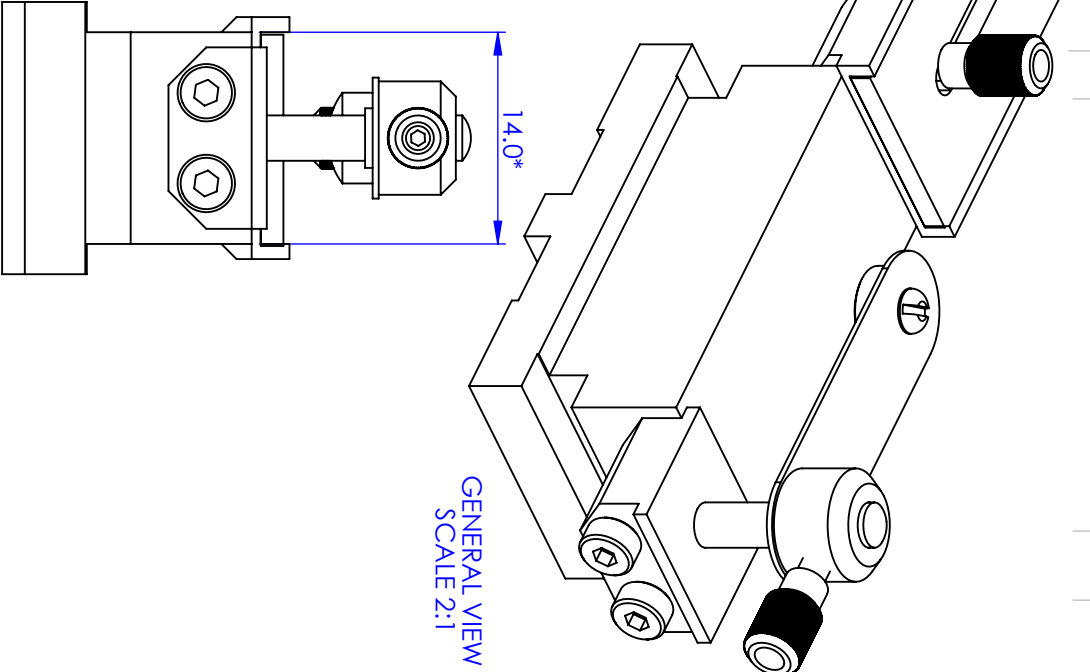
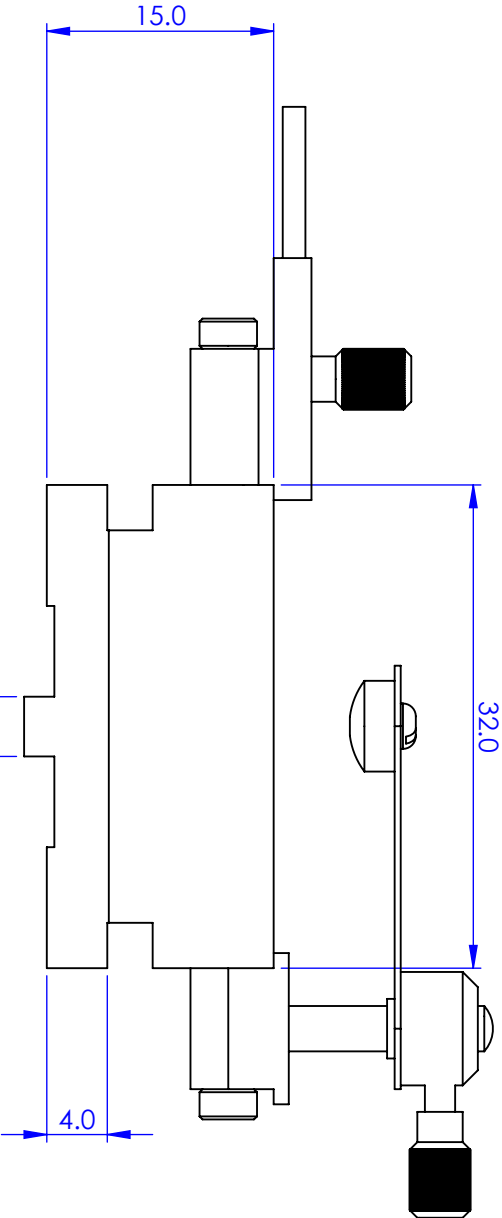
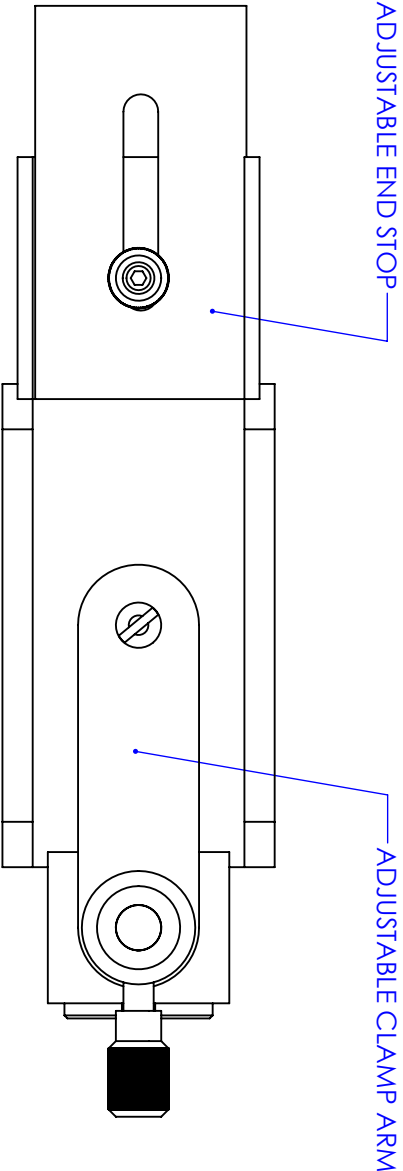
Specifications

Length 30 mm
Height 15 mm

Options

Other waveguide lengths: 10 mm and 14 mm
Alternative mounting: adhesive/tape or vacuum
Also available manufactured in copper

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



*STANDARD WIDTHS AVAILABLE
ARE 10mm, 14mm AND 30mm.
ORDER MDE743/10, MDE743/14 AND MDE743/30 RESPECTIVELY

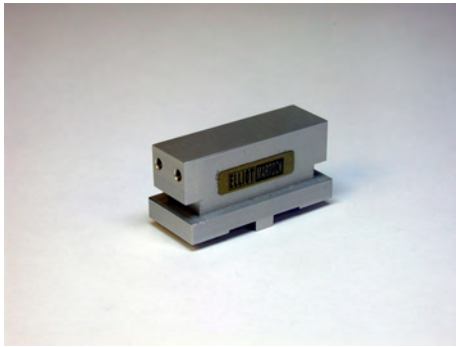
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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: \pm
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME	DATE
AUTHOR GW	10/08/2010
CHECKED	
MATERIAL	
FINISH	
DO NOT SCALE DRAWING	
TITLE	
WAVEGUIDE MOUNT WITH CLAMP	
SIZE A4	DWG. NO. MDE743
SCALE2:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Elliot Gold™ Series: Waveguide Holders

MDE744-10 Basic Waveguide/Device Holder - 10 x 18 mm



- 10 mm waveguide length
- 18 mm nominal height
- Adhesive or tape mounting



The MDE744 series is a basic waveguide/substrate mount for use with MDE717 and MDE718 fibre rotators. These models feature an increased mounting height of 18 mm which matches the working height of the rotators. Affix device with tape or bond with adhesive.

Specifications

Length	10 mm
Height	18 mm

Options

Other waveguide lengths: 14 mm and 30 mm

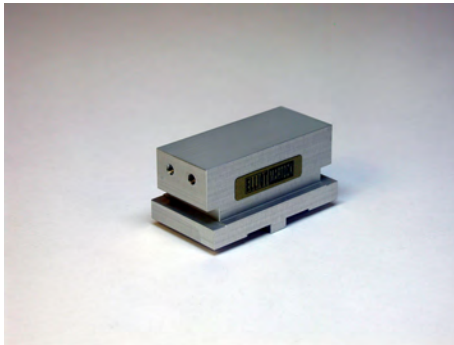
Alternative mounting: vacuum or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE744-14 Basic Waveguide/Device Holder - 14 x 18 mm



- 14 mm waveguide length
- 18 mm nominal height
- Adhesive or tape mounting



The MDE744 series is a basic waveguide/substrate mount for use with MDE717 and MDE718 fibre rotators. These models feature an increased mounting height of 18 mm which matches the working height of the rotators. Affix device with tape or bond with adhesive.

Specifications

Length	14 mm
Height	18 mm

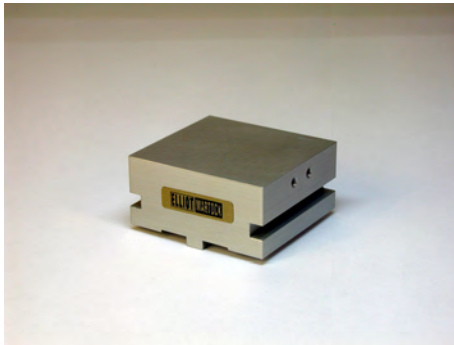
Options

Other waveguide lengths: 10 mm and 30 mm

Alternative mounting: vacuum or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders**MDE744-30 Basic Waveguide/Device Holder - 30 x 18 mm**

- 30 mm waveguide length
- 18 mm nominal height
- Adhesive or tape mounting



The MDE744 series is a basic waveguide/substrate mount for use with MDE717 and MDE718 fibre rotators. These models feature an increased mounting height of 18 mm which matches the working height of the rotators. Affix device with tape or bond with adhesive.

Specifications

Length	30 mm
Height	18 mm

Options

Other waveguide lengths: 10 mm and 14 mm

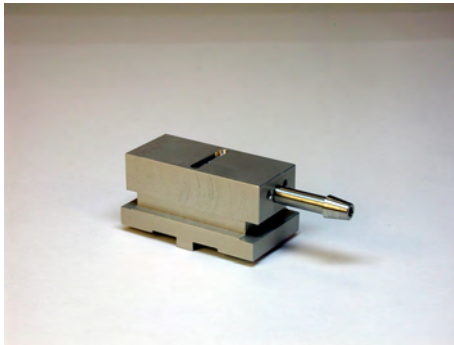
Alternative mounting: vacuum or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE745-10 Vacuum Waveguide/Device Holder - 10 x 18 mm



- 10 mm waveguide length
- 18 mm nominal height
- Vacuum mounting
- Hold-down groove custom cut for application

ELLIOT MARTOCK

The MDE745 series is a vacuum waveguide mount for use with MDE717 and MDE718 fibre rotators. The model MDE745 features an increased mounting height of 18 mm that matches the working height of the rotators. Vacuum hold-down groove is cut to suit application.

Specifications

Length	10 mm
Height	18 mm

Options

Other waveguide lengths: 14 mm and 30 mm

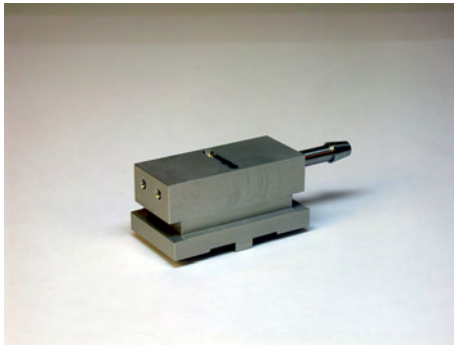
Alternative mounting: adhesive/tape or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE745-14 Vacuum Waveguide/Device Holder - 14 x 18 mm



- 14 mm waveguide length
- 18 mm nominal height
- Vacuum mounting
- Hold-down groove custom cut for application

ELLIOT MARTOCK

The MDE745 series is a vacuum waveguide mount for use with MDE717 and MDE718 fibre rotators. The model MDE745 features an increased mounting height of 18 mm that matches the working height of the rotators. Vacuum hold-down groove is cut to suit application.

Specifications

Length	14 mm
Height	18 mm

Options

Other waveguide lengths: 10 mm and 30 mm

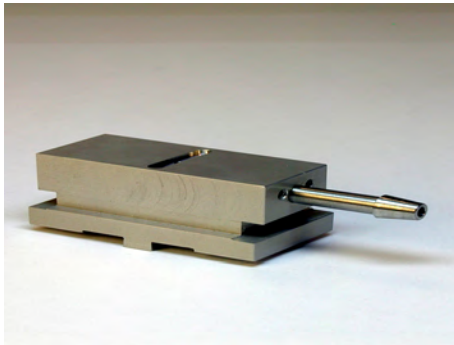
Alternative mounting: adhesive/tape or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE745-30 Vacuum Waveguide/Device Holder - 30 x 18 mm



- 30 mm waveguide length
- 18 mm nominal height
- Vacuum mounting
- Hold-down groove custom cut for application



The MDE745 series is a vacuum waveguide mount for use with MDE717 and MDE718 fibre rotators. The model MDE745 features an increased mounting height of 18 mm that matches the working height of the rotators. Vacuum hold-down groove is cut to suit application.

Specifications

Length	30 mm
Height	18 mm

Options

Other waveguide lengths: 10 mm and 14 mm

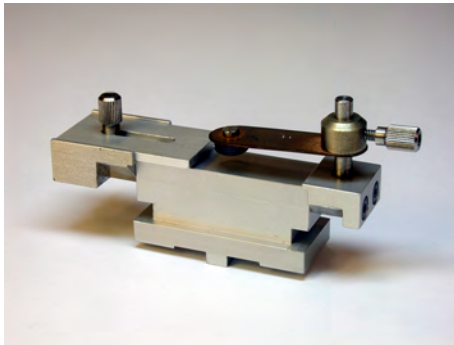
Alternative mounting: adhesive/tape or mechanical clamp

Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE746-10 Mechanical Waveguide/Device Holder - 10 x 18 mm



- 10 mm waveguide length
- 18 mm nominal height
- Mechanical clamp mounting
- Adjustable end stop



The MDE746 series is a waveguide/substrate mount with mechanical clamp arm and adjustable end-stop for use with MDE717 and MDE718 fibre rotators. The MDE746 features an increased mounting height of 18 mm which matches the working height of the rotators.

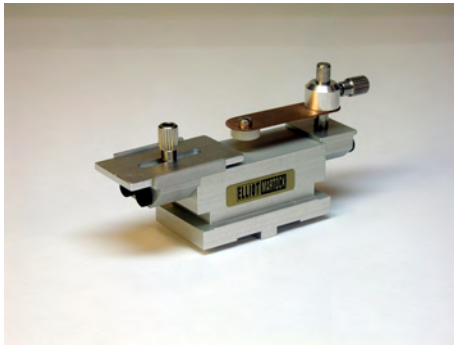
Specifications

Length	10 mm
Height	18 mm

Options

Other waveguide lengths: 14 mm and 30 mm
 Alternative mounting: adhesive/tape or vacuum
 Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders**MDE746-14 Mechanical Waveguide/Device Holder - 14 x 18 mm**

- 14 mm waveguide length
- 18 mm nominal height
- Mechanical clamp mounting
- Adjustable end stop

ELLIOT MARTOCK

The MDE746 series is a waveguide/substrate mount with mechanical clamp arm and adjustable end-stop for use with MDE717 and MDE718 fibre rotators. The MDE746 features an increased mounting height of 18 mm which matches the working height of the rotators.

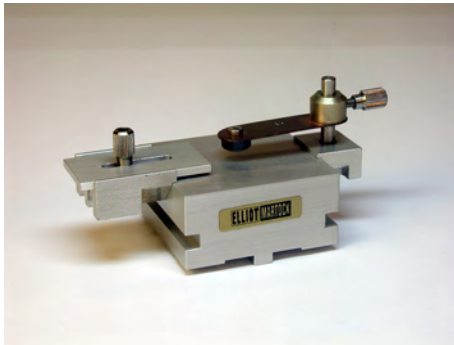
Specifications

Length	14 mm
Height	18 mm

Options

Other waveguide lengths: 10 mm and 30 mm
Alternative mounting: adhesive/tape or vacuum
Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders**MDE746-30 Mechanical Waveguide/Device Holder - 30 x 18 mm**

- 30 mm waveguide length
- 18 mm nominal height
- Mechanical clamp mounting
- Adjustable end stop

ELLIOT MARTOCK

The MDE746 series is a waveguide/substrate mount with mechanical clamp arm and adjustable end-stop for use with MDE717 and MDE718 fibre rotators. The MDE746 features an increased mounting height of 18 mm which matches the working height of the rotators.

Specifications

Length	30 mm
Height	18 mm

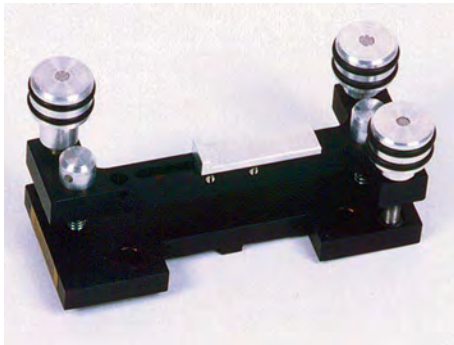
Options

Other waveguide lengths: 10 mm and 14 mm
Alternative mounting: adhesive/tape or vacuum
Also available manufactured in copper



Elliot Gold™ Series: Waveguide Holders

MDE747 Waveguide Mount with Pitch, Roll & Height Adjust



ELLIOT MARTOCK

- Angular travel $\pm 3^\circ$
- Optical axis height 15 mm \pm 3 mm
- Waveguide mount slides & clamps in Y direction 12 mm
- Mechanical clamp arm from MDE743 may be fitted to stage
- Fits on flexure stages and MDE147, MDE148, and MDE149 brackets

Waveguide mount with kinematic adjustment of pitch and roll, plus height. Short length allows access with microscope objectives for free space coupling. Adjustable location ridge allows substrate to be placed parallel along optical axis.

Specifications

Y-Travel of waveguide mount	12 mm
Optical Axis Height	15 mm \pm 3 mm
Angular Adjustment Pitch	$\pm 3^\circ$
Roll	$\pm 3^\circ$

Options

Mechanical clamp arm from MDE743



Elliot Gold™ Series: Waveguide Holders

MDE890 Waveguide Mount with θ_y and X Adjust



- X-axis travel 16 mm
- Angular resolution 1 arc second
- Attaches to MDE881 and MDE883 Central Workstation
- θ_y has 360° coarse rotation with $\pm 1^\circ$ fine adjustment



Attaches to central platform of MDE881 or any Elliot/Martock flexure stage. θ_y has 360° of coarse adjustment, with $\pm 1^\circ$ rotation to 1 arc second resolution. The spindle assembly can slide in the X-direction by 16 mm along a precision dovetail and is locked in place with two screws. Customer or Elliot to machine mounting block supplied to suit requirements.

Specifications

θ_y Rotation	360° coarse adjustment, $\pm 1^\circ$ fine adjustment
Angular resolution	1 arc second
X-Adjustment	16 mm on precision dovetail with locking screws

Options

Machining of mounting block to suit requirements



Elliot Gold™ Series: Waveguide Holders

MDE891 Waveguide Mount with θ_y plus X & Y Adjust



- X-axis travel: 16 mm
- Z-axis travel: + 8/- 2 mm relative to spindle
- Angular resolution 1 arc second
- Attaches to MDE881 and MDE883 Central Workstation
- θ_y has 10° coarse rotation with $\pm 1^\circ$ fine adjustment



Attaches to central platform of MDE881 or any Elliot/Martock flexure stage. θ_y has 10° of coarse adjustment, with $\pm 1^\circ$ rotation to 1 arc second resolution. The spindle assembly can slide in the X-direction by 16 mm along a precision dovetail and is locked in place with two screws. The Y-adjustment is limited to + 8/- 2 mm travel relative to spindle. Customer or Elliot to machine mounting block supplied to suit requirements.

Specifications

θ_y Rotation	10° coarse adjustment, $\pm 1^\circ$ fine adjustment
Angular resolution	1 arc second
X-Adjustment	16 mm on precision dovetail with locking screws
Z-Adjustment	+ 8/- 2 mm relative to spindle

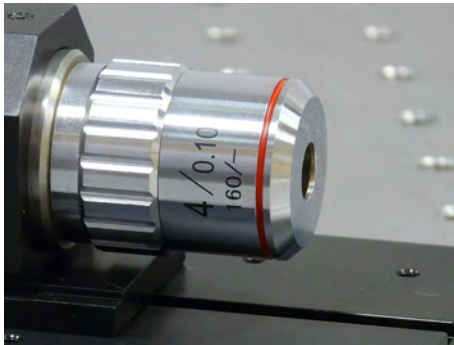
Options

Machining of mounting block to suit requirements



Elliot Gold™ Series: Microscope Objectives

MDE170 Microscope Achromatic Objective x4



- x4 Magnification
- BBAR Coated
- RMS 0.800"-36 Mounting Thread



Achromatic objective lens suitable for use with the Elliot Gold™ series Fibre Launch Systems.

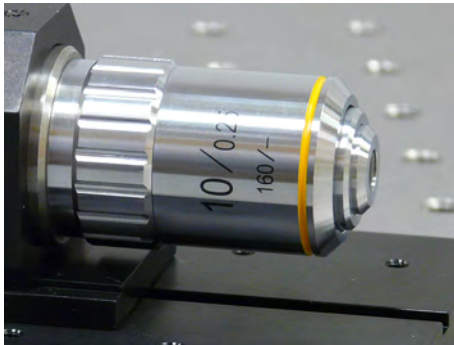
Specifications

Magnification	x4
Numerical Aperture	0.12
Working Distance	22 mm
Anti-reflection coating	Broadband AR coated for visible wavelength range
Mounting Thread	RMS 0.800"-36



Elliot Gold™ Series: Microscope Objectives

MDE172 Microscope Achromatic Objective x10



- x10 Magnification
- BBAR Coated
- RMS 0.800"-36 Mounting Thread



Achromatic objective lens suitable for use with the Elliot Gold™ series Fibre Launch Systems.

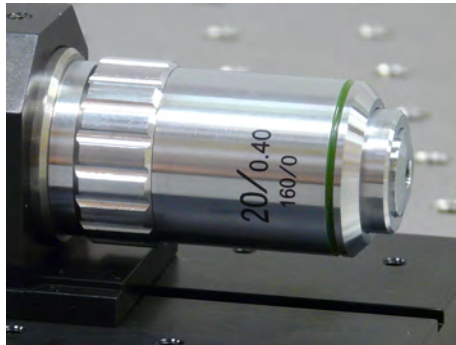
Specifications

Magnification	x10
Numerical Aperture	0.25
Working Distance	6.5 mm
Anti-reflection coating	Broadband AR coated for visible wavelength range
Mounting Thread	RMS 0.800"-36



Elliot Gold™ Series: Microscope Objectives

MDE173 Microscope Achromatic Objective x20



- x20 Magnification
- BBAR Coated
- RMS 0.800"-36 Mounting Thread



Achromatic objective lens suitable for use with the Elliot Gold™ series Fibre Launch Systems.

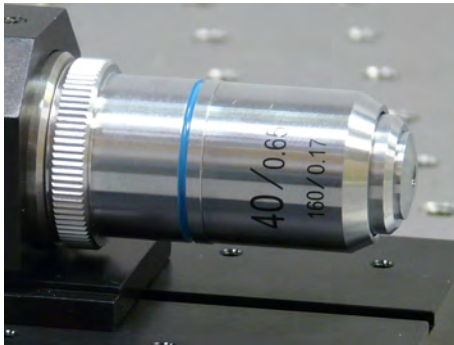
Specifications

Magnification	x20
Numerical Aperture	0.40
Working Distance	1.3 mm
Anti-reflection coating	Broadband AR coated for visible wavelength range
Mounting Thread	RMS 0.800"-36



Elliot Gold™ Series: Microscope Objectives

MDE174 Microscope Achromatic Objective x40



- x40 Magnification
- BBAR Coated
- RMS 0.800"-36 Mounting Thread



Achromatic objective lens suitable for use with the Elliot Gold™ series Fibre Launch Systems.

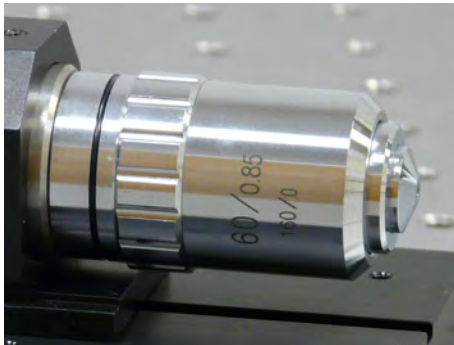
Specifications

Magnification	x40
Numerical Aperture	0.65
Working Distance	0.6 mm
Anti-reflection coating	Broadband AR coated for visible wavelength range
Mounting Thread	RMS 0.800"-36



Elliot Gold™ Series: Microscope Objectives

MDE175 Microscope Achromatic Objective x60



- x60 Magnification
- BBAR Coated
- RMS 0.800"-36 Mounting Thread



Achromatic objective lens suitable for use with the Elliot Gold™ series Fibre Launch Systems.

Specifications

Magnification	x60
Numerical Aperture	0.85
Working Distance	0.18 mm
Anti-reflection coating	Broadband AR coated for visible wavelength range
Mounting Thread	RMS 0.800"-36



Miniature Stages

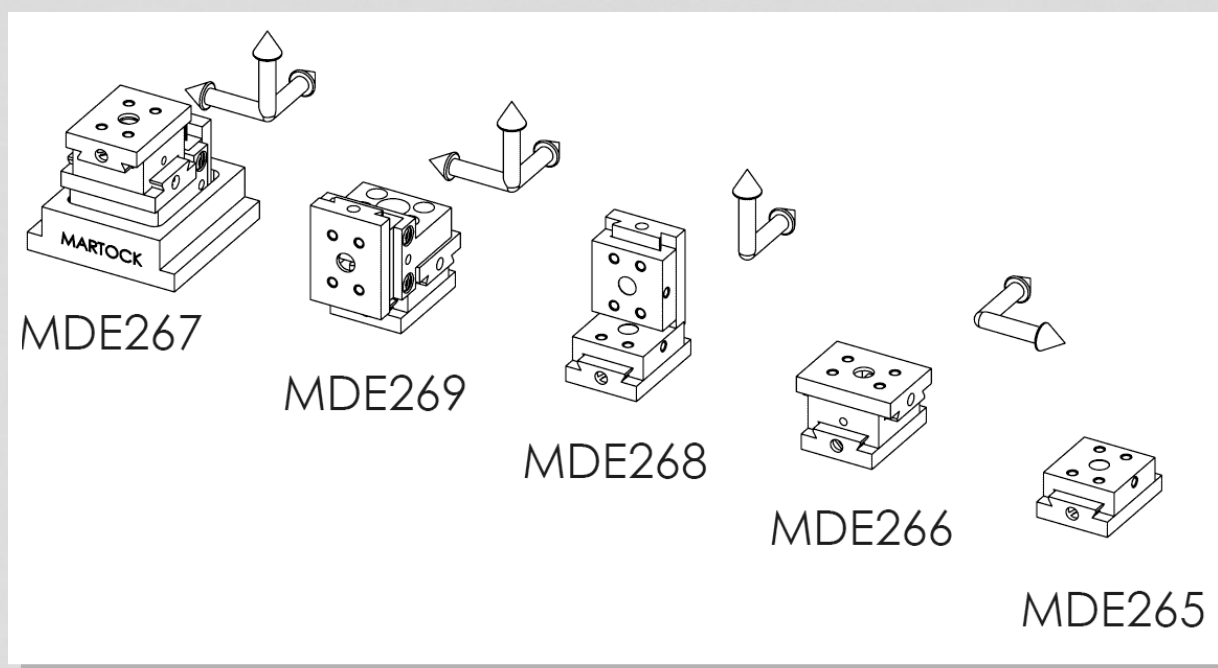


ELLIOT | MARTOCK

2019



Ultra Small Linear Stages



ELLIOT | MARTOCK

2019



Manual Positioners: Ultra Small Linear Stages: 3 mm Travel

MDE265 Single Axis Ultra-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Very Small dovetail slide series
- One of the smallest micropositioners available

ELLIOT MARTOCK

The Elliot Scientific MDE265 slide is an ultra-small, single axis micropositioner with simple adjusters for linear translation stage applications in physics experiments or optical systems.

Specifications

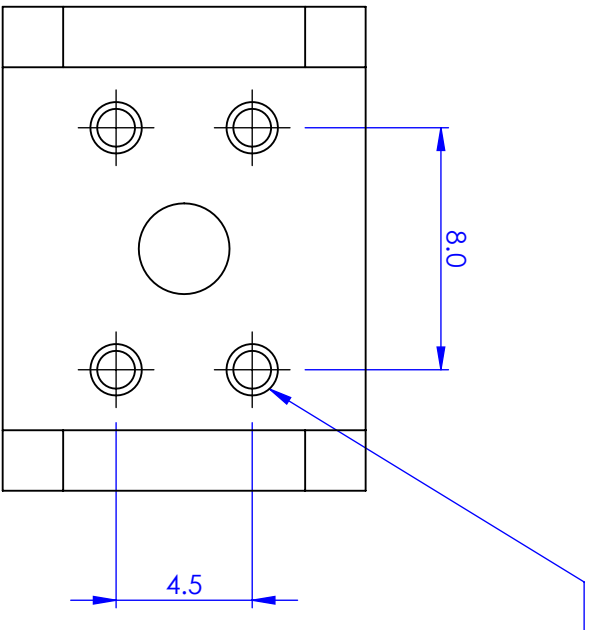
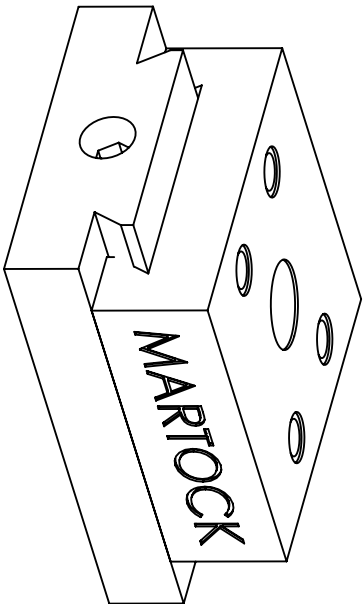
Travel	3 mm
Sensitivity	< 0.5 μm
Adjuster	0.25 pitch with 1.27 mm hex socket
Top plate	12 x 12 mm
Mounting holes	Four M1.6 x 2 mm deep on both sides

Options

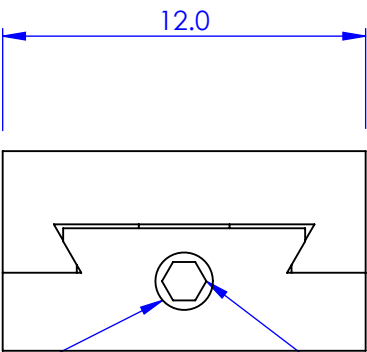
Knurled knob adjuster (Sold separately as P/No. MD-054115)
 Post mounting using MDE857 (and MDE858 if required)
 Fibre holders available: MDE719 and MDE730
 Vacuum compatible versions available

Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

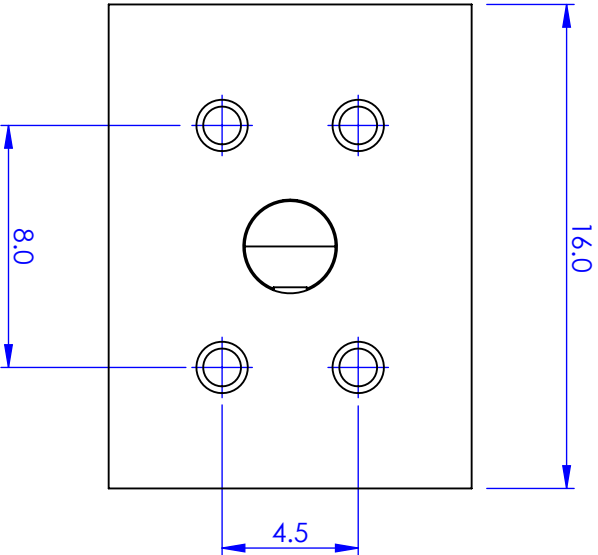
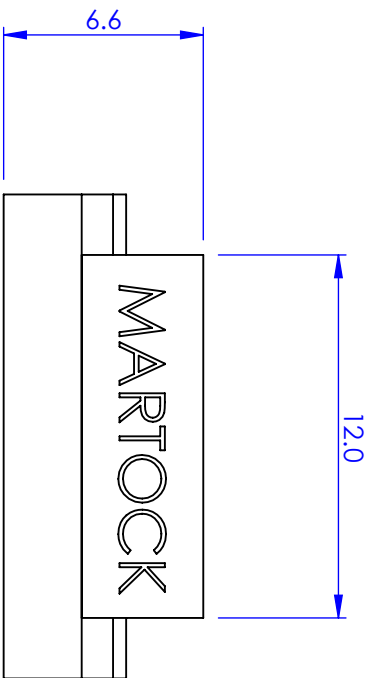


4 HOLES
M1.6 x 2 DEEP
TOP AND BOTTOM



1.27 HEX SOCKET

ADJUSTER



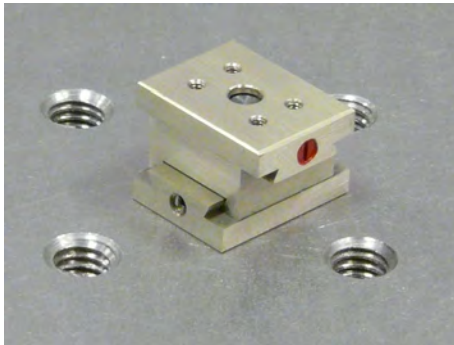
TRAVEL ± 1.5 mm

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

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AUTHOR	NAME	DATE	TITLE
CHECKED	GW	11/05/2010	MDE265 SINGLE AXIS STAGE
MATERIAL CU ALLOY, STAINLESS STEEL		FINISH ---	SIZE A4
DO NOT SCALE DRAWING		SCALE: 1	THIRD ANGLE PROJECTION
			SHEET 1 OF 1

Manual Positioners: Ultra Small Linear Stages: 3 mm Travel

MDE266 Dual Axis XY Ultra-Small Micropositioner



ELLIOT MARTOCK

- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Very Small dovetail slide series
- One of the smallest micropositioners available

The Elliot Scientific MDE266 slide is an ultra-small, dual axis micropositioner with simple adjusters for XY linear translation stage applications in physics experiments or optical systems.

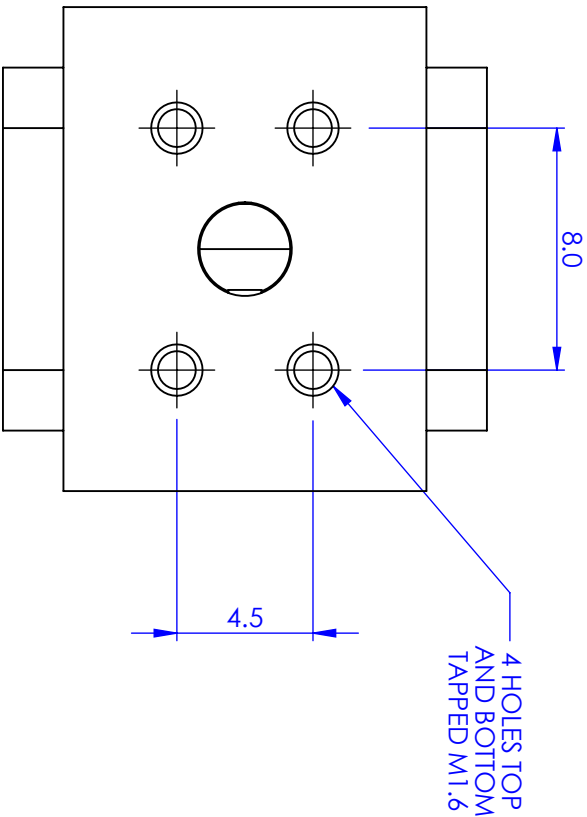
Specifications

Travel	3 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with 1.27 mm hex socket
Ball hex driver supplied	
Top plate	12 x 12 mm
Thickness	11 mm
Mounting holes	Four M1.6 x 2 mm deep on both sides

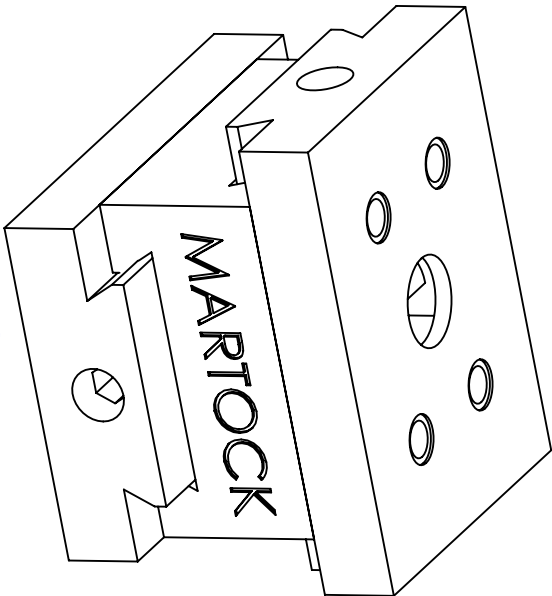
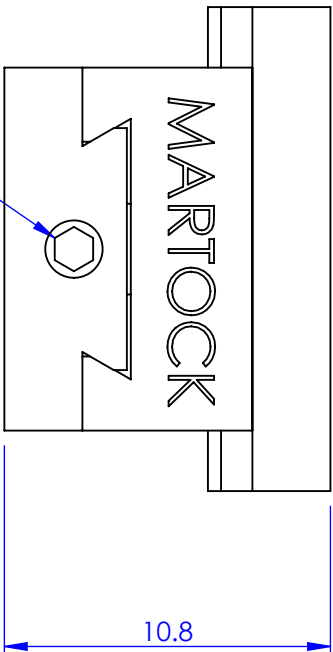
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

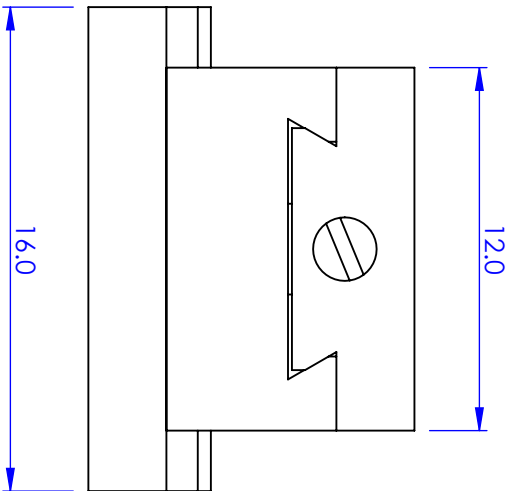
REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



BOTH AXES ±3mm OF TRAVEL



GENERAL VIEW
SCALE: 4:1



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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

AUTHOR		NAME		DATE	
CHECKED		GW		11/05/2010	
MATERIAL					
CU ALLOY, STAINLESS STEEL					
FINISH					

DO NOT SCALE DRAWING					
TITLE					
2 AXIS DOVETAIL SLIDE					
SIZE		DWG. NO.			
A4		MDE266			
SCALE: 1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Manual Positioners: Ultra Small Linear Stages: 3 mm Travel

MDE267 Three-Axis XYZ Ultra-Small Micropositioner on M4 Tapped Base



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Very Small dovetail slide series
- One of the smallest micropositioners available



The Elliot Scientific MDE267 slide is an ultra-small, triple axis micropositioner with simple adjusters on an M4 tapped base for XYZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	3 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with 1.27 mm hex socket
Ball hex driver supplied	
Top plate	12 x 12 mm
Base	M4 tapped

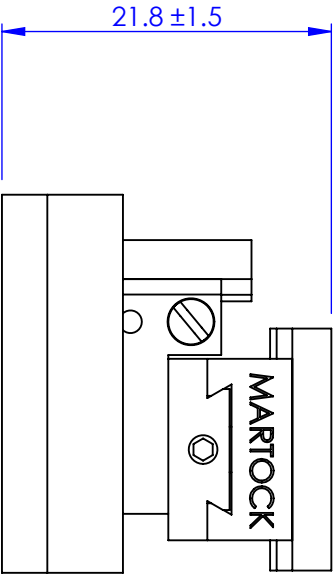
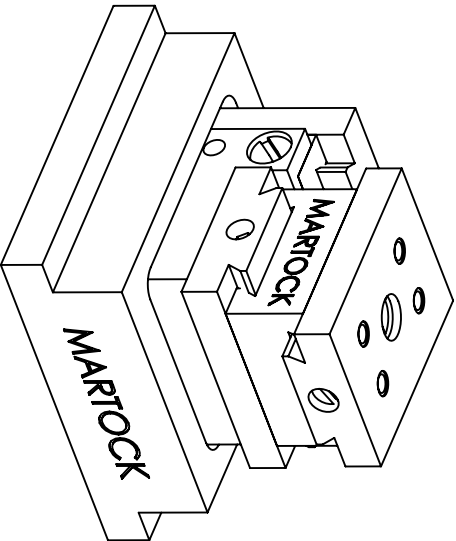
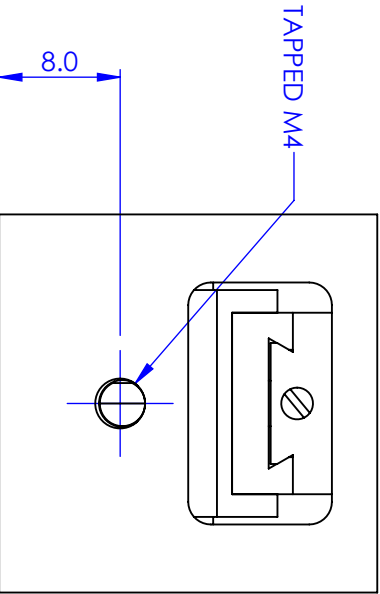
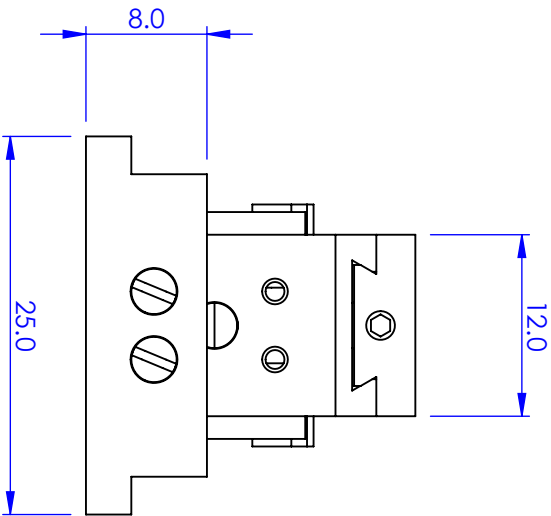
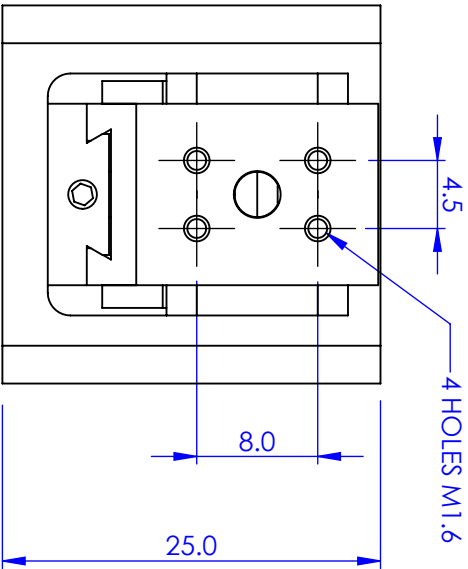
Options

Knurled knob adjuster (Sold separately as P/No. MD-054115)
 Post mounting using MDE857 (and MDE858 if required)
 Fibre holders available: MDE719 and MDE730
 Vacuum compatible versions available

Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

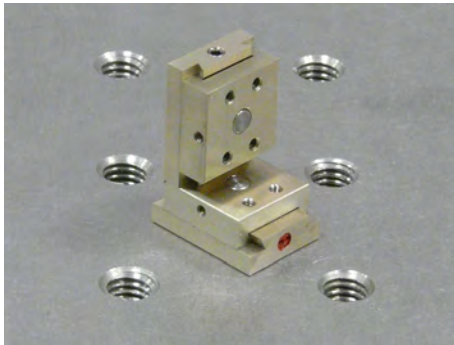
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REV.	DESCRIPTION		



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AUTHOR		NAME		DATE		MATERIAL	
CHECKED		GW		13/05/2010		CU ALLOY, AL ALLOY STAINLESS STEEL	
FINISH		---		---		TITLE	
DO NOT SCALE		DRAWING		SIZE		MDE267 3-Axis Micropositioner	
A4		DWG. NO.		MDE267		THIRD ANGLE PROJECTION	
SCALE: 2:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1			

Manual Positioners: Ultra Small Linear Stages: 3 mm Travel

MDE268 Dual Axis XZ Ultra-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Very Small dovetail slide series
- One of the smallest micropositioners available



The Elliot Scientific MDE268 slide is an ultra-small, dual axis micropositioner with simple adjusters for XZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	3 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with 1.27 mm hex socket
Top plate	12 x 12 mm
Mounting holes	Four M1.6 x 2 mm deep on both sides

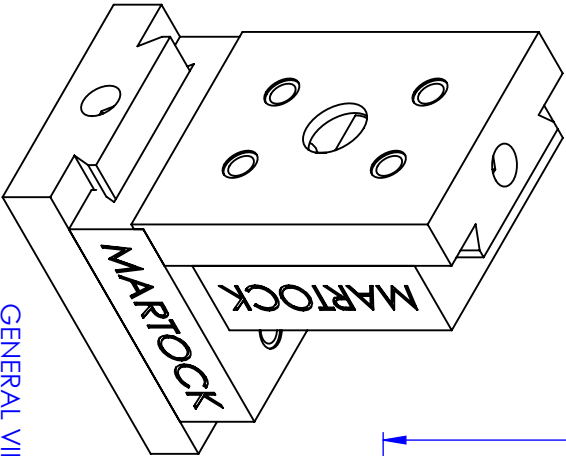
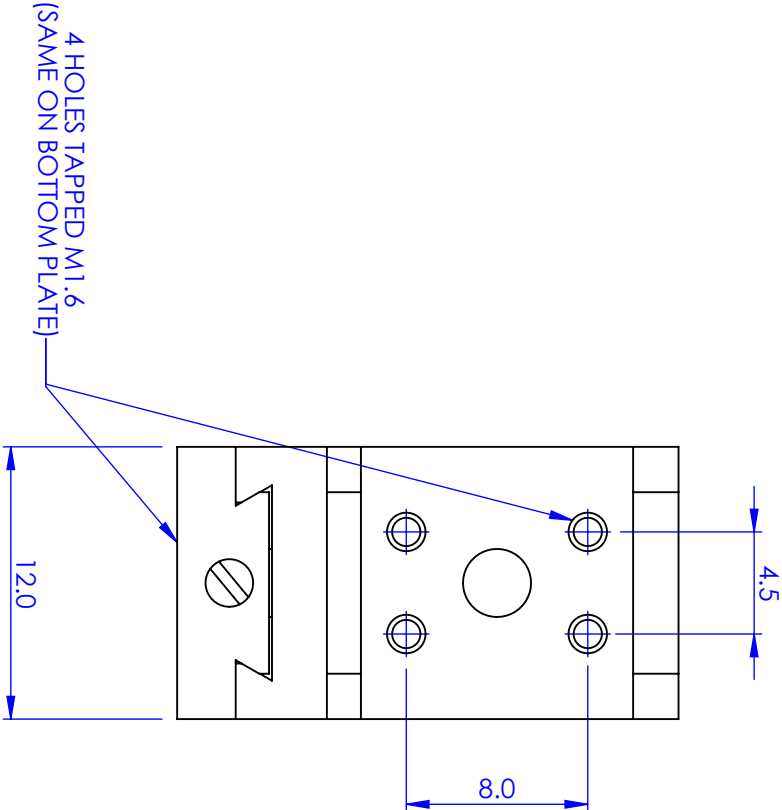
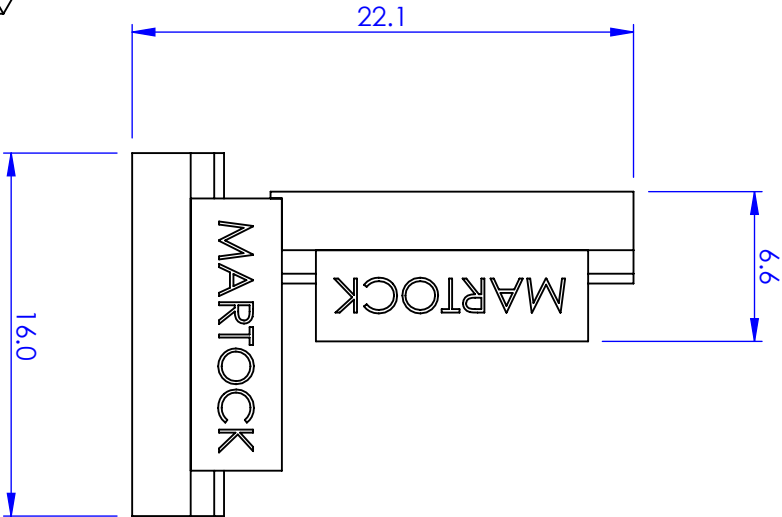
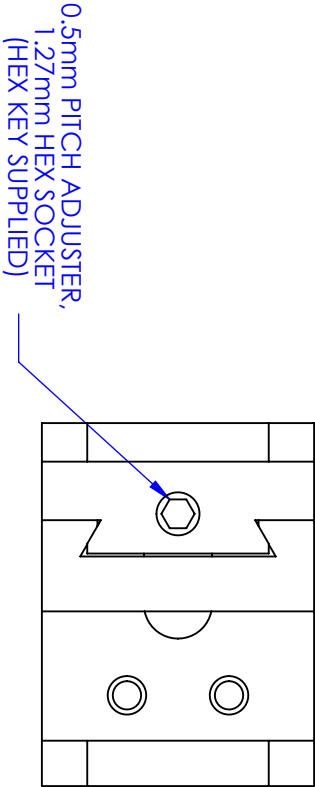
Options

Knurled knob adjuster (Sold separately as P/No. MD-054115)
 Post mounting using MDE857 (and MDE858 if required)
 Fibre holders available: MDE719 and MDE730
 Vacuum compatible versions available

Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

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REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 3:1

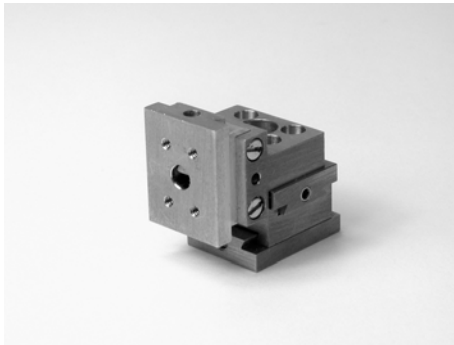
BOTH AXES ±3mm OF TRAVEL

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MATERIAL CU ALLOY, STAINLESS STEEL			FINISH ---		
AUTHOR CHECKED			NAME GW		
DATE 13/05/2010			---		

DO NOT SCALE DRAWING			THIRD ANGLE PROJECTION		
SHEET 1 OF 1			SHEET 1 OF 1		
TITLE XZ MICROPOSITIONER			DWG. NO. MDE268		
SCALE: 3:1			SIZE A4		

Manual Positioners: Ultra Small Linear Stages: 3 mm Travel

MDE269 Three Axis XZ Ultra-Small Micropositioner



ELLIOT MARTOCK

- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Very Small dovetail slide series
- One of the smallest micropositioners available

The Elliot Scientific MDE269 slide is an ultra-small, triple axis micropositioner with simple adjusters for XYZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	3 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with 1.27 mm hex socket
Top plate	12 x 12 mm
Mounting holes	Four M1.6 x 2 mm deep on both sides

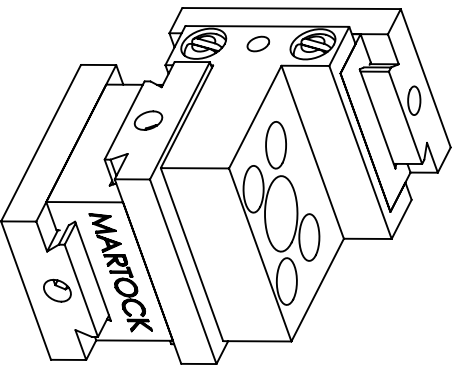
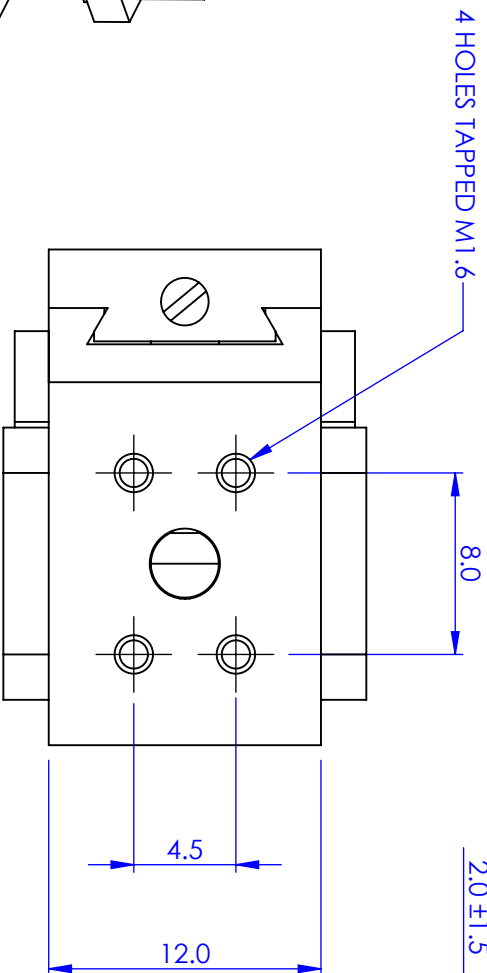
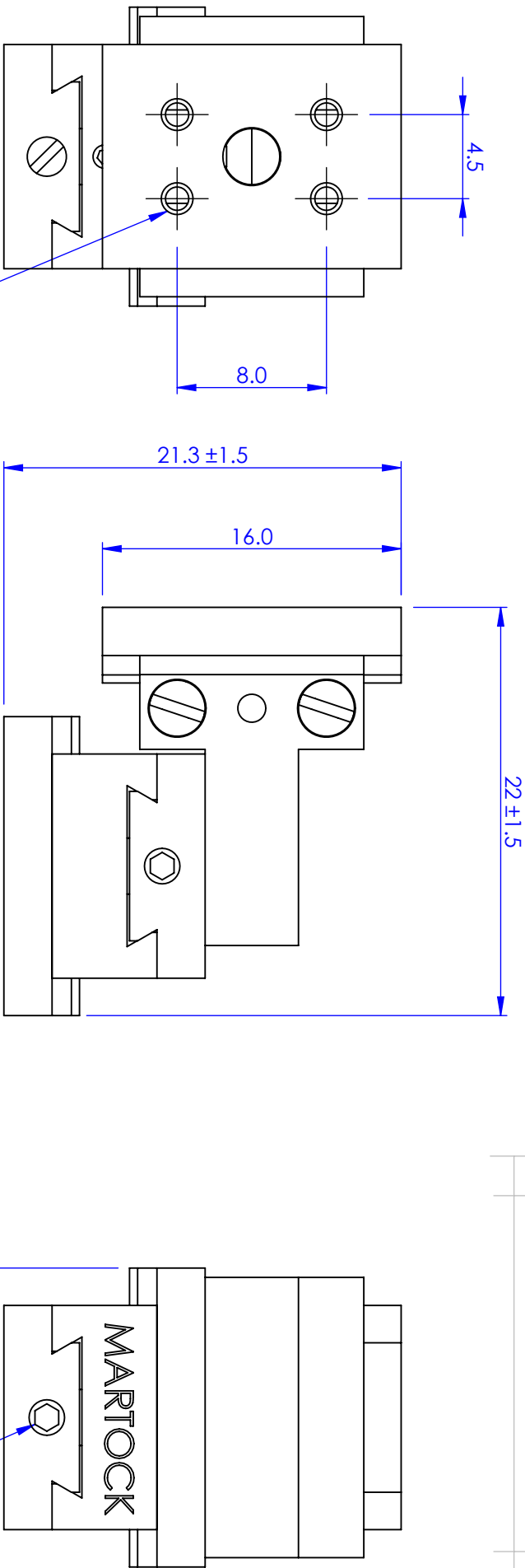
Options

Knurled knob adjuster (Sold separately as P/No. MD-054115)
 Post mounting using MDE857 (and MDE858 if required)
 Fibre holders available: MDE719 and MDE730
 Vacuum compatible versions available

Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

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GENERAL VIEW
SCALE 3:1

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ANGULAR TOLERANCES: \pm
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME		DATE	
CHECKED		GW		11/05/2010	
MATERIAL:		-		-	
CU ALLOY, STAINLESS STEEL					
FINISH					
DO NOT SCALE DRAWING					
<div><div>Eliot Scientific</div><div>TITLE</div><div>3 AXIS DOVETAIL SLIDE</div><div>SIZEA4</div><div>DWG. NO. MDE269</div><div>SCALE:1</div><div>THIRD ANGLE PROJECTION</div><div>SHEET 1 OF 1</div></div>					

Manual Positioners: Ultra Small Linear Stages: Fibre Accessories

MDE719 Fibre Rotator



ELLIOT MARTOCK

- Spindle rotates 360°
- Resolution 30 arc secs
- Holds fibre ferrules only
- Fine adjustment: $\pm 5^\circ$ range
- Fits MDE265 Series Positioners
- Works with any ferrule up to 4.5 mm diameter

The MDE719 is a simple fibre rotator that integrates with MDE265 series positioners. It is designed to be used with fibre ferrules up to 4.5 mm in diameter (customer must specify actual ferrule size). It incorporates a spindle that rotates through 360°. Fine adjustment is $\pm 5^\circ$ with a resolution of 30 arc secs.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. The user replaceable V-grooves enable the you to work with different fibre sizes economically. Remember, custom grooves are our speciality.

All accessories are compatible with the Elliot Gold™ series flexure stages. The optical axis height is 18 mm above the platform surface and on the centre line of the location slot. Where necessary a locating tongue forms part of the accessory. A standard clamp system is used and is supplied with the flexure stages and accessory platforms.

The clamp set (MDE154) is available separately if required.

Specifications

Ferrule Size	Up to 4.5 mm diameter. Customer specified
Rotation	360° coarse rotation $\pm 5^\circ$ fine adjustment
Resolution	30 arc secs
Mount Fits	MDE265 Series Positioners
Supplied with	mounting screws

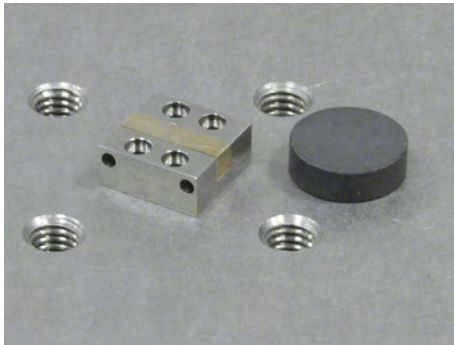
Options

MDE265 series micropositioners
Clamp set (MDE154)



Manual Positioners: Ultra Small Linear Stages: Fibre Accessories

MDE730 Fibre Holder (Magnetic)



- V-groove for 125 μm fibre
- V-groove for 125 μm fibre
- Fits MDE 265 Series Positioners
- Fibre retained by magnet (supplied)

ELLIOT MARTOCK

The MDE730 is a simple fibre holder utilising a magnetic clamp. The standard V-groove accepts 125 μm fibre, although other sizes are available on request. The fibre holder fits the MDE265 series positioners.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. The user replaceable V-grooves enable the you to work with different fibre sizes economically. Remember, custom grooves are our speciality.

Specifications

Fibre size	125 μm fibre
Fibre clamp	Magnetic
Optical axis	5.0 mm centre height
Mount Fits MDE265 Series Positioners	
Supplied with mounting screws	

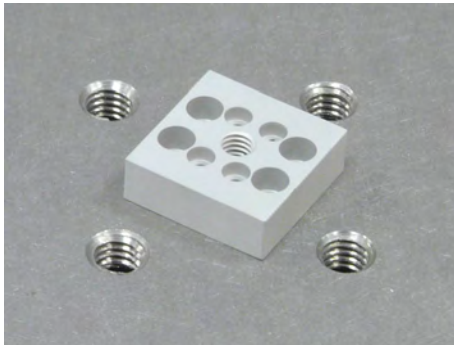
Options

MDE265 series micropositioners



Manual Positioners: Ultra Small Linear Stages: Adaptors

MDE857 MDE260 & MDE265 Post Adaptor



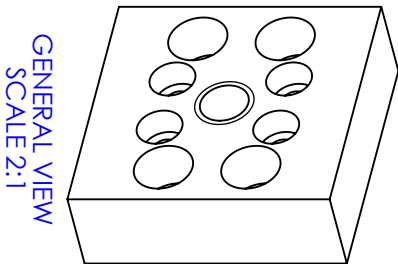
- Mount slide horizontal on post
- Mount MDE260 and MDE265 series to any M4 stud post
- Use with Elliot/Martock MDE260 and MDE265 series Ultra Small Micropositioners



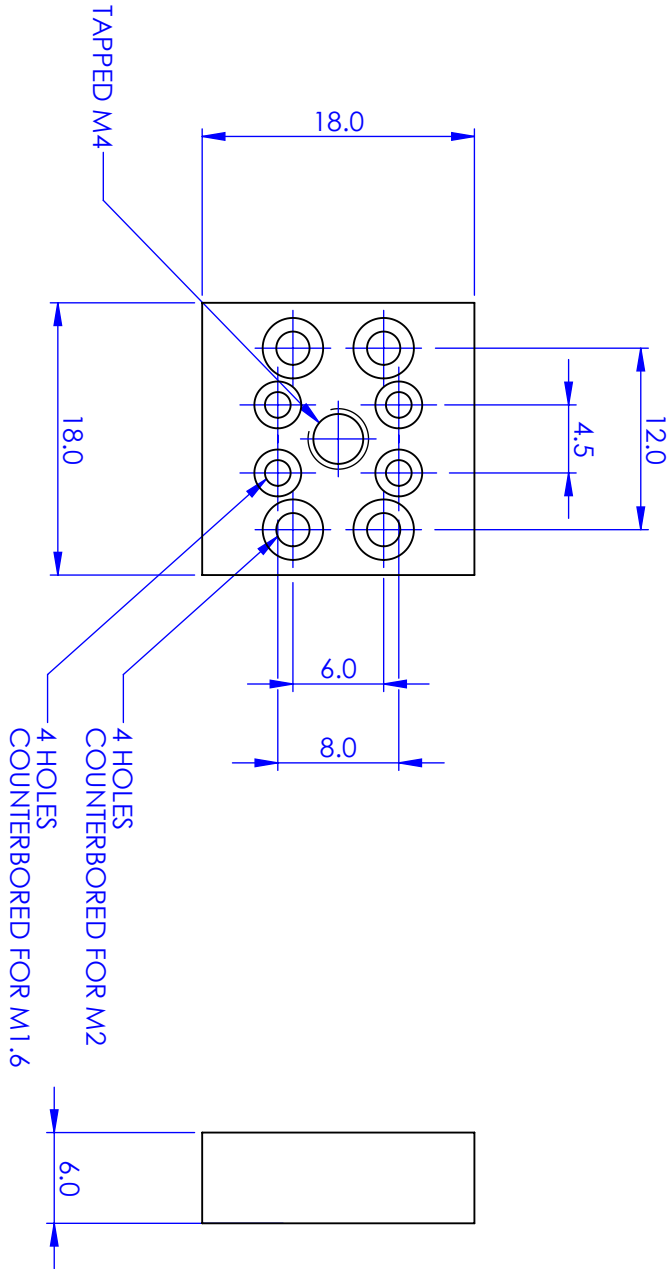
MDE857 adaptor fits MDE260 and MDE265 series slides.

Enables post mounting of MDE26x Series Stages

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW
SCALE 2:1



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MATERIAL ALUMINIUM ALLOY		TITLE HORIZONTAL POST MOUNT	
FINISH ANODISED CLEAR		SIZE A4	
DO NOT SCALE DRAWING		DWG. NO. MDE857	
AUTHOR GW		DATE 23/03/2010	
CHECKED -		SCALE2:1	
NAME GW		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Ultra Small Linear Stages: Adaptors

MDE858 MDE260 & MDE265 Post Adaptor for MDE857



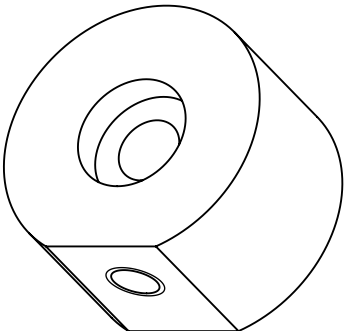
- Requires MDE857 adaptor
- Mount MDE260/MDE265 series micropositioners vertically or rotationally on an M4 stud



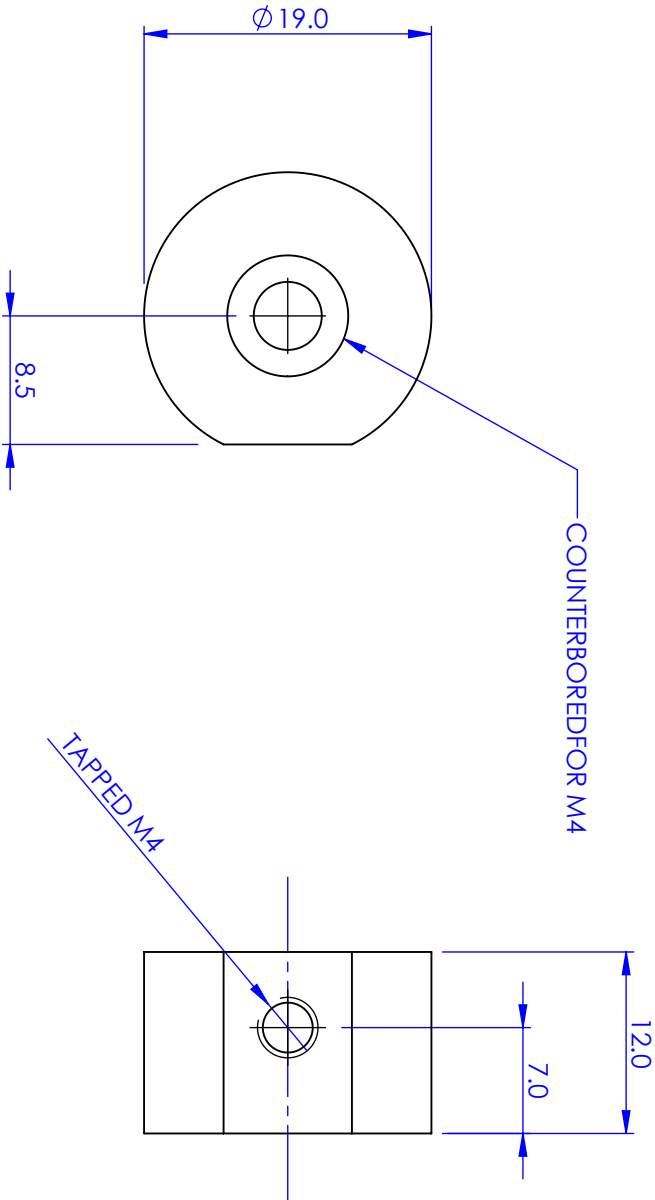
The MDE858 adaptor is used in conjunction with an MDE857 to allow vertical or rotational mounting of MDE260 and MDE265 series Ultra Small Micropositioners.

Enables sideways post mounting of MDE26x Series Stages in conjunction with MDE857 adaptor

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW
SCALE 2:1



COUNTERBORED FOR M4

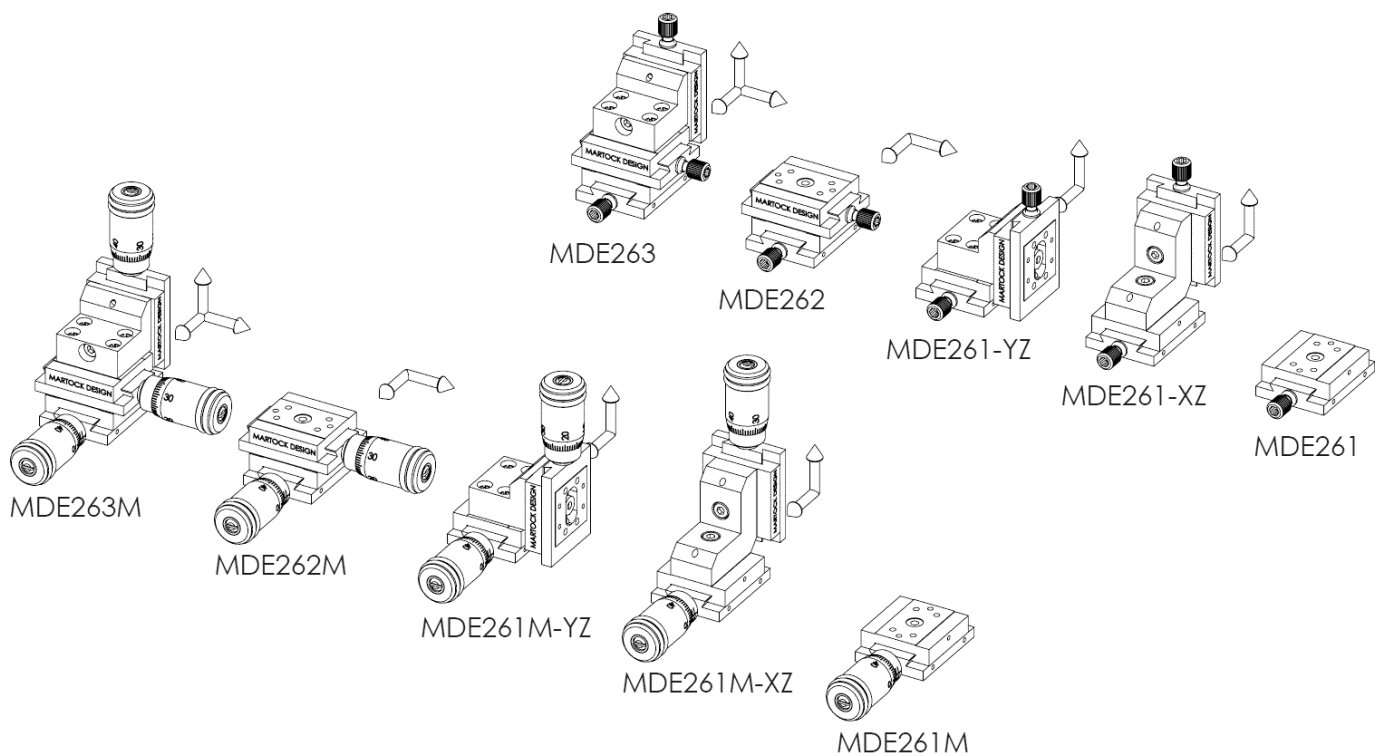
TAPPED M4

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AND CORNERS TO BE
REMOVED

NAME	DATE
AUTHOR GW	23/03/2010
CHECKED	
MATERIAL ALUMINIUM ALLOY	
FINISH ANODISED CLEAR	
DO NOT SCALE DRAWING	
TITLE ADAPTER MOUNT	
SIZE A4	DWG. NO. MDE858
SCALE 2:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Very Small Linear Stages



ELLIOT | MARTOCK

2019



Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE261 Single Axis Very-Small Micropositioner



ELLIOT MARTOCK

- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Small dovetail slide series

A very small, single axis micropositioner with simple adjustment for linear translation stage applications in physics experiments or optical systems.

Specifications

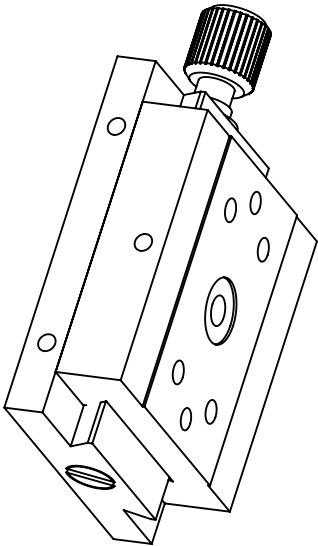
Travel	5 mm
Sensitivity	< 0.5 μm
Adjuster	0.25 pitch with knurled knob and 2.5 mm hex socket
Ball hex driver supplied	
Top plate	26 x 20 mm
Thickness	8 mm
Mounting holes	Four M2 x 2 mm deep on both sides

Options

Post mounting using MDE857 (and MDE858 if required)	Table-mounting option: MDE293
Fibre holder available: MDE72	Vacuum version
Tilting option: MDE270 and MDE273	
Rotation option: MDE283	

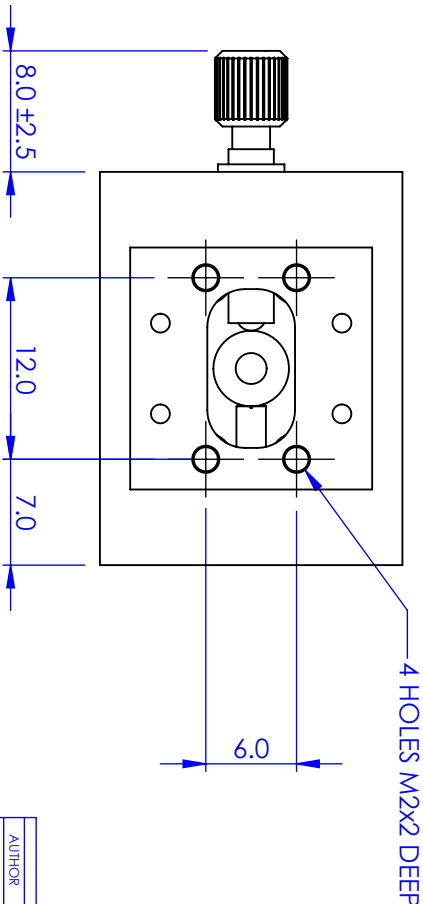
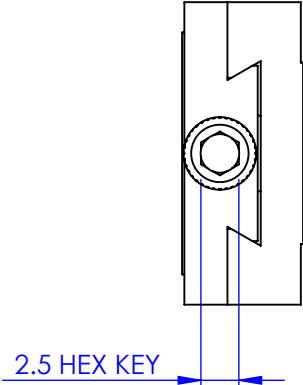
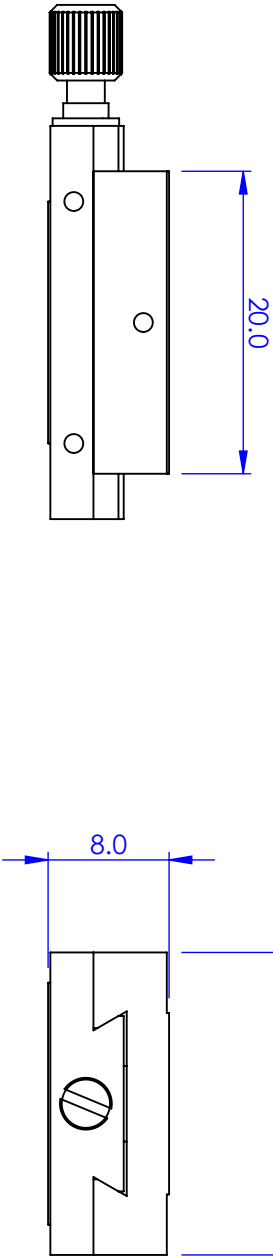
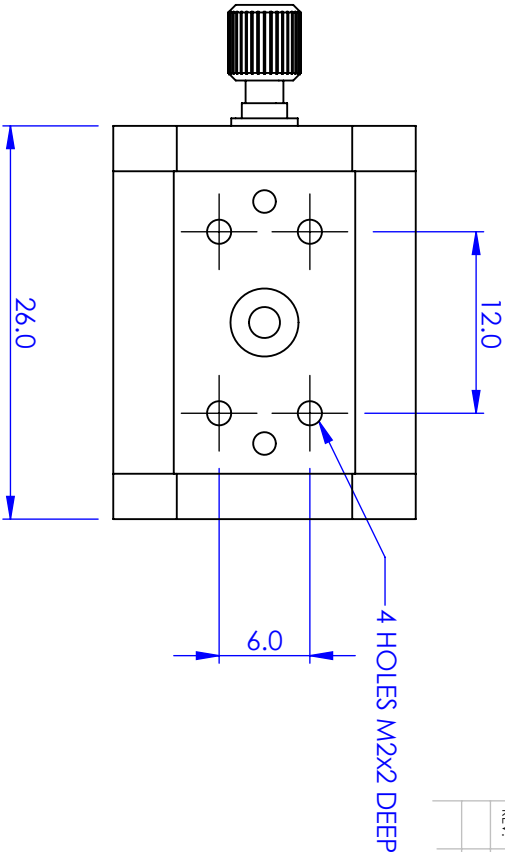
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.



GENERAL VIEW
SCALE: 2:1

TRAVEL $\pm 2.5\text{mm}$



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REV.	DESCRIPTION		

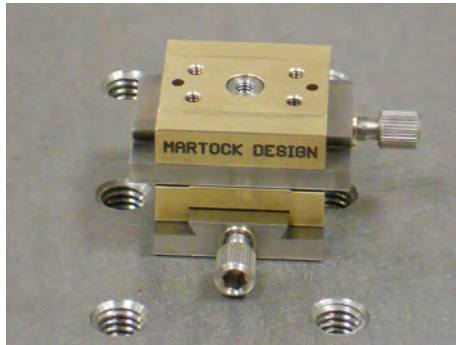
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ANGULAR TOLERANCES: \pm
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME	DATE
AUTHOR GW	11/05/2010
CHECKED	—
MATERIAL STAINLESS STEEL, ALUM. ALLOY	
FINISH —	
DO NOT SCALE DRAWING	
TITLE MDE261 LINEAR SLIDE	
SIZE A4	DWG. NO. MDE261
SCALE2:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE262 Dual Axis XY Very-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Small dovetail slide series



A very small, dual axis micropositioner with simple adjustment for XY linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with knurled knob and 2.5 mm hex socket
Ball hex driver supplied	
Top plate	26 x 20 mm
Thickness	16 mm
Mounting holes	Four M2 x 2 mm deep on both sides

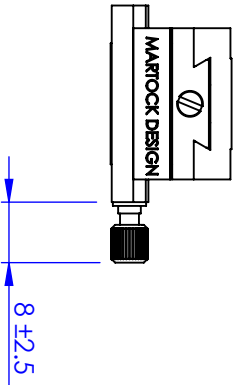
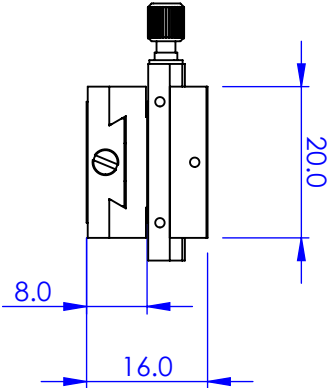
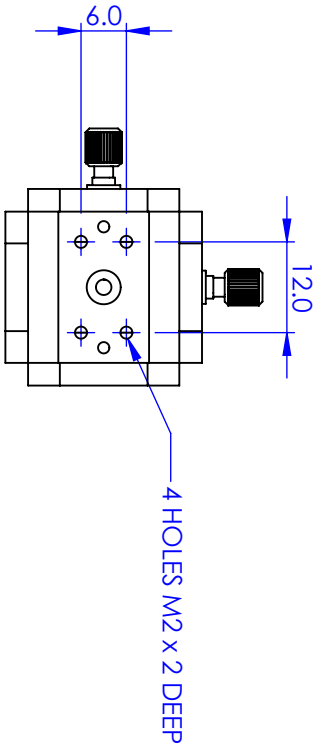
Variants

XZ and YZ versions
Lockable travel
Vacuum version

Notes

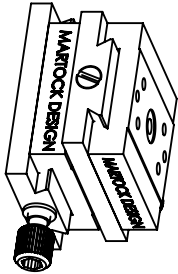
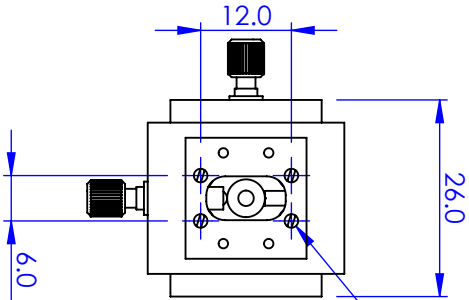
Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



EACH AXIS HAS ±2.5mm OF TRAVEL

4 HOLES M2 x 2 DEEP



GENERAL VIEW
SCALE: 1:1

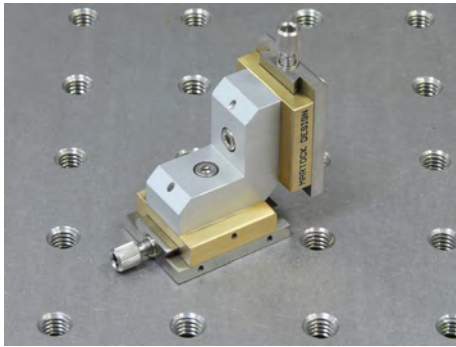
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MATERIAL STAINLESS STEEL, ALUM. ALLOY			FINISH ---		
DO NOT SCALE DRAWING			SIZE A4		
			DWG. NO. MDE262		
			SCALE: 1:1		
			THIRD ANGLE PROJECTION		
			SHEET 1 OF 1		

Eliot Scientific

2 AXIS DOVETAIL SLIDE

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE261-XZ Dual Axis XZ Very-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Small dovetail slide series

ELLIOT MARTOCK

A very small, dual axis micropositioner with simple adjustment for XZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with knurled knob and 2.5 mm hex socket
Ball hex driver supplied	
Top plate	26 x 20 mm
Mounting holes	Four M2 x 2 mm deep on both sides

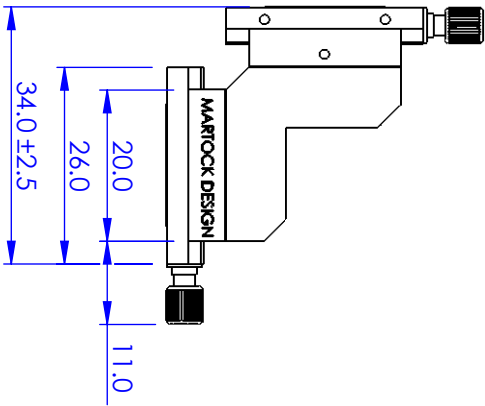
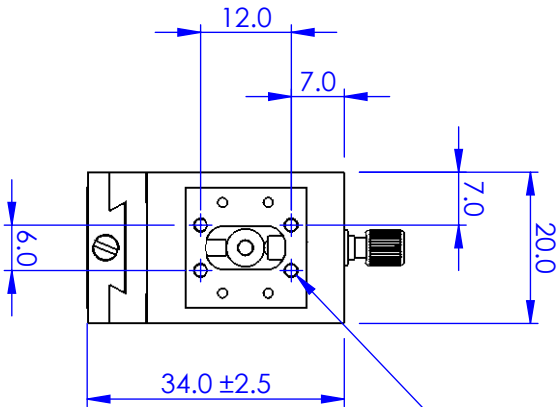
Variants

XY and XZ versions
Lockable travel
Vacuum version

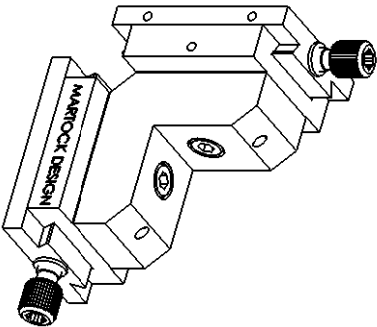
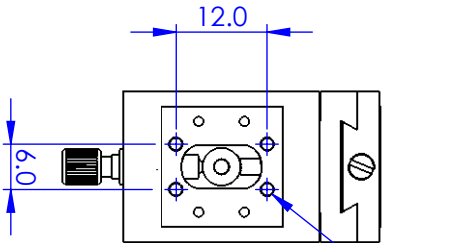
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

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EACH AXIS HAS ±2.5mm OF TRAVEL



GENERAL VIEW
SCALE: 1:1

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MATERIAL STAINLESS STEEL, ALUM. ALLOY		FINISH ---	
DO NOT SCALE DRAWING		TITLE XZ DOVETAIL SLIDE	
SIZE A4		DWG. NO. MDE261-XZ	
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE261-YZ Dual Axis YZ Very-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Small dovetail slide series



A very small, dual axis micropositioner with simple adjustment for YZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with knurled knob and 2.5 mm hex socket
Ball hex driver supplied	
Top plate	26 x 20 mm
Mounting holes	Four M2 x 2 mm deep on both sides

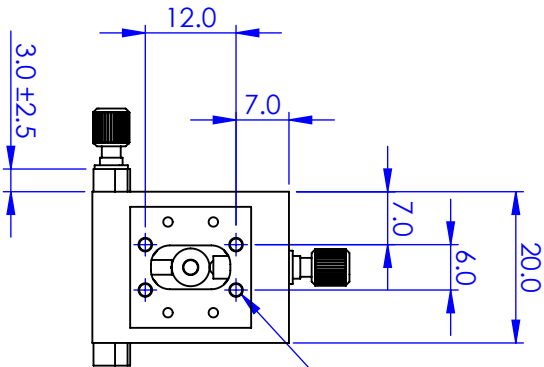
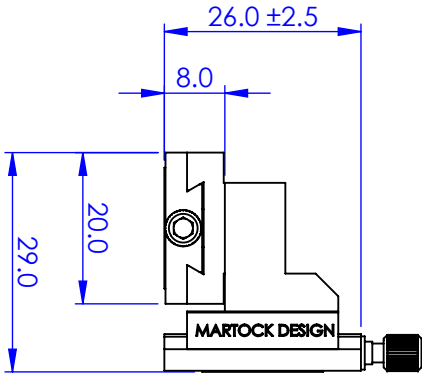
Variants

XY and XZ versions
Lockable travel
Vacuum version

Notes

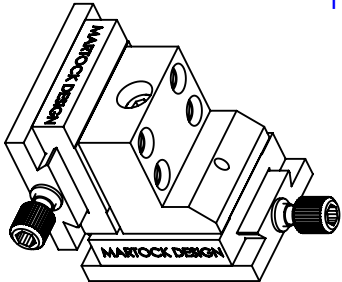
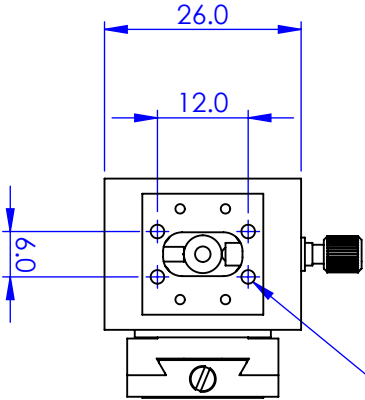
Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			




EACH AXIS HAS ±2.5mm OF TRAVEL

4 HOLES TAPPED M2 X 2 DEEP



GENERAL VIEW
SCALE 1:1

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AUTHOR		NAME		DATE		FINISH	
CHECKED		GW		12/05/2010		---	
DO NOT SCALE DRAWING				TITLE			
SCALE: 1:1				THIRD ANGLE PROJECTION			
SHEET 1 OF 1				Y-Z SLIDE ASSEMBLY			
SIZE				DWG. NO.			
A4				MD261-YZ			
MATERIAL				STAINLESS STEEL, ALUM. ALLOY			



Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE263 Three Axis XYZ Very-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion
- Based on the Small dovetail slide series

A very small, three-axis XYZ micropositioner with simple adjustment for XYZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch with knurled knob and 2.5 mm hex socket
Ball hex driver supplied	
Top plate	26 x 20 mm
Mounting holes	Four M2 x 2 mm deep on both sides

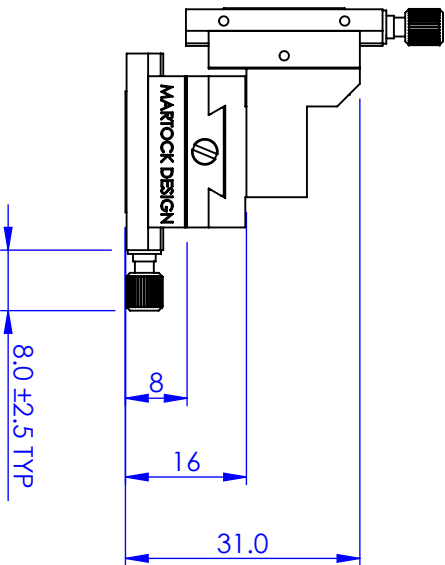
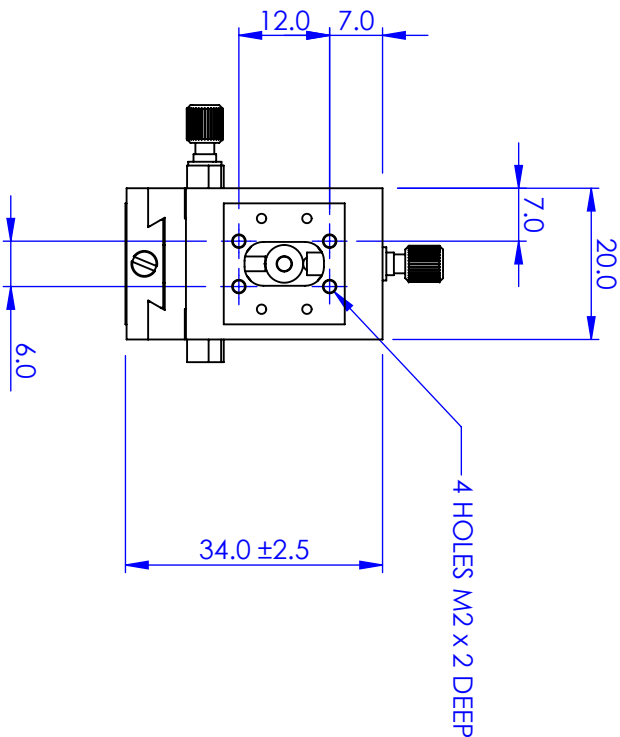
Options

Post mounting using MDE857 (and MDE858 if required)	Table-mounting option: MDE293
Fibre holder available: MDE72	Vacuum version
Tilting option: MDE270 and MDE273	
Rotation option: MDE283	

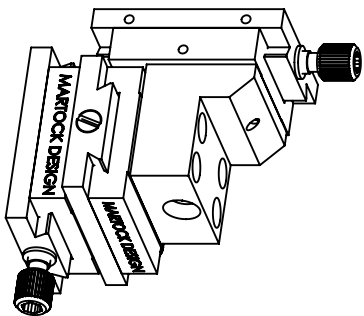
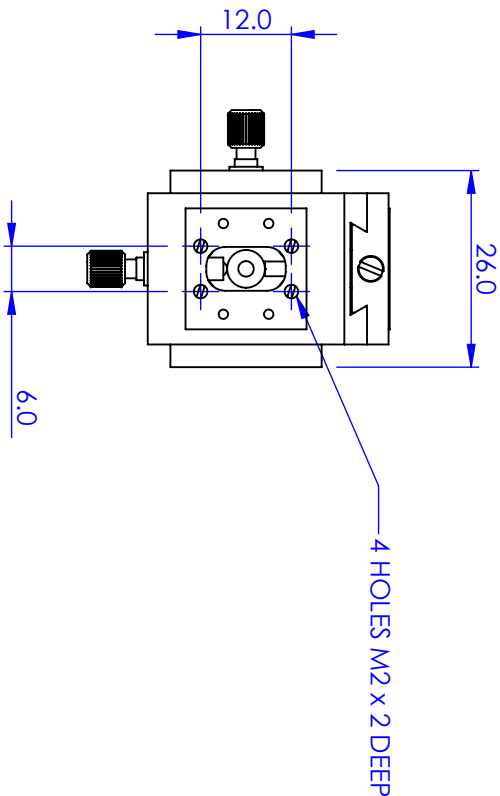
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



EACH AXIS HAS ±2.5mm OF TRAVEL



GENERAL VIEW
SCALE: 1:1

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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

Eliot Scientific		TITLE	
XYZ DOVETAIL SLIDE		MDE263	
A4		DWG. NO.	
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION	
SHEET 1 OF 1		SHEET 1 OF 1	

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE261M Single Axis Very-Small Micropositioner with Micrometer



- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjuster
- Based on the Small dovetail slide series



A very small, single axis micropositioner with micrometer adjustment for precision linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjuster	Micrometer reading to 0.01 mm
Top plate	26 x 20 mm
Thickness	8 mm
Mounting holes	Four M2 x 2 mm deep on both sides

Options

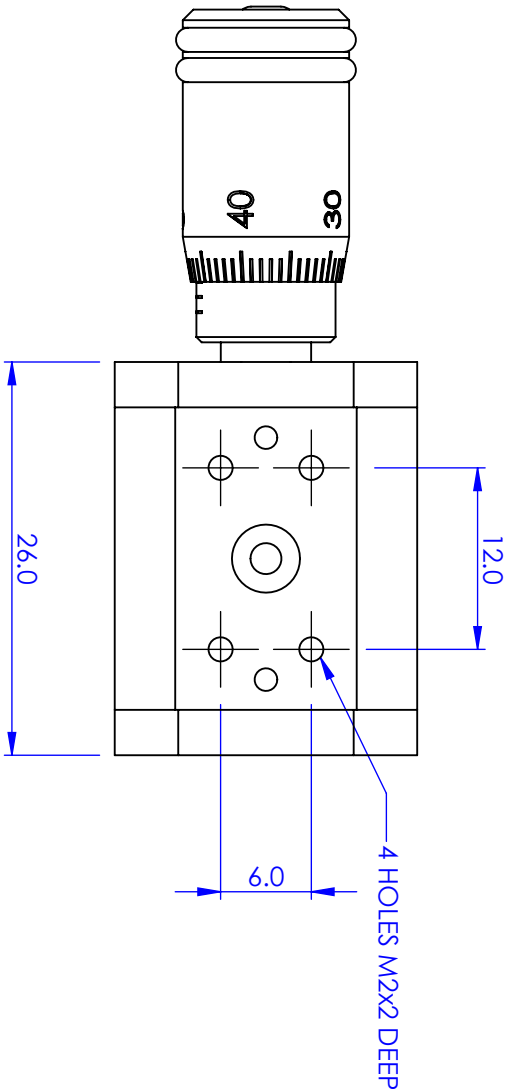
Post mounting using MDE857 (and MDE858 if required)
 Fibre holder available: MDE72
 Tilting option: MDE270 and MDE273
 Rotation option: MDE283

Table-mounting option: MDE293
 Vacuum version

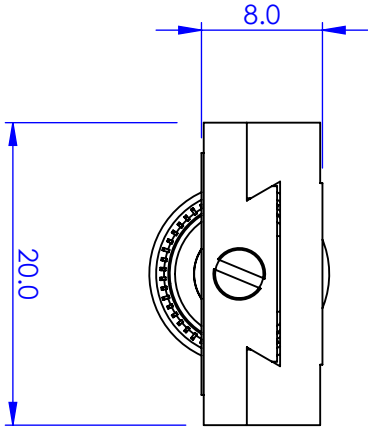
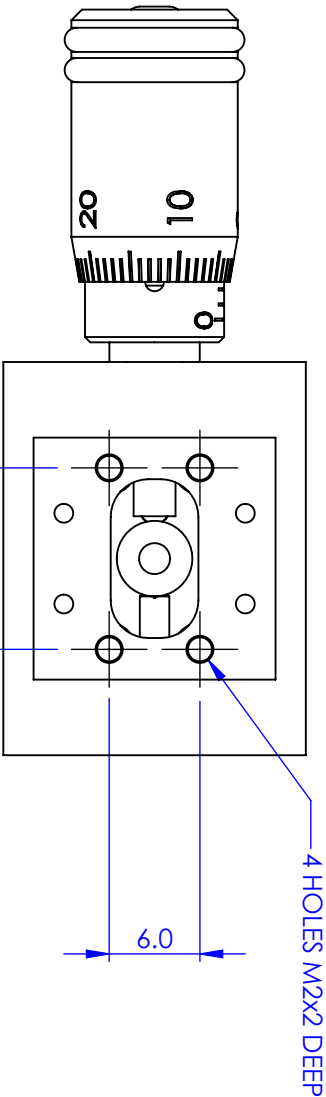
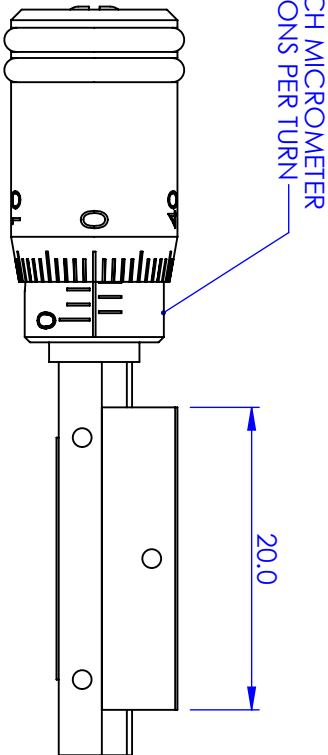
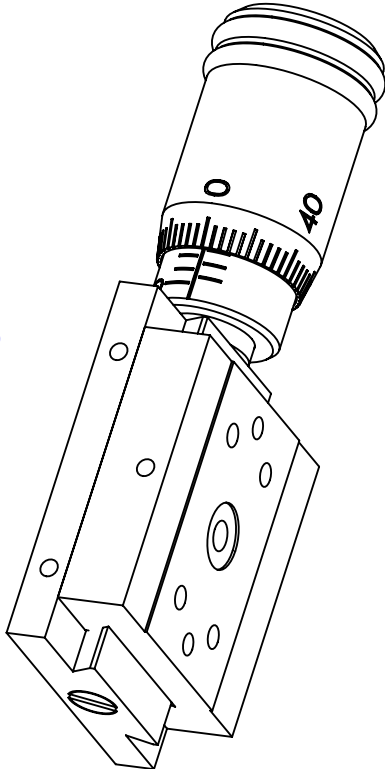
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 2:1



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AUTHOR		NAME		DATE		MATERIAL	
CHECKED		GW		26/05/2010		STAINLESS STEEL, ALUM. ALLOY	
FINISH		---		---		TITLE	
DO NOT SCALE DRAWING		SCALE: 2:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE262M Dual Axis XY Very-Small Micropositioner with Micrometers



- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Based on the Small dovetail slide series



A very small, dual axis micropositioner with micrometer adjustment for precision XY linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm
Top plate	26 x 20 mm
Thickness	16 mm
Mounting holes	Four M2 x 2 mm deep on both sides

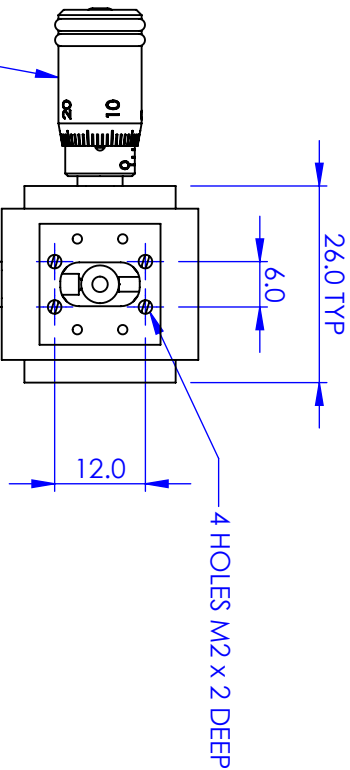
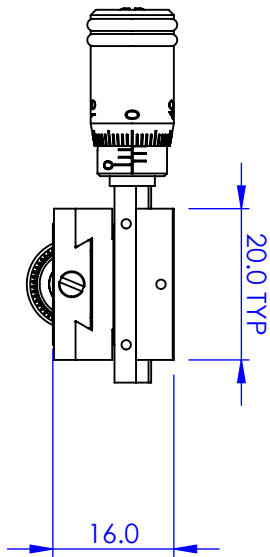
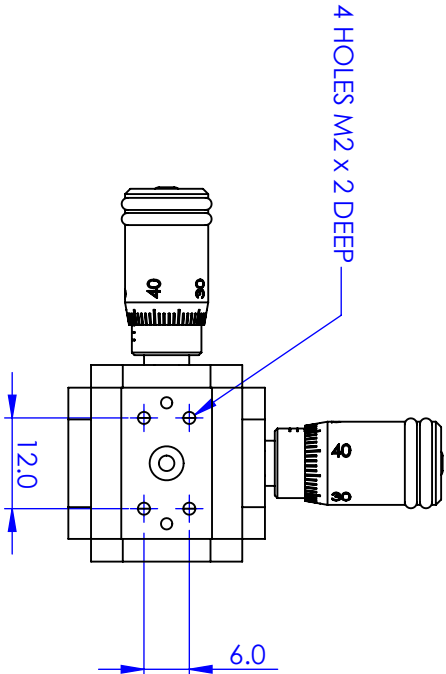
Variants

XZ and YZ versions
Lockable travel
Vacuum version

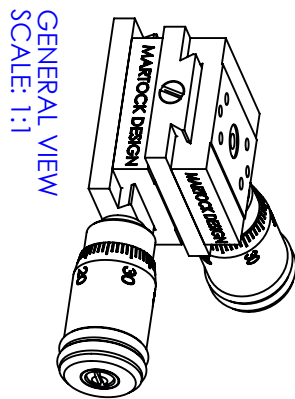
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

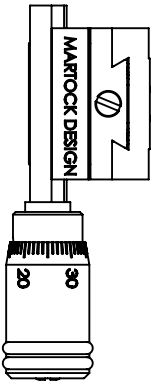
REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



0.5mm PITCH MICROMETERS
50 DIVISIONS PER TURN



GENERAL VIEW
SCALE: 1:1



EACH AXIS HAS ± 2.5 mm OF TRAVEL

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AND CORNERS TO BE
REMOVED

AUTHOR		NAME		DATE	
CHECKED		GW		14/02/2007	
MATERIAL		STAINLESS STEEL, ALUM. ALLOY			
FINISH		---			
DO NOT SCALE		DRAWING		TITLE	
SIZE		DWG. NO.		2 AXIS DOVETAIL SLIDE	
A4		MDE262M		Eliot Scientific	
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE261M-XZ Dual Axis XZ Very-Small Micropositioner with Micrometers



- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Based on the Small dovetail slide series

ELLIOT MARTOCK

A very small, dual axis micropositioner with micrometer adjustment for precision XZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm
Top plate	26 x 20 mm
Mounting holes	Four M2 x 2 mm deep on both sides

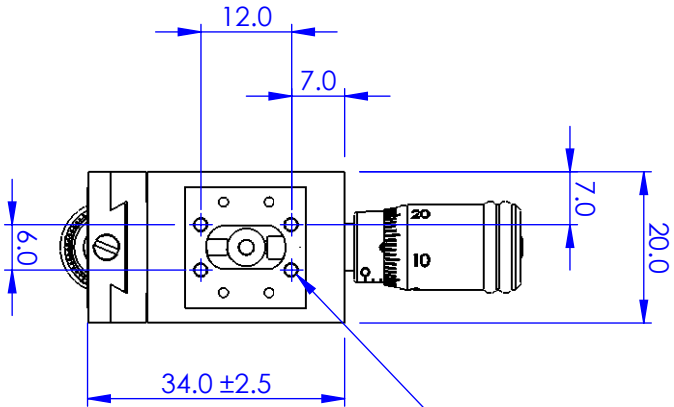
Variants

XY and XZ versions
Lockable travel
Vacuum version

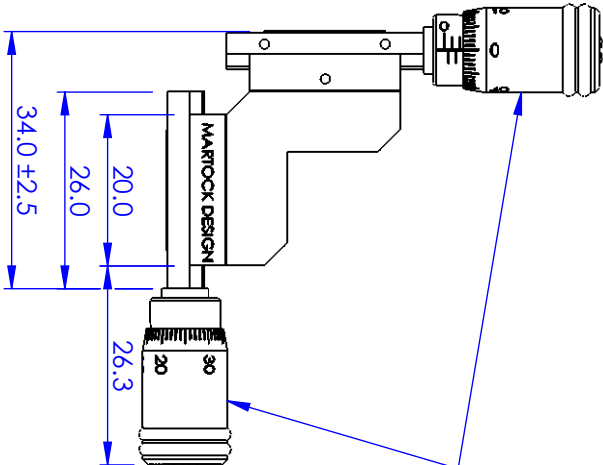
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			

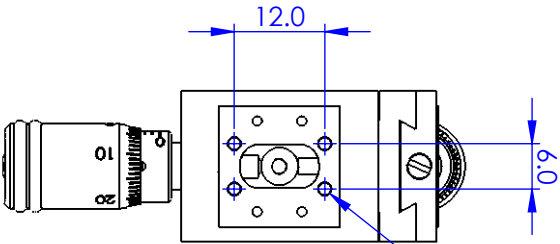


4 HOLES TAPPED M2 X 2 DEEP



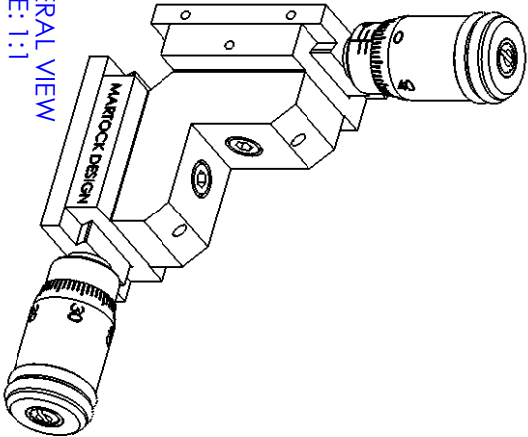
0.5mm PITCH MICROMETERS
50 DIVISIONS PER TURN

EACH AXIS HAS ±2.5mm OF TRAVEL



4 HOLES TAPPED M2 X 2 DEEP

GENERAL VIEW
SCALE: 1:1



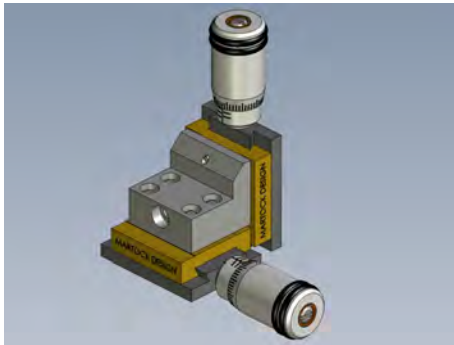
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME		DATE	
CHECKED		GW		11/05/2010	
MATERIAL		FINISH		TITLE	
STAINLESS STEEL, ALUM. ALLOY		---		XZ DOVETAIL SLIDE	
DO NOT SCALE DRAWING		SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1		DWG. NO.		MDE261M-XZ	

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE261M-YZ Dual Axis YZ Very-Small Micropositioner with Micrometers



- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Based on the Small dovetail slide series



A very small, dual axis micropositioner with micrometer adjustment for precision YZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm
Top plate	26 x 20 mm
Mounting holes	Four M2 x 2 mm deep on both sides

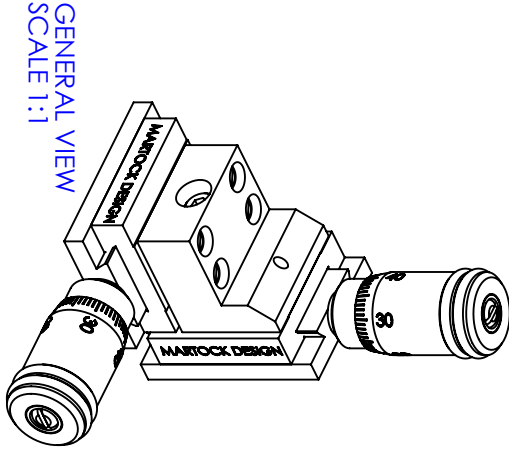
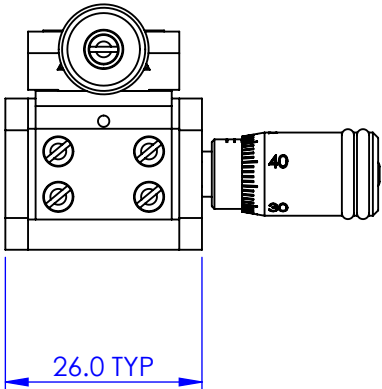
Variants

XY and XZ versions
Lockable travel
Vacuum version

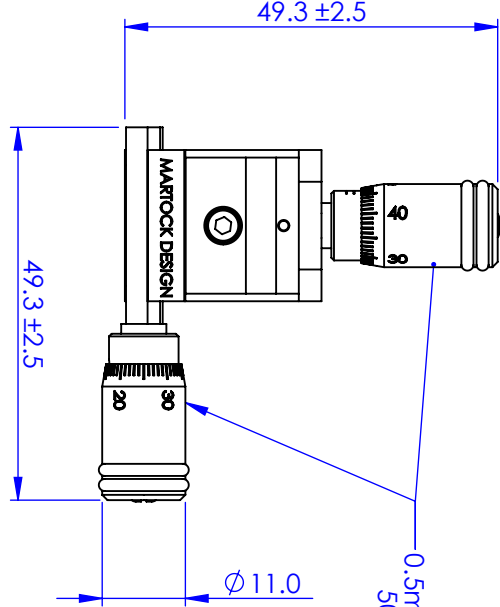
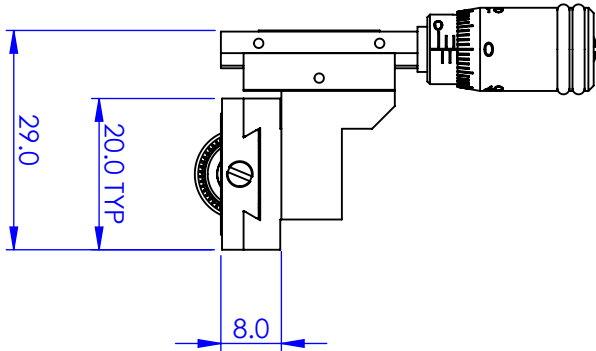
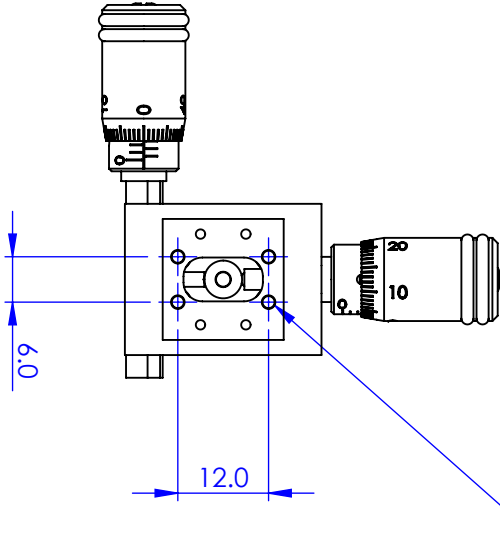
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



4 HOLES TAPPED M2 X 2 DEEP



0.5mm PITCH MICROMETERS
50 DIVISIONS PER TURN

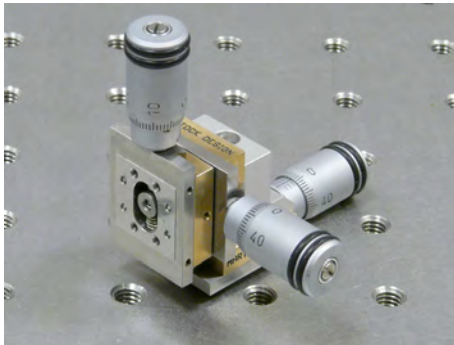
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR		GW	
CHECKED		-	
MATERIAL		FINISH	
STAINLESS STEEL,		---	
ALUM. ALLOY		---	
TITLE		SIZE	
Y-Z SLIDE ASSY WITH MICROMETERS		A4	
DWG. NO.		MDE261M-YZ	
DO NOT SCALE DRAWING		SCALE 1:1	
THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Manual Positioners: Very Small Linear Stages: 5 mm Travel

MDE263M Three Axis XYZ Very-Small Micropositioner with Micrometers



ELLIOT MARTOCK

- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Based on the Small dovetail slide series

A very small, three-axis XYZ micropositioner with micrometer adjustment for precision XYZ linear translation stage applications in physics experiments or optical systems.

Specifications

Travel	5 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm
Top plate	26 x 20 mm
Mounting holes	Four M2 x 2 mm deep on both sides

Options

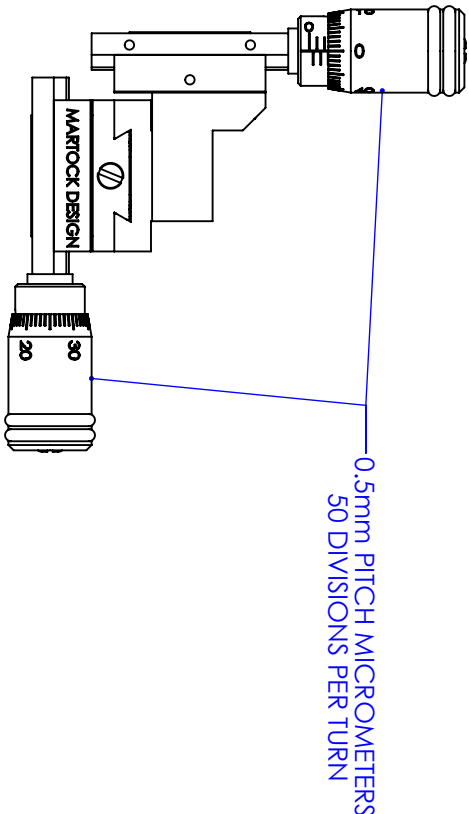
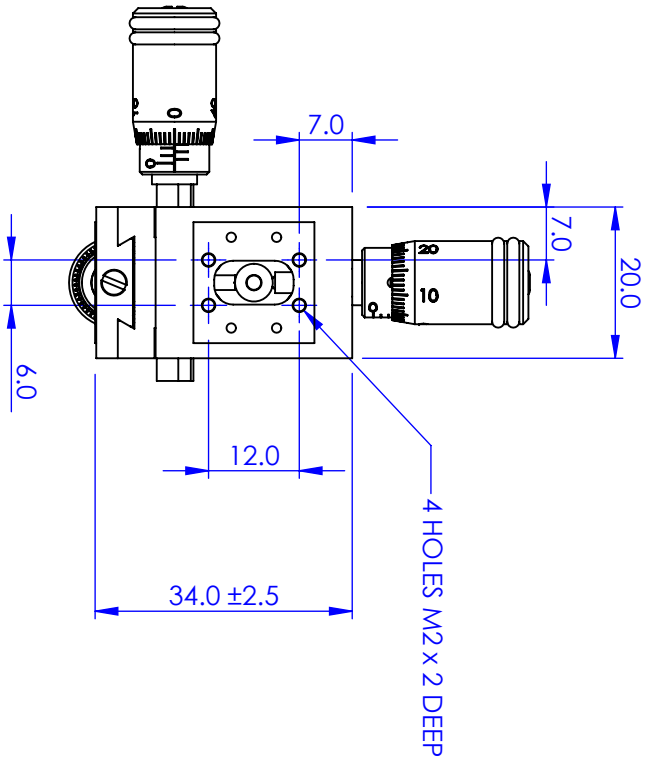
Post mounting using MDE857 (and MDE858 if required)
 Fibre holder available: MDE72
 Tilting option: MDE270 and MDE273
 Rotation option: MDE283

Table-mounting option: MDE293
 Vacuum version

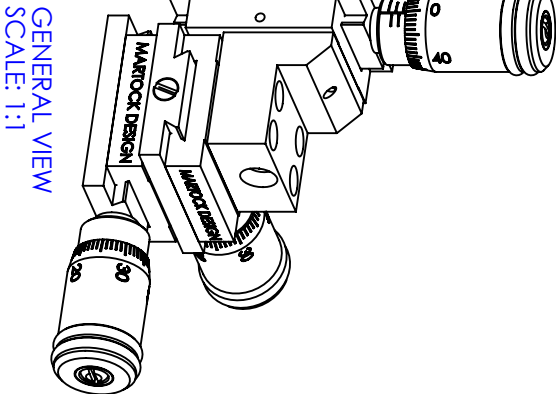
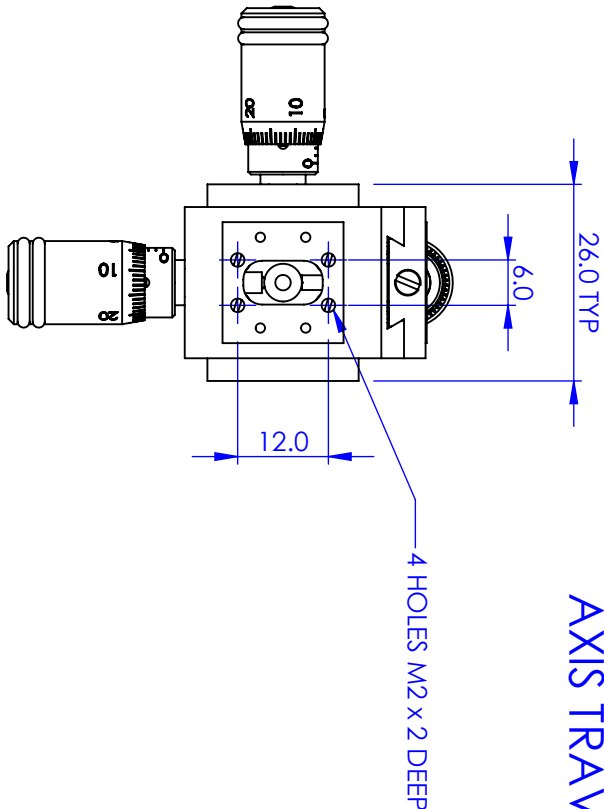
Notes

Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported on a comparatively large area.


REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



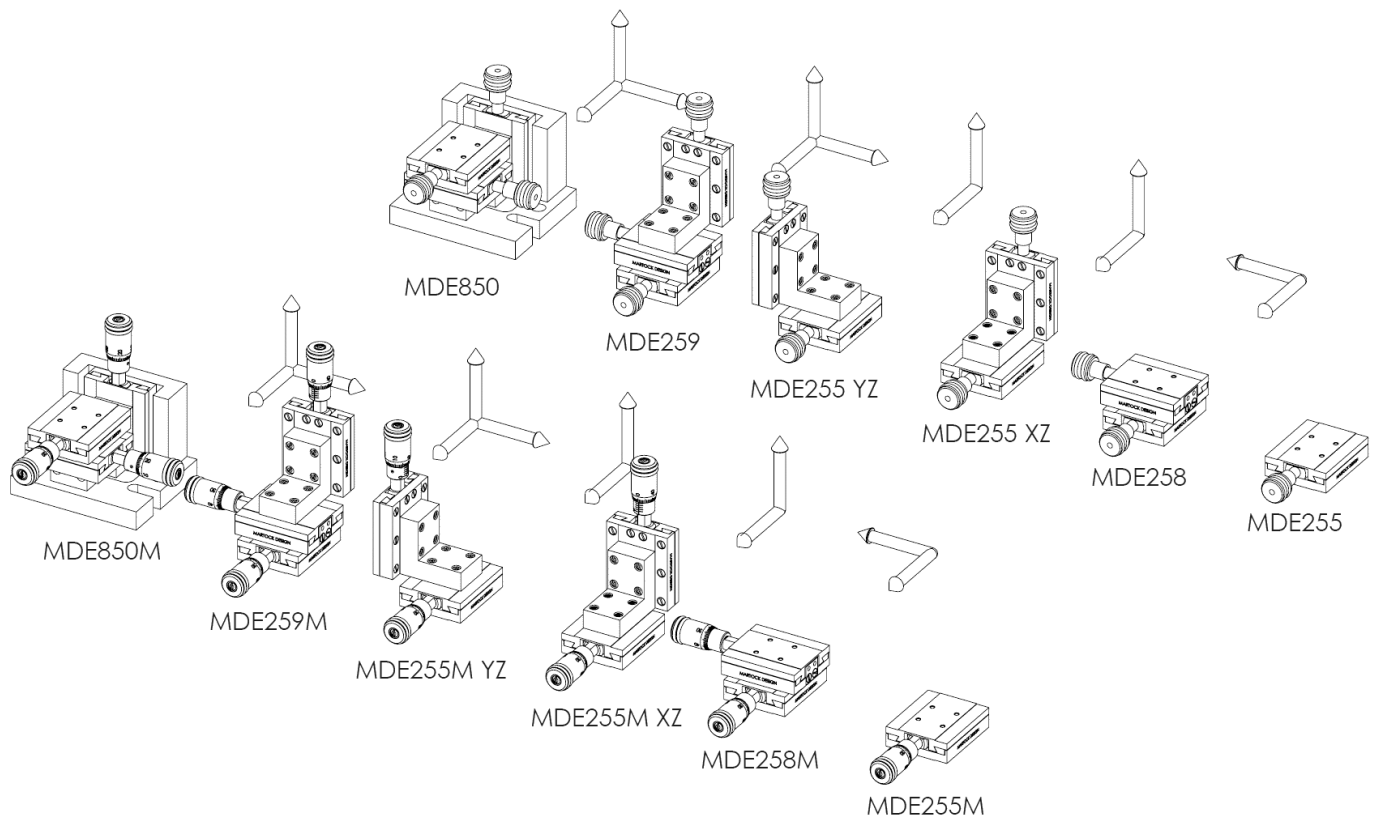
AXIS TRAVEL ±2.5mm



GENERAL VIEW
SCALE: 1:1

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AUTHOR		NAME		DATE		FINISH	
CHECKED		GW		25/01/2007		---	
DO NOT SCALE DRAWING				TITLE			
				MDE263 WITH MICROMETERS			
				A4			
				MDE263M			
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1			

Small Linear Stages



ELLIOT | MARTOCK

2019



Manual Positioners: Small Linear Stages: 10 mm Travel

MDE255 Single Axis Small Micropositioner



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Slide surfaces precision lapped in matched pairs



The MDE255 is a small, single axis micropositioner with simple adjustment for linear translation stage applications in physics experiments or optical systems.

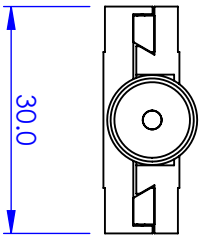
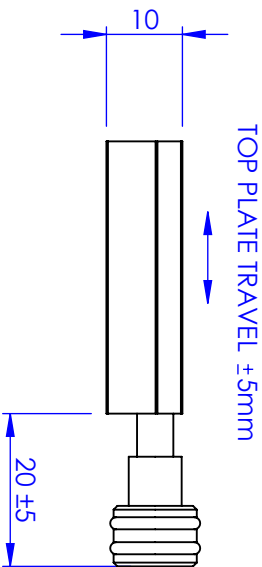
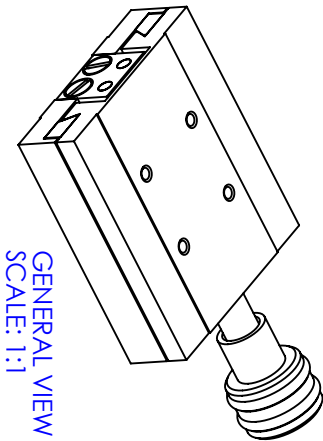
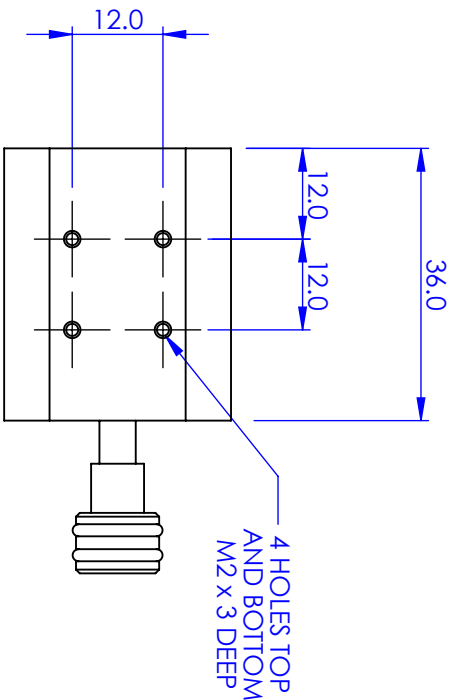
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjuster	0.25 pitch

Variants

Lockable travel
Vacuum version

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



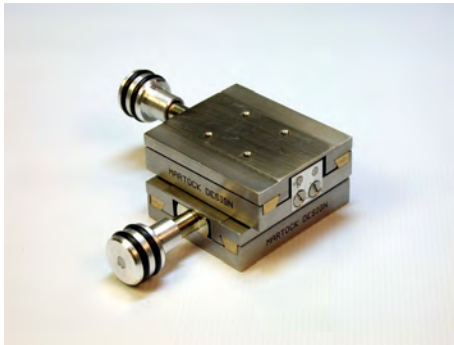
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MATERIAL STAINLESS STEEL, BRASS, ALUM, ALLOY		FINISH ---	
AUTHOR GW	NAME GW	DATE 27/05/2008	
CHECKED ---	---	---	
DO NOT SCALE DRAWING		SIZE A4	DWG. NO. MDE255
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1		SHEET 1 OF 1	

Eliot Scientific

MDE255 LINEAR SLIDE

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE258 Dual Axis XY Small Micropositioner



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Slide surfaces precision lapped in matched pairs



The MDE258 is a small, dual axis micropositioner with simple adjustment for XY linear translation stage applications in physics experiments or optical systems.

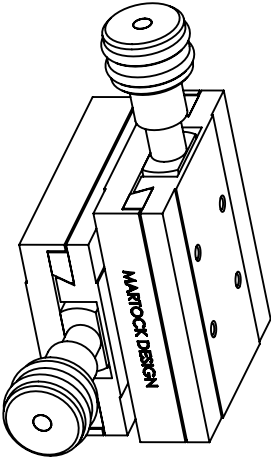
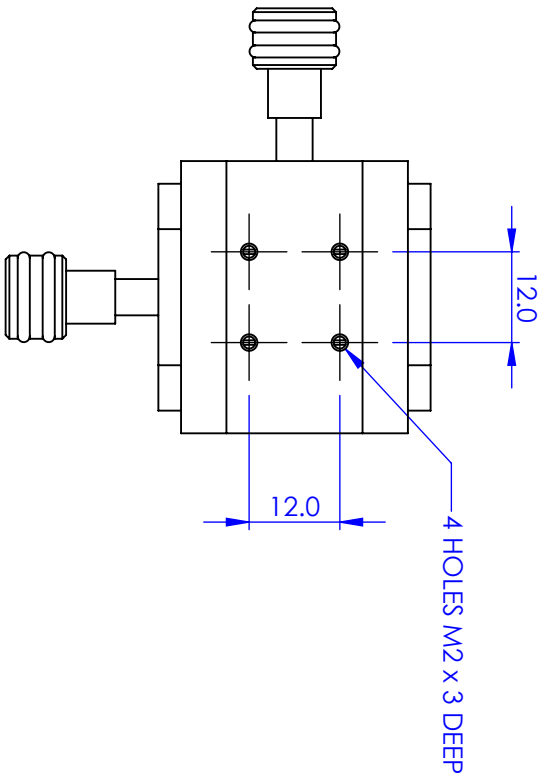
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch

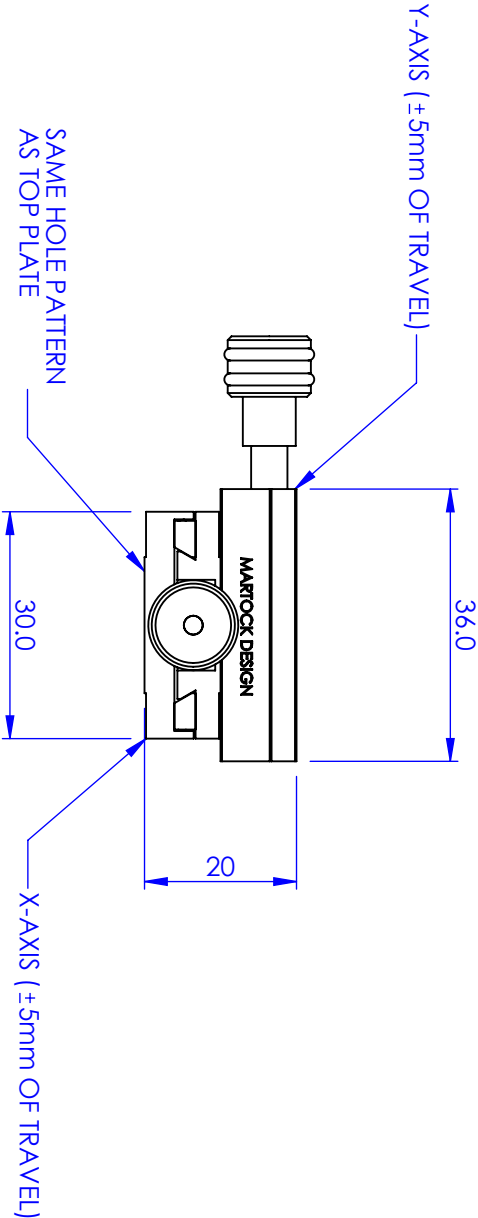
Variants

Lockable travel
Vacuum version

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:1



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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	11/05/2010	
CHECKED	-	-	
MATERIAL STAINLESS STEEL, BRASS, ALUM, ALLOY			
FINISH ---			
DO NOT SCALE DRAWING			
TITLE		SIZE	DWG. NO.
2 AXIS MICROPOSITIONER		A4	MDE258
SCALE: 1:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE255-XZ Dual Axis XZ Small Micropositioner



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Slide surfaces precision lapped in matched pairs



The MDE255-XZ is a small, dual axis micropositioner with simple adjustment for XZ linear translation stage applications in physics experiments or optical systems.

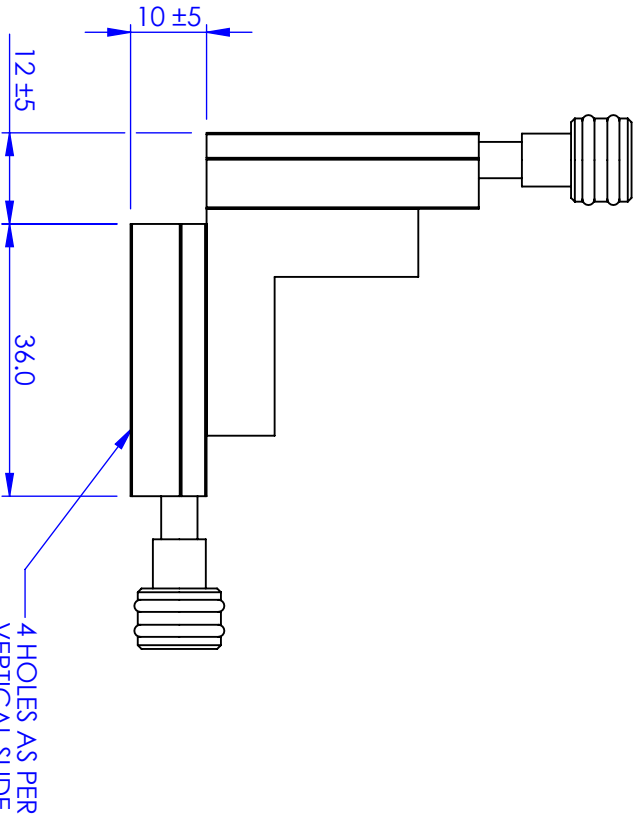
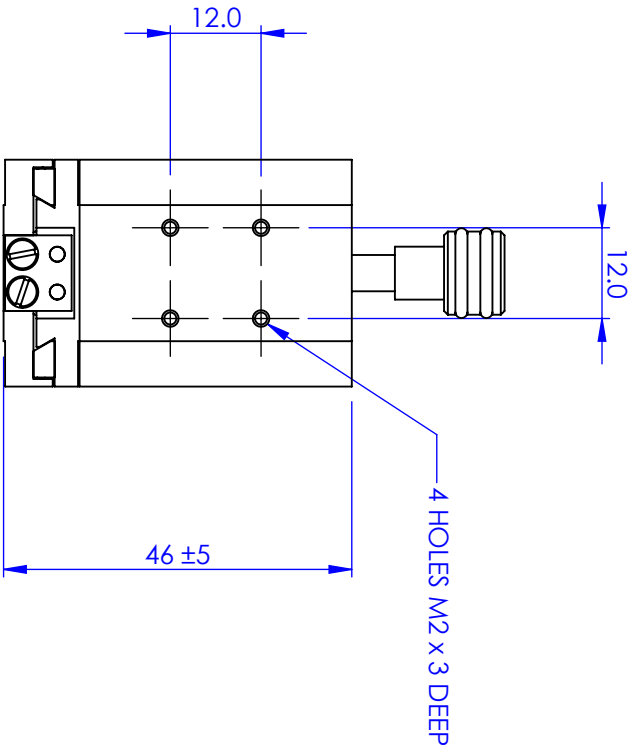
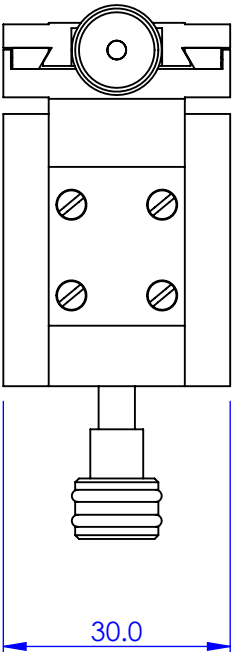
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch

Variants

Lockable travel
Vacuum version

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



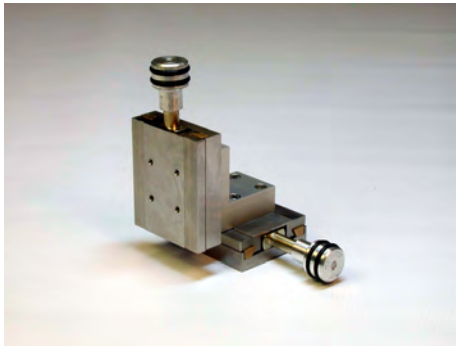
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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	11/05/2010	
CHECKED	-	-	
MATERIAL STAINLESS STEEL, BRASS, ALUM, ALLOY			
FINISH ---			
DO NOT SCALE DRAWING			
TITLE		SIZE	DWG. NO.
XZ DOVETAIL SLIDE		A4	MDE255 XZ
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE255-YZ Dual Axis YZ Small Micropositioner



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Slide surfaces precision lapped in matched pairs



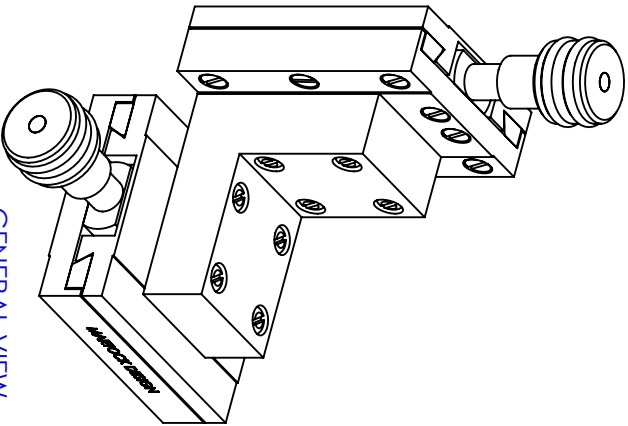
The MDE255-YZ is a small, dual axis micropositioner with simple adjustment for YZ linear translation stage applications in physics experiments or optical systems.

Specifications

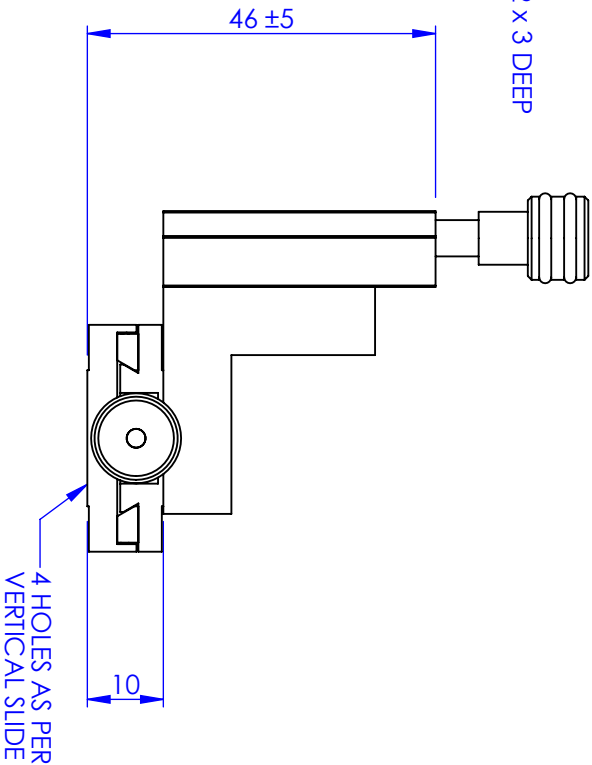
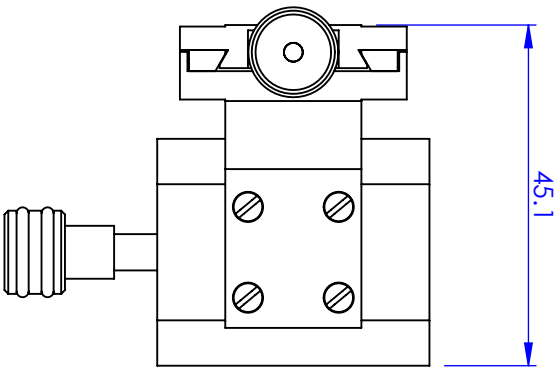
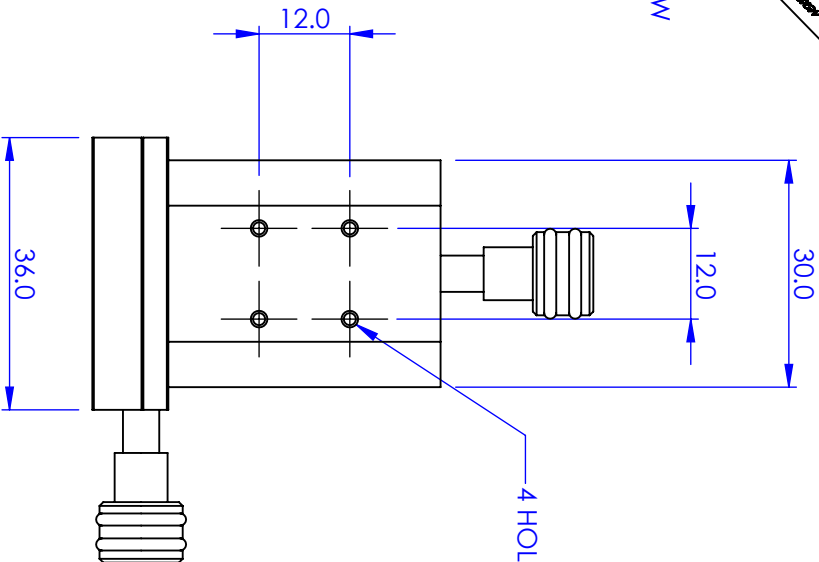
Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch

Variants

Lockable travel
Vacuum version



GENERAL VIEW
SCALE 1:1



REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

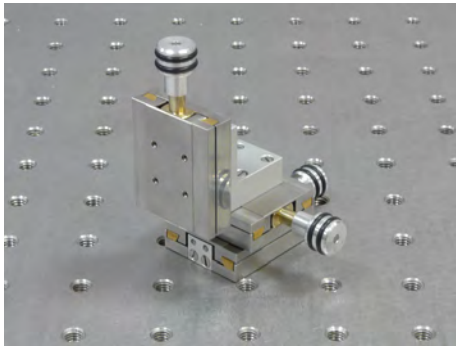
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DIMENSIONS ARE IN mm
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	11/05/2010
FINISH		---	---
MATERIAL		STAINLESS STEEL, BRASS, ALUM, ALLOY	
DO NOT SCALE DRAWING		TITLE	
SIZE		YZ DOVETAIL SLIDE	
A4		DWG. NO. MDE255 YZ	
SCALE 1:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE259 Three Axis XYZ Small Micropositioner



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Slide surfaces precision lapped in matched pairs



The MDE259 is a small, three-axis micropositioner with simple adjustment for XYZ linear translation stage applications in physics experiments or optical systems.

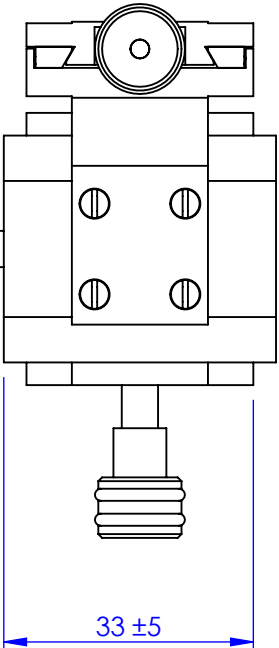
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch

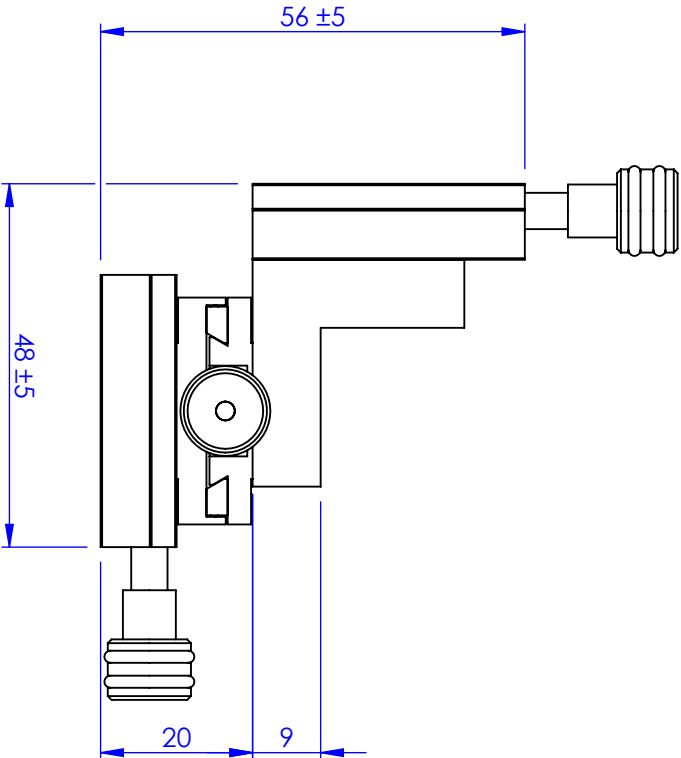
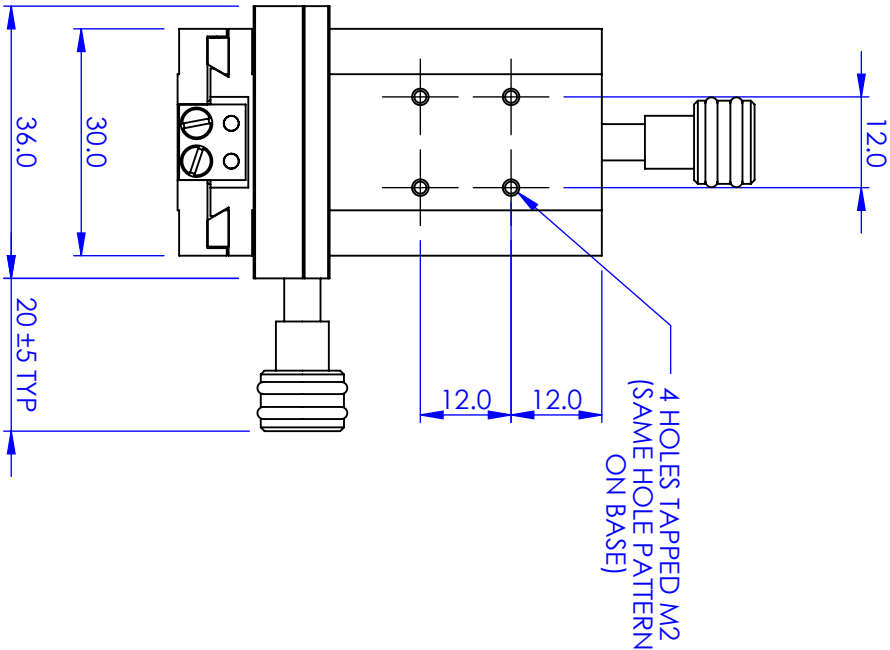
Variants

Lockable travel
Vacuum version

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



ALL THREE AXES ±5mm TRAVEL



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CHECKED	GW	11/05/2010

MATERIAL		FINISH	
STAINLESS STEEL, BRASS, ALUM, ALLOY		---	
DIMENSIONS ARE IN mm GENERAL TOLERANCES: ± 0.1 ANGULAR TOLERANCES: ± SURFACE FINISH: ALL BURRS, SHARP EDGES AND CORNERS TO BE REMOVED		DO NOT SCALE DRAWING	

Eliot Scientific

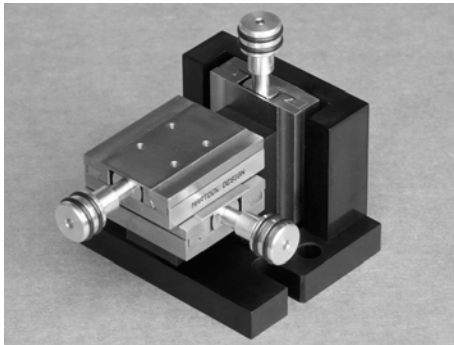
3-Axis Micropositioner

A4
DWG. NO. **MDE259**

SCALE: 1:1
THIRD ANGLE PROJECTION
SHEET 1 OF 1

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE850 Three Axis Horizontal Platform



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Adjustable horizontal platform
- Very smooth backlash-free motion



The MDE850 is a variation on the MDE259, and is based on the MDE255 dovetail slides.

A micrometer equipped variant is available as the MDE850M.

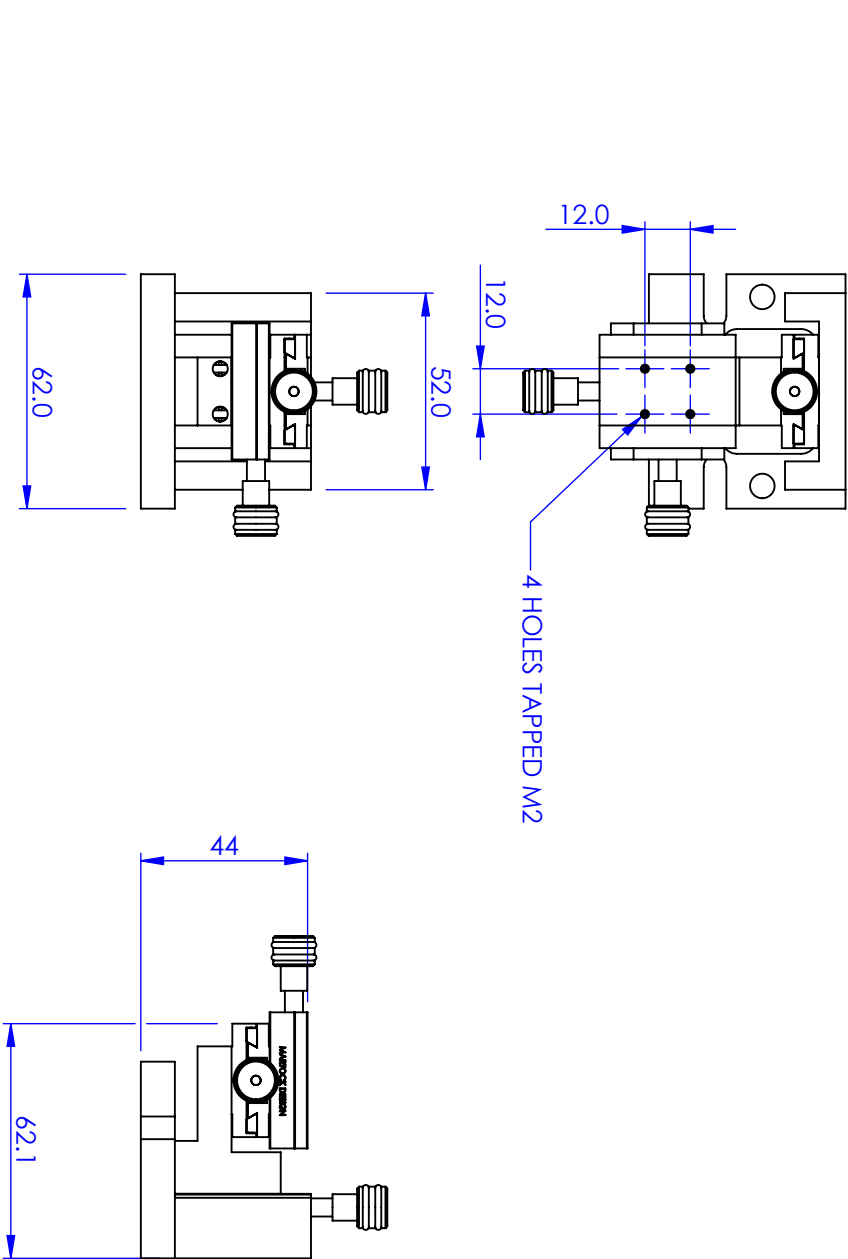
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	0.25 pitch

Variants

Lockable travel
Vacuum version

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



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MATERIAL STAINLESS STEEL, BRASS, ALUM, ALLOY		TITLE XYZ MICROPOSITIONER	
FINISH ---		SIZE A4	
DO NOT SCALE DRAWING		DWG. NO. MDE850	
AUTHOR CHECKED		NAME GW	
DATE 26/05/2010		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE255M Single Axis Small Micropositioner with Micrometer



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjuster
- Slide surfaces precision lapped in matched pairs



The MDE255M is a small, single axis micropositioner with micrometer adjustment for precision linear translation stage applications in physics experiments or optical systems

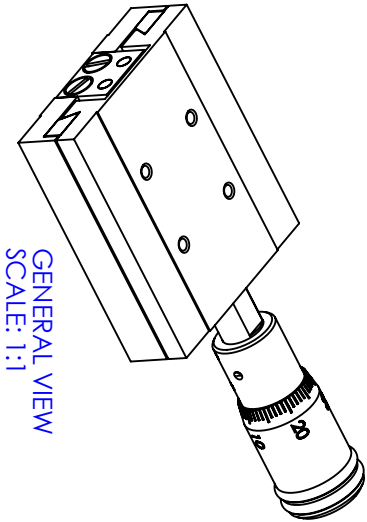
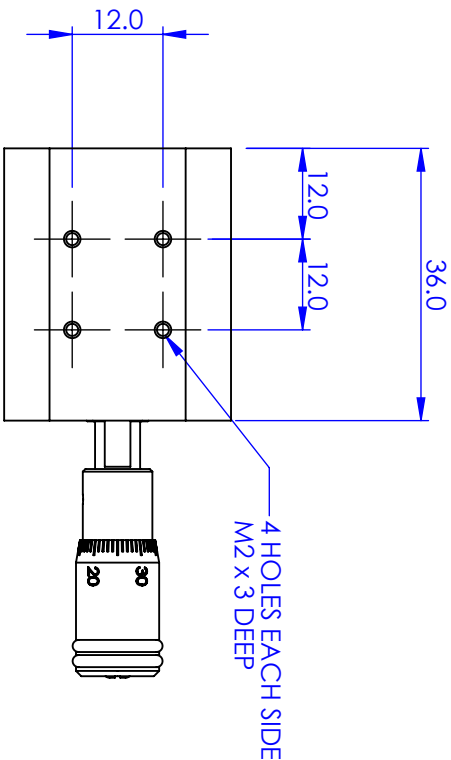
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjuster	Micrometer reading to 0.01 mm

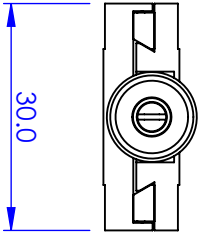
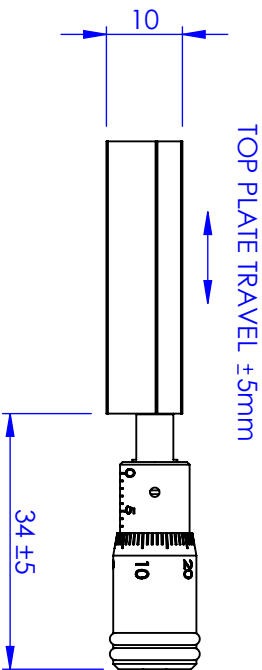
Variants

Lockable travel
Vacuum version

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW
SCALE: 1:1



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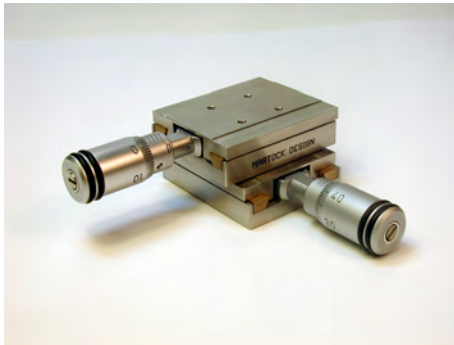
DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	26/06/2008	
CHECKED	-	-	
MATERIAL			
STAINLESS STEEL, BRASS, ALUM, ALLOY			
FINISH			

DO NOT SCALE DRAWING		TITLE	
		SLIDE WITH MICROMETER	
SIZE		DWG. NO.	
A4		MDE255M	
SCALE: 1:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE258M Dual Axis XY Small Micropositioner with Micrometers



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Slide surfaces precision lapped in matched pairs



The MDE258M is a small, dual axis micropositioner with micrometer adjustment for precision XY linear translation stage applications in physics experiments or optical systems

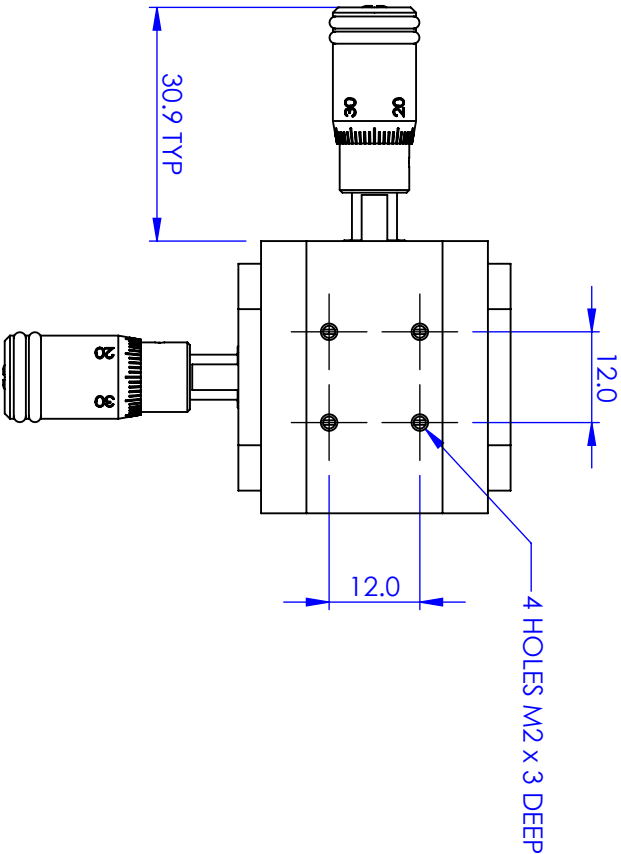
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm

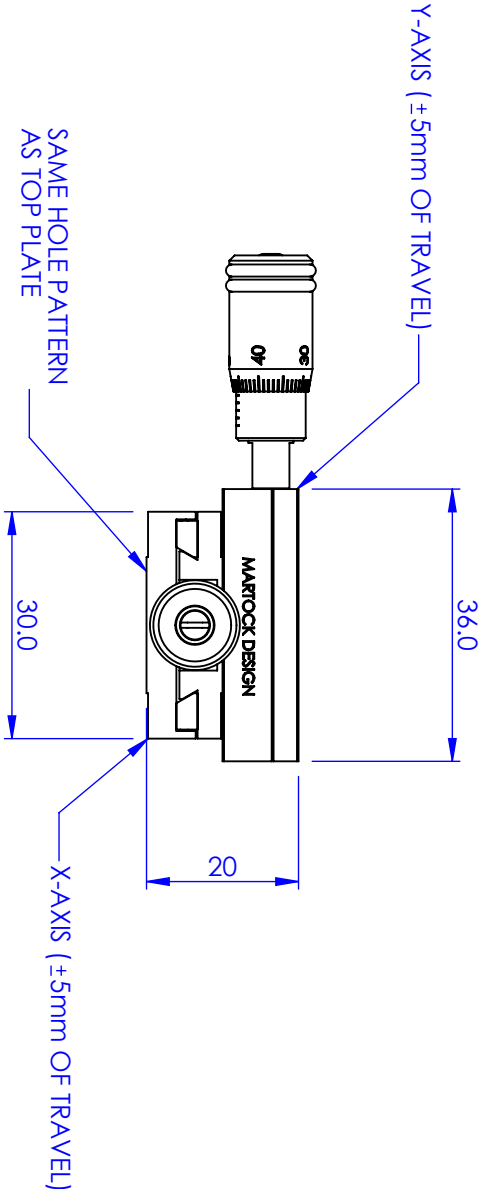
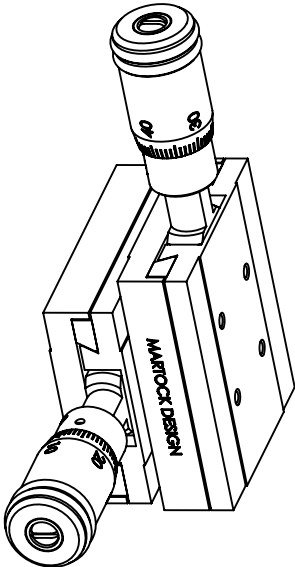
Variants

Lockable travel
Vacuum version

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW
SCALE: 1:1



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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	25/05/2010	
CHECKED	-	-	
MATERIAL STAINLESS STEEL, BRASS, ALUM, ALLOY			
FINISH ---			
TITLE		SIZE	DWG. NO.
2 AXIS MICROPOSITIONER		A4	MDE258M
DO NOT SCALE DRAWING		SCALE: 1:1	THIRD ANGLE PROJECTION
			SHEET 1 OF 1

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE255M-XZ Dual Axis XZ Small Micropositioner with Micrometers



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Slide surfaces precision lapped in matched pairs



The MDE255M-XZ is a small, dual axis micropositioner with micrometer adjustment for precision XZ linear translation stage applications in physics experiments or optical systems.

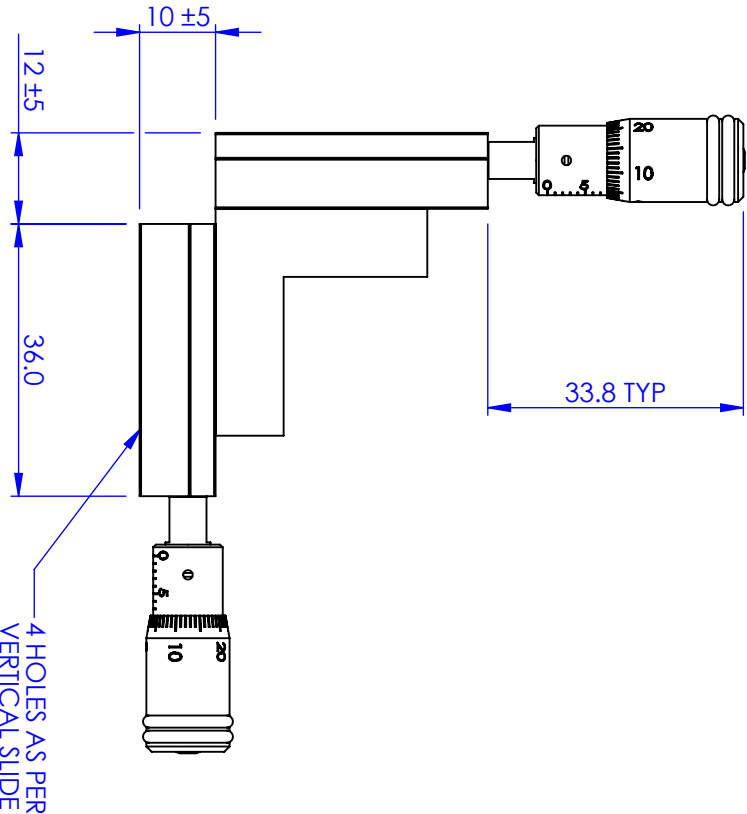
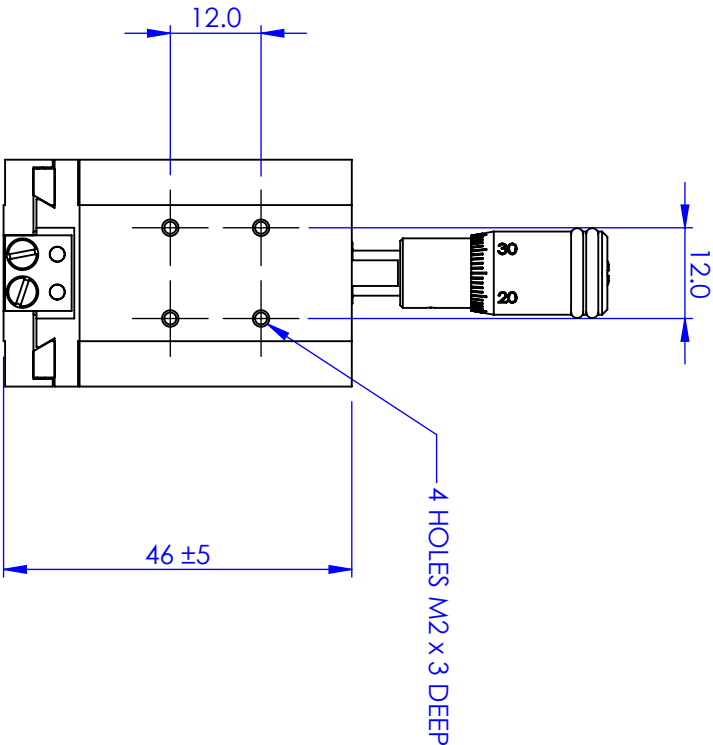
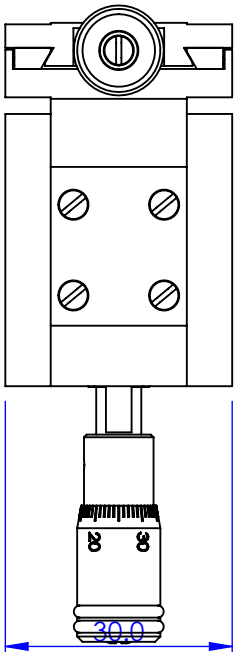
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm

Variants

Lockable travel
Vacuum version

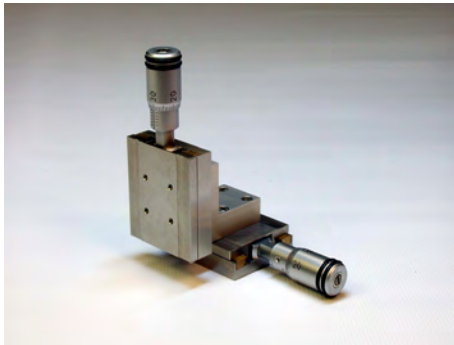
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REV.	DESCRIPTION			



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AUTHOR		NAME		DATE		TITLE	
CHECKED		GW		11/05/2010		XZ DOVETAIL SLIDE	
FINISH		---		---		MATERIAL STAINLESS STEEL, BRASS, ALUM., ALLOY	
DO NOT SCALE		DRAWING		SCALE: 1:1		SIZE A4	
						DWG. NO. MDE235M-XZ	
						THIRD ANGLE PROJECTION	
						SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE255M-YZ Dual Axis YZ Small Micropositioner with Micrometers



- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Slide surfaces precision lapped in matched pairs



The MDE255M-YZ is a small, dual axis micropositioner with micrometer adjustment for precision YZ linear translation stage applications in physics experiments or optical systems.

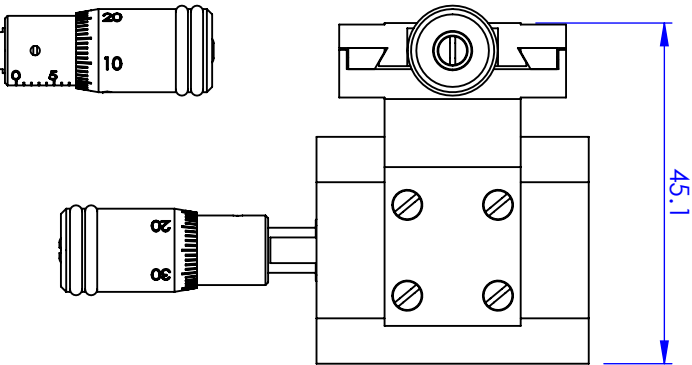
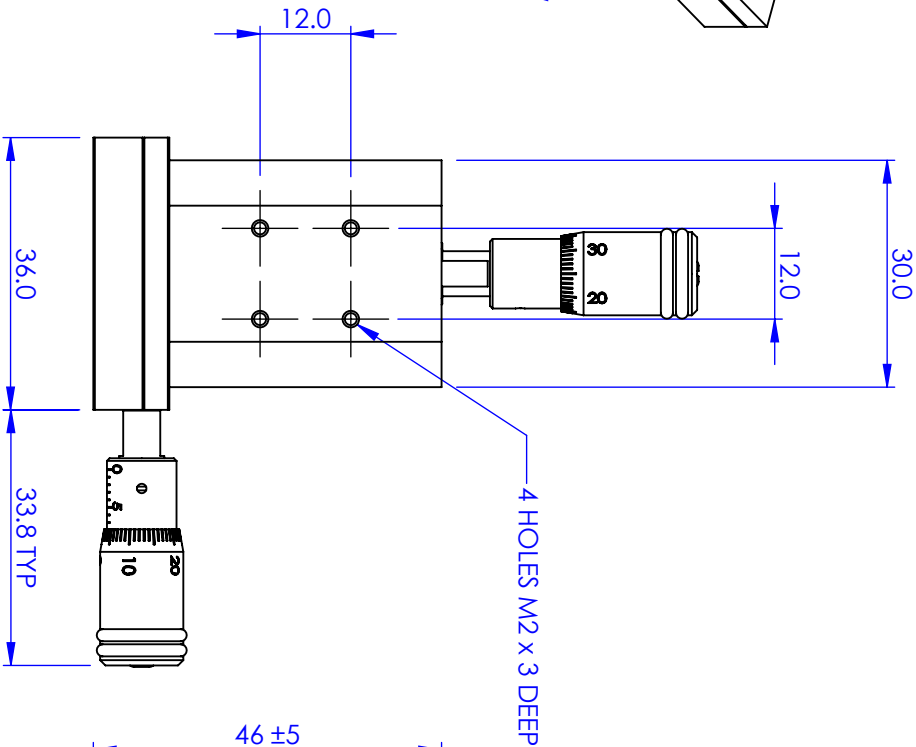
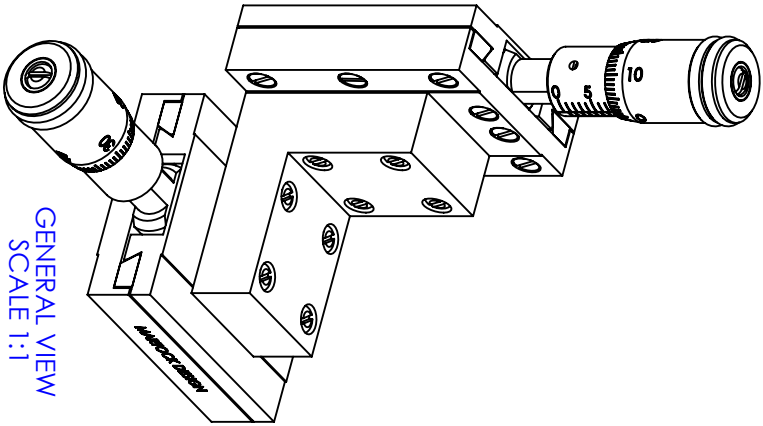
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm

Variants

Lockable travel
Vacuum version

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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
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AUTHOR		NAME		DATE	
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FINISH		MATERIAL		TITLE	
DO NOT SCALE DRAWING		STAINLESS STEEL, BRASS, ALUM, ALLOY		YZ DOVETAIL SLIDE	
SCALE 1:1		SIZE A4		DWG. NO. MDE255M-YZ	
THIRD ANGLE PROJECTION		SHEET 1 OF 1		Eliot Scientific	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE259M Three Axis XYZ Small Micropositioner with Micrometers



ELLIOT MARTOCK

- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Micrometer adjusters
- Slide surfaces precision lapped in matched pairs

The MDE259M small, three-axis micropositioner with micrometer adjustment for precision XYZ linear translation stage applications in physics experiments or optical systems

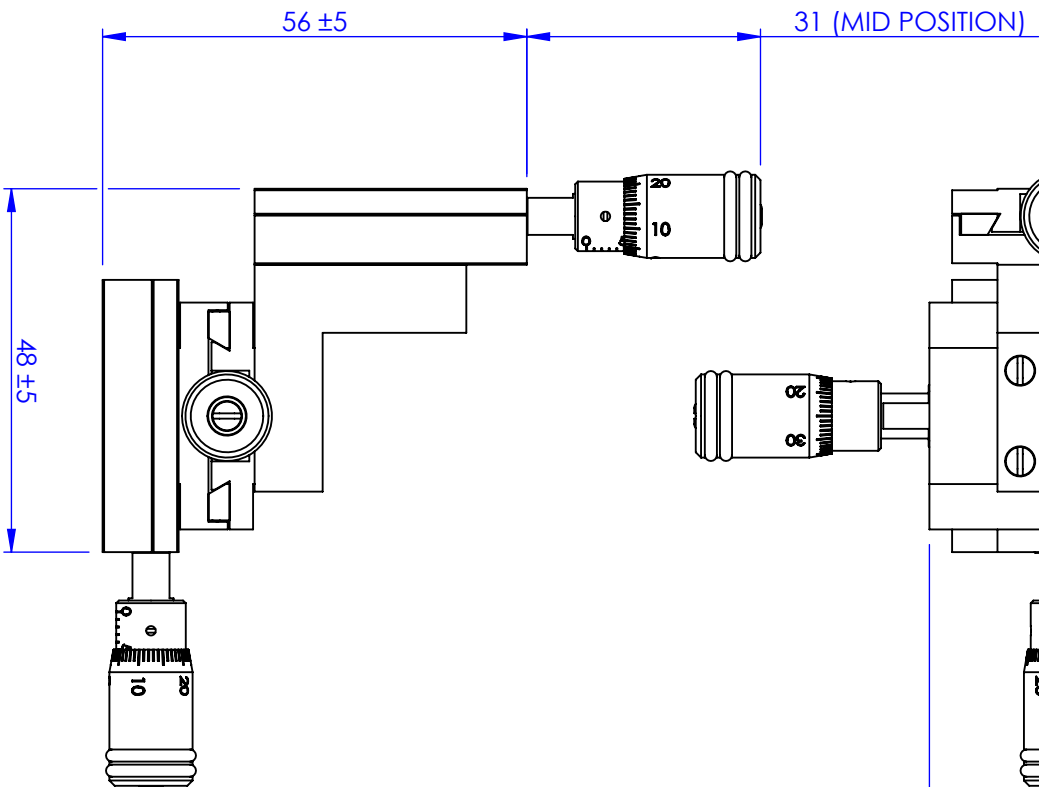
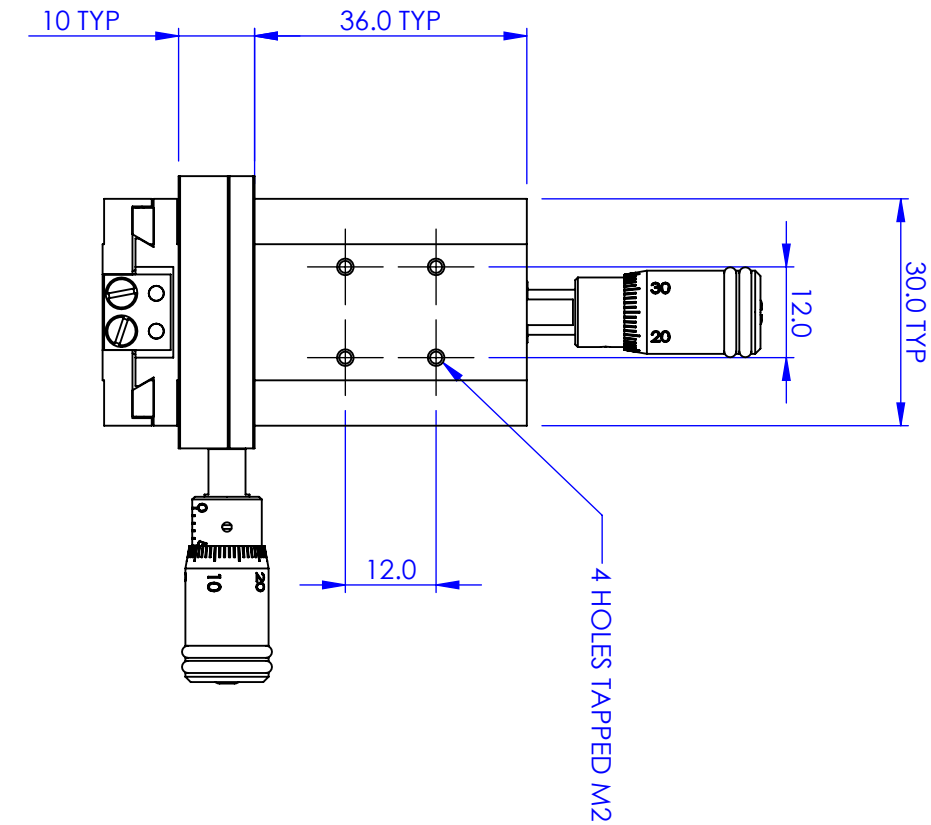
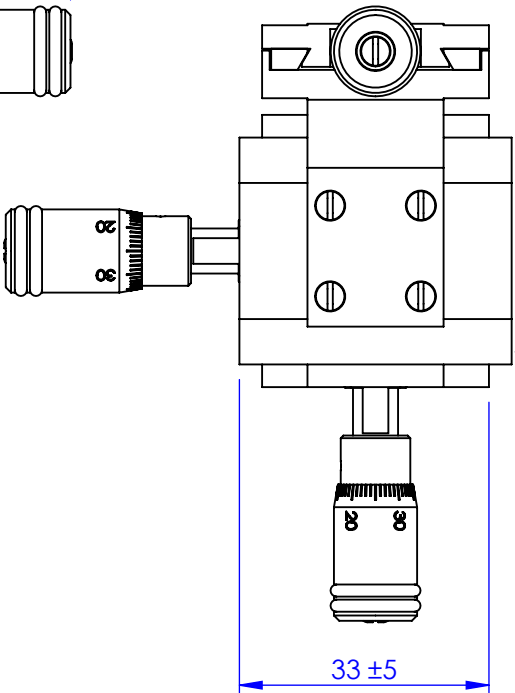
Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm

Variants

Lockable travel
Vacuum version

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
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AUTHOR		NAME		DATE	
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FINISH		MATERIAL		TITLE	
---		STAINLESS STEEL, BRASS, ALUM, ALLOY		3-Axis Micropositioner	
DO NOT SCALE DRAWING		SIZE A4		DWG. NO. MDE259M	
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: 10 mm Travel

MDE850M Three Axis Horizontal Platform with Micrometers



ELLIOT MARTOCK

- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Adjustable horizontal platform
- Micrometer adjuster
- Very smooth backlash-free motion

The MDE850M is a three-axis XYZ micropositioner with micrometer adjustment configured to provide a horizontal platform that can be moved in the XY plane plus vertically along the Z-axis. The MDE850M is a variation on the MDE259M, and is based on the MDE255M dovetail slides.

Specifications

Travel	10 mm
Sensitivity	< 0.5 μm
Adjusters	Micrometer reading to 0.01 mm

Variants

Lockable travel
Vacuum version



Manual Positioners: Small Linear Stages: Adaptors

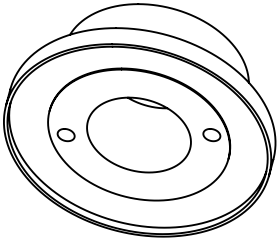
MDE252 Spigot for use with Centring Micropositioners



- Mounting spigot
- Compatible with Microbench from Spindler & Hoyer/Linos Photonics

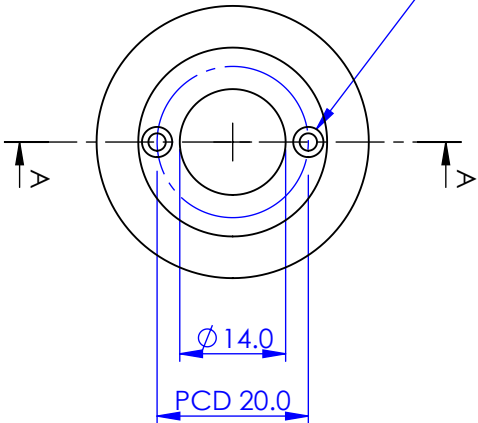
ELLIOT | MARTOCK

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

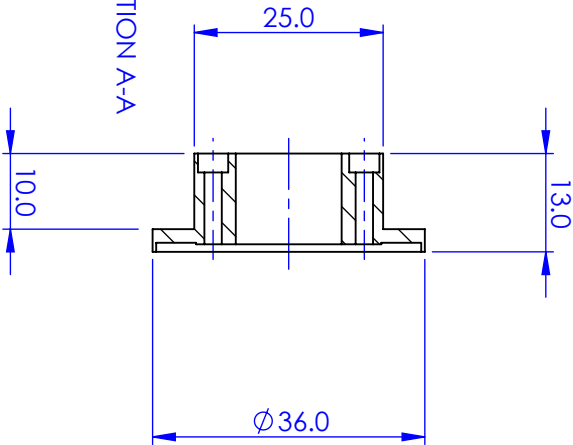


GENERAL VIEW
SCALE 1:1

2 HOLES COUNTERBORED
FOR M2




SECTION A-A



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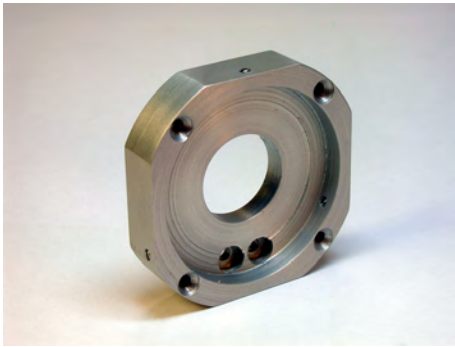
DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	24/03/2010
MATERIAL			
ALUMINIUM ALLOY			
FINISH			
ANODISED CLEAR			
DO NOT SCALE DRAWING			

			
TITLE			
SPIGOT ADAPTER			
SIZE	DWG. NO.		
A4	MDE252		
SCALE: 1:1	THIRD ANGLE PROJECTION		SHEET 1 OF 1

Manual Positioners: Small Linear Stages: Adaptors

MDE253 Micropositioner Adaptor Plate

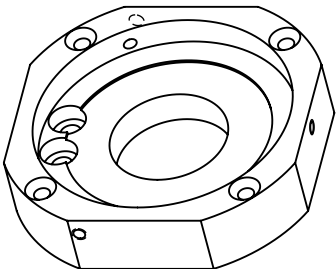


- Use with any MDE25x Series Micropositioner
- Allows external mounting via M2 screws

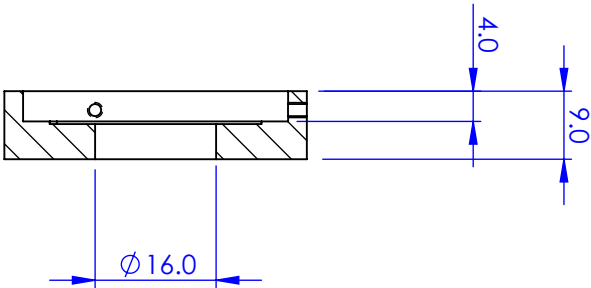
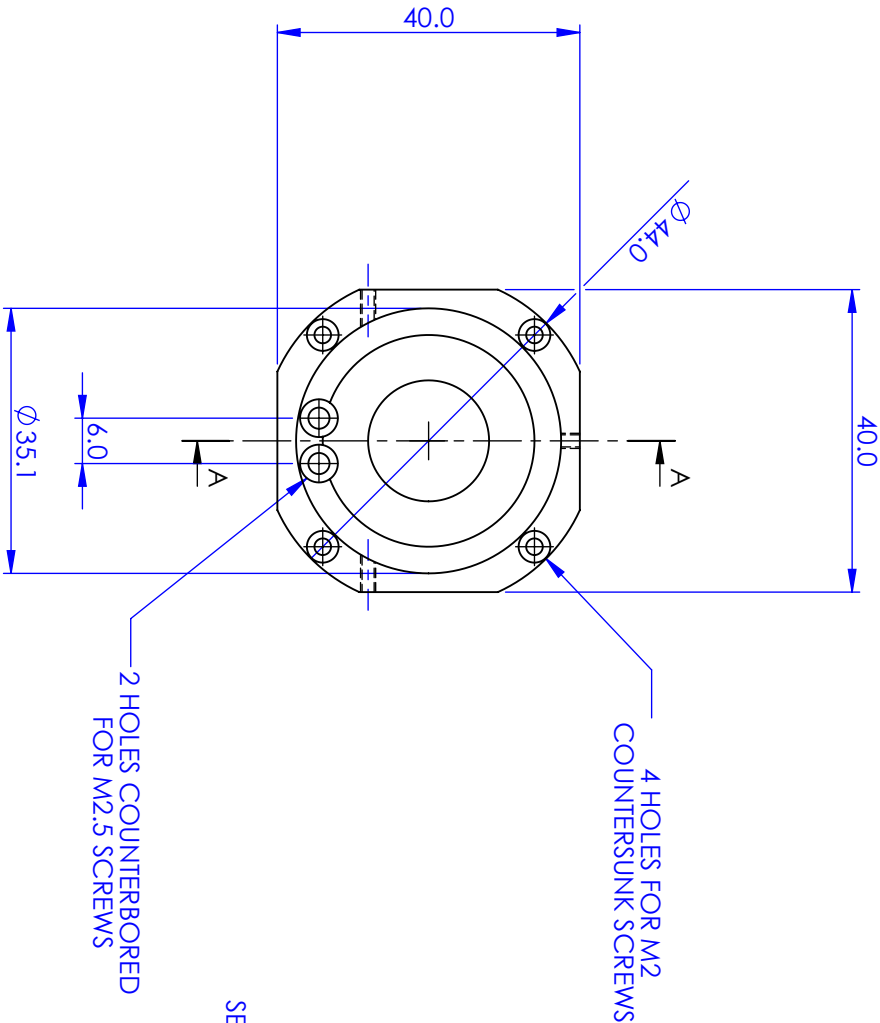


Adaptor plate for mounting MDE250 series centring and XY positioners using grub screws. The adaptor plate has 4 x 2.2 mm countersunk holes which accept M2 screws for attachment to external mount.

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW
SCALE 1:1



SECTION A-A

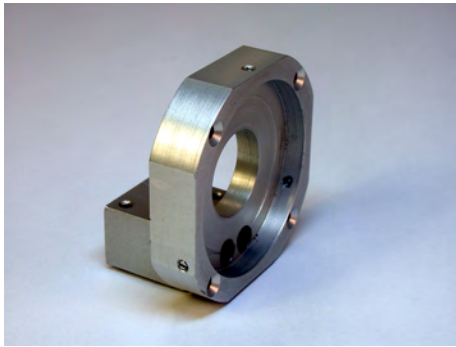
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GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: \pm
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	24/03/2010	
CHECKED	-	-	
MATERIAL ALUMINIUM ALLOY			
FINISH CLEAR ANODISED			
DO NOT SCALE DRAWING			
TITLE ADAPTER PLATE		SIZE A4	DWG. NO. MDE253
SCALE 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Manual Positioners: Small Linear Stages: Adaptors

MDE254 Angle adaptor plate for use with Centreing Micropositioners

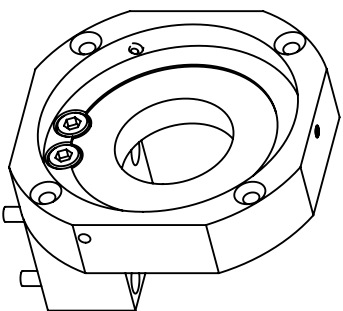
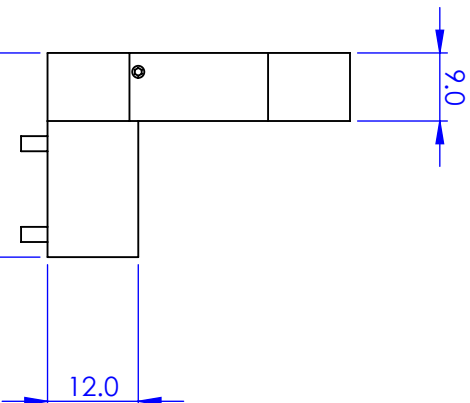
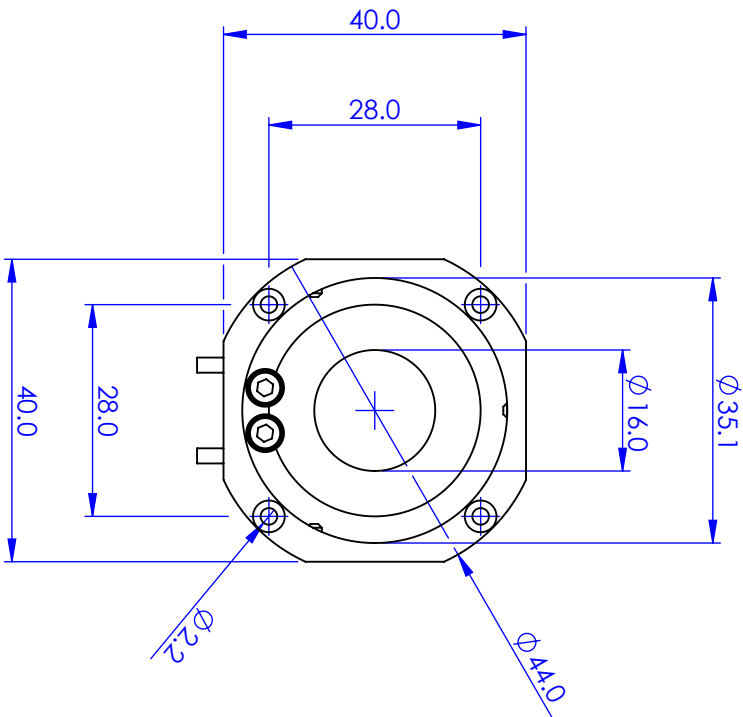
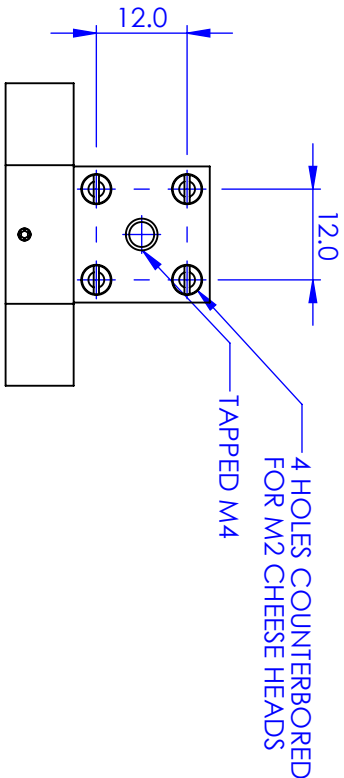


- Use with any MDE25x Series Micropositioner
- Allows external mounting via M2 screws
- Tapped hole for M4 post mounting



Adaptor plate for mounting MDE250 series centreing and XY positioners using grub screws. The adaptor plate has a set of 4 x 2.2 mm countersunk holes, which accept M2 screws for attachment to an external mount, and an angle plate with a tapped hole for M4 post mounting.

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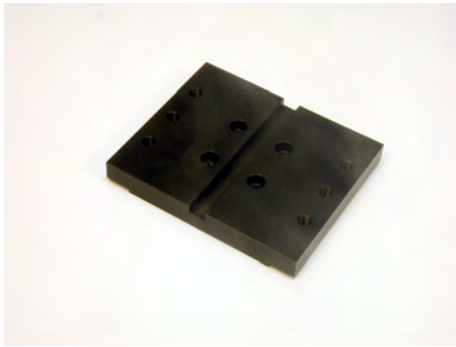
GENERAL VIEW
SCALE 1:1

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Eliot Scientific		TITLE ANGLE ADAPTER PLATE	
AUTHOR GW		DATE 24/03/2010	
CHECKED -		SCALE A4	
DWG. NO. MDE254		THIRD ANGLE PROJECTION	
SHEET 1 OF 1		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: Accessory

MDE851 Micropositioner Accessory Platform

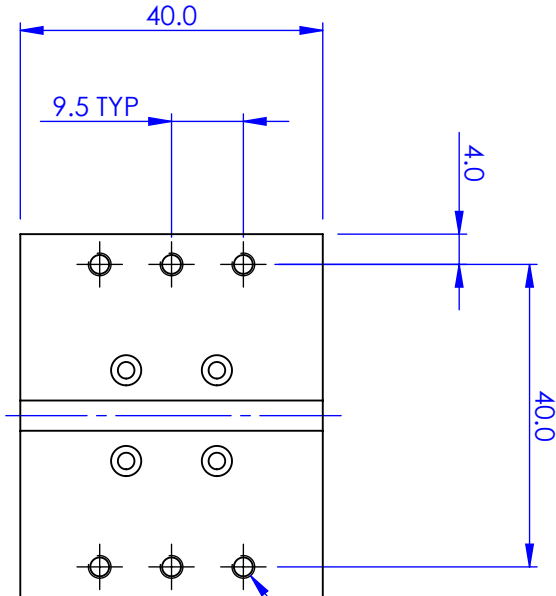


- Use with MDE850 or MDE850M
- Improves component stability

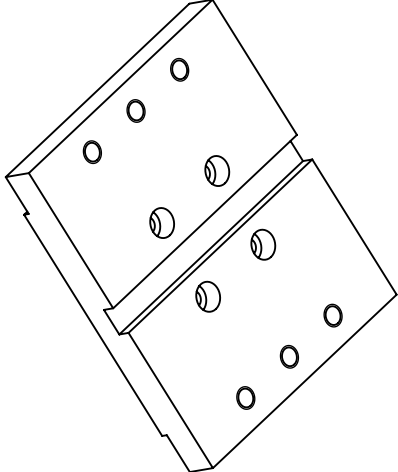


Accessory platform for use as an option with the MDE850 and MDE850M horizontal platform three axis XYZ micropositioners. It provides a stable large area platform for mounting XYZ Flexure Stage components.

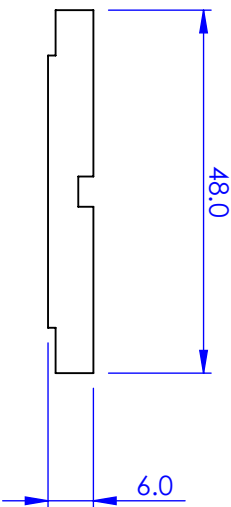
REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



6 HOLES TAPPED M3 THROUGH



GENERAL VIEW
SCALE: 1:1



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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	26/05/2010	
CHECKED	-	-	
MATERIAL			
ALUM ALLOY			
FINISH			
ANODISED BLACK			
DO NOT SCALE DRAWING		TITLE	
		Eliot Scientific	
		PLATFORM FOR MDE850	
SIZE		DWG. NO.	
A4		MDE851	
SCALE: 1:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Small Linear Stages: Fibre Accessories

MDE722 Fibre Holder (Mechanical) with Spigot



ELLIOT MARTOCK

- Very easy to use
- Clamp force adjustable from 25 to 125 g
- Contact point on fibre is a resilient pad
- Holds 125/250 μm fibre with a jacket up to 1 mm diameter
- Clamp arm swings clear of V-groove for easy loading of fibre
- Includes 11 mm dia spigot for mating to centring micropositioners

The MDE722 Fibre Holder features a double V-groove and single clamp arm to hold 125/250 μm fibre with a jacket up to 1mm diameter. The clamp arms swing clear of the V-groove, and the clamp forces can be adjusted from 25 to 125 g, making the unit very easy to use.

The fibre holder is fitted with an 11 mm diameter spigot that mates with the MDE250 series centring micropositioners. The spigot is slotted for easy insertion of the fibre and the clamp arms can be fitted on either side of the V-groove.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

Specifications

Configuration	Double V-groove and clamp arms for cladding and jacket
Fibre size	125/250 μm fibre with up to 1 mm jacket
Fibre clamp	Double clamp arms with adjustable force. Clamp arms can be fitted either side of V-groove
Clamp force	Adjustable from 25 to 125 g
Mount	11mm spigot to fit centring mount models: MDE251, MDE250-S, MDE257, MDE257M, MDE276, MDE276M, MDE277, MDE277M

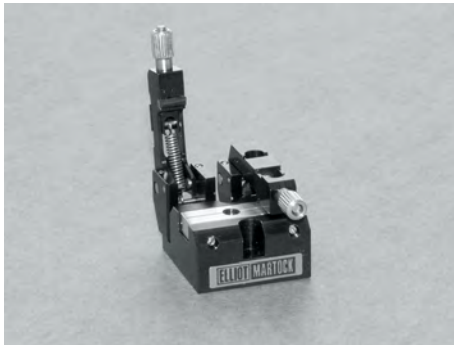
Options

Custom sized V-grooves



Manual Positioners: Small Linear Stages: Fibre Accessories

MDE723 Fibre Holder (Mechanical) for MDE255 & MDE260 Series Positioners



ELLIOT MARTOCK

- Very easy to use
- Clamp force adjustable from 25 to 125 g
- Contact point on fibre is a resilient pad
- 125/250 μm fibre with a jacket up to 1 mm diameter
- Clamp arm swings clear of V-groove for easy loading of fibre
- Mounts MDE255/MDE260 series dovetail slide micropositioners

The MDE723 Fibre Holder features a double V-groove and clamp arms to hold 125/250 μm fibre with a jacket up to 1 mm diameter. The clamp arms swing clear of the V-groove, and the clamp forces can be adjusted from 25 to 125 g, making the unit very easy to use.

The fibre holder fits MDE255 Series and MDE260 Series positioners (except models MDE257 & MDE257M), and can also be post mounted.

A comprehensive range of fibre holders using vacuum, magnet or spring-loaded clamps is available. User replaceable V-grooves enable the user to work with different fibre sizes economically. Custom grooves are our speciality.

Specifications

Configuration	Double V-groove and clamp arms for cladding and jacket
Fibre size	125/250 μm fibre with up to 1 mm jacket
Fibre clamp	Double clamp arms with adjustable force
Clamp force	Adjustable from 25 to 125 g
Optical Axis	11 mm centre height
Mount	M4 hole on base for post mounting Fits MDE255 Series and MDE260 series positioners (except models MDE257 & MDE257M). Supplied with mounting screws

Options

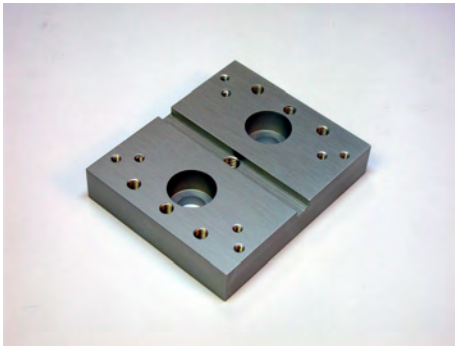
Custom sized V-grooves

MDE255 series and MDE260 series micropositioners



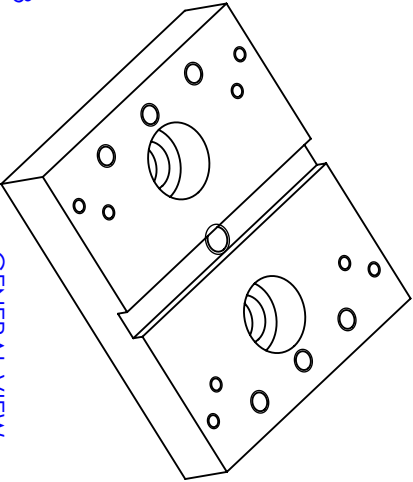
Manual Positioners: Small Linear Stages: Fibre Accessories

MDE860 MDE709 Fibre Holder Adaptor

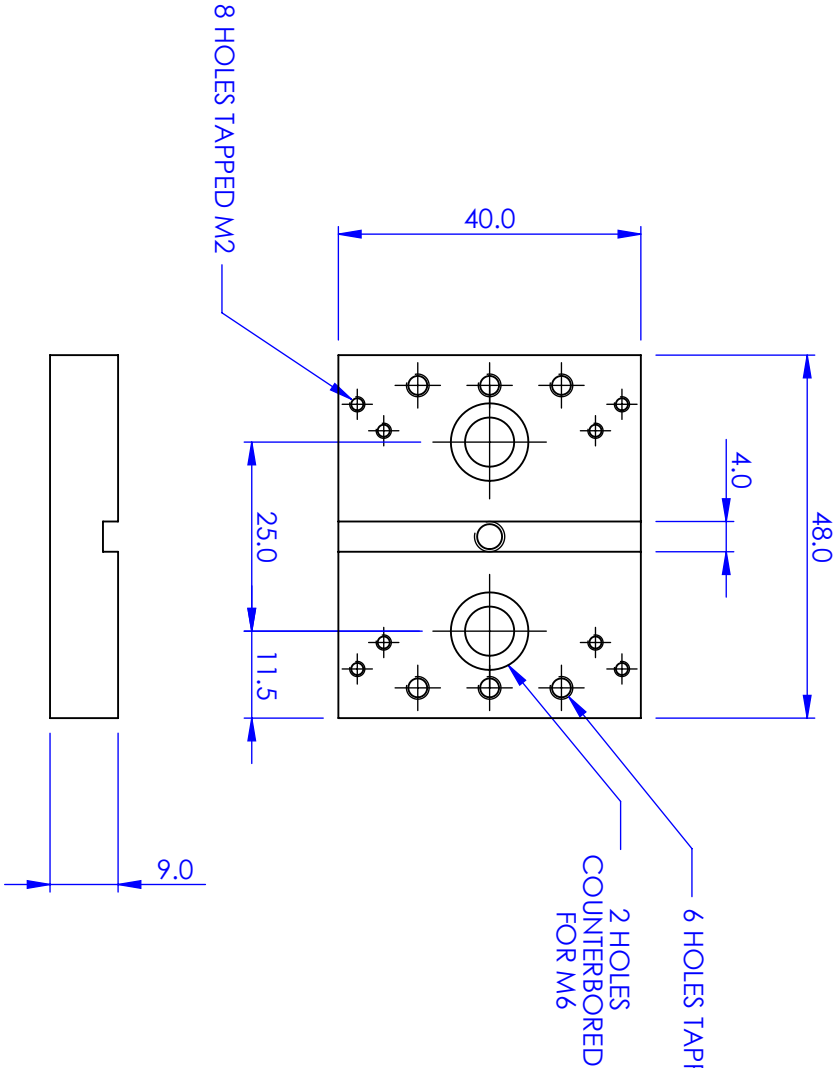


This adaptor mounts the MDE709 fibre holder on to a conventional 25 mm pitch optical table or an M4 post.
For use with MDE253 and MDE270

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:1



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MATERIAL ALUM. ALLOY		NAME GW	DATE 25/05/2010		
FINISH ---		AUTHOR CHECKED	---		
DO NOT SCALE DRAWING			TITLE ADAPTER PLATE		
SIZE A4			DWG. NO. MDE860		
SCALE: 1:1			THIRD ANGLE PROJECTION		
SHEET 1 OF 1					

Centring Micropositioners



ELLIOT | MARTOCK

2019



Manual Positioners: Centring Micropositioners

MDE250-S XY Simple Centring Micropositioner



- Travel ± 1 mm
- Stainless steel body
- Simple centring screw design
- For use where space is limited
- Wide range of configurations
- Very smooth backlash-free motion
- Standard 11 mm \varnothing bore (suits small laser diodes)

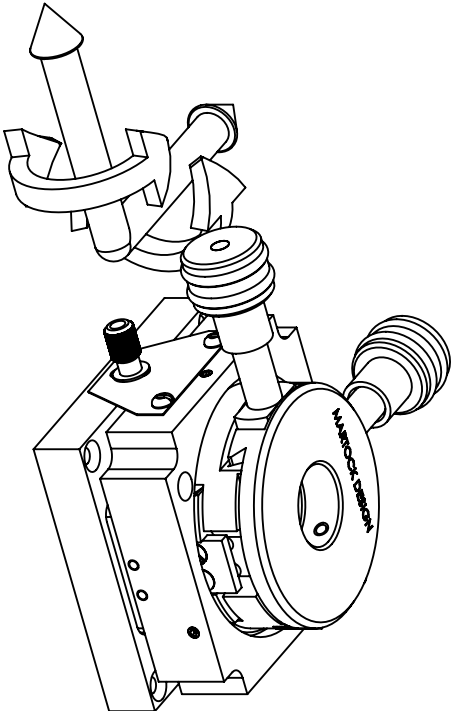
ELLIOT MARTOCK

The MDE250-S is a dual axis XY centring mount with simple adjusters for optic micropositioning.

Specifications

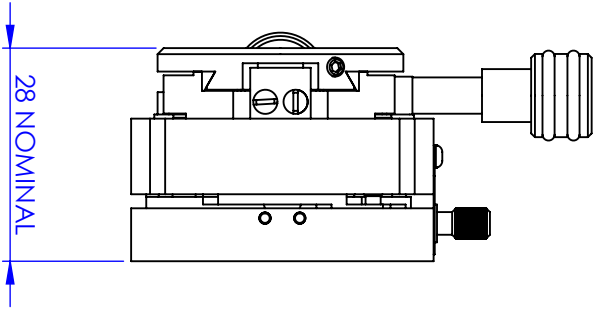
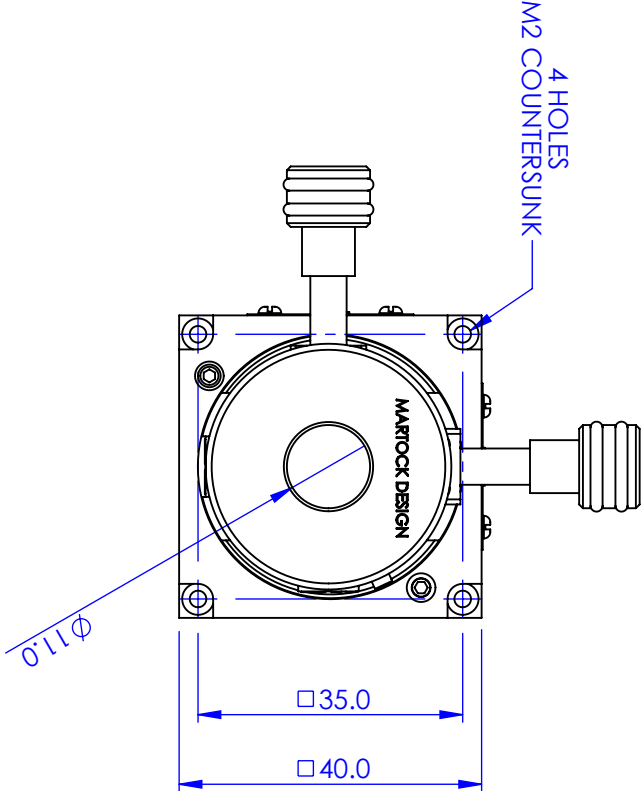
Travel	± 1 mm X and Y
Sensitivity	$< 2 \mu\text{m}$
Adjusters	0.25 pitch
Bore diameter	11 mm
Mounting holes	Two M2 x 3.5 mm deep
Thickness	13 mm

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW SHOWING ROTATION
AND TRANSLATION AXES

3° ROTATION AXES
±1mm TRANSLATION AXES



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CHECKED		GW	01/06/2010
MATERIAL		—	—
—			
FINISH			
—			
DO NOT SCALE DRAWING			

TITLE	
4 AXIS MICROPOSITIONER	
SIZE	DWG. NO.
A4	MDE276
SCALE: 1:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Manual Positioners: Centring Micropositioners

MDE250-S-15 XY Simple Centring Micropositioner (Large Bore)



ELLIOT MARTOCK

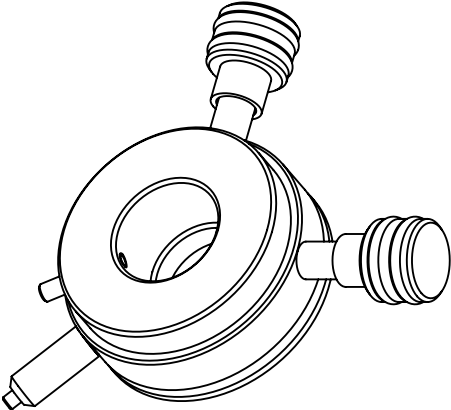
- Travel ± 1 mm
- Stainless steel body
- Simple centring screw design
- For use where space is limited
- Wide range of configurations
- Very smooth backlash-free motion
- Large 15 mm \varnothing bore

The MDE250-S-15 is a large bore twin axis XY centring mount with simple adjusters for optic micropositioning.

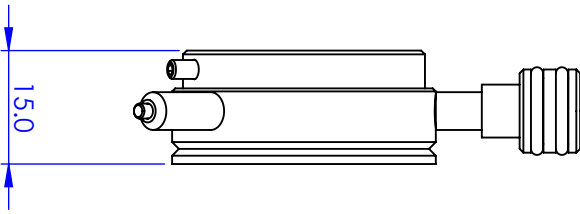
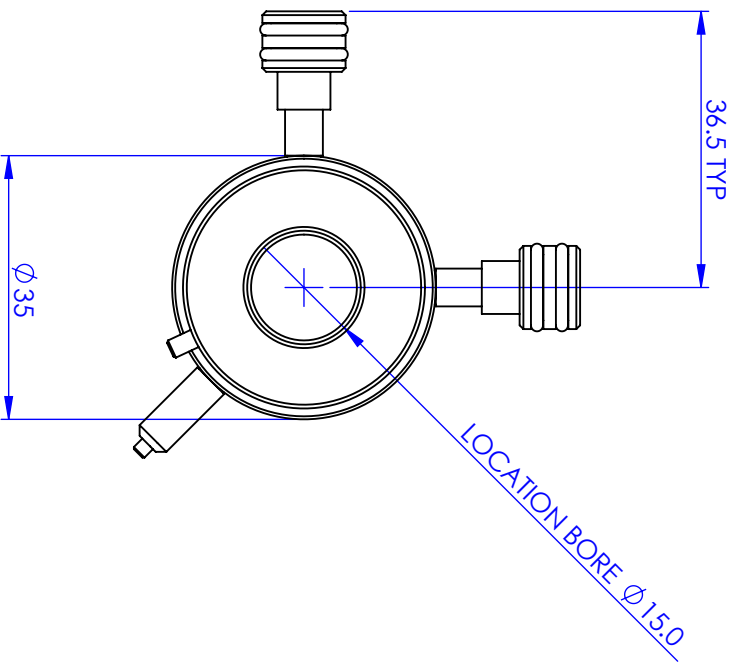
Specifications

Travel	± 1 mm X and Y
Sensitivity	$< 2 \mu\text{m}$
Adjusters	0.25 pitch
Bore diameter	15 mm
Mounting holes	Two M2 x 3.5 mm deep
Thickness	13 mm

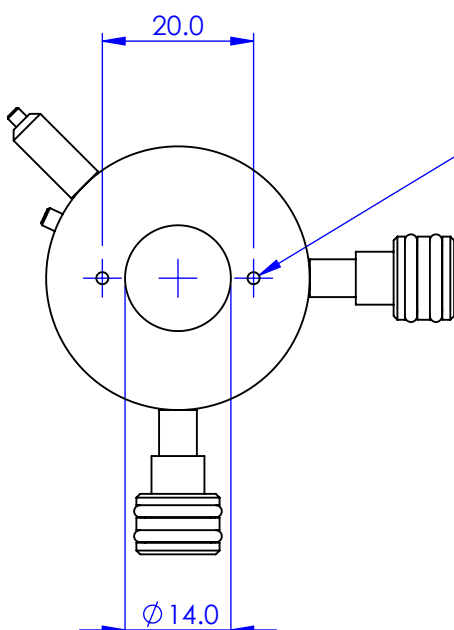
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± 1mm X&Y TRAVEL



2 HOLES TAPPED M2



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MATERIAL STAINLESS STEEL		FINISH ---	
AUTHOR	NAME	DATE	
CHECKED	GW	23/03/2010	
DO NOT SCALE DRAWING		SCALE: 1:1	THIRD ANGLE PROJECTION
TITLE CENTRING MOUNT		SIZE A4	DWG. NO. MDE250-S-15
		SHEET 1 OF 1	



Manual Positioners: Centring Micropositioners

MDE257 XYZ Simple Centring Micropositioner



- X & Y centring positioner
- Stainless steel body
- Small dovetail slides
- Wide range of configurations
- Very smooth backlash-free motion
- Standard 11 mm Ø bore (suits small laser diodes)
- Optional 15 mm bore MDE257-15



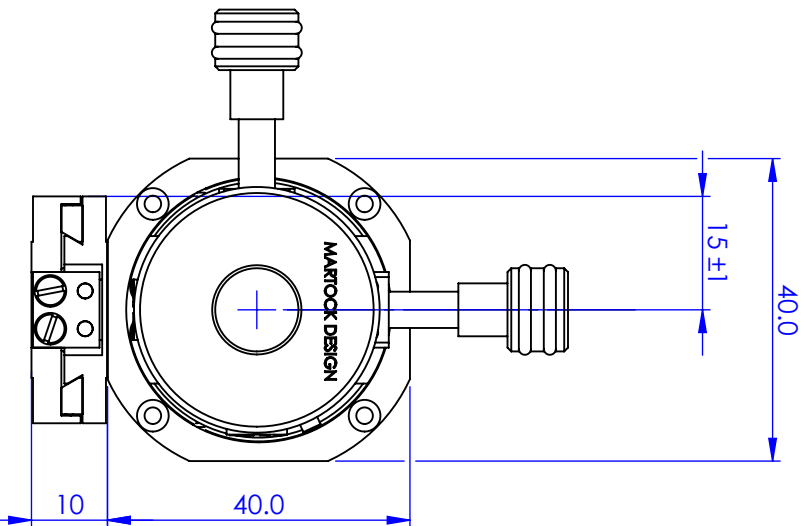
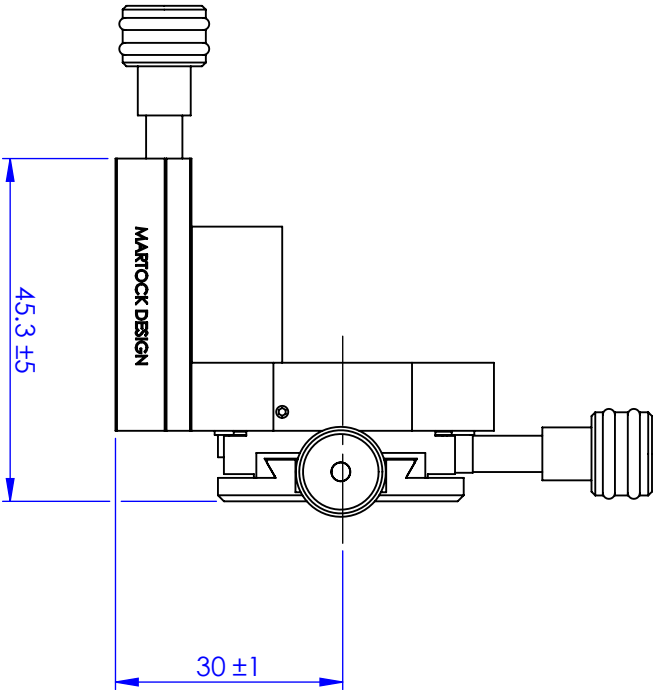
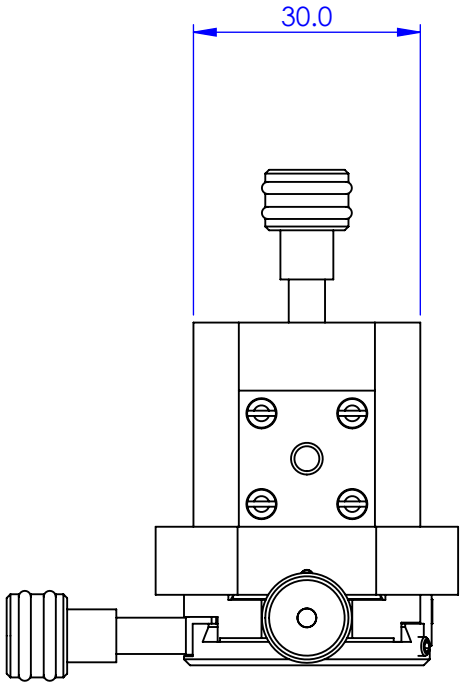
Three axis XYZ micropositioner comprising MDE255 single axis positioner and MDE254 bracket fitted with MDE251 centring positioner.

Specifications

X-axis travel	10 mm
X-axis sensitivity	< 0.5 μm
Z & Y-axis travel	$\pm 1\text{mm}$
Adjusters	0.25 pitch
Z & Y-axis location bore	11 mm Ø, 5 mm deep

Options

MDE257-15 Large Bore Model
Vacuum version



REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR	NAME	DATE
CHECKED	GW	12/01/2007
FINISH	---	---
MATERIAL	STAINLESS STEEL, BRASS, ALUM., ALLOY	

XYZ MICROPOSITIONER

SIZE **A4** DWG. NO. **MDE257**

DO NOT SCALE DRAWING

SCALE: 1:1

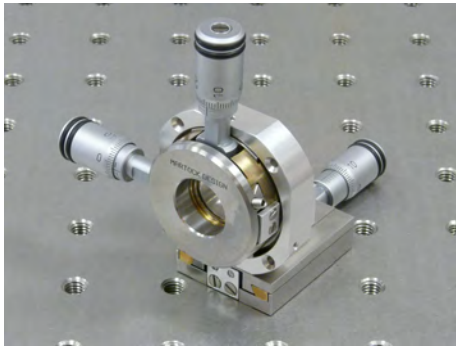
THIRD ANGLE PROJECTION

SHEET 1 OF 1

Eliot Scientific

Manual Positioners: Centring Micropositioners

MDE257M XYZ Simple Centring Micropositioner with Micrometers



- Micrometer adjusters
- Stainless steel body
- Small dovetail slides
- X & Y centring positioner
- Wide range of configurations
- Very smooth backlash-free motion
- Standard 11 mm \varnothing bore (suits small laser diodes)
- Optional 15 mm bore MDE257M-15

ELLIOT MARTOCK

Three-axis, micrometer adjusted XYZ micropositioner comprising MDE255M single axis positioner and MDE254 bracket fitted with MDE251M centring positioner.

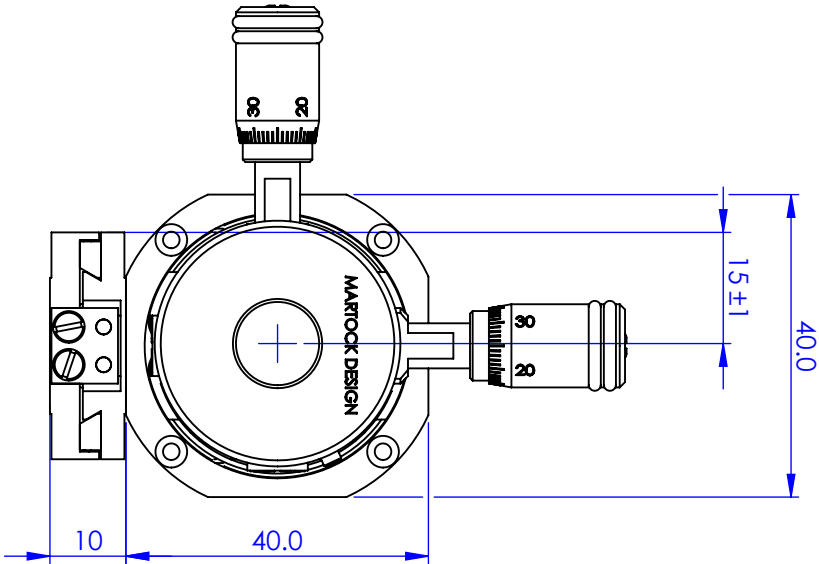
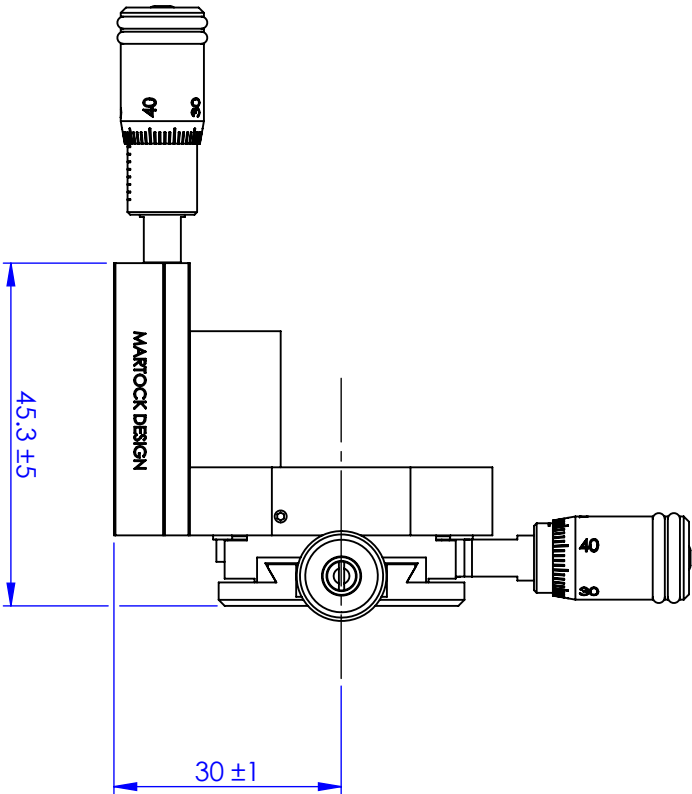
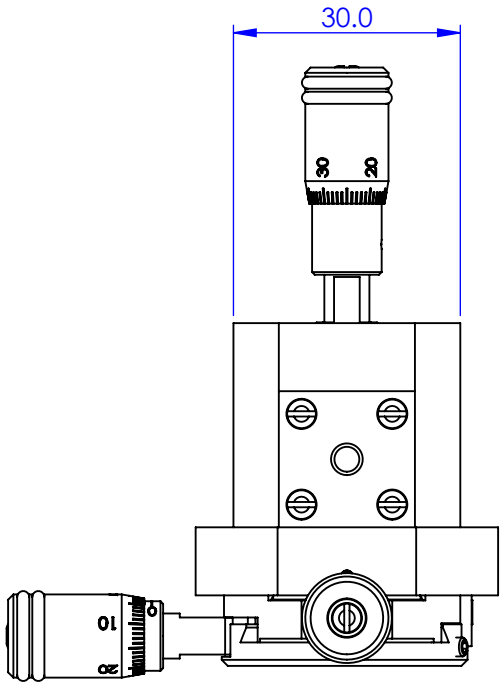
Specifications

X-axis travel	10 mm
X-axis sensitivity	< 0.5 μm
Z & Y-axis travel	$\pm 1\text{mm}$
Micrometer scales	0.01 mm
Z & Y-axis location bore	11 mm \varnothing , 5 mm deep

Options

MDE257M-15 Large Bore Model
Vacuum version

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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR	NAME	DATE
CHECKED	-	12/01/2007
MATERIAL STAINLESS STEEL, BRASS, ALUM., ALLOY		
FINISH ---		
DO NOT SCALE DRAWING		
TITLE Eliot Scientific		
XYZ MICROPOSITIONER		
SIZE A4	DWG. NO. MDE257M	
SCALE: 1:1	THIRD ANGLE PROJECTION	SHEET 1 OF 1

Manual Positioners: Centring Micropositioners

MDE251 XY Precision Centring Micropositioner



ELLIOT MARTOCK

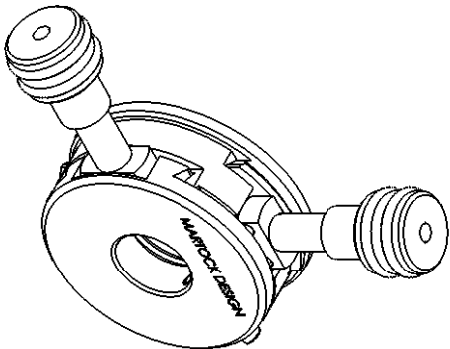
- Travel ± 1 mm
- Stainless steel body
- Two independent dovetail slides
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- Smooth backlash-free motion
- Standard 11 mm \varnothing bore (suits small laser diodes)

The MDE251 is a small XY precision centring mount with simple adjusters for optic micropositioning.

Specifications

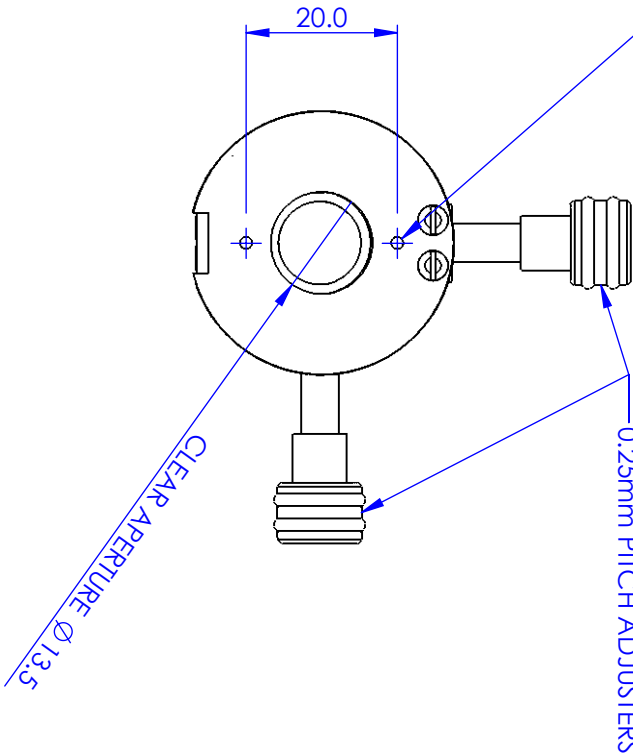
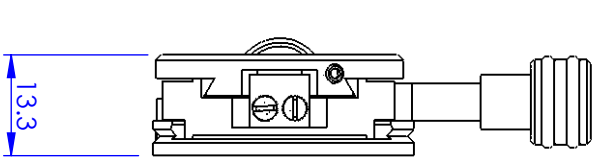
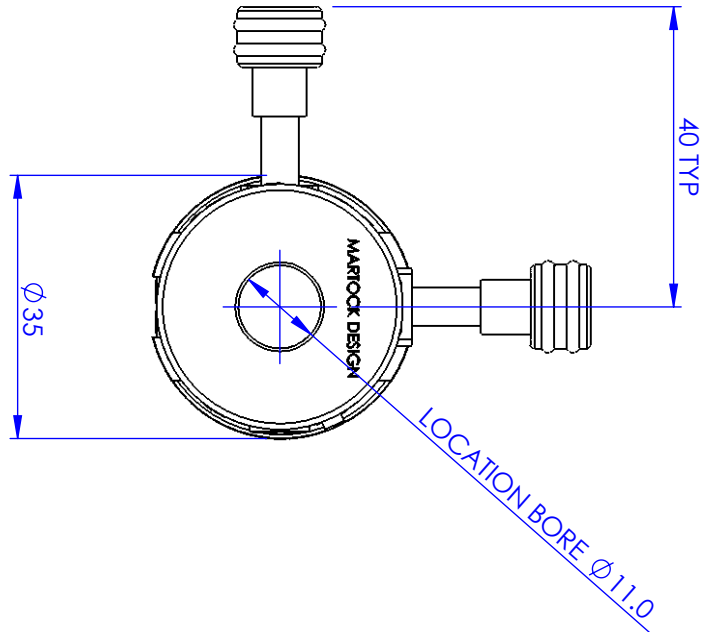
Travel	± 1 mm X and Y
Sensitivity	$< 0.5 \mu\text{m}$
Adjusters	0.25 pitch
Bore diameter	11 mm
Mounting holes	Two M2 x 3.5 mm deep
Thickness	13 mm

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REV.	DESCRIPTION			



±1mm X & Y TRAVEL
DOVETAIL SLIDES

GENERAL VIEW
SCALE: 1:1



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ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	25/05/2010
MATERIAL		-	
STAINLESS STEEL			
AL. ALLOY/Y.L. BRONZE			
FINISH			
-			
DO NOT SCALE DRAWING			
TITLE			
PRECISION XY MICROPOSITIONER			
SIZE			
A4			
DWG. NO.			
MDE251			
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Manual Positioners: Centring Micropositioners

MDE251-15 XY Precision Centring Micropositioner (Large Bore)



ELLIOT MARTOCK

- Travel ± 1 mm
- Stainless steel body
- Two independent dovetail slides
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- Smooth backlash-free motion
- Large 15 mm \varnothing bore

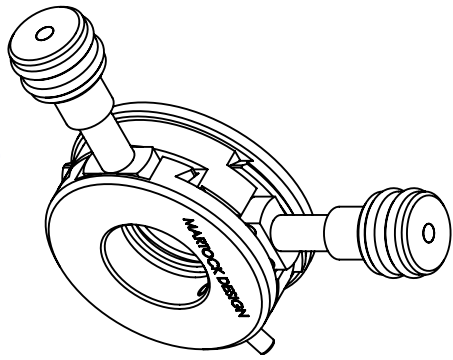
The MDE251-15 is a large bore, small XY precision centring mount with simple adjusters for optic micropositioning.

Specifications

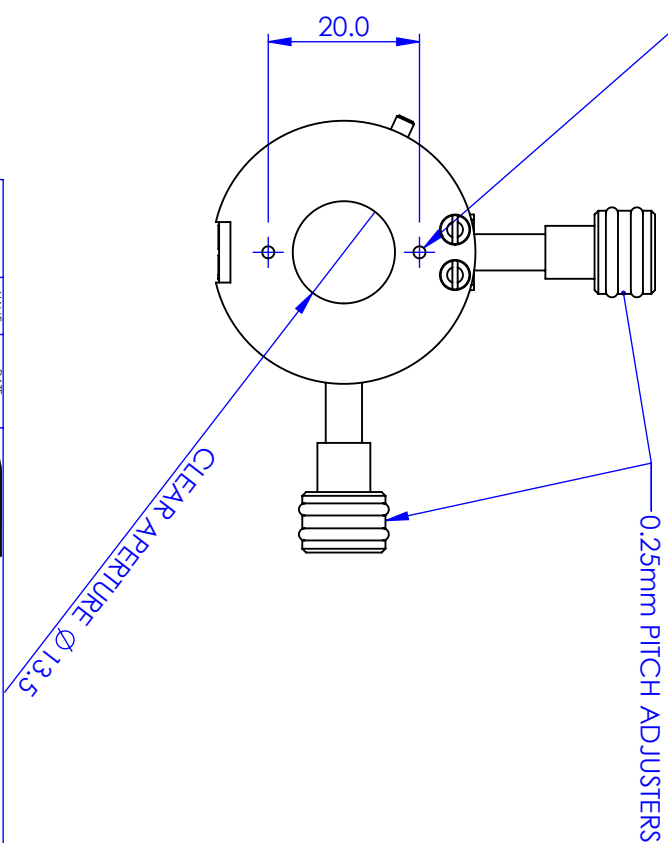
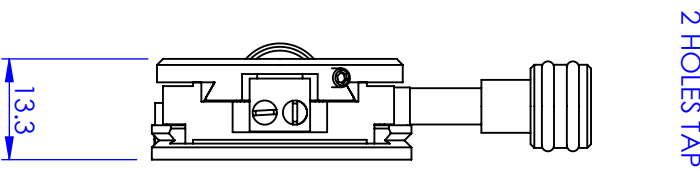
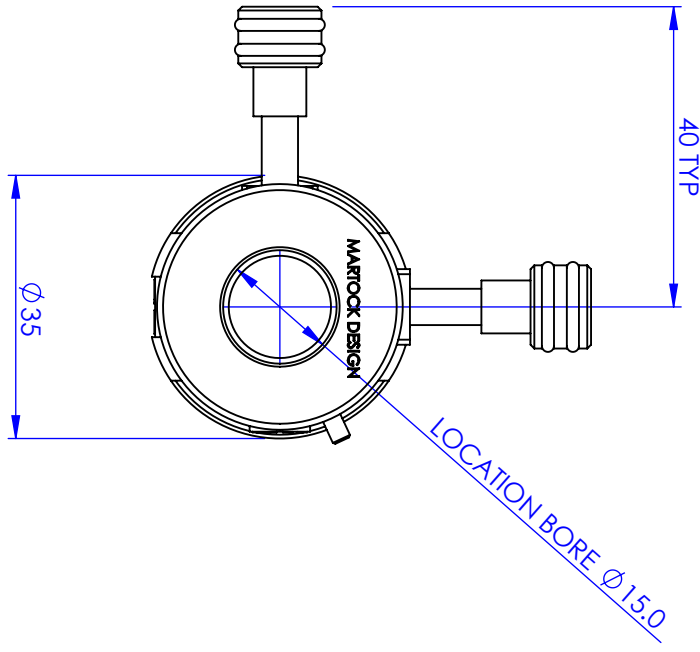
Travel	± 1 mm X and Y
Sensitivity	$< 0.5 \mu\text{m}$
Adjusters	0.25 pitch
Bore diameter	15 mm
Mounting holes	Two M2 x 3.5 mm deep
Thickness	13 mm

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			

±1mm X & Y TRAVEL
DOVETAIL SLIDES



GENERAL VIEW
SCALE: 1:1



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GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

NAME	DATE
AUTHOR GW	25/03/2010
CHECKED -	-
MATERIAL STAINLESS STEEL AL. ALLOY/AL. BRONZE	
FINISH ---	
DO NOT SCALE DRAWING	
TITLE PRECISION XY MICROPOSITIONER	
SIZE A4	DWG. NO. MDE251-15
SCALE: 1:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Manual Positioners: Centring Micropositioners

MDE251M XY Precision Centring Micropositioner with Micrometers (Large Bore)



- Travel ± 1 mm
- Stainless steel body
- Two independent dovetail slides
- Micrometer adjusters
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- Smooth backlash-free motion
- Standard 11 mm \varnothing bore (suits small laser diodes)



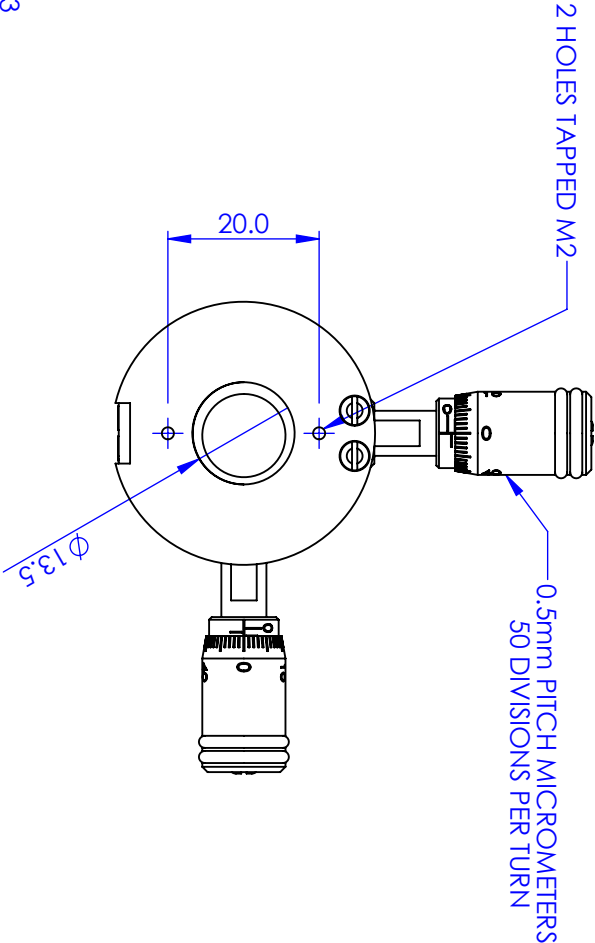
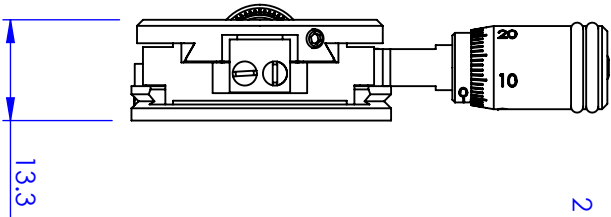
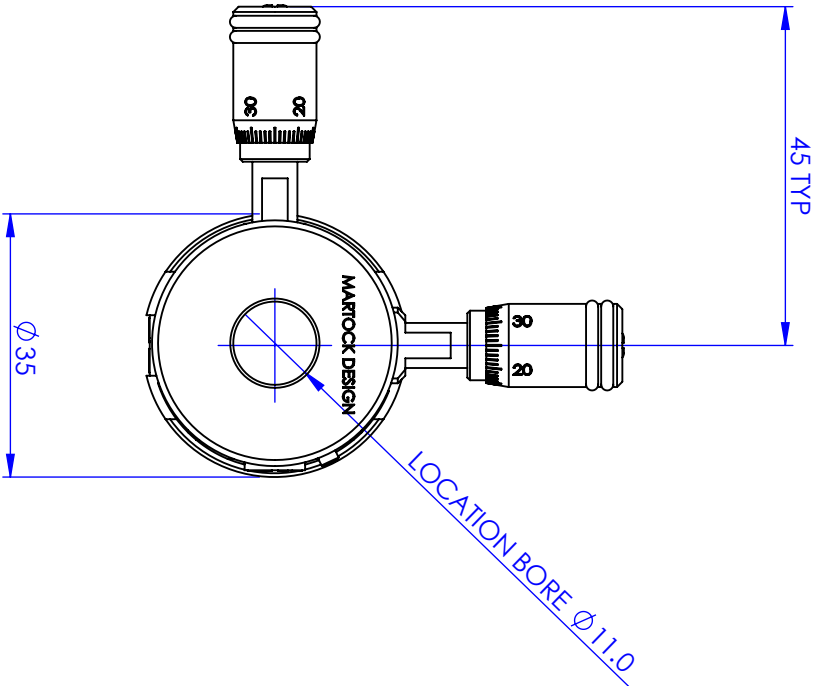
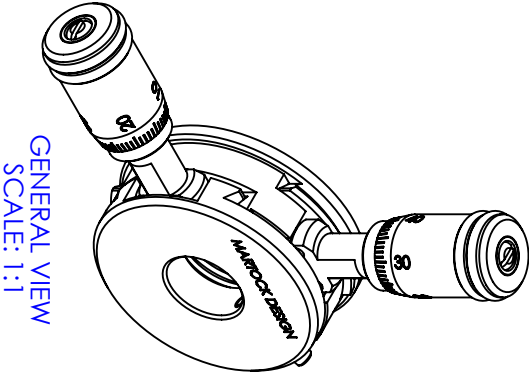
The MDE251M is a small, dual axis, micrometer equipped, precision centring XY mount for optic micropositioning.

Specifications

Travel	± 1 mm X and Y
Micrometer scale	0.01 mm
Bore diameter	11 mm
Mounting holes	Two M2 x 3.5 mm deep
Thickness	13 mm

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REV.	DESCRIPTION			

±1mm X & Y TRAVEL
DOVETAIL SLIDES



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MATERIAL STAINLESS STEEL AL. ALLOY/AL. BRONZE		TITLE PRECISION XY MICROPOSITIONER	
FINISH ---		SIZE A4	
DO NOT SCALE DRAWING		DWG. NO. MDE251M	
AUTHOR CHECKED		NAME GW	
DATE 25/05/2010		SCALE: 1:1	
THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Manual Positioners: Centring Micropositioners

MDE251M-15 XY Precision Centring Micropositioner with Micrometers (Large Bore)



- Travel ± 1 mm
- Stainless steel body
- Two independent dovetail slides
- Micrometer adjusters
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- Smooth backlash-free motion
- Large 15 mm \varnothing bore



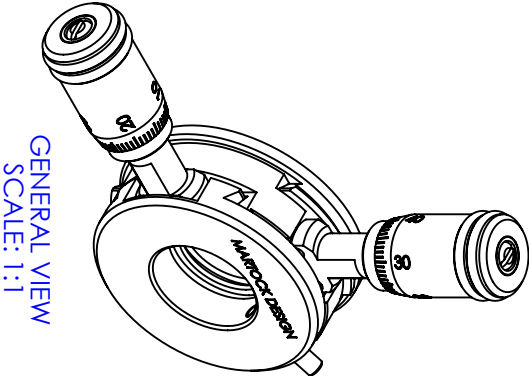
The MDE251-15 is a large bore, micrometer equipped small XY precision centring mount for optic micropositioning.

Specifications

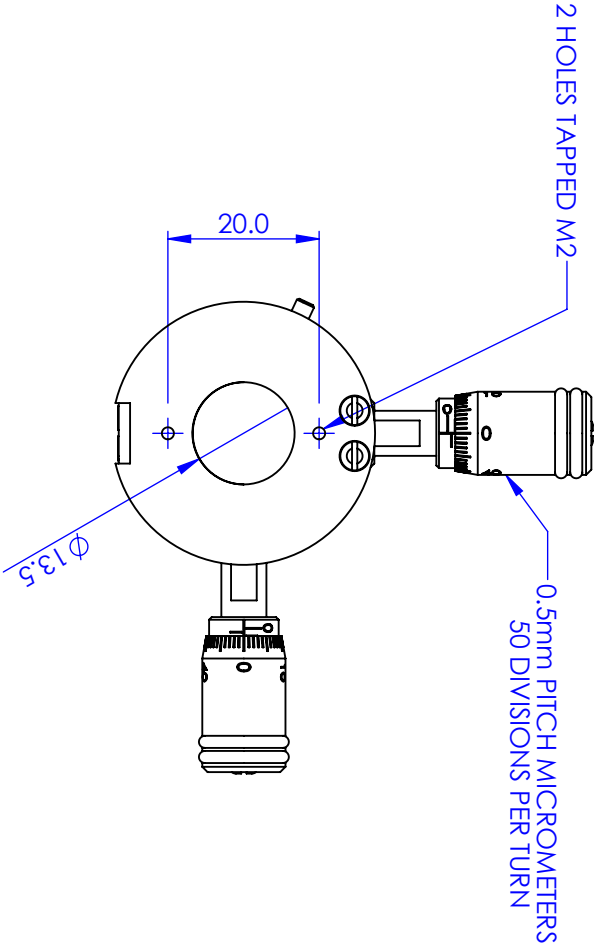
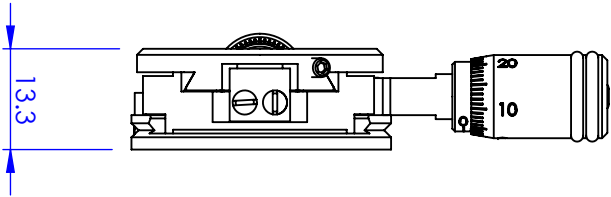
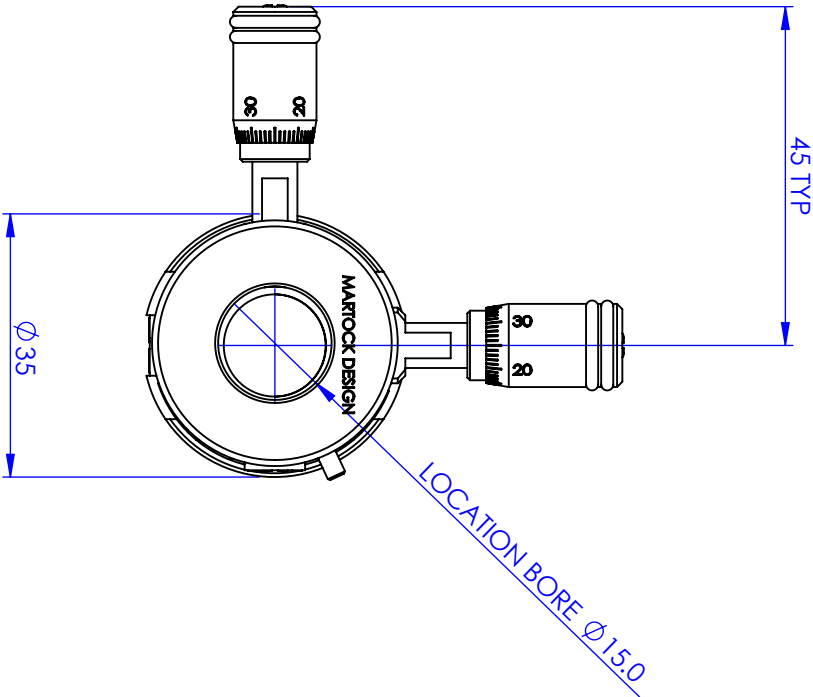
Travel	± 1 mm X and Y
Micrometer scale	0.01 mm
Bore diameter	15 mm
Mounting holes	Two M2 x 3.5 mm deep
Thickness	13 mm

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REV.	DESCRIPTION			

±1mm X & Y TRAVEL
DOVETAIL SLIDES



GENERAL VIEW
SCALE: 1:1




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AUTHOR		NAME		DATE	
CHECKED		GW		25/05/2010	
MATERIAL					
STAINLESS STEEL					
AL. ALLOY/AL. BRONZE					
FINISH					

DO NOT SCALE DRAWING					

					
TITLE					
PRECISION XY MICROPOSITIONER					
SIZE		DWG. NO.			
A4		MDE251M-15			
SCALE: 1:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Rotation Stages



ELLIOT | MARTOCK

2019



Manual Positioners: Rotation Stages

MDE282 Compact Precision Rotation Stage



ELLIOT MARTOCK

- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Very smooth backlash-free motion
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range

The MDE282 rotation stage offers superb resolution (5 arc seconds) in a compact, low profile package. The calibrated fine adjustment control reads 2 arc minutes per division.

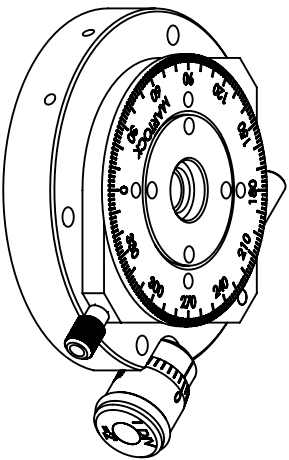
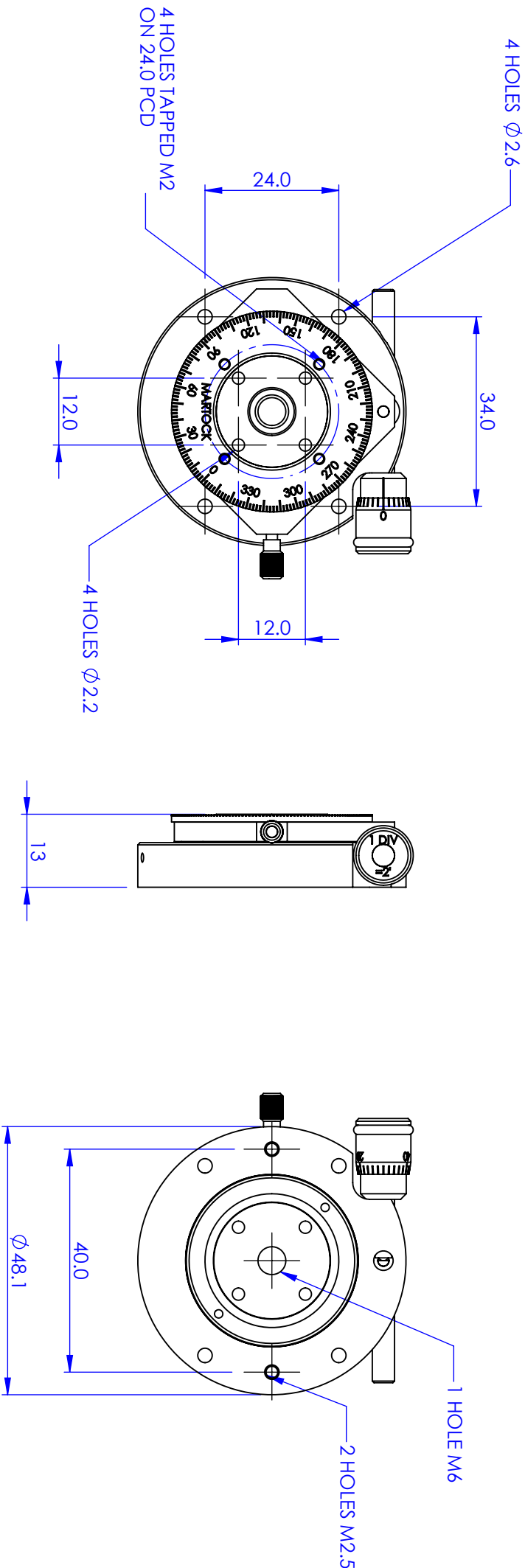
Specifications

Construction	High precision lapped bearing
Rotation	360° free rotation with clamp screw
Fine adjustment	Tangent screw providing 10° range
Resolution	5 arc seconds
Calibration	1 division fine adjustment = 2 arc minutes
Thickness	13 mm
Standard bore tapped M6 with 8 mm counterbore	
Hole array for mounting MDE255, MDE257, MDE258 or MDE259 micropositioners	

Variants

- MDE282-20: Stage with 20 mm Clear Bore
- MDE282G: Stage with M6 Tapped Bore & Vernier Scale
- MDE282-20G: Stage with 20 mm Clear Bore & Vernier Scale

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REV.	DESCRIPTION		



GENERAL VIEW
SCALE: 1:1

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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	02/06/2010	
CHECKED	-	-	
MATERIAL			
FINISH			

DO NOT SCALE DRAWING			
TITLE		SIZE	DWG. NO.
ROTATION STAGE		A4	MDE282
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Manual Positioners: Rotation Stages

MDE282G Compact Precision Rotation Stage with Vernier



ELLIOT MARTOCK

- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Very smooth backlash-free motion
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range
- 360° scale with 2° divisions and 10 arc minute vernier

The MDE282G rotation stage offers superb resolution (5 arc seconds) in a compact, low profile package. The calibrated fine adjustment control reads 2 arc minutes per division and there is a 360° scale of 2° divisions plus a 10 arc minute vernier which itself can be adjusted and clamped over a 16° range.

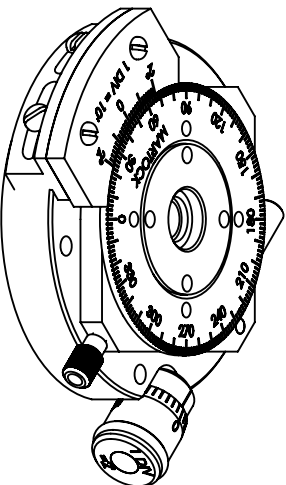
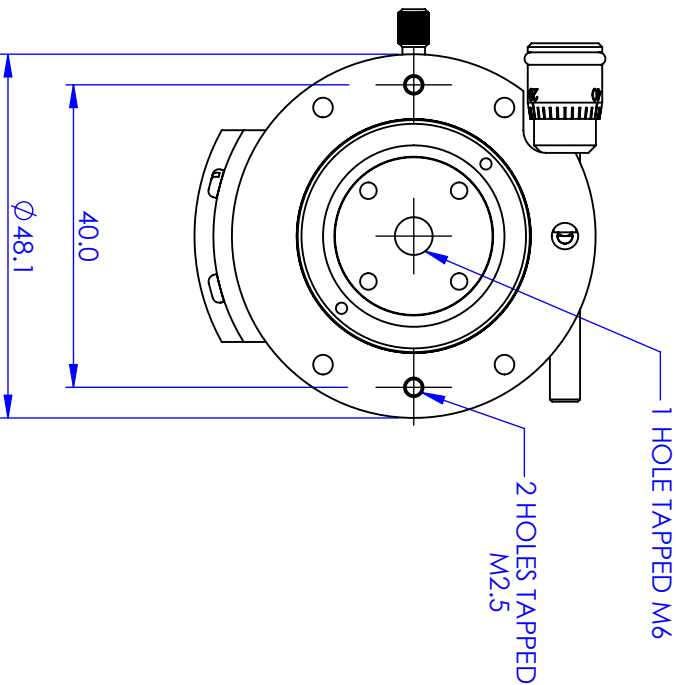
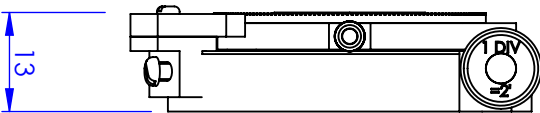
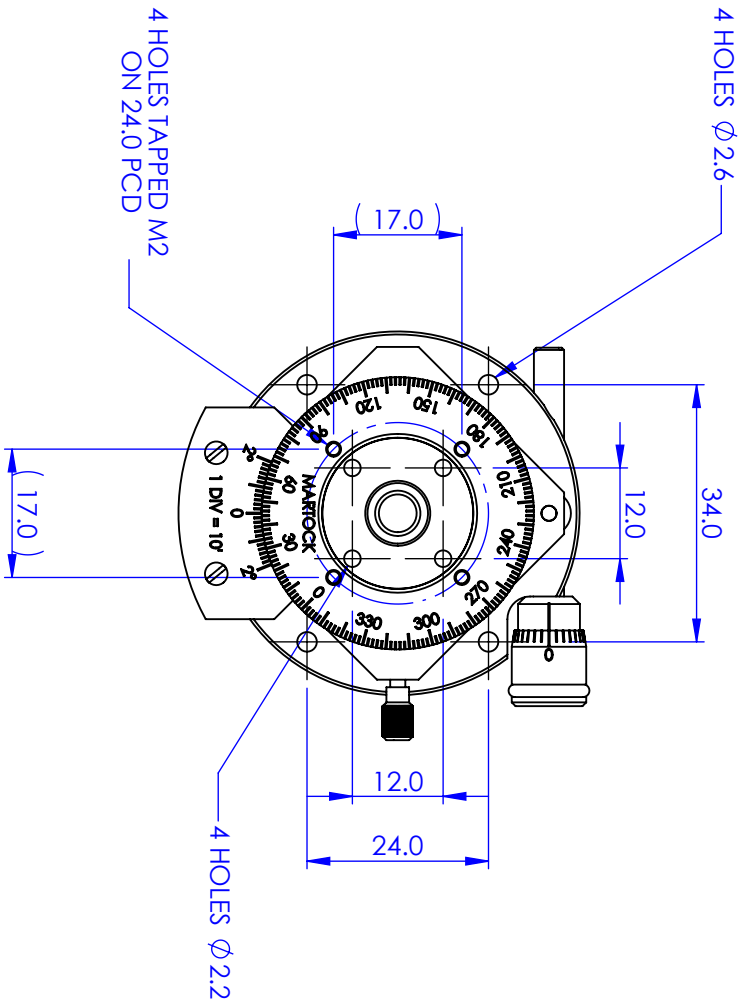
Specifications

Construction	High precision lapped bearing
Rotation	360° free rotation with clamp screw
Gauge	360° scale with 2° divisions and 10 arc minute vernier
Fine adjustment	Tangent screw providing 10° range
Resolution	5 arc seconds
Calibration	1 division fine adjustment = 2 arc minutes
Thickness	13 mm
Standard bore tapped M6 with 8 mm counterbore	
Hole array for mounting MDE255, MDE257, MDE258 or MDE259 micropositioners	

Variants

- MDE282: Stage with M6 Tapped Bore
- MDE282G: Stage with M6 Tapped Bore & Vernier Scale
- MDE282-20G: Stage with 20 mm Clear Bore & Vernier Scale

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REV.	DESCRIPTION		



GENERAL VIEW
SCALE: 1:1

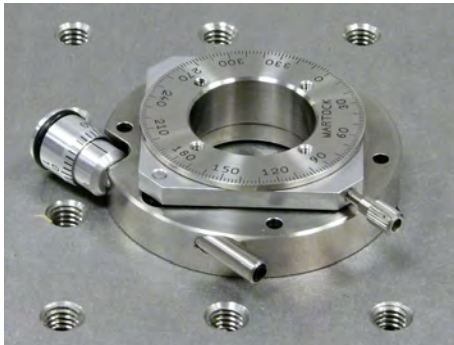
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AUTHOR		NAME	DATE
CHECKED		GW	09/02/2010
MATERIAL		---	---
FINISH		---	
DO NOT SCALE DRAWING		TITLE	
SIZE A4		ROTATION STAGE	
DWG. NO. MDE282G		THIRD ANGLE PROJECTION	
SCALE: 1:1		SHEET 1 OF 1	

Manual Positioners: Rotation Stages

MDE282-20 Compact Precision Rotation Stage, Large Bore



- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Very smooth backlash-free motion
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range

ELLIOT MARTOCK

The MDE282-20 rotation stage offers superb resolution (5 arc seconds) in a compact, low profile package with a 20 mm centre bore. The calibrated fine adjustment control reads 2 arc minutes per division.

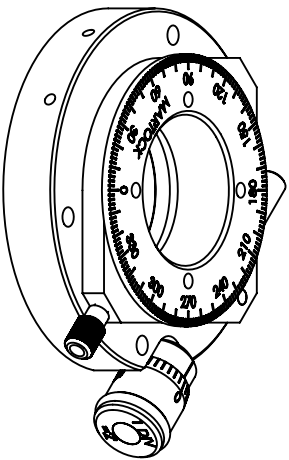
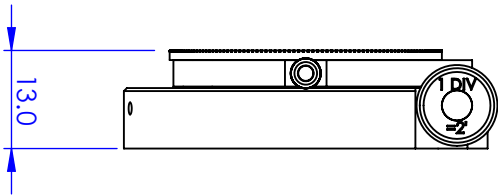
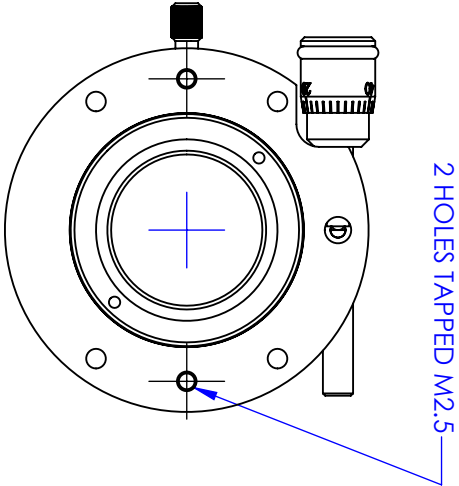
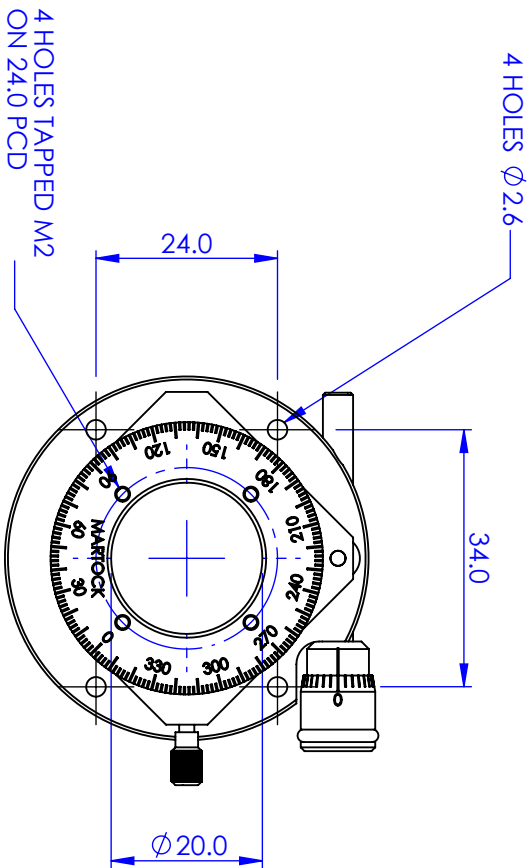
Specifications

Construction	High precision lapped bearing
Rotation	360° free rotation with clamp screw
Fine adjustment	Tangent screw providing 10° range
Resolution	5 arc seconds
Calibration	1 division fine adjustment = 2 arc minutes
Thickness	13 mm
Bore	20 mm
Hole array for mounting MDE255, MDE257, MDE258 or MDE259 micropositioners	

Variants

- MDE282: Stage with M6 Tapped Bore
- MDE282-20: Stage with 20 mm Clear Bore
- MDE282-20G: Stage with 20 mm Clear Bore & Vernier Scale

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GENERAL VIEW
SCALE: 1:1

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MATERIAL			
FINISH			

DO NOT SCALE DRAWING			
TITLE			
			
ROTATION STAGE			
SIZE		DWG. NO.	
A4		MDE282-20	
SCALE: 1:1	THIRD ANGLE PROJECTION	SHEET 1 OF 1	

Manual Positioners: Rotation Stages

MDE282-20G Compact Precision Rotation Stage, Large Bore with Vernier



ELLIOT MARTOCK

- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Very smooth backlash-free motion
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range
- 360° scale with 2° divisions and 10 arc minute vernier

The MDE282-20G rotation stage offers superb resolution (5 arc seconds) in a compact, low profile package with a 20 mm centre bore. The calibrated fine adjustment control reads 2 arc minutes per division and there is a 360° scale of 2° divisions plus a 10 arc minute vernier which itself can be adjusted and clamped over a 16° range.

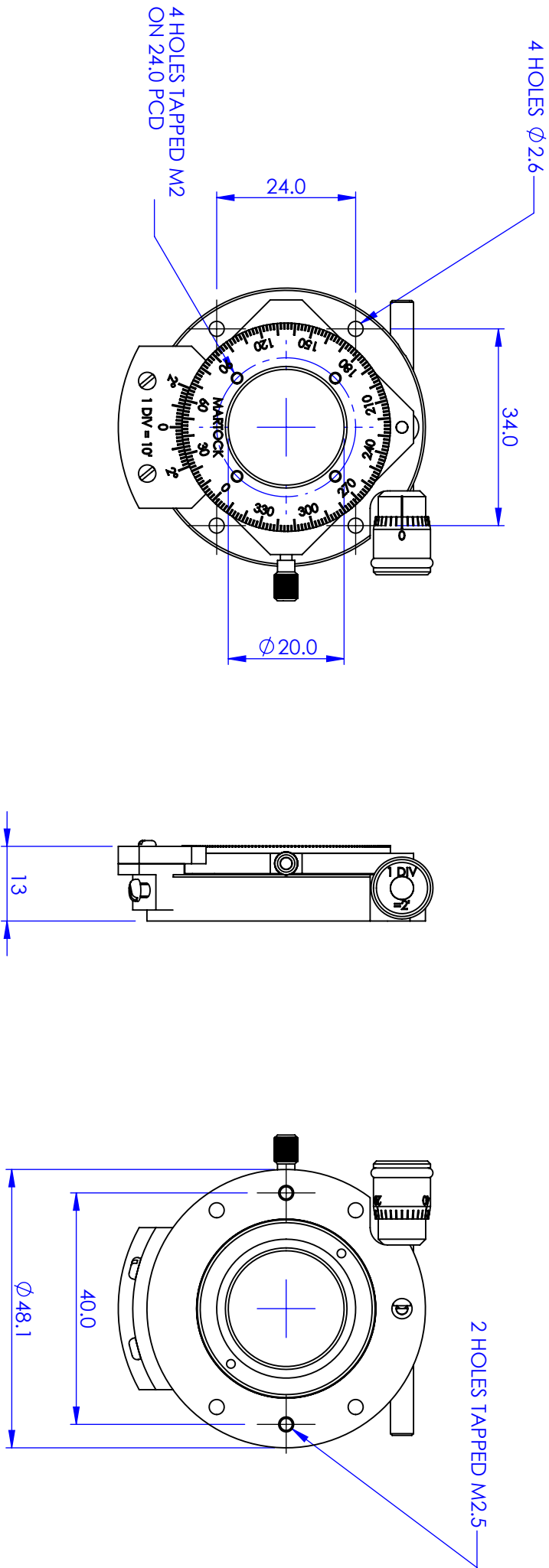
Specifications

Construction	High precision lapped bearing
Rotation	360° free rotation with clamp screw
Gauge	360° scale with 2° divisions and 10 arc minute vernier
Fine adjustment	Tangent screw providing 10° range
Resolution	5 arc seconds
Calibration	1 division fine adjustment = 2 arc minutes
Thickness	13 mm
Bore	20 mm
Hole array for mounting MDE255, MDE257, MDE258 or MDE259 micropositioners	

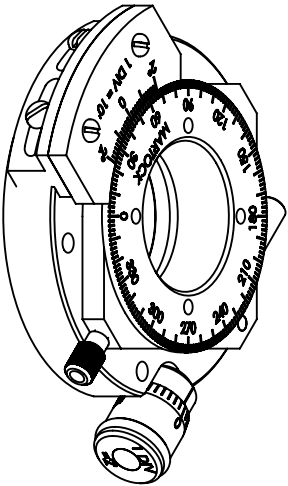
Variants

- MDE282: Stage with M6 Tapped Bore
- MDE282G: Stage with M6 Tapped Bore & Vernier Scale
- MDE282-20: Stage with 20 mm Clear Bore

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GENERAL VIEW
SCALE: 1:1



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CHECKED	GW	02/06/2010	
MATERIAL			
FINISH			

DO NOT SCALE DRAWING			

Elliott Scientific

ROTATION STAGE

SIZE **A4** DWG. NO. **MDE282-20G**

SCALE: 1:1 THIRD ANGLE PROJECTION SHEET 1 OF 1

Manual Positioners: Rotation Stages

MDE283 Very Compact Precision Rotation Stage



- Very compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Very smooth backlash-free motion
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range

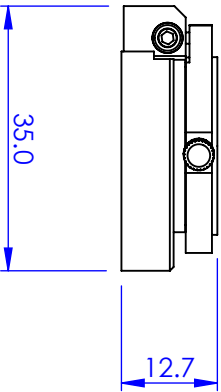
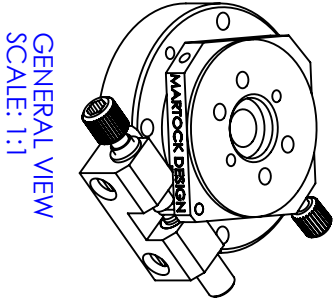
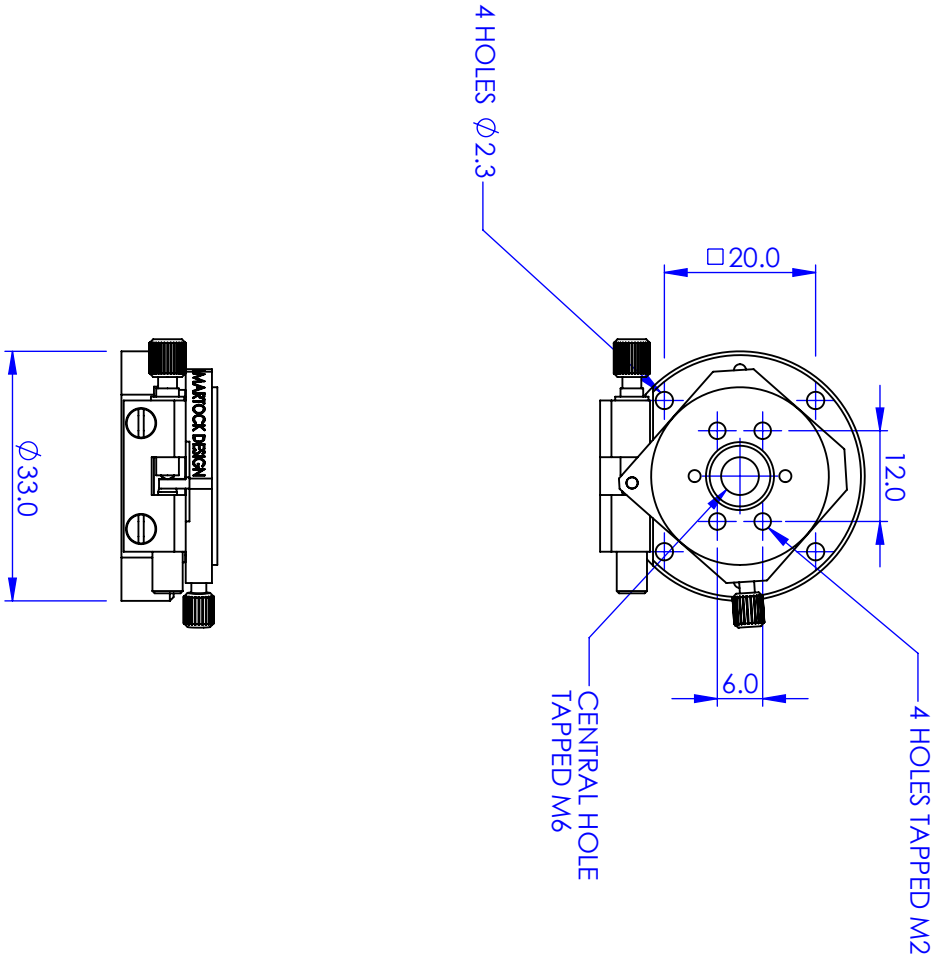


The MDE283 rotation stage offers superb resolution (5 arc seconds) in a very compact, low profile package.

Specifications

Construction	High precision lapped bearing
Rotation	360° free rotation with clamp screw
Fine adjustment	Tangent screw providing 10° range: 1 turn = 1° rotation of stage
Resolution	5 arc seconds
Thickness	13 mm
Standard bore tapped M6 with 8 mm Ø x 2 mm counterbore	

MDE283
COARSE ADJUST: FULL 360°
FINE ADJUST: ±5°
RESOLUTION: 5 ARC.SEC



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AUTHOR GW	02/06/2010
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MATERIAL	
FINISH ---	
DO NOT SCALE DRAWING	
TITLE ROTATION STAGE	
SIZE A4	DWG. NO. MDE283
SCALE: 1:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Manual Positioners: Rotation Stages

MDE283-8 Very Compact Precision Rotation Stage, 8 mm Bore



- Very compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Very smooth backlash-free motion
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range

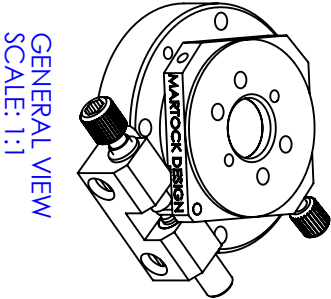
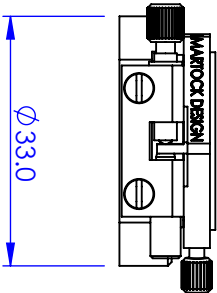
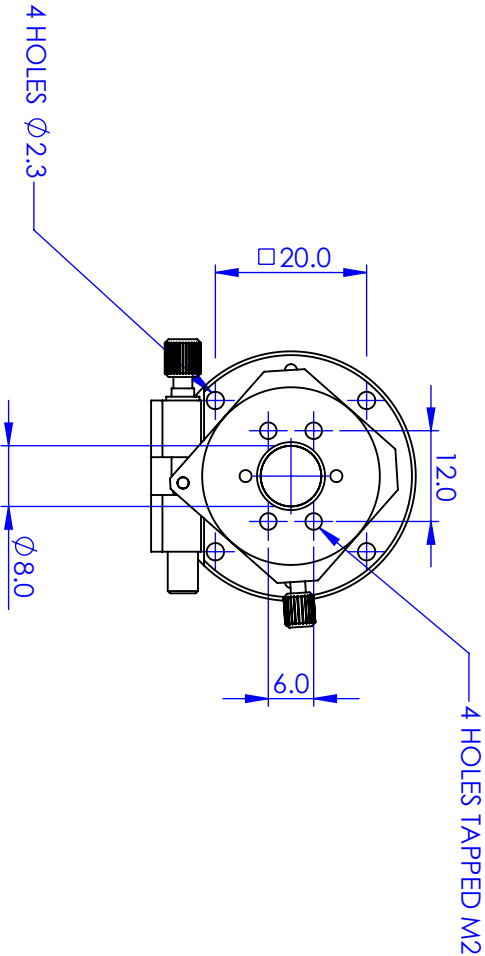
ELLIOT MARTOCK

The MDE283-8 rotation stage offers superb resolution (5 arc seconds) in a very compact, low profile package with an 8 mm bore.

Specifications

Construction	High precision lapped bearing
Rotation	360° free rotation with clamp screw
Fine adjustment	Tangent screw providing 10° range: 1 turn = 1° rotation of stage
Resolution	5 arc seconds
Thickness	13 mm
Bore	8 mm

MDE283-8
COARSE ADJUST: FULL 360°
FINE ADJUST: ±5°
RESOLUTION: 5 ARC.SEC



GENERAL VIEW
SCALE: 1:1

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AUTHOR	NAME	DATE	
CHECKED	GW	02/06/2010	
MATERIAL		FINISH	

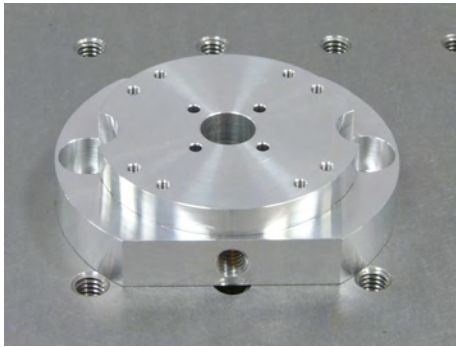
DO NOT SCALE DRAWING		SIZE A4	DWG. NO. MDE283-8
SCALE: 1:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

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ROTATION STAGE

Manual Positioners: Rotation Stages: Adaptors

MDE292 Compact Rotation Stage to Optical Table Adaptor

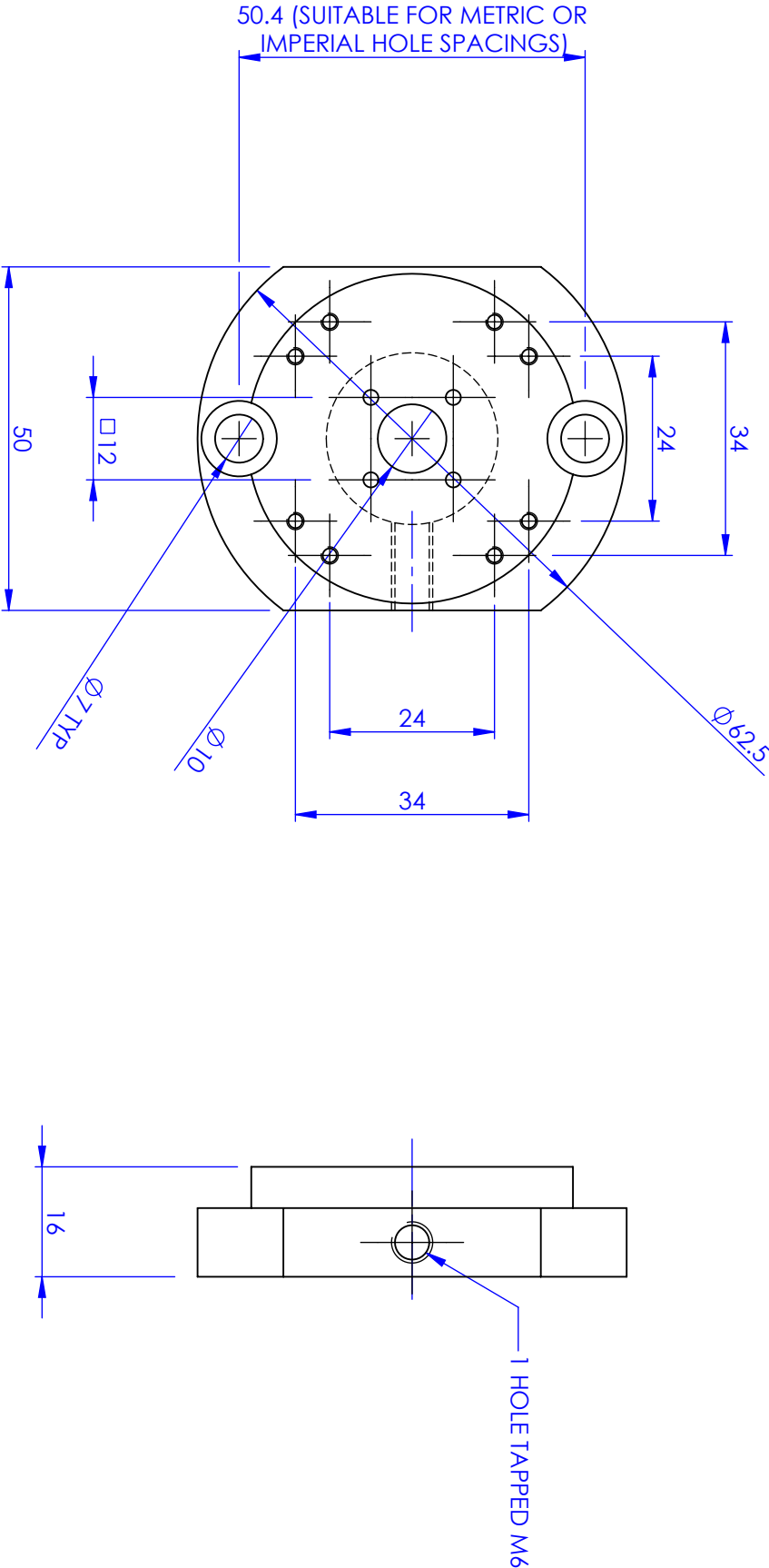


- Mounts stage onto optical table
- Alternative M6 hole for post mounting
- Adapts MDE255 and MDE282 series micropositioners to optical tables



The MDE292 Adaptor Plate allows the mounting of MDE282 compact rotation stages and the MDE255 series linear stages onto optical tables or M6 studded posts.

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MATERIAL		FINISH	
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THIRD ANGLE PROJECTION		SHEET 1 OF 1	

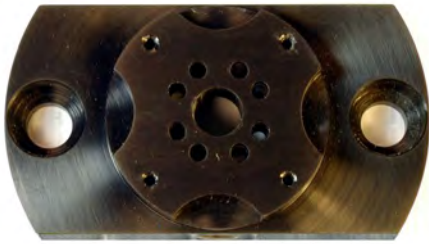


ADAPTOR PLATE

SIZE A4 DWG. NO. MDE292

Manual Positioners: Rotation Stages: Adaptors

MDE293 Very Compact Rotation Stage to Optical Table Adaptor



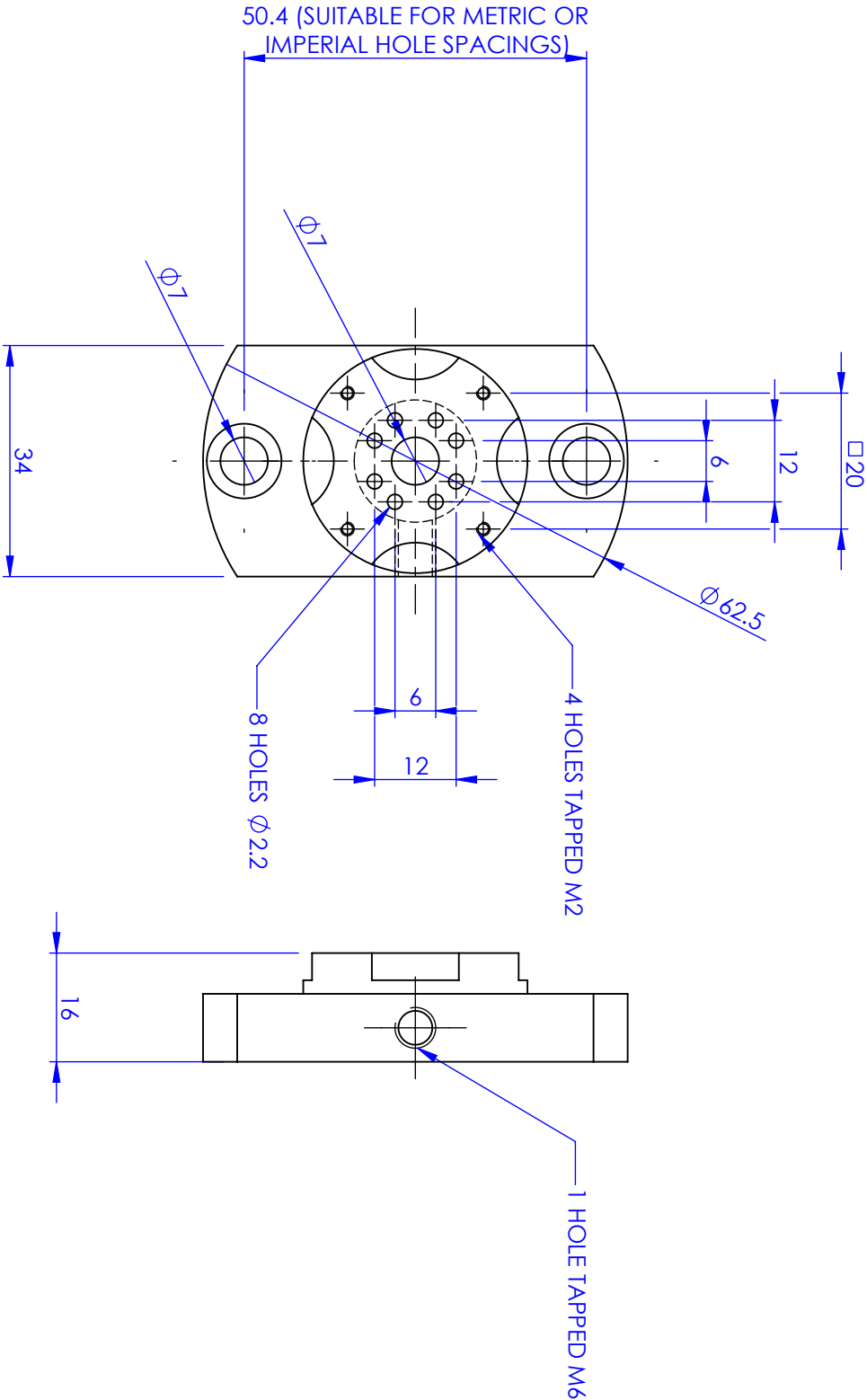
- Mounts stage onto optical table
- Alternative M6 hole for post mounting
- Adapts MDE260 series micropositioners to optical tables



The MDE293 Adaptor Plate allows the mounting of the MDE283 very compact rotation stage and the MDE26x Series linear stages onto optical tables or M6 studded posts.

For use with the MDE283 and MDE261, MDE262 and MDE263 Series of Stages

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AUTHOR	NAME	DATE	
CHECKED	GW	02/06/2010	
MATERIAL		FINISH	

DO NOT SCALE DRAWING		TITLE	
		ADAPTOR PLATE	
		SIZE A4 DWG. NO. MDE293	
		SCALE: 1:1 THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Rotation Stages: Adaptors

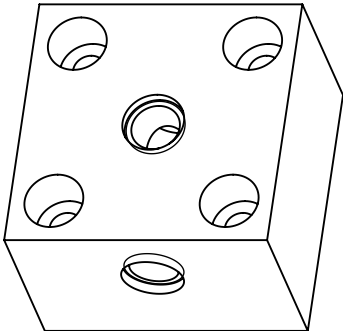
MDE856 Very Small Micropositioner Adaptor



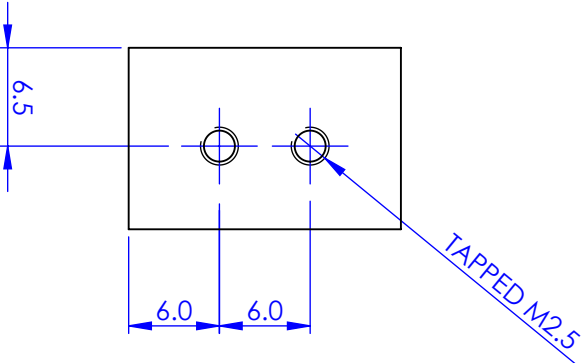
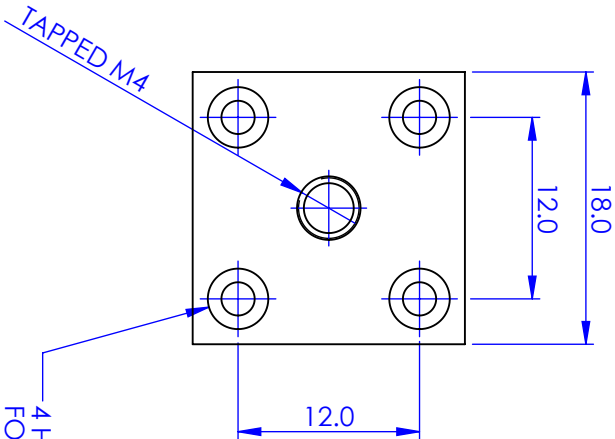
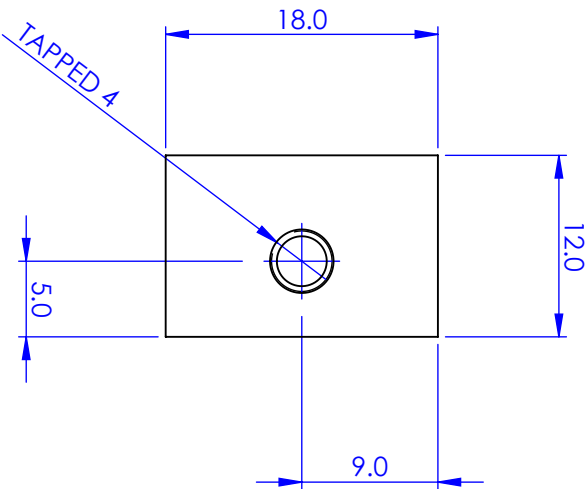
- Use with any MDE25x Series Micropositioner
- Allows mounting onto any post with M4 stud
- Facilitates vertical and horizontal mounting



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REV.	DESCRIPTION		



GENERAL VIEW
SCALE 2:1

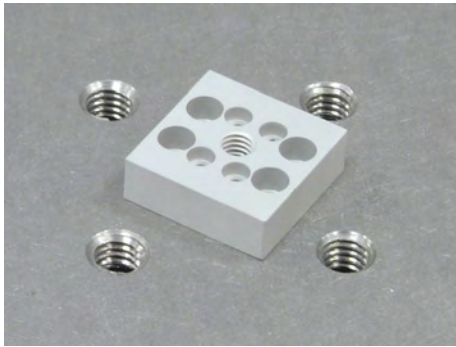


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AUTHOR	NAME	DATE	
CHECKED	GW	23/03/2010	
MATERIAL ALUMINIUM ALLOY		TITLE POST MOUNT ADAPTER	
FINISH ANODISED CLEAR		SIZE A4	DWG. NO. MDE856
DO NOT SCALE DRAWING		SCALE:2:1	THIRD ANGLE PROJECTION
			SHEET 1 OF 1



Manual Positioners: Rotation Stages: Adaptors

MDE857 MDE260 & MDE265 Adaptor

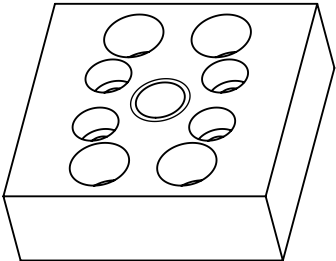


- Mount slide horizontal on post
- Mount MDE260 and MDE265 series to any M4 stud post
- Use with Elliot/Martock MDE260 and MDE265 series Ultra Small Micropositioners

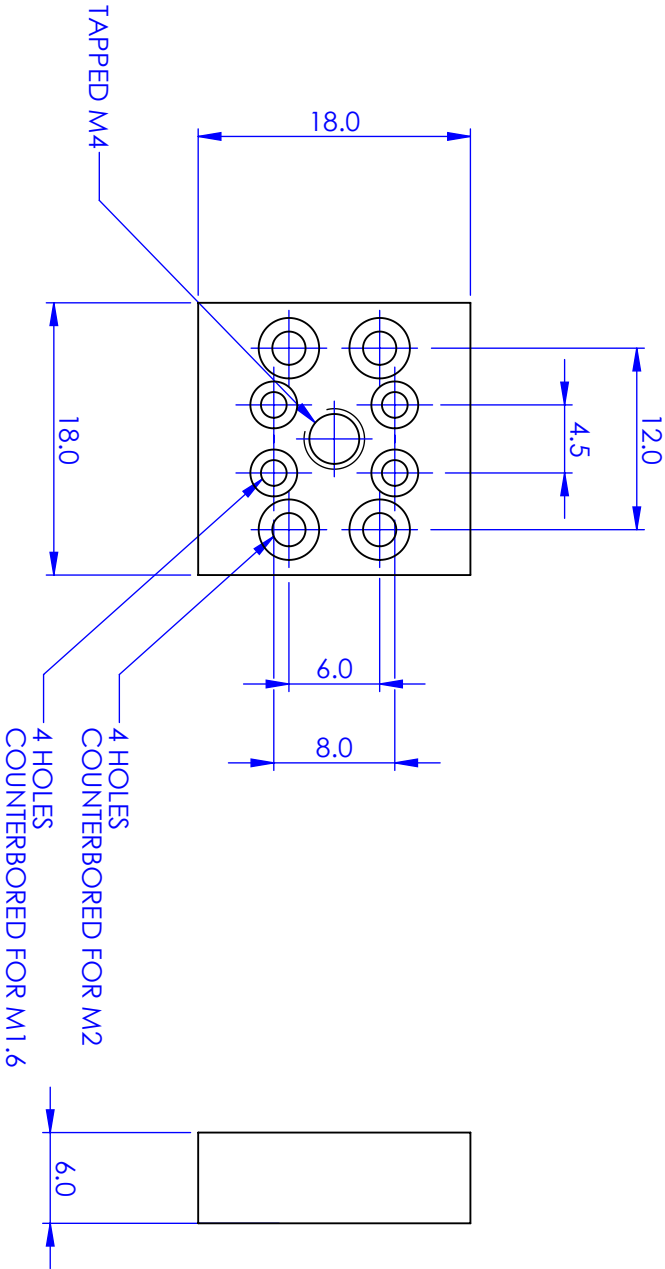


MDE857 adaptor fits MDE260 and MDE265 series slides.

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REV.	DESCRIPTION		



GENERAL VIEW
SCALE 2:1



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MATERIAL ALUMINIUM ALLOY		TITLE HORIZONTAL POST MOUNT	
FINISH ANODISED CLEAR		SIZE A4	
DO NOT SCALE DRAWING		DWG. NO. MDE857	
AUTHOR GW		DATE 23/03/2010	
CHECKED -		NAME -	
		SCALE: 2:1	
		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Rotation Stages: Adaptors

MDE858 MDE260 & MDE265 Adaptor

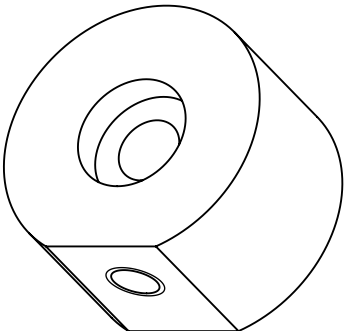


- Requires MDE857 adaptor
- Mount MDE260/MDE265 series micropositioners vertically or rotationally on an M4 stud

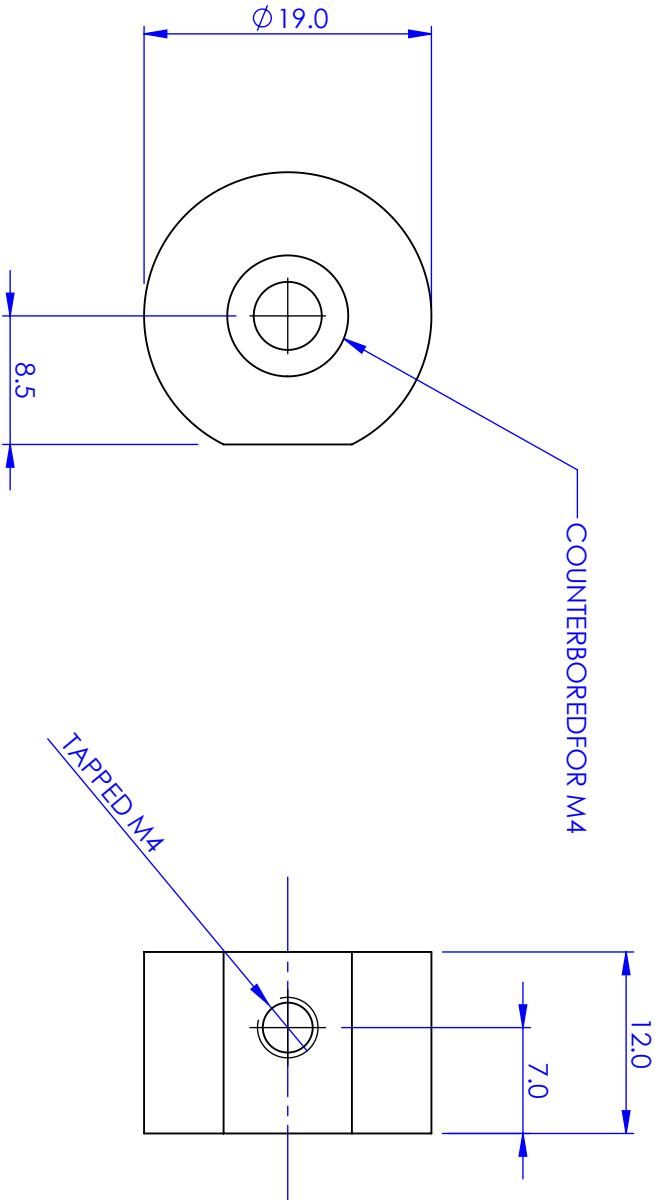


The MDE858 adaptor is used in conjunction with an MDE857 to allow vertical or rotational mounting of MDE260 and MDE265 series Ultra Small Micropositioners.

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REV.	DESCRIPTION		



GENERAL VIEW
SCALE 2:1



COUNTERBORED FOR M4

TAPPED M4

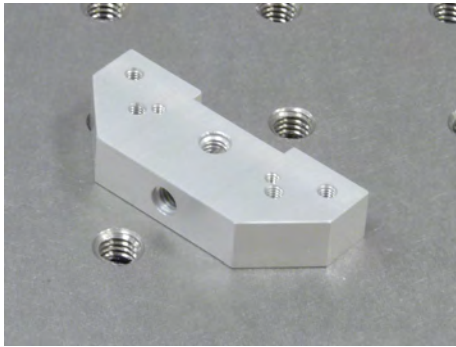
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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

NAME	DATE
AUTHOR GW	23/03/2010
CHECKED	
MATERIAL ALUMINIUM ALLOY	
FINISH ANODISED CLEAR	
DO NOT SCALE DRAWING	
TITLE ADAPTER MOUNT	
SIZE A4	DWG. NO. MDE858
SCALE 2:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Manual Positioners: Rotation Stages; Adaptors

MDE859 Rotation Stage to Post Mount Adaptor



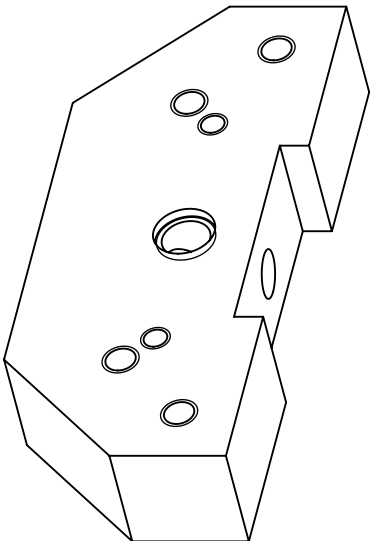
- Post mount stage onto any M4 stud post
- Designed for MDE282 & MDE283 rotation stages
- Allows mounting in vertical or horizontal plane



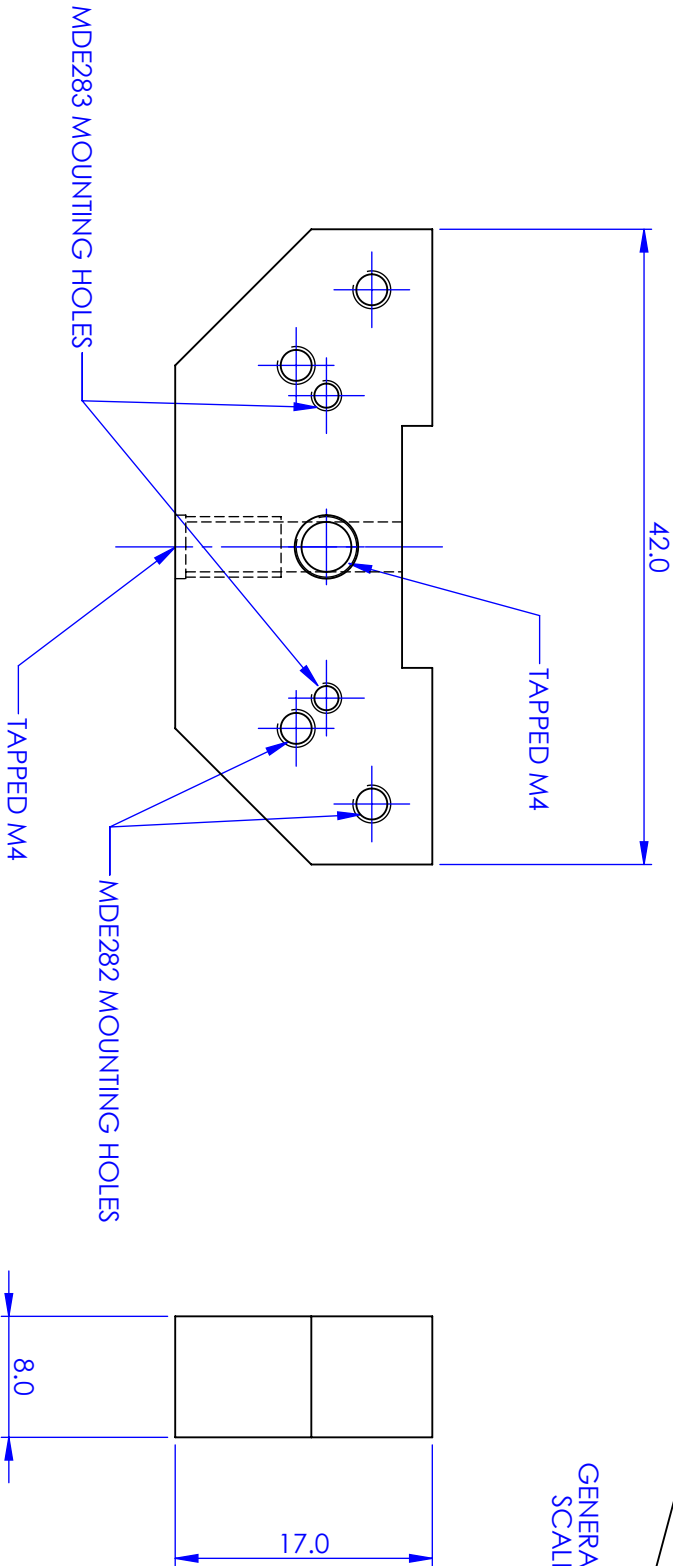
The MDE859 adaptor fits both MDE282 and MDE283 Rotation Stages allowing you to mount them onto a post via an M4 stud in the vertical or horizontal plane. The adaptor can also be used with FEMTO-BENCH™ accessories.

For use with MDE282 and MDE283 Series Stages.

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REV.	DESCRIPTION			

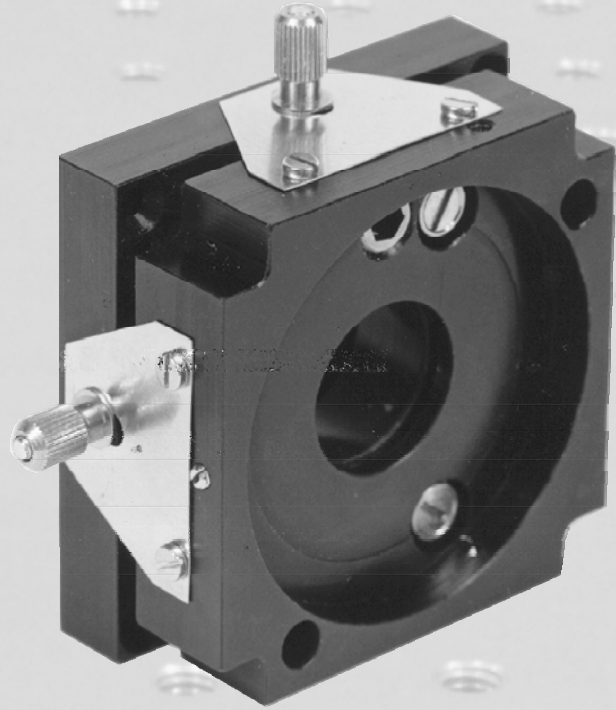


GENERAL VIEW
SCALE 2:1



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MATERIAL ALUMINIUM ALLOY			FINISH ANODISED CLEAR		
DO NOT SCALE DRAWING			TITLE ROTATION STAGE ADAPTER		
AUTHOR CHECKED			NAME DATE 23/03/2010		
SIZE A4			DWG. NO. MDE859		
SCALE: 2:1			THIRD ANGLE PROJECTION		
SHEET 1 OF 1					

Tilt Stages



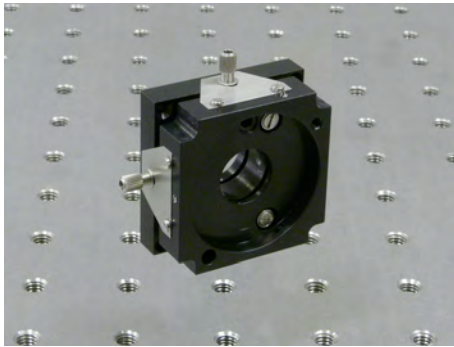
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2019



Manual Positioners: Tilt Stages

MDE270 High Precision Tilting Stage



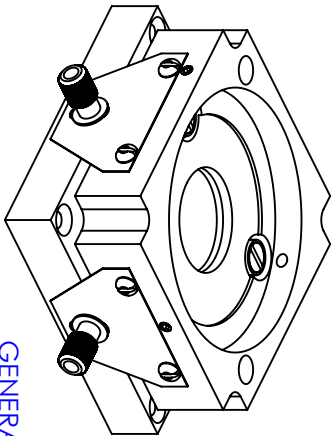
ELLIOT MARTOCK

- Clamps fitted to angular motions
- Range on each axis 3°
- Sensitivity 5 arc seconds
- Kinematic gimbal design: independent adjustment on two axes

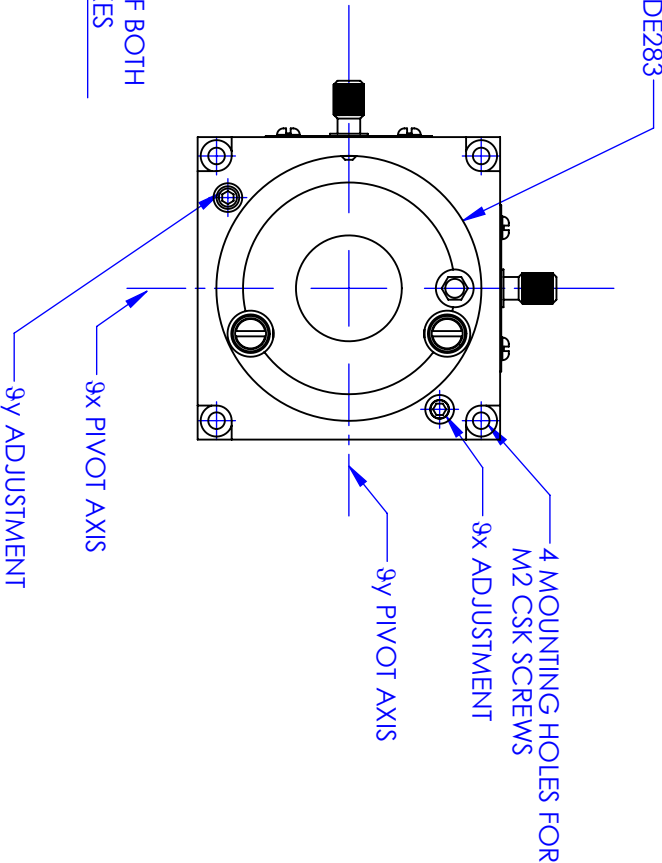
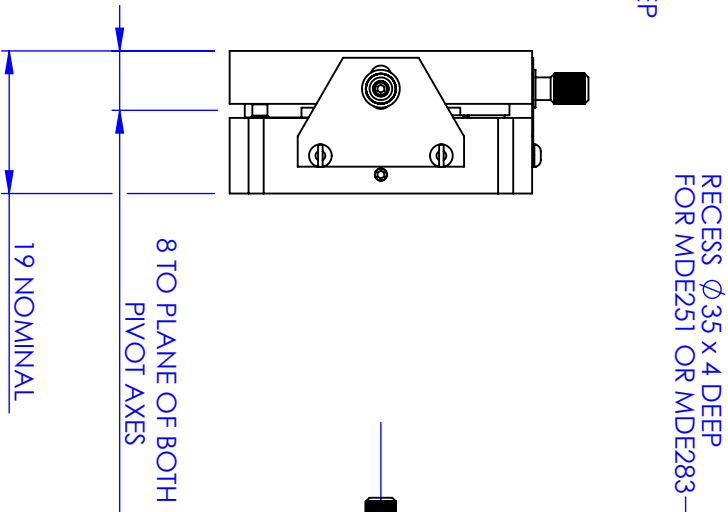
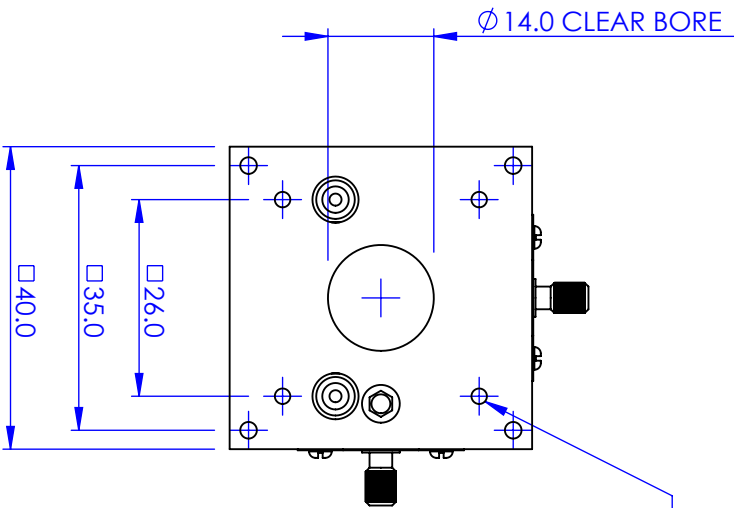
This high precision tilting stage provides angular adjustment to a range of Elliot Scientific linear micropositioners and rotation stages. Specifically for use with MDE251 or MDE251M micropositioners, it can also be used with the MDE283 rotation stage, and MDE255 or MDE260 series micropositioners using an appropriate adaptor plate.

Specifications

Range on each axis	3°
Sensitivity	5 arc seconds
Adjustment	Hex key
Mounting options	M2 clearance holes, M2.5 tapped holes & M4 post-mounting using adaptor (MDE274)
Clamps fitted to angular motions	



GENERAL VIEW
SCALE: 1:1



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REMOVED

NAME	DATE
AUTHOR GW	26/05/2010
CHECKED -	-
MATERIAL ALUM ALLOY, STAINLESS STEEL	
FINISH ---	
DO NOT SCALE DRAWING	
TITLE MDE270 PRECISION TILT STAGE	
SIZE A4	DWG. NO. MDE270
SCALE: 1:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

Manual Positioners: Tilt Stages: Adaptors

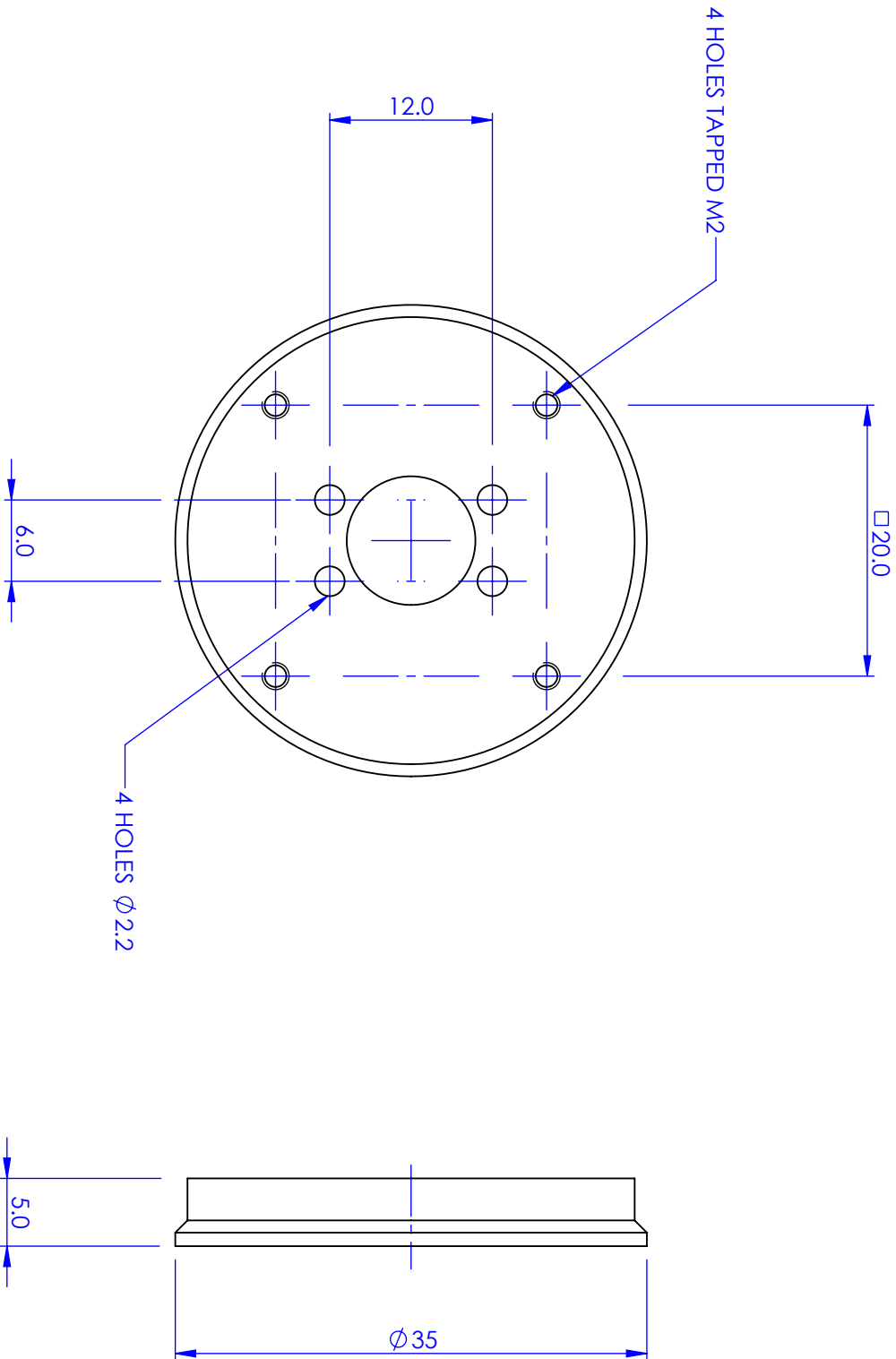
MDE273 MDE283/MDE26x to MDE270 Adaptor Plate



Adaptor plate that facilitates mounting of rotation stage MDE283 or linear micropositioner MDE26x series stages to the MDE270 tilt stage.

For use with MDE261, MDE262, MDE263 Series of stages and MDE270 and MDE283.

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



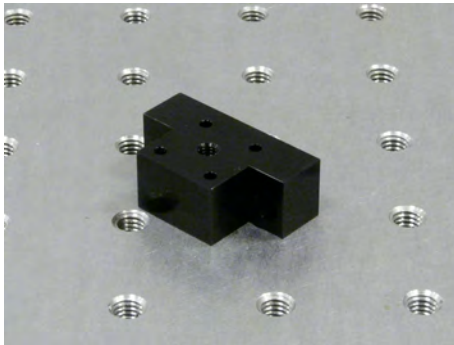
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AND CORNERS TO BE
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NAME		DATE	
AUTHOR	GW	27/05/2010	
CHECKED			
MATERIAL		ALUMINIUM ALLOY	
FINISH		---	
DO NOT SCALE DRAWING			
TITLE		ADAPTER PLATE	
SIZE		A4	
DWG. NO.		MDE273	
SCALE2:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Manual Positioners: Tilt Stages: Adaptors

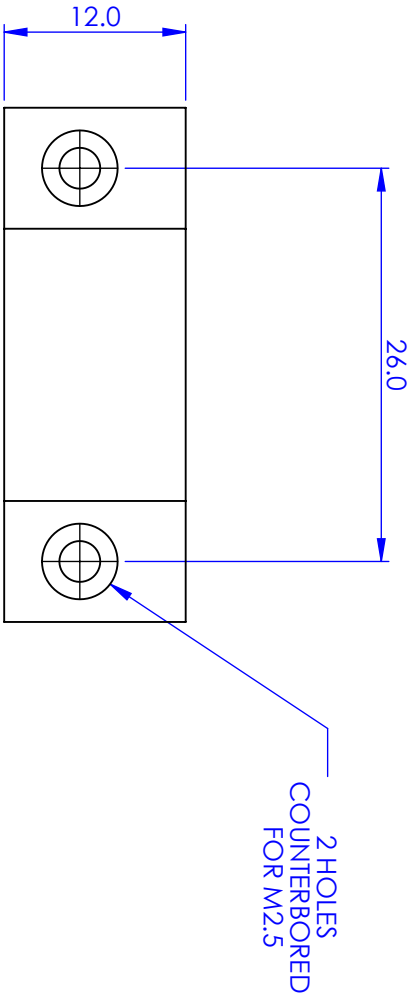
MDE274 MDE270 to MDE255 Adaptor



Adaptor block to allow tilt stage MDE270 to be mounted to single axis micropositioner MDE255. Also includes M4 tapped hole to accept mounting post.

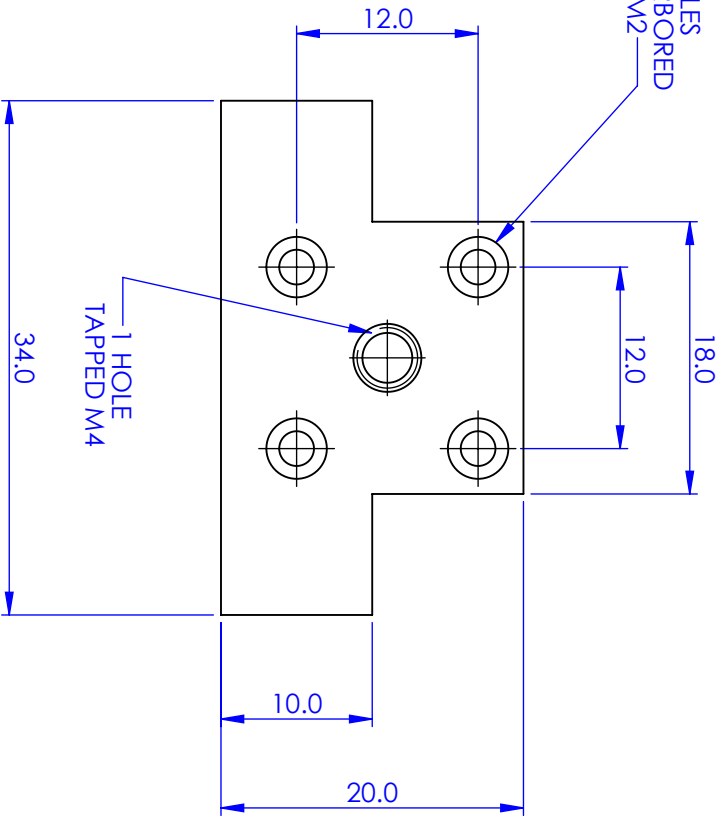
For use with MDE270.

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

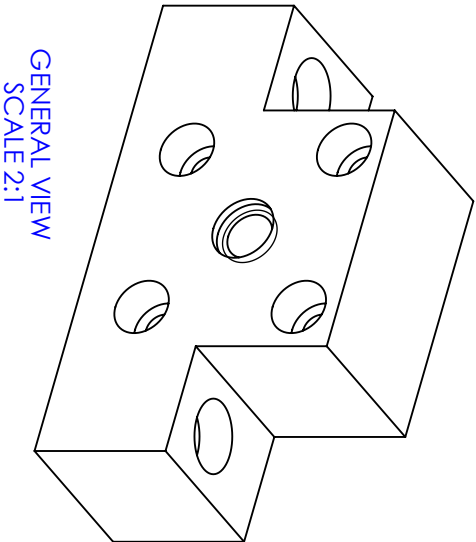


2 HOLES
COUNTERBORED
FOR M2.5

4 HOLES
COUNTERBORED
FOR M2



1 HOLE
TAPPED M4



GENERAL VIEW
SCALE 2:1

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AUTHOR	NAME	DATE	
CHECKED			
FINISH BLACK ANODISE	SCALE A4	TITLE ADAPTER BLOCK	SIZE DWG. NO. MDE274
DO NOT SCALE DRAWING	SCALE 2:1	THIRD ANGLE PROJECTION	SHEET 1 OF 1

Manual Positioners: Tilt Stages

MDE276 Four-Axis Micropositioner



ELLIOT MARTOCK

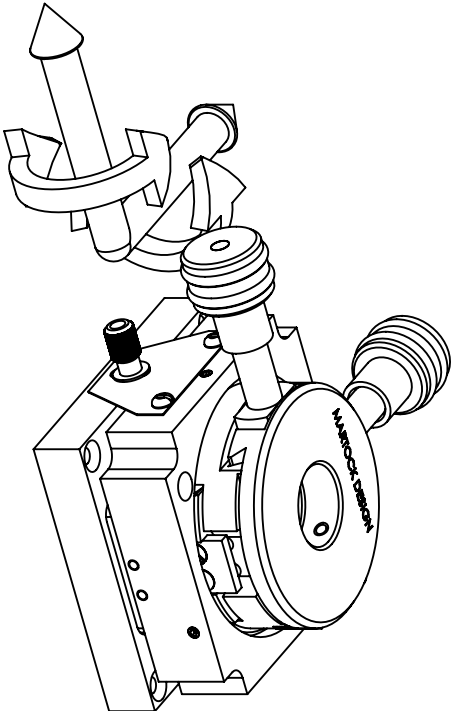
- Clamps fitted to angular motions
- Tilt range on each axis 3° - sensitivity 5 arc seconds
- Kinematic gimbal design: independent adjustment on two tilt axes
- X & Y Travel ± 1 mm
- Two independent dovetail slides
- Very smooth backlash-free motion
- No interaction between X and Y axes
- Fine thread 0.25 pitch adjusters
- Standard 11 mm \varnothing bore suits small laser diodes

A four-axis micropositioner comprising an MDE270 Precision Tilt Stage and MDE251 Precision XY Centring Micropositioner

Specifications

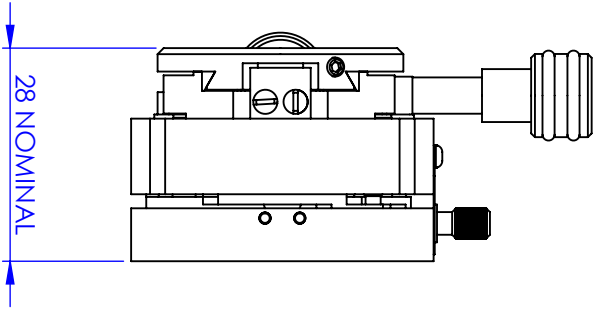
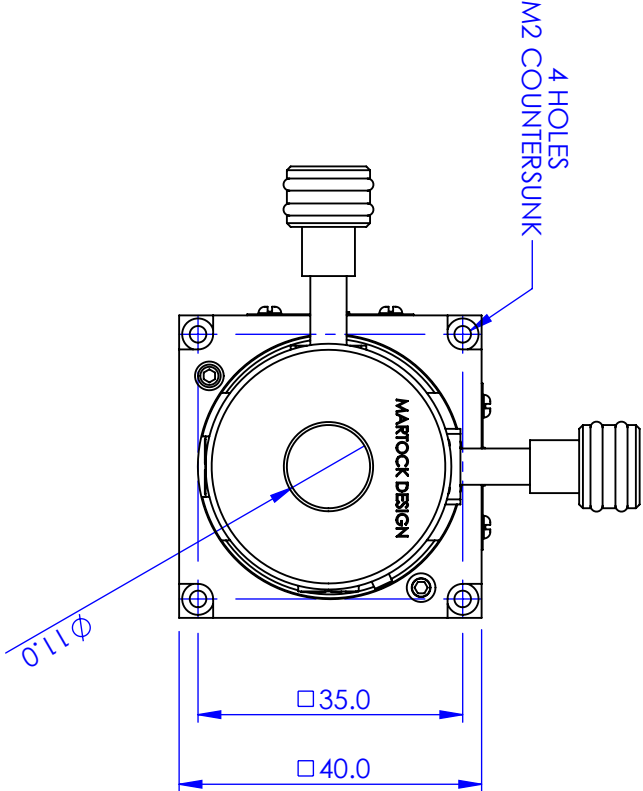
Tilt range on each axis	3°
Sensitivity	5 arc seconds
Adjustment	Hex key
Mounting options	M2 clearance holes, M2.5 tapped holes & M4 post-mounting (use adaptor MDE274)
Clamps fitted to angular motions	
Two independent dovetail slides combined	
Travel in X & Y	± 1 mm
Sensitivity	$< 0.5 \mu\text{m}$
Bore diameter	11 mm
Adjusters	0.25 pitch (x2)

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW SHOWING ROTATION
AND TRANSLATION AXES

3° ROTATION AXES
±1mm TRANSLATION AXES



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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR	NAME	DATE
CHECKED	GW	01/06/2010
MATERIAL		
FINISH		
DO NOT SCALE DRAWING		
TITLE		
4 AXIS MICROPOSITIONER		
SIZE	DWG. NO.	
A4	MDE276	
SCALE:1:1	THIRD ANGLE PROJECTION	SHEET 1 OF 1

Manual Positioners: Tilt Stages

MDE276M Four-Axis Micropositioner with Micrometers



ELLIOT MARTOCK

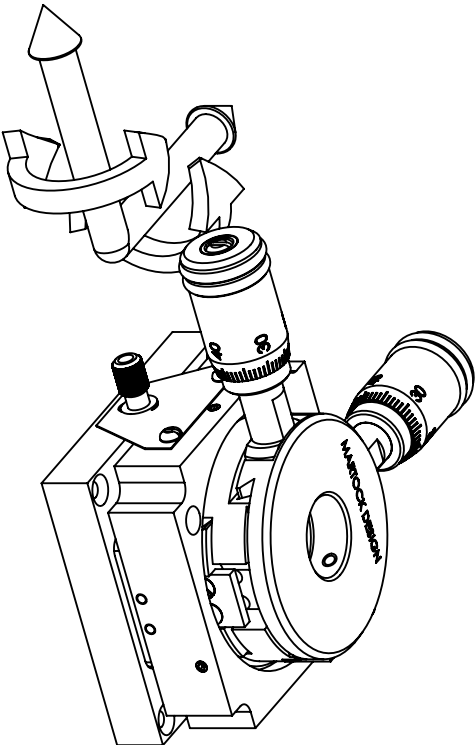
- Clamps fitted to angular motions
- Tilt range on each axis 3° - sensitivity 5 arc seconds
- Kinematic gimbal design: independent adjustment on two tilt axes
- X & Y Travel ± 1 mm
- Two independent dovetail slides
- Very smooth backlash-free motion
- No interaction between X and Y axes
- Micrometer scales read to 0.01 mm
- Standard 11 mm \varnothing bore suits small laser diodes

A four-axis micropositioner comprising an MDE270 Precision Tilt Stage and MDE251M Precision XY Centring Micropositioner

Specifications

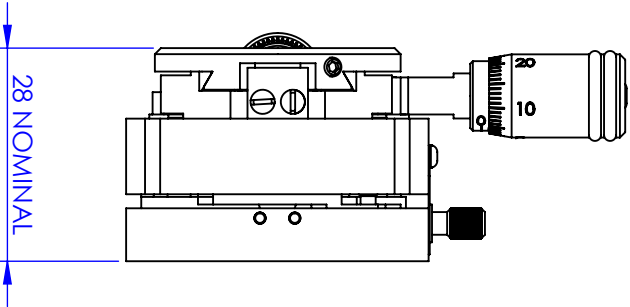
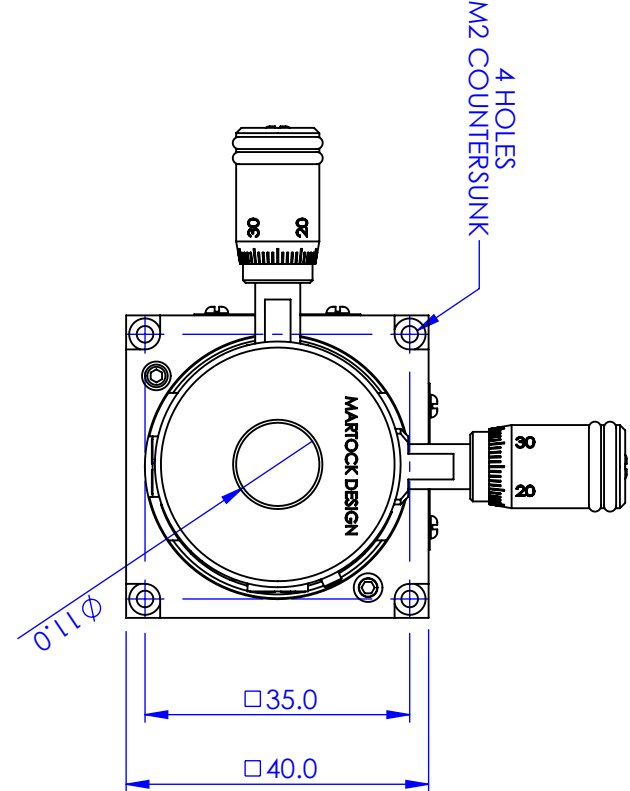
Tilt range on each axis	3°
Sensitivity	5 arc seconds
Adjustment	Hex key
Mounting options	M2 clearance holes, M2.5 tapped holes & M4 post-mounting (use adaptor MDE274)
Clamps fitted to angular motions	
Two independent dovetail slides combined	
Travel in X & Y	± 1 mm
Bore diameter	11 mm
Adjusters	Micrometer reading to 0.01 mm (x2)

REVISIONS		DATE	APPROVED
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GENERAL VIEW SHOWING ROTATION
AND TRANSLATION AXES

3° ROTATION AXES ±1mm TRANSLATION AXES



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REMOVED

AUTHOR	NAME	DATE
CHECKED	GW	01/06/2010
MATERIAL		
FINISH		
DO NOT SCALE DRAWING		
TITLE		
4 AXIS MICROPOSITIONER		
SIZE		
A4		
DWG. NO.		
MDE276M		
SCALE: 1:1		
THIRD ANGLE PROJECTION		
SHEET 1 OF 1		

Manual Positioners: Tilt Stages

MDE277 Five-Axis Micropositioner



ELLIOT MARTOCK

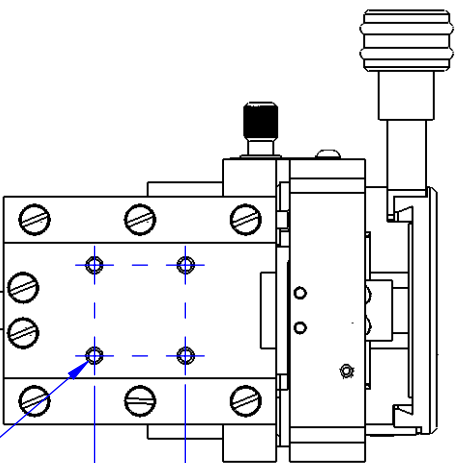
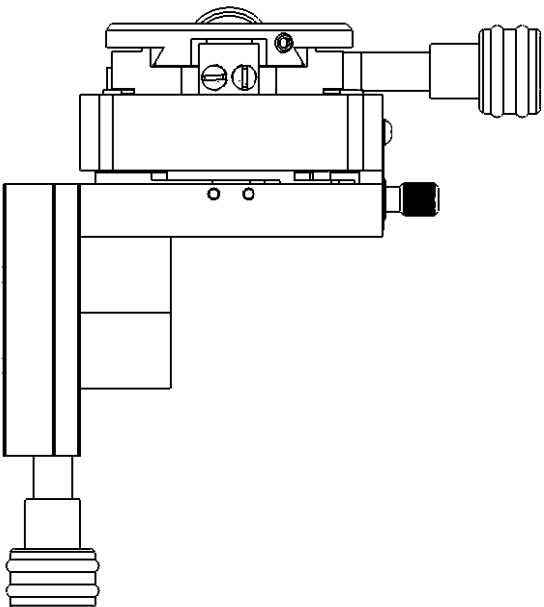
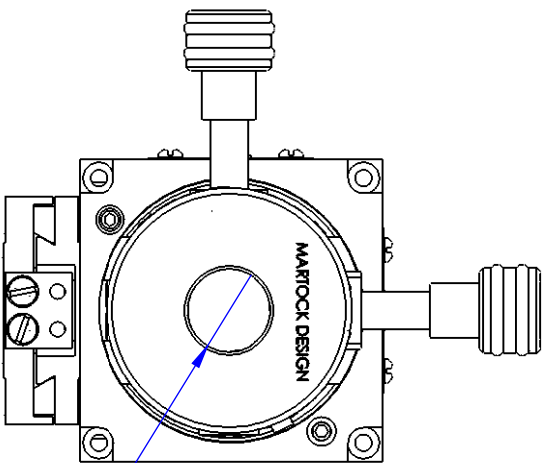
- Kinematic gimbal design: independent adjustment on two tilt axes
- Tilt range on each axis 3° with sensitivity of 5 arc seconds
- Clamps fitted to angular motions
- Centring is by two independent dovetail
- Travel: ± 1 mm with very smooth backlash-free motion
- No interaction between X and Y axes
- Fine thread 0.25 pitch adjusters
- Standard 11 mm \varnothing bore suits small laser diodes
- Positioner is a small dovetail slide (stainless steel body)

A five-axis micropositioner comprising an MDE270 Precision Tilt Stage, MDE251 Precision XY Centring Micropositioner, MDE274 Adaptor Block and MDE255 Single Axis Micropositioner.

Specifications

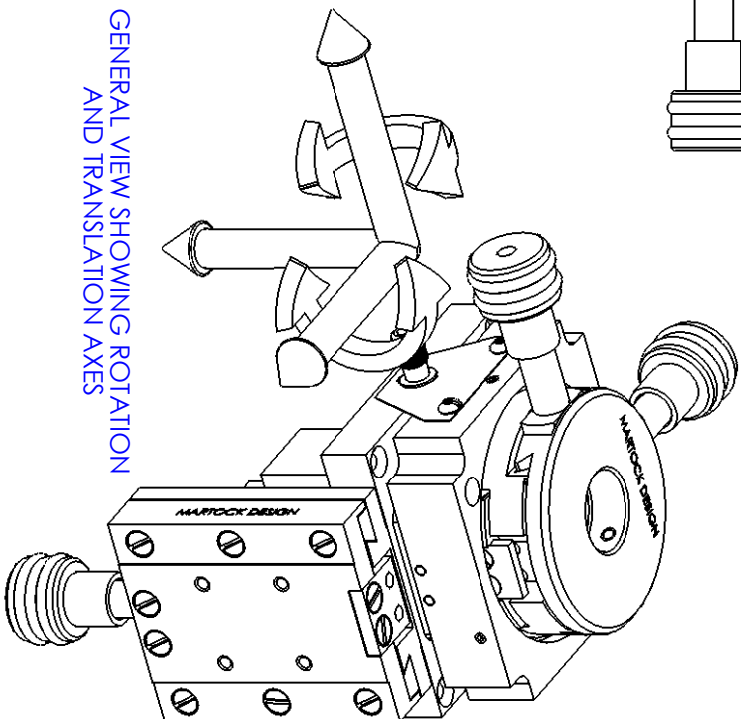
Tilt range on each axis	3°
Sensitivity	5 arc seconds
Adjustment	Hex key
Mounting options	M2 clearance holes, M2.5 tapped holes & M4 post-mounting (using adaptor MDE274)
MDE251 Specifications	Two independent dovetail slides combined
Travel in X & Y	± 1 mm
Bore diameter	11 mm
Adjusters	Fine thread 0.25 pitch adjusters
MDE255 Specifications	Dovetail slide with fine thread 0.25 pitch adjuster
Travel	10 mm

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REV.	DESCRIPTION			



4 HOLES TAPPED M2

3° ROTATION AXES
±1mm X&Y TRANSLATION,
±5mm Z TRANSLATION



GENERAL VIEW SHOWING ROTATION
AND TRANSLATION AXES

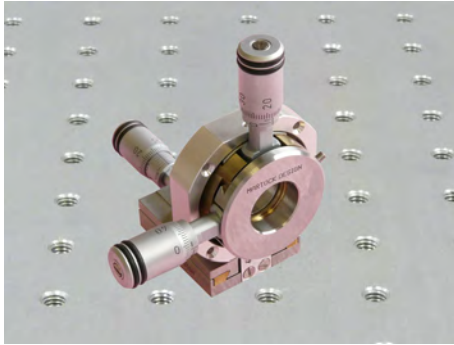
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AUTHOR	NAME	DATE
CHECKED	GW	01/06/2010
MATERIAL		
FINISH		
DO NOT SCALE DRAWING		
TITLE		
5 AXIS MICROPOSITIONER		
SIZE	DWG. NO.	
A4	MDE277	
SCALE:1:1	THIRD ANGLE PROJECTION	SHEET 1 OF 1

Manual Positioners: Tilt Stages

MDE277M Five-Axis Micropositioner with Micrometers



ELLIOT MARTOCK

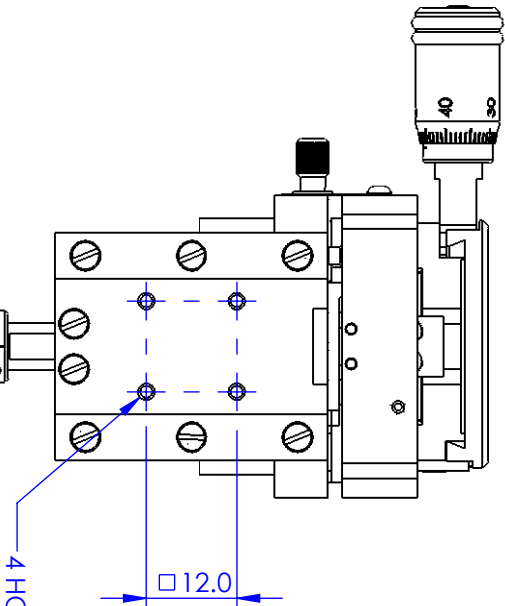
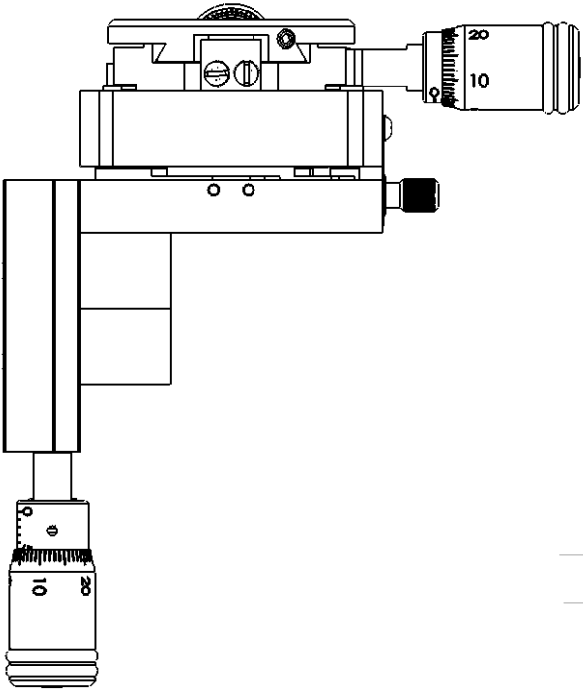
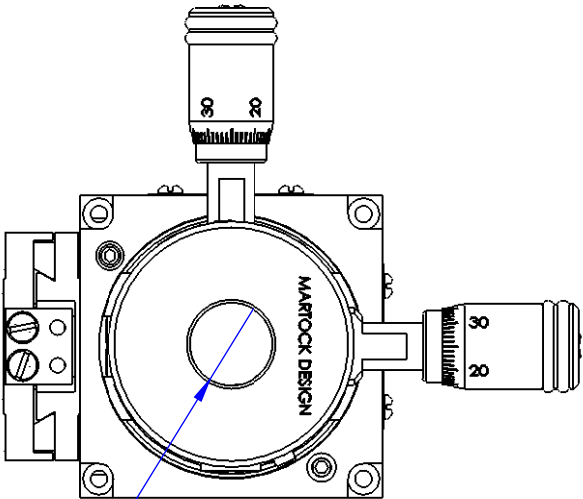
- Kinematic gimbal design: independent adjustment on two tilt axes
- Tilt range on each axis 3° with sensitivity of 5 arc seconds
- Clamps fitted to angular motions
- Centring is by two independent dovetail
- Travel: ± 1 mm with very smooth backlash-free motion
- No interaction between X and Y axes
- Micrometer scales read to 0.01 mm
- Standard 11 mm \varnothing bore suits small laser diodes
- Positioner is a small dovetail slide (stainless steel body)

A five-axis micropositioner comprising an MDE270 Precision Tilt Stage, MDE251 Precision XY Centring Micropositioner, MDE274 Adaptor Block and MDE255M Single Axis Micropositioner.

Specifications

Tilt range on each axis	3°
Sensitivity	5 arc seconds
Adjustment	Hex key
Mounting options	M2 clearance holes, M2.5 tapped holes & M4 post-mounting (using adaptor MDE274)
MDE251M Specifications	Two independent dovetail slides combined
Travel in X & Y	± 1 mm
Bore diameter	11 mm
Adjusters	Micrometer reading to 0.01 mm x2
MDE255M Specifications	Dovetail slide with micrometer reading to 0.01 mm
Travel	10 mm

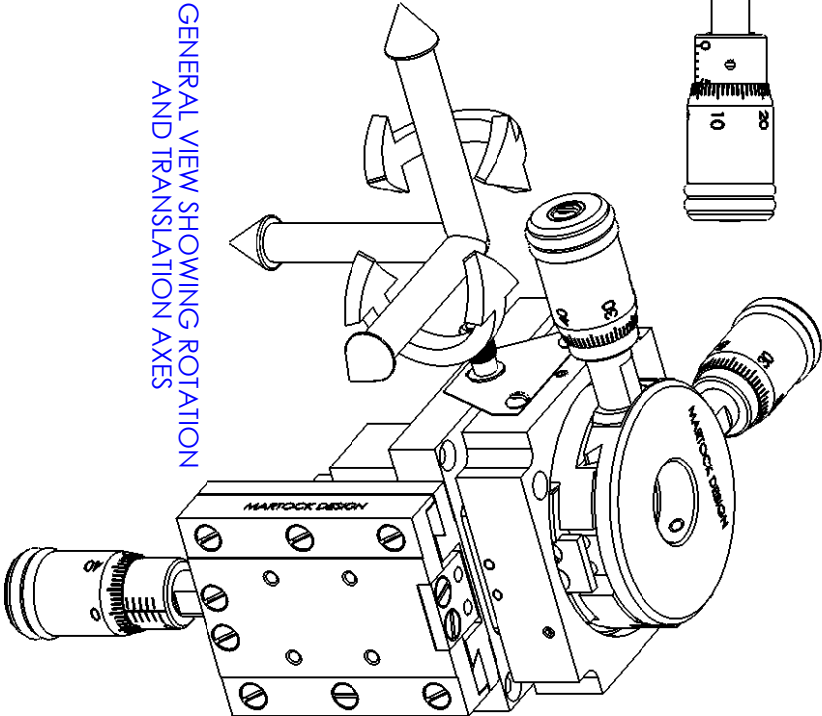
REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



4 HOLES TAPPED M2

3° ROTATION AXES
±1mm X&Y TRANSLATION,
±5mm Z TRANSLATION

GENERAL VIEW SHOWING ROTATION
AND TRANSLATION AXES



Elliott Scientific

TITLE

5 AXIS MICROPOSITIONER

SIZE A4 DWG. NO. MDE277M

NAME	DATE
AUTHOR GW	01/06/2010
CHECKED	

MATERIAL

FINISH

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SURFACE FINISH:
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REMOVED

DO NOT SCALE DRAWING

SCALE: 1:1

THIRD ANGLE PROJECTION

SHEET 1 OF 1

Centring Lens Mounts



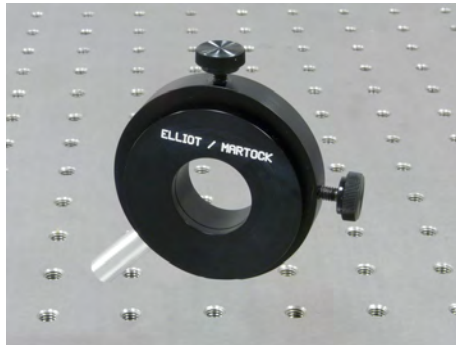
ELLIOT | MARTOCK

2019



Manual Positioners: Centring Lens Mounts

MDE870 1" (25 mm) Centring Lens Mount



ELLIOT MARTOCK

- Mounts 1" or 25 mm lens
- Travel in X & Y ± 2.5 mm
- Convenient sleeve clamping of optic
- Accepts a range of optic thicknesses

Part of a range of economical, post mountable lens holders with X and Y adjustment for lens centring applications and general laboratory use.

Specifications

Optic size	25 mm / 1.0 inch
Adjusters	Drive screws with knurled knob
Travel	± 2.5 mm in X & Y
Mounting hole	M4 threaded hole

Options and Accessories

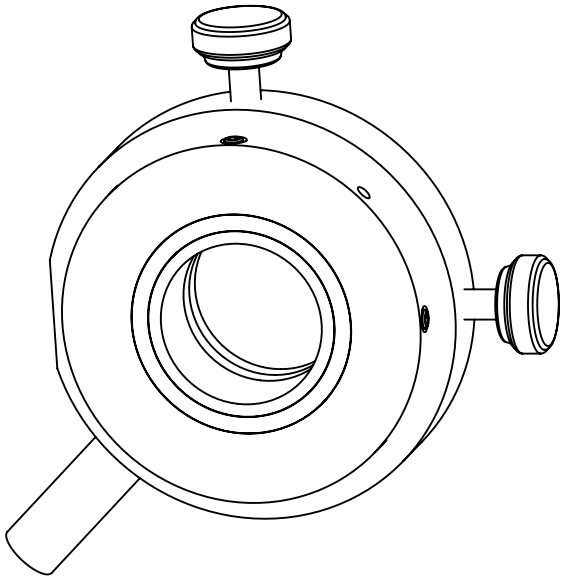
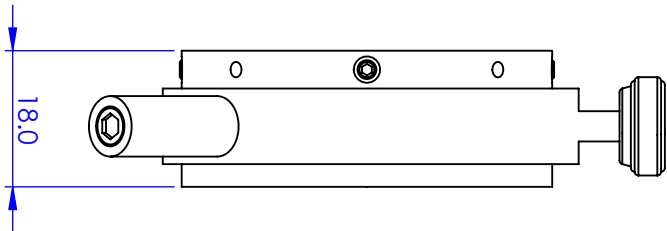
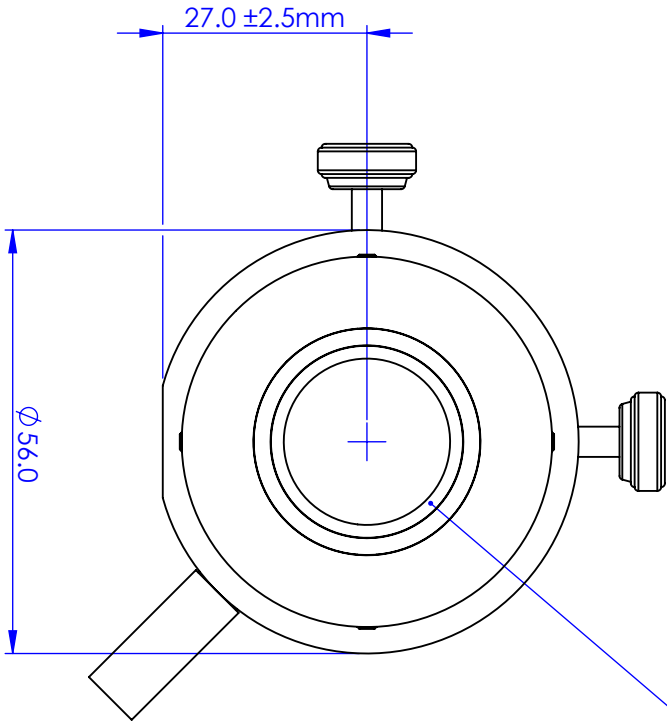
MDE874 RMS 0.800-36 threaded insert to accept microscope objectives

Posts

Post holders

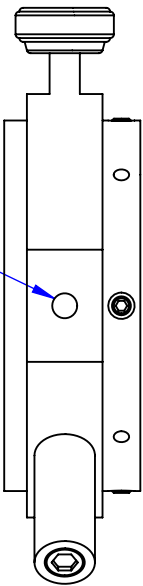
REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			

OPTIC RETAINING SLEEVE.
HOLDS 1" OPTICS UP
TO 11mm THICK



GENERAL VIEW
SCALE 1:1

±2.5mm TRAVEL IN X AND Y



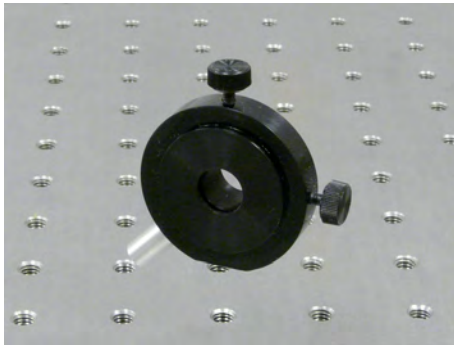
TAPPED M4 MOUNTING HOLE

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AUTHOR	NAME	DATE	FINISH		TITLE		
CHECKED	GW	10/02/2009	MATERIAL		LENS CENTRING MOUNT		
DO NOT SCALE DRAWING				SIZE A4	DWG. NO. MDE870	SCALE 1:1	

Eliot Scientific

Manual Positioners: Centring Lens Mounts

MDE871 ½" (12.5 mm) Centring Lens Mount



ELLIOT MARTOCK

- Mounts ½" or 12.5 mm lens
- Travel in X & Y ± 2.5 mm
- Convenient sleeve clamping of optic
- Accepts a range of optic thicknesses

Part of a range of economical, post mountable lens holders with X and Y adjustment for lens centring applications and general laboratory use.

Specifications

Optic size	12.5 mm / ½ inch
Adjusters	Drive screws with knurled knob
Travel	± 2.5 mm in X & Y
Mounting hole	M4 threaded hole

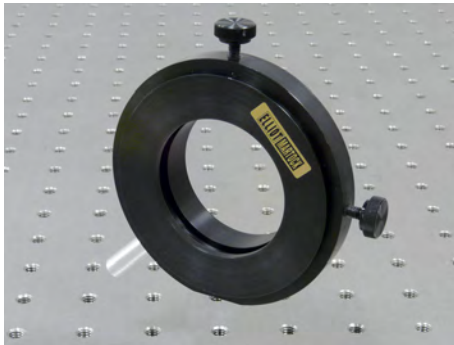
Options and Accessories

Posts
Post holders



Manual Positioners: Centring Lens Mounts

MDE872 2" (50 mm) Centring Lens Mount



ELLIOT MARTOCK

- Mounts 2" or 50 mm lens
- Travel in X & Y ± 2.5 mm
- Convenient sleeve clamping of optic
- Accepts a range of optic thicknesses
- 2.035" - 40 thread on rear for mounting lens tubes

Part of a range of economical, post mountable lens holders with X and Y adjustment for lens centring applications and general laboratory use.

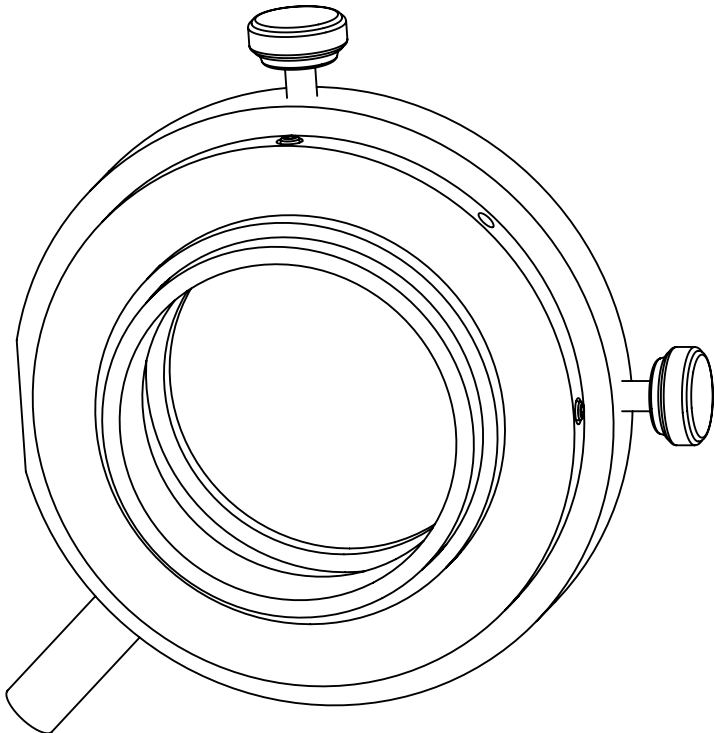
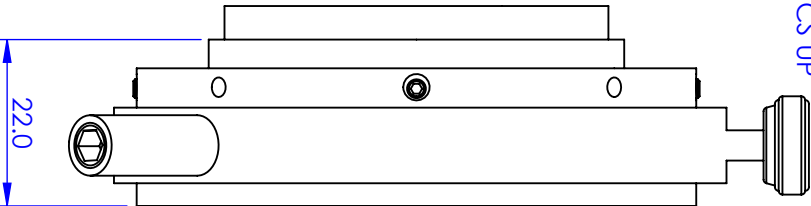
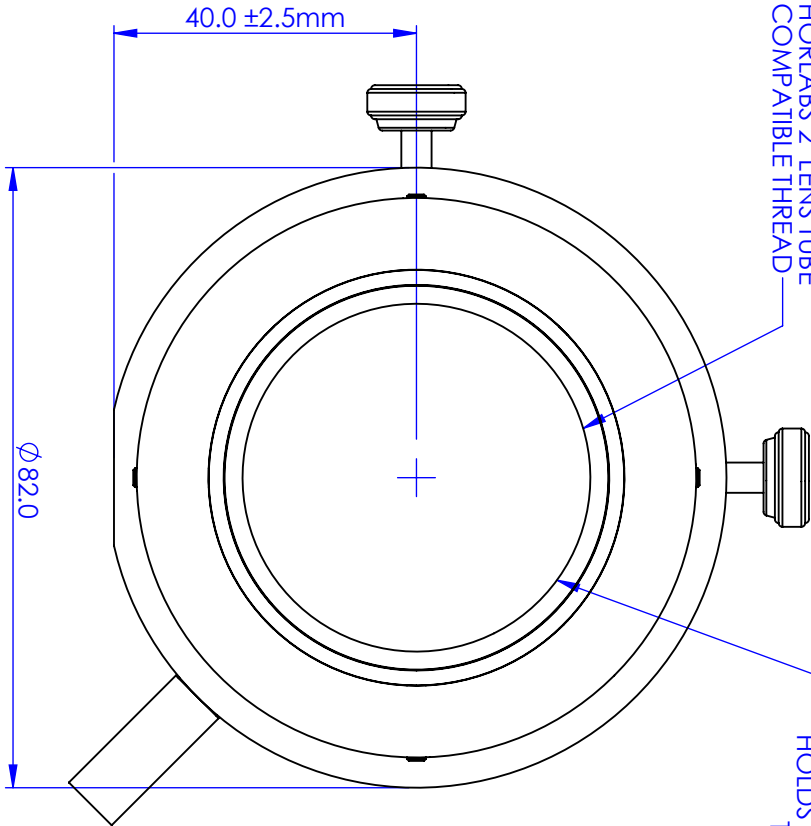
Specifications

Optic size	50 mm / 2.0 inch
Adjusters	Drive screws with knurled knob
Travel	± 2.5 mm in X & Y
Mounting hole	M4 threaded hole

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		

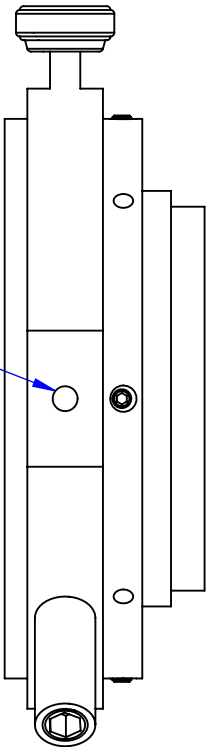
REMOVE SLEEVE TO REVEAL
THORLABS 2" LENS TUBE
COMPATIBLE THREAD

OPTIC RETAINING SLEEVE.
HOLDS 2" or 50mm OPTICS UP
TO 1mm THICK



GENERAL VIEW
SCALE 1:1

±2.5mm TRAVEL IN X AND Y



M4 TAPPED MOUNTING HOLE

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AUTHOR	NAME	DATE	FINISH	MATERIAL	TITLE	SIZE	DWG. NO.
CHECKED	-	10/07/2009	---	---	2" LENS CENTRING MOUNT	A4	MDE872
DO NOT SCALE DRAWING				THIRD ANGLE PROJECTION			
SHEET 1 OF 1				SHEET 1 OF 1			

Adjusters



ELLIOT | MARTOCK

2019



Micrometers, Adjusters, Piezos & Inertial Drives: Miniature Adjusters

MDE208 Simple Adjuster with 5 mm travel



ELLIOT MARTOCK

- 5 mm travel
- Extremely compact
- Very smooth operation
- Very fine thread - 0.25 mm pitch
- Designed specifically for micropositioning applications
- Positioning to 0.5 μm using a hex key via integral hole
- Long life stainless steel spindle with hard steel ball tip & nickel silver nut

This miniature adjuster is used in the MDE260 series micropositioners. It incorporates a 4 mm diameter mounting spigot. A knurled knob facilitates simple adjustment or an optional hex driver can be used when greater sensitivity is required.

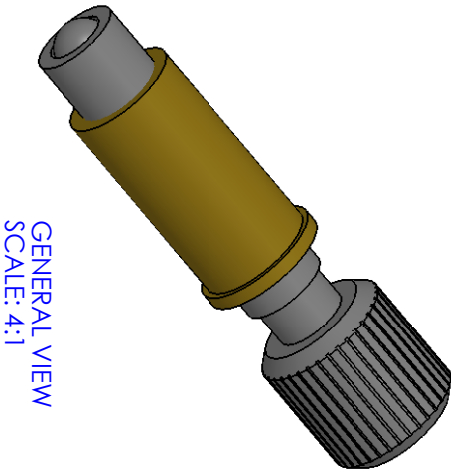
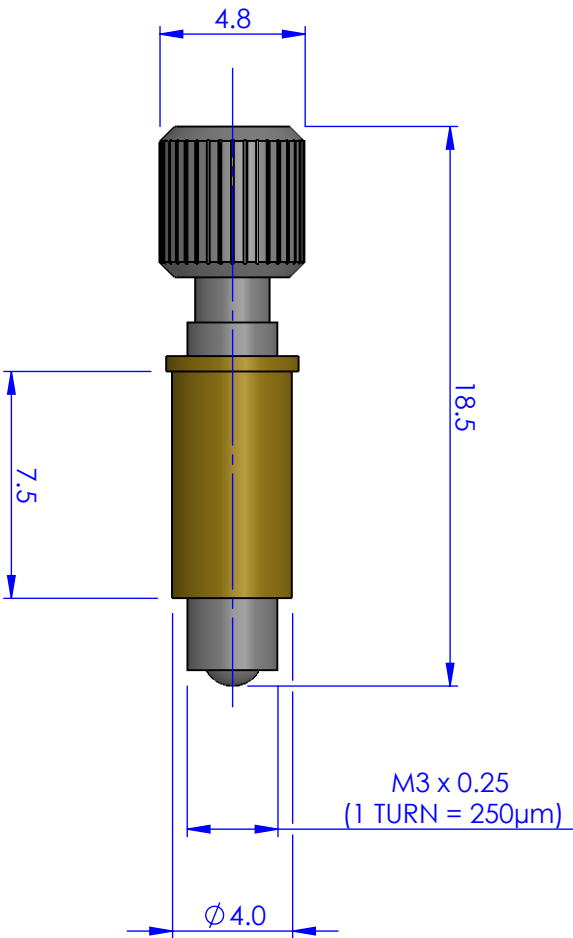
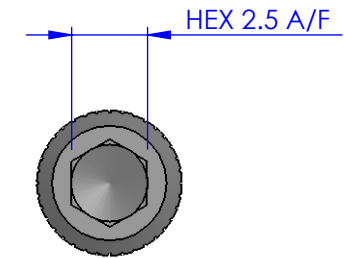
Specifications

Travel	0 ~ 5 mm
Thread	0.25 mm pitch
Sensitivity	0.5 μm

Options

Long travel version - 10 mm

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			




GENERAL VIEW
SCALE: 4:1

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AND CORNERS TO BE
REMOVED

AUTHOR		NAME		DATE	
CHECKED		GW		02/06/2010	
MATERIAL					
FINISH					
DO NOT SCALE DRAWING					

					
TITLE					
MDE208 ADJUSTER					
SIZE		DWG. NO.		MDE208	
A4					
SCALE:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Micrometers, Adjusters, Piezos & Inertial Drives: Miniature Adjusters

MDE213 Simple Adjuster with 3 mm travel



- 3 mm travel
- Ultra-miniature
- Very smooth operation
- Very fine thread - 0.25 mm pitch
- Designed specifically for micropositioning applications
- Positioning to 0.5 μm using the supplied 1.27 AF Ball Drive key
- Long life stainless steel spindle with hard steel ball tip & nickel silver nut

ELLIOT MARTOCK

This miniature adjuster is used in the MDE265 series micropositioners. It incorporates a 3 mm diameter mounting spigot. A ball drive key is supplied to effect adjustments.

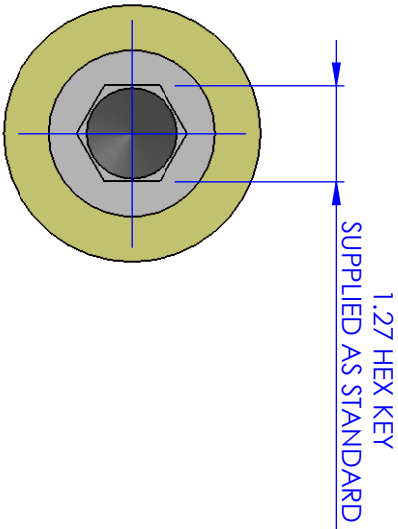
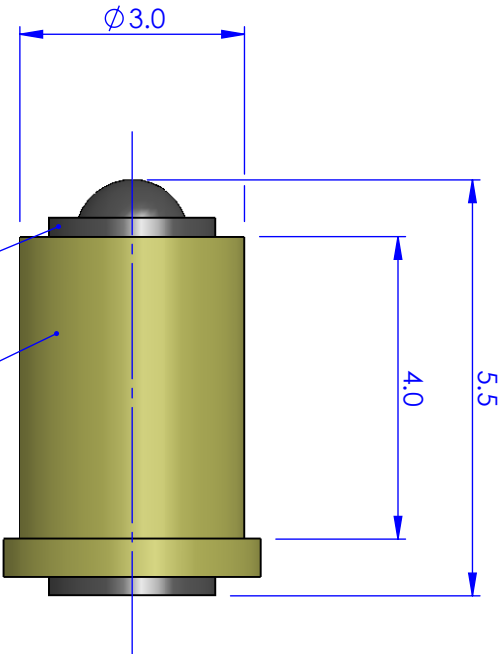
Specifications

Travel	0 ~ 5 mm
Thread	0.25 mm pitch
Sensitivity	0.5 μm

Options

Long travel version

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	23/04/2008
MATERIAL		---	---
FINISH			

DO NOT SCALE DRAWING			
TITLE			
M2.2 ADJUSTER			
SIZE		DWG. NO.	
A4		MDE213	
SCALE: 1:1	THIRD ANGLE PROJECTION		SHEET 1 OF 1

Micrometers, Adjusters, Piezos & Inertial Drives: Miniature Adjusters

MDE214 Simple Adjuster with 10 mm travel



- 10 mm travel
- Compact design
- Very smooth operation
- Positioning to 0.5 μm
- Very fine thread - 0.25 mm pitch
- Designed specifically for micropositioning applications
- Long life stainless steel spindle with hard steel ball tip & nickel silver nut



This miniature adjuster is used in the MDE255 and MDE260 series micropositioners. It incorporates a side mounting bar and a knurled knob facilitates simple adjustment.

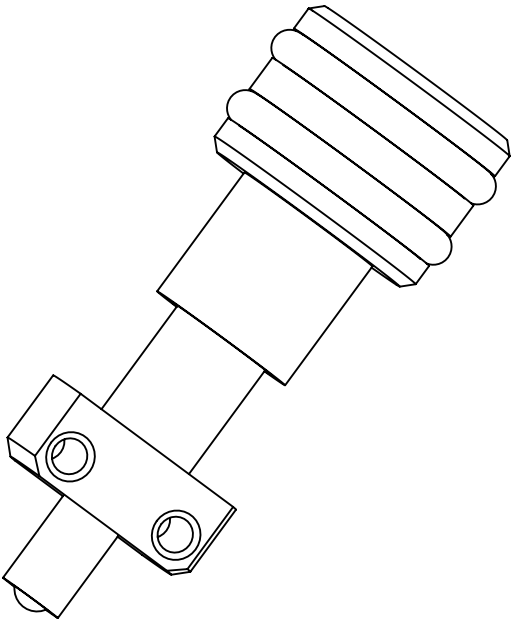
Specifications

Travel	0 ~ 10 mm
Thread	0.25 mm pitch
Sensitivity	0.5 μm

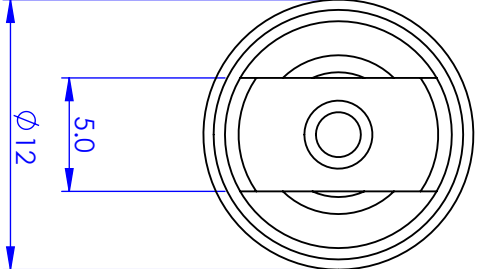
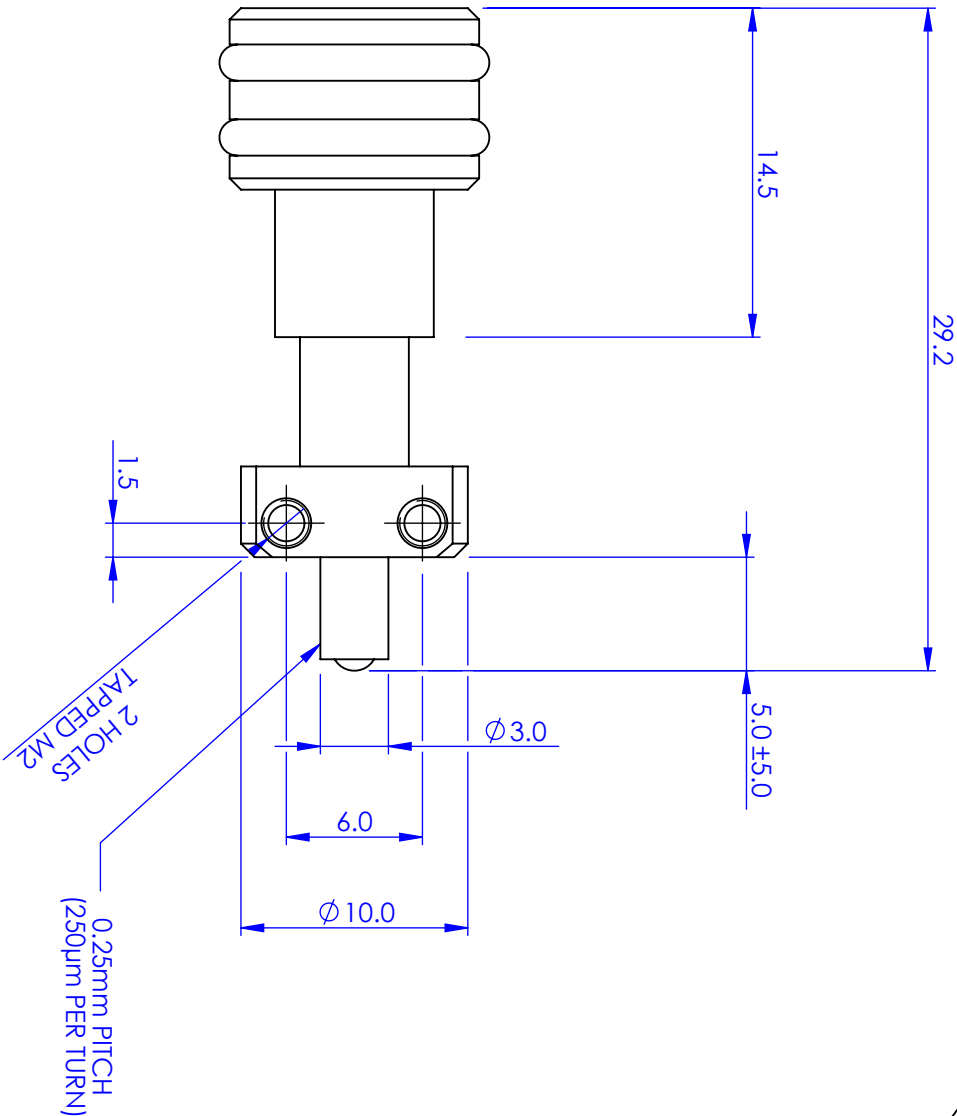
Options

Short travel version

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 3:1



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DIMENSIONS ARE IN mm
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	07/04/2010	
CHECKED	-	-	
MATERIAL			
ALUM., ALLOY, NICKEL, SILVER, STAINLESS STEEL			
FINISH			

TITLE			
ADJUSTER			
SIZE		DWG. NO.	
A4		MDE214	
SCALE: 3:1		THIRD ANGLE PROJECTION	
DO NOT SCALE DRAWING		SHEET 1 OF 1	

Micrometers, Adjusters, Piezos & Inertial Drives: Miniature Adjusters

E200 Simple Adjuster with 12 mm travel



- 12 mm travel
- Compact design
- Very smooth operation
- Positioning to 0.4 μm
- Highest quality hand-lapped adjusters
- Hex drive adjusters with removable knurled knobs
- Designed specifically for micropositioning applications
- Very fine thread - 0.20 mm pitch (~127 turns/inch thread)
- Long life stainless steel spindle with hard steel ball tip & nickel silver nut



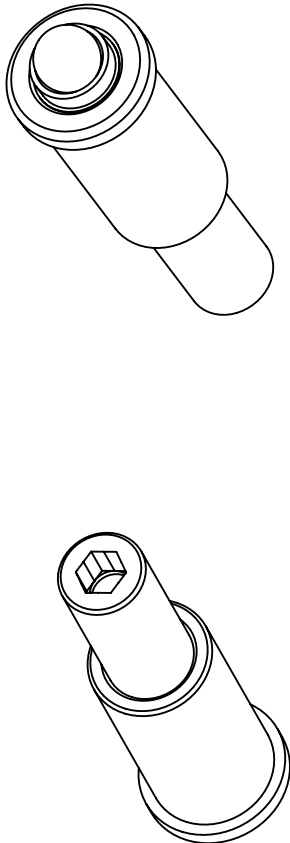
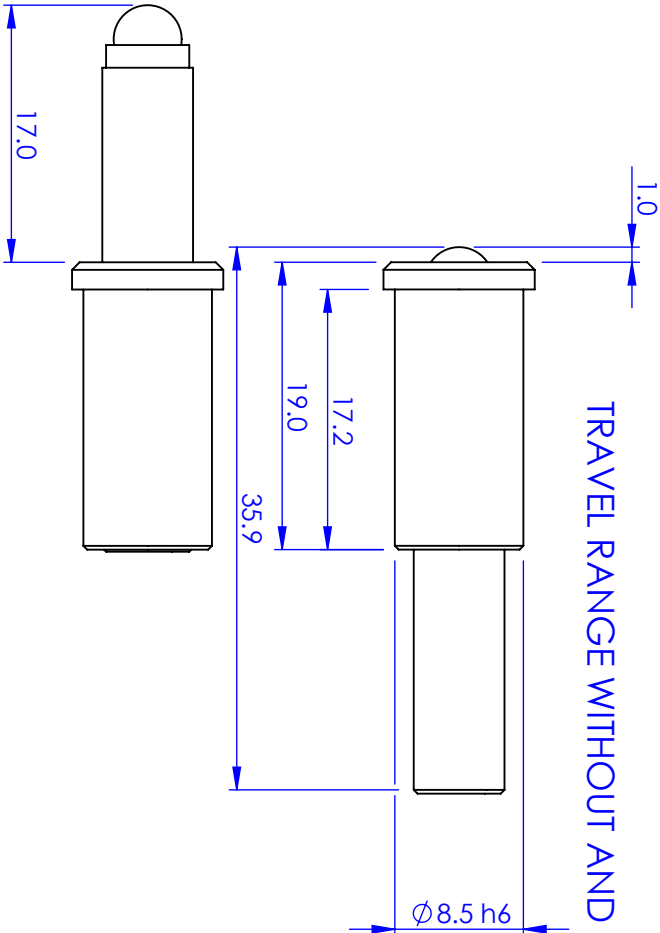
This miniature adjuster is used in the E901, E902 and E910 series micropositioners. Adjustment is either via a removable knurled knob or a 3 mm hex socket.

Specifications

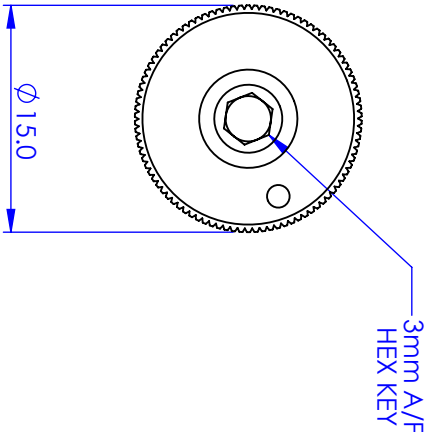
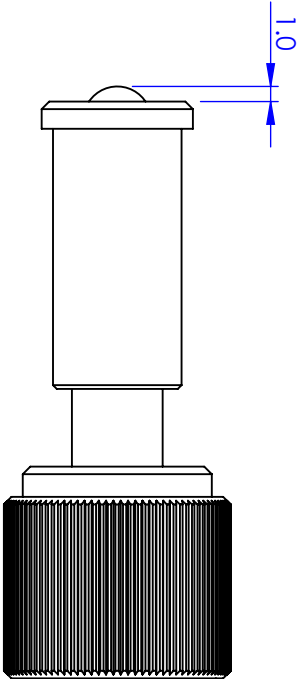
Travel	0-12 mm
Thread	0.20 mm pitch
Sensitivity	0.4 μm

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			

TRAVEL RANGE WITHOUT AND WITH REMOVEABLE KNOB




GENERAL VIEWS
SCALE: 2:1



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DIMENSIONS ARE IN mm
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SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	15/09/2006
MATERIAL			
FINISH			
DO NOT SCALE DRAWING			

	
TITLE	
E-200 ADJUSTER	
SIZE	DWG. NO.
A4	E-200 Adjuster
SCALE:2:1	THIRD ANGLE PROJECTION
SHEET 1 OF 1	

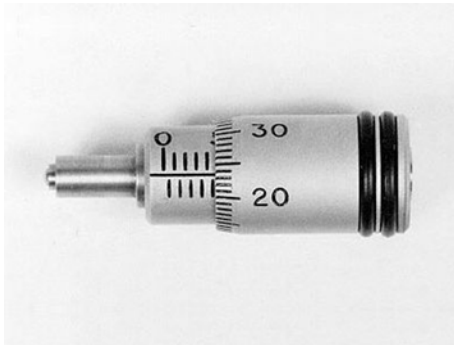
Eliot Scientific

TITLE
E-200 ADJUSTER

SIZE
A4
DWG. NO.
E-200 Adjuster

Micrometers, Adjusters, Piezos & Inertial Drives: Micrometers

MDE206 Micrometer Adjuster with 5 mm travel



ELLIOT MARTOCK

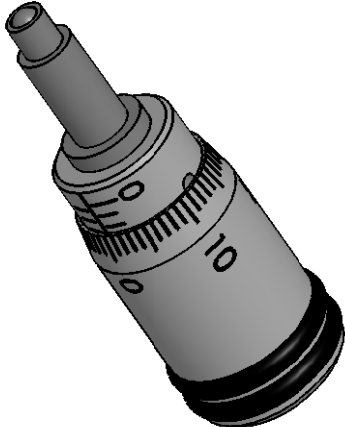
- Very compact
- 0.01 mm graduations, 0.5 mm per revolution
- Very smooth motion allows positioning to 1 μm
- Rubber rings provide a sensitive but precise grip
- Designed specifically for micropositioning applications
- Stainless steel screw with hard steel ball on spindle tip

This micrometer features rubber finger grips and very smooth motion that give a linear sensitivity of 1 μm . Graduations indicate 10 μm of linear travel.

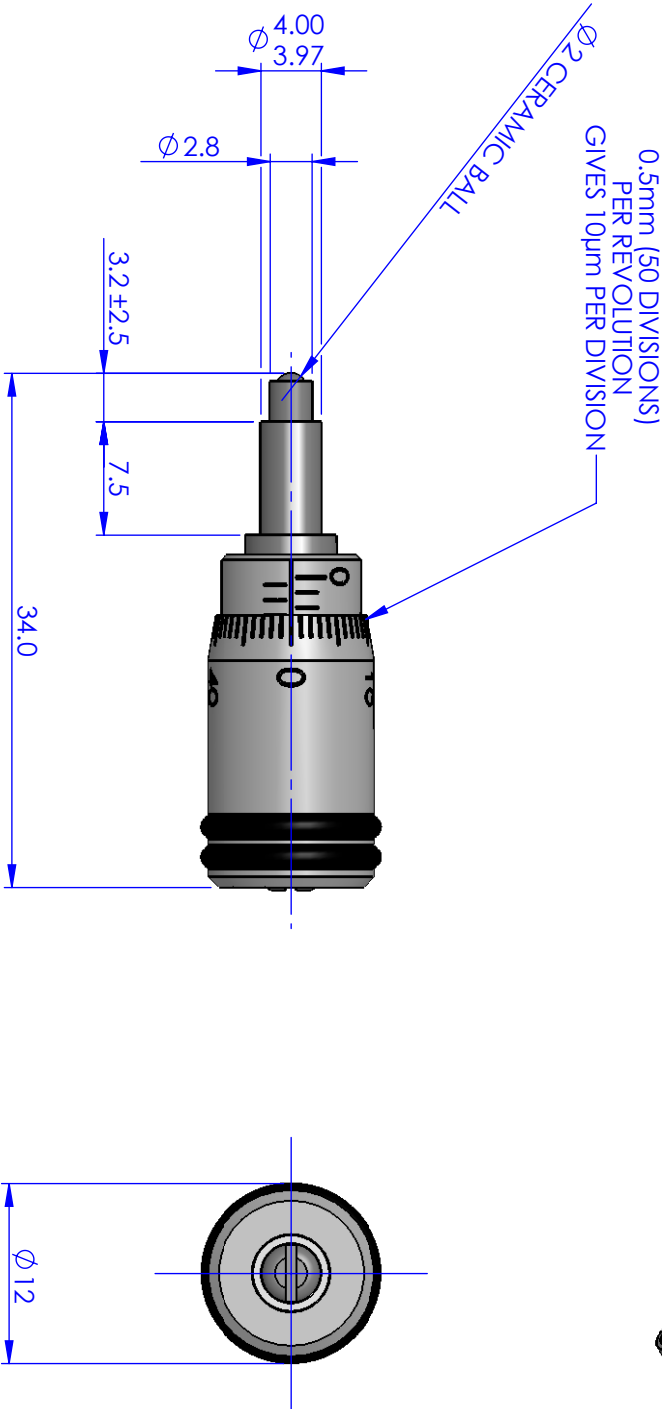
Specifications

Travel	0 ~ 5 mm
Displacement	0.5 mm per revolution
Graduations	10 μm
Sensitivity	1 μm
Spigot diameter	4 mm

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW



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DIMENSIONS ARE IN mm
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ANGULAR TOLERANCES: \pm
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

NAME		DATE	
AUTHOR	GW	22/04/2008	
CHECKED	-	-	
MATERIAL			
ALUM., ALLOY, NICKEL			
FINISH			
SILVER, STAINLESS STEEL			
TITLE			
5mm TRAVEL MICROMETER			
SIZE		DWG. NO.	
A4		MDE206	
SCALE: 2:1		THIRD ANGLE PROJECTION	
		SHEET 1 OF 1	

Micrometers, Adjusters, Piezos & Inertial Drives: Micrometers

MDE219 Micrometer Adjuster with 10 mm travel



ELLIOT MARTOCK

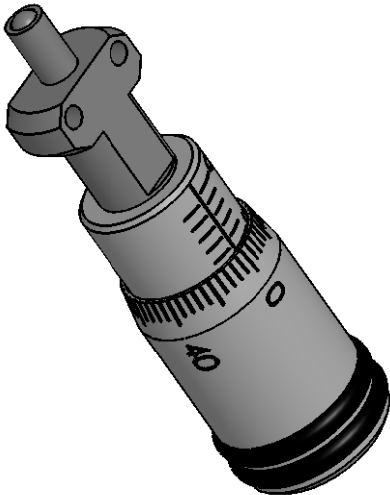
- Very compact
- 0.01 mm graduations, 0.5 mm per revolution
- Very smooth motion allows positioning to 1 μm
- Rubber rings provide a sensitive but precise grip
- Designed specifically for micropositioning applications
- Stainless steel screw with hard steel ball on spindle tip

This micrometer features rubber finger grips and very smooth motion that give a linear sensitivity of 1 μm . Graduations indicate 10 μm of linear travel.

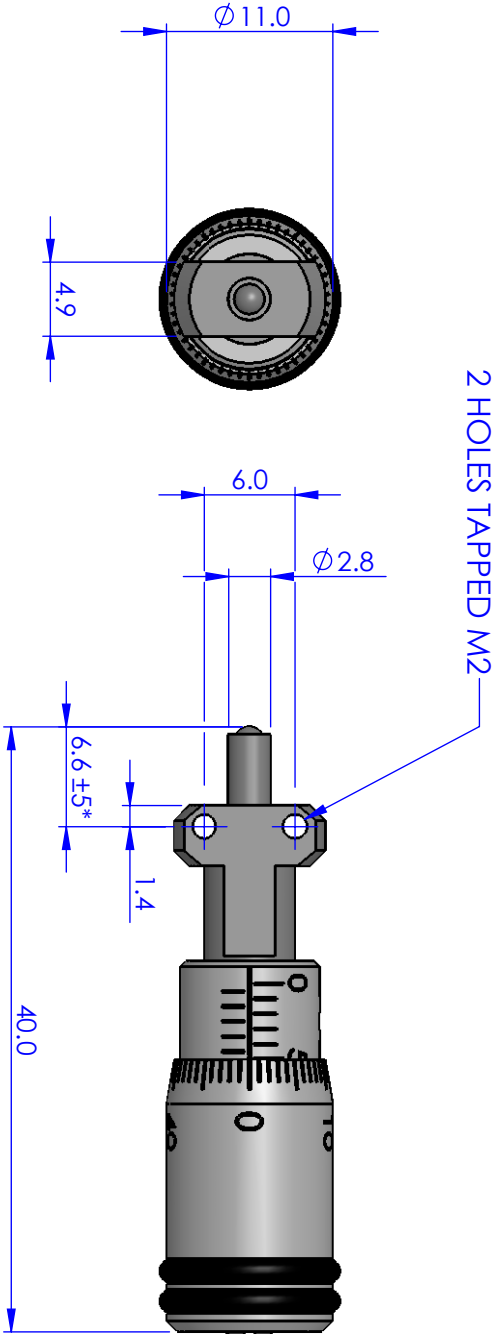
Specifications

Travel	0 ~ 10 mm
Displacement	0.5 mm per revolution
Graduations	10 μm
Sensitivity	1 μm
Mounting	M2 tapped holes x2

REVISIONS		DATE	APPROVED
REV.	DESCRIPTION		



GENERAL VIEW



*MDE219 HAS ±5mm OF TRAVEL FROM POSITION SHOWN.
SCREW PITCH IS 0.5 SO ONE COMPLETE TURN GIVES
0.5mm OF TRAVEL AT 10µm PER DIVISION

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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	22/04/2008
MATERIAL			
ALUM., ALLOY, NICKEL SILVER, STAINLESS STEEL			
FINISH			

DO NOT SCALE DRAWING		TITLE	
SIZE		DWG. NO.	
A4		MDE219	
SCALE2:1	THIRD ANGLE PROJECTION		SHEET 1 OF 1

Micrometers, Adjusters, Piezos & Inertial Drives: Micrometers

MD-Mitutoyo Digital Micrometer Adjuster with 25 mm travel



- Data hold
- Data output
- Zero setting
- Large LCD display
- Inch/metric conversion
- Tungsten carbide tip
- Reads to 1 μm or 0.00005"

ELLIOT MARTOCK

Digital micrometer with direct read-out of position to 1 μm on LCD display. Very smooth motion that gives a linear sensitivity of 0.5 μm .

Specifications

Travel	0 ~ 25 mm
Displacement	0.635 mm (0.025") per revolution
Graduations	0.001"
Sensitivity	0.5 μm
Mounting shaft	9.5 mm \varnothing



Micrometers, Adjusters, Piezos & Inertial Drives: Precision Adjusters

MDE215 Ultra Fine Mirror Mount Adjuster



- 20 nm resolution
- Lockable coarse drive
- Provides ultra-fine adjustment
- Retrofits existing mirror mounts
- Fits the 1/4-80 tapped hole
- Improves resolution



The MDE215 incorporates a patented† mechanical lever that can achieve a linear sensitivity of 20 nm. Suitable for retrofitting to existing optical mounts, as it fits the 1/4-80 tapped hole typically found on kinematic mirror mounts, enhancing their adjustment precision.

Specifications

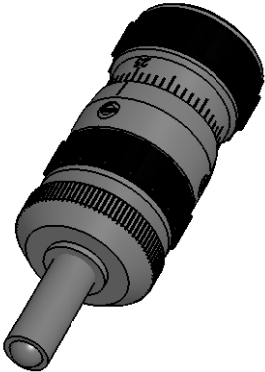
Resolution	20 nm
Mounting size	1/4-80 tapped thread

Options

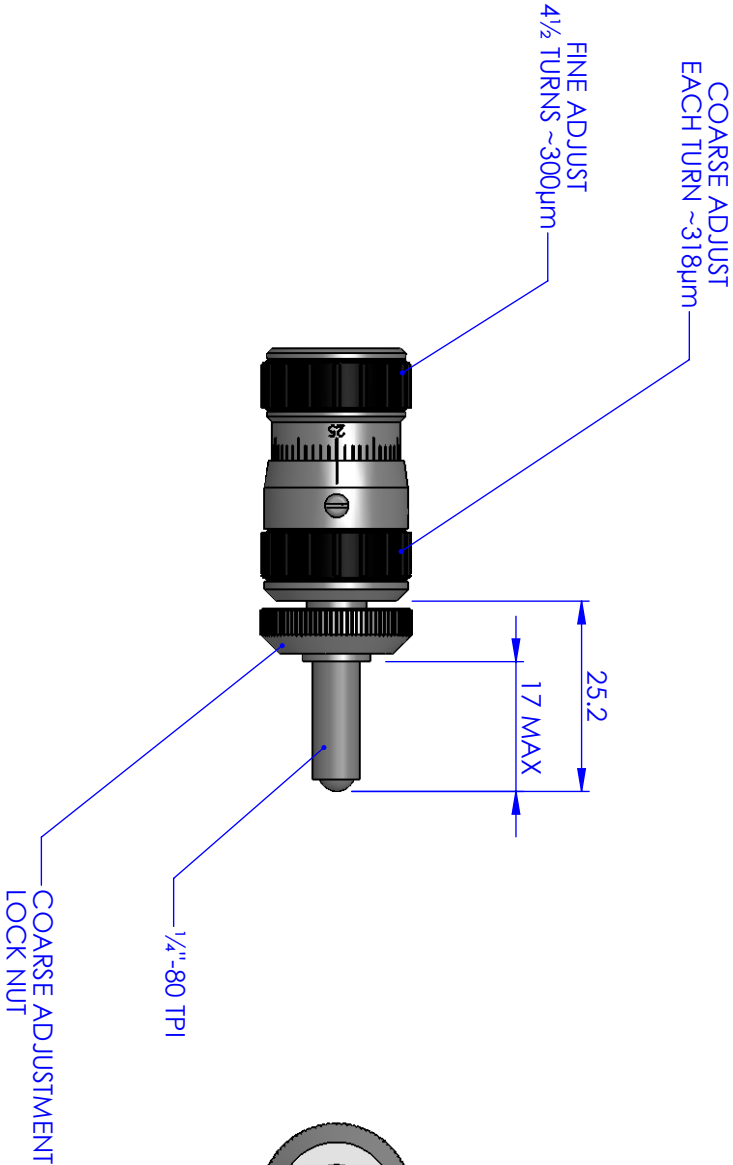
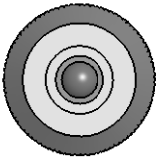
Elliot Scientific can supply a mirror mount for 1" optics fitted with two MDE215 adjusters. Resolution is increased from around 2 arc seconds to 0.1 arc seconds.

† Patent Nos. GB 2152616B & USA 4617833

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GENERAL VIEW
SCALE: 1:1



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MATERIAL				TITLE			
FINISH				HIGH PRECISION ADJUSTER			
---				SIZE DWG. NO.			
A4				MDE215			
DO NOT SCALE DRAWING				SCALE:1:1		THIRD ANGLE PROJECTION	
				SHEET 1 OF 1			

Micrometers, Adjusters, Piezos & Inertial Drives: Precision Adjusters

MDE216 High Precision Manual Adjuster



ELLIOT MARTOCK

- Negligible backlash
- Graduated knob
- Output via non-rotating hard steel ball
- Positive travel limit stops on control knob
- Coarse adjustment: 8.0 mm travel at 1 μ m resolution
- Fine adjustment: 0.3 mm travel at 20 nm resolution
- Very smooth feel, largely independent of applied load
- Santoprene control ring allows a delicate touch and reduces heat transfer into the drive

The MDE216 high precision adjuster is based on a patented† mechanical lever system and is the highest resolution mechanical (non-piezo) adjuster in the Elliot Scientific range.

It is ideal for use with the Elliot Gold™ series flexure stages as it incorporates a 12 mm diameter matching sleeve. Travel is 8 mm (limited to 2 mm in flexure stages), with 20 nm resolution on the fine control.

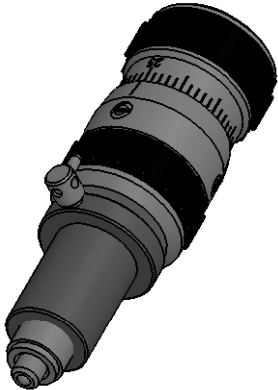
Not all applications require that three adjusters be fitted in a flexure stage. Substitution with an MDE229 fixed axis spacer sets an axis in mid travel position and provides a cost saving. At a later date it can be replaced by an adjuster if user requirements change.

Specifications

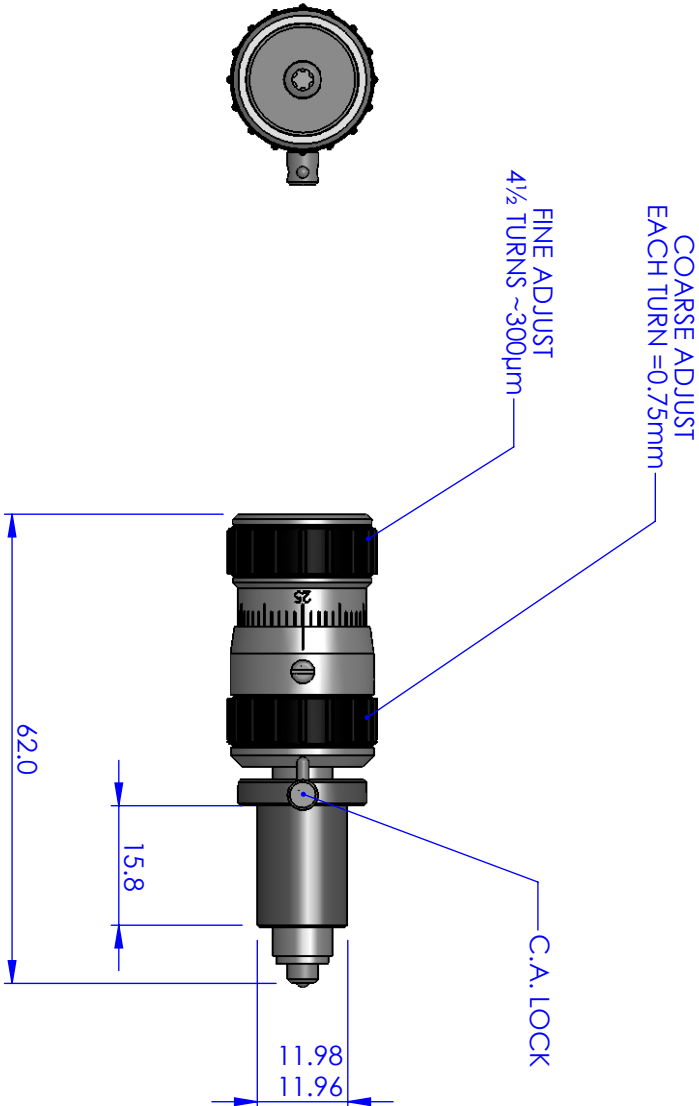
Coarse adjustment	8 mm travel, 1 μ m resolution
Fine adjustment	0.3 mm travel, 20 nm resolution
Readout	Graduated knob with 50 arbitrary divisions

† Patent Nos. GB 2152616B & USA 4617833

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:1



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AND CORNERS TO BE
REMOVED

AUTHOR		NAME	DATE
CHECKED		GW	12/07/2010
MATERIAL		---	---
FINISH		---	---
DO NOT SCALE DRAWING		TITLE	
SIZE		HIGH PRECISION ADJUSTER	
A4		DWG. NO. MDE216	
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1		Eliot Scientific	

Micrometers, Adjusters, Piezos & Inertial Drives: Precision Adjusters

MDE217 Simple Manual Adjuster



- 8.0 mm travel
- 1 μ m resolution
- Cost effective

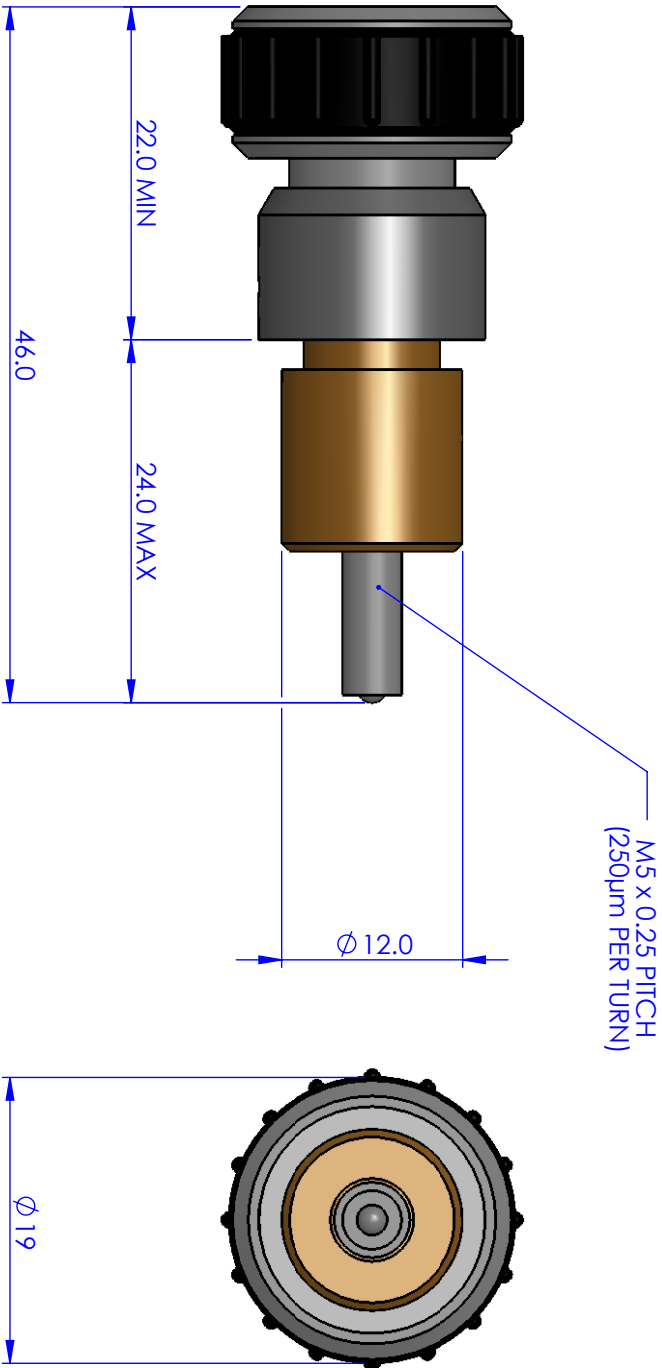


The MDE217 is a manual adjuster incorporating a 12 mm diameter sleeve matched to the Elliot Gold™ series flexure stages. It has 1 μ m resolution and provides a cost effective solution where simple adjustment is required.

Specifications

Travel	8 mm
Resolution	1 μ m
Thread type	0.25 pitch

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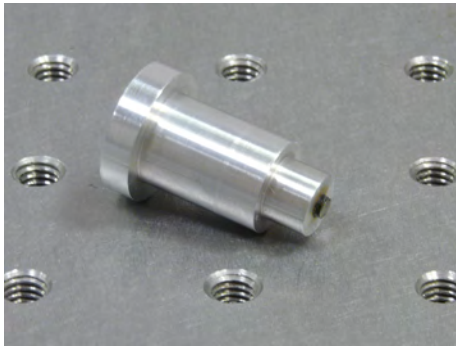
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TITLE					
SIMPLE ADJUSTER					
SIZE		DWG. NO.		MDE217	
A4					
SCALE2:1		THIRD ANGLE PROJECTION		SHEET 1 OF 1	

Micrometers, Adjusters, Piezos & Inertial Drives: Precision Adjusters

MDE229 Fixed Axis Spacer



- Eliminates expense of high precision adjuster
- Preset to fit Elliot Gold™ series flexure stage



A Fixed Axis Spacer is used when a third axis is not required on a flexure stage. For example, when used as an YZ waveguide mount between two XYZ stages.

Not all applications require that three adjusters be fitted in a flexure stage. Substitution with an MDE229 fixed axis spacer sets an axis in mid travel position and provides a cost saving. At a later date it can be replaced by an adjuster if required.



Micrometers, Adjusters, Piezos & Inertial Drives: Motorised Actuators

MDE231 Stepper Motor Actuator: 8 mm travel



- Non-rotating spindle
- Resolution 0.254 μm single step
- Integral stepper motor drive and gearbox
- Integrates with Elliot Gold™ series flexure stages and rotation units

ELLIOT MARTOCK

The MDE231 is a stepper motor-driven 8 mm travel actuator. The non-rotating spindle offers low noise translation or rotation when integrated with the Elliot Gold™ series flexure stages, pitch & yaw stages and rotation units. Developed for the demanding rotation and alignment of fibre optic components, it can be used anywhere that stable, accurate motion is needed.

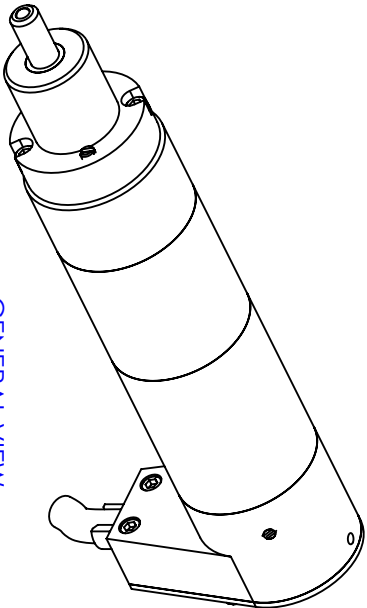
Specifications

Travel 8 mm
 Thread 0.254 μm pitch
 Max. speed 0.5 mm/s
 Non-rotating spindle
 Manual adjustment via hex key

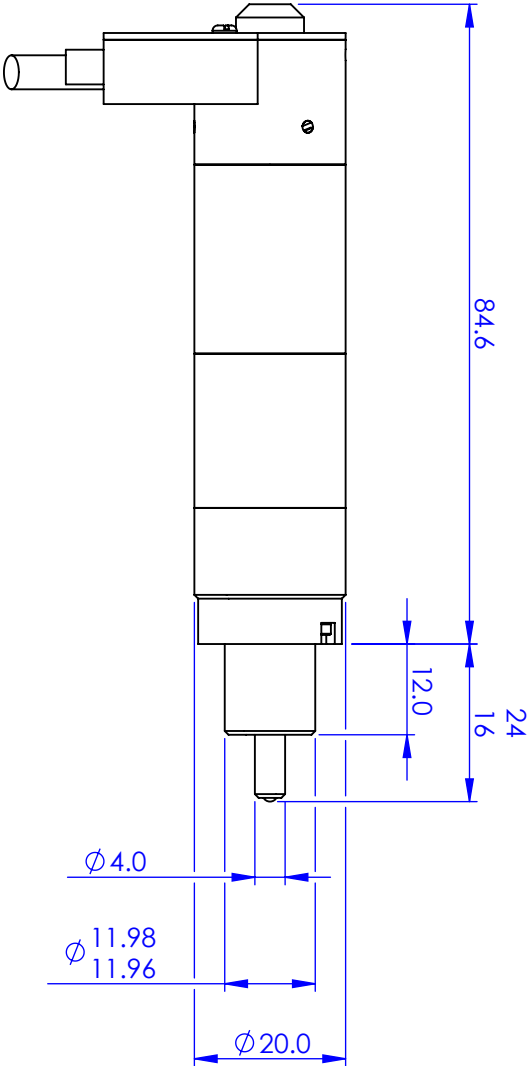
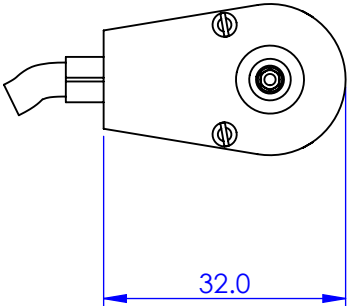
Options

Stepper drive controllers available

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REV.	DESCRIPTION			



GENERAL VIEW
SCALE 1:1



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Elliott Scientific		A4	MDE231
8mm STEPPER MOTOR ACTUATOR		SCALE:1:1	THIRD ANGLE PROJECTION
		SHEET 1 OF 1	

Micrometers, Adjusters, Piezos & Inertial Drives: Piezo Adjusters

MDE218 Standard Piezo Adjuster with 25 μ m travel



ELLIOT MARTOCK

- 25 μ m direct-drive piezo
- 8 mm coarse travel on 0.25 pitch thread
- Adjustable hard stop prevents damage to the piezo when axis is at full mechanical extension

Standard piezo adjuster for applications requiring greater resolution than that achievable with manual adjusters or where "hands free" operation of the positioner is required.

The MDE218 piezo adjuster offers 25 μ m of direct-drive piezo travel with 10 nm resolution and incorporates a 12 mm sleeve matched to the Elliot Gold™ series flexure stage.

Specifications

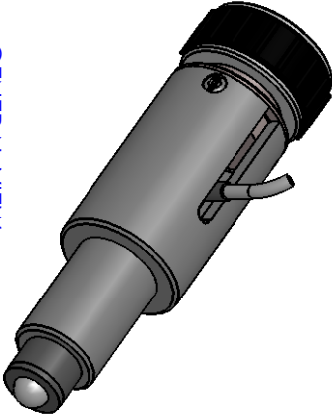
Travel	25 μ m direct-drive piezo
Resolution	10 nm
Coarse travel	8 mm coarse travel on 0.25 pitch thread (limited to 2 mm when fitted to an Elliot Gold™ Series flexure stage)
Operating voltage	0 ~ 150 V
Hysteresis	12 ~ 15%

Adjustable hard stop prevents damage to the piezo when axis is at full mechanical extension

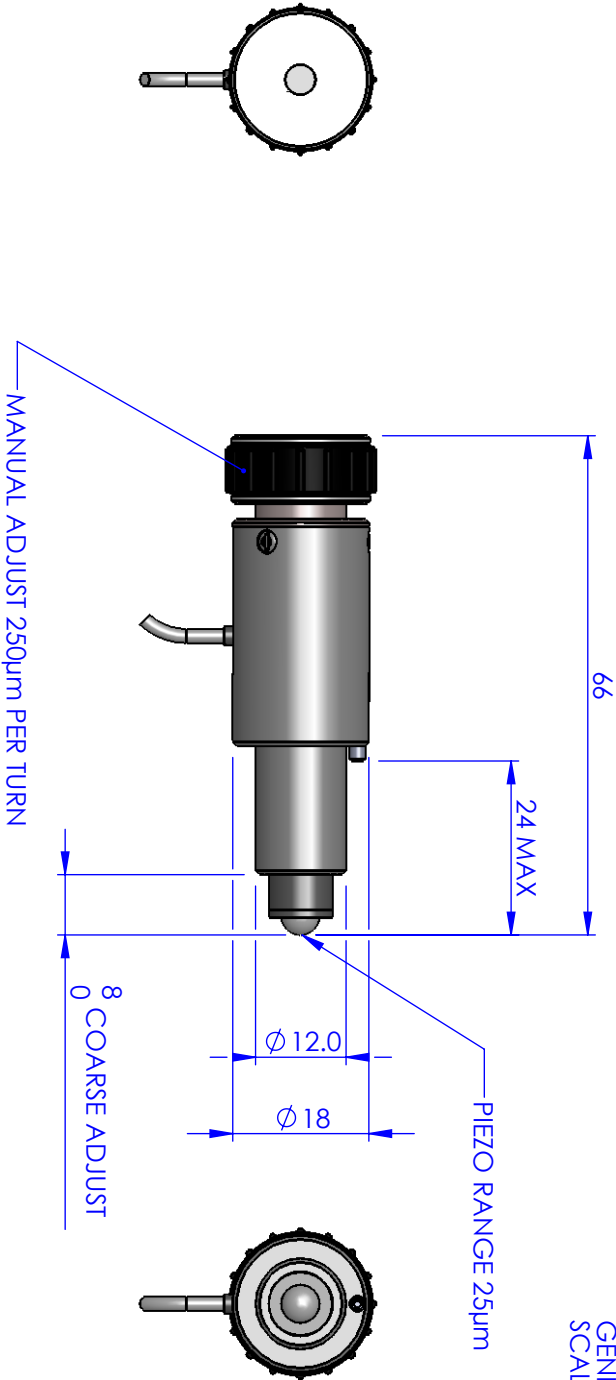
Options

Long travel 100 μ m piezo adjuster (MDE227)
 Very long travel 200 μ m piezo adjuster (MDE230)
 DALI 3 piezo controller (E2300)

REVISIONS			DATE	APPROVED
REV.	DESCRIPTION			



GENERAL VIEW
SCALE: 1:1



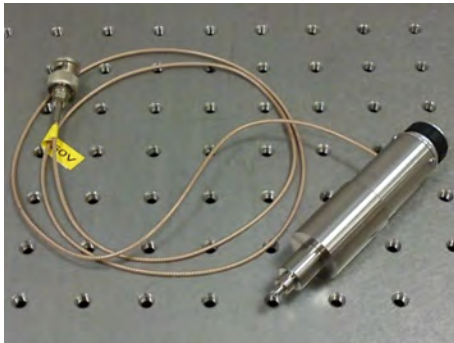
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SIZE		DWG. NO.	
A4		MDE218	
SCALE: 1:1		THIRD ANGLE PROJECTION	
SHEET 1 OF 1			

Micrometers, Adjusters, Piezos & Inertial Drives: Piezo Adjusters

MDE227 Long Travel Piezo Adjuster with 100 μm travel



- 100 μm travel
- 50 nm resolution

ELLIOT MARTOCK

This Long Travel Piezo Adjuster is for applications requiring an increased range of high precision adjustment. The MDE227 gives 100 μm of piezo travel with 50 nm resolution by means of a lever mechanism to amplify the extension of a 40 μm piezo stack. It also incorporates a 12 mm sleeve matched to the Elliot Gold™ series flexure stage.

On drives such as the MDE227, an integral hex adjuster is built into the coarse drive. This adjuster protrudes significantly from the flexure stage body, so finger pressure effects during manual adjustment can cause cross-talk between axes. Adjustment using a ball-headed hex key avoids these effects and the adjuster is driven in the intended axis only.

Specifications

Travel	100 μm piezo travel
Resolution	50 nm
Coarse travel	± 1 mm travel on coarse drive with 1 μm resolution
Operating voltage	0 ~ 150 V
Hysteresis	12 ~ 15%

Options

Standard travel 25 μm piezo adjuster (MDE218)
 Very long travel 200 μm piezo adjuster (MDE230)
 DALI 3 piezo controller (E2300)



Micrometers, Adjusters, Piezos & Inertial Drives: Piezo Adjusters

MDE230 Very Long Travel Piezo Adjuster with 200 μm travel



- 200 μm travel
- 130 nm resolution

This Very Long Travel Piezo Adjuster is for applications requiring an increased range of high precision adjustment.

The MDE230 gives 200 μm of piezo travel with 130 nm resolution by means of a lever mechanism to amplify the extension of a piezo stack. It also incorporates a 12 mm sleeve matched to the Elliot Gold™ series flexure stage.

The MDE230 features an integral hex adjuster built into the coarse drive. The adjuster protrudes significantly from the flexure stage body, so finger pressure effects during manual adjustment can cause cross-talk between axes. Adjustment using a ball-headed hex key avoids these effects and the adjuster is driven in the intended axis only.

Specifications

Travel	200 μm piezo travel
Resolution	130 nm
Coarse travel	± 1 mm travel on coarse drive with 1 μm resolution
Operating voltage	0 ~ 150 V
Hysteresis	12 ~ 15%

Options

Standard travel 25 μm piezo adjuster (MDE218)
 Long travel 100 μm piezo adjuster (MDE227)
 DALi 3 piezo controller (E2300)



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International Distributors

Europe & Middle East

France

Optoprim

21-23 rue Aristide Briand
92170 Vanves

Tel: +33 (0)141 90 61 80
Fax: +33 (0)141 90 61 89
Web: www.optoprim.com
Email: info@optoprim.com

Opton Laser International

Parc Club Orsay Université
29, rue Jean Rostand
91893 Orsay Cedex

Tel: +33 (0)169 41 04 05
Fax: +33 (0)169 41 32 90
Web: www.optonlaser.com
Email: ventes@optonlaser.com

Germany

Mountain Photonics GmbH

Albert-Einstein-Str. 18
D-86899 Landsberg am Lech

Tel: +49 0 8191 985199 0
Fax: +49 0 8191 985199 99
Web: www.mphotonics.de
Email: info@mphotonics.de

Israel

Rosh Electroptics

P.O.B 2667
Netanya 4212601

Tel: +972 9862 7401
Fax: +972 9861 6185
Web: www.roshelop.co.il
Email: info@roshelop.co.il

Italy

dB Electronic Instruments S.r.l.

Via Teano, 2
20161 Milano

Tel: +39 02 64 69 341
Fax: +39 02 64 56 632
Web: www.db-electronic.it
Email: sales@dblaser.it

Spain

Laser Technology S.L

Calle Mestral, 1 - 13, Local 8
08340 Vilassar de Mar
Barcelona

Tel: +34 93 750 0121
Tel: +34 93 750 0323
Web: www.laser-technology.com
Email: info@laser-technology.com

North America

USA

Lightspeed Technologies Inc.

P.O. Box 110161
Campbell
CA 95011-0161

Tel: +1 408 761 0062
Fax: +1 408 378 3629
Web: www.light-speed-tech.com
Email: sales@light-speed-tech.com

Asia

China

Standard Components

ETSC Technologies

14 / F, Block B4, Overseas Talent Building
Wuhan Science and Technology City
999, High-tech Avenue, Donghu Development Zone
Wuhan City
Hubei

Tel: +86 27 87807177
Fax: +86 27 87807133
Web: www.etsc-tech.com
Email: huiwinw@etsc-tech.com

China

Optical Tweezers

Worldwide Technology (S.H) Co.,Ltd.

WAD (H.K) Co.,Ltd.
Room 1026, Area B, Wisdom Bay Creative Garden
No.6, Chuan Chuan Road
Baoshan District
Shanghai

Tel: +86 21 66621556/7/8/9
Fax: +86 21 66621556/7/8/9*8048
Web: www.worldwide-china.com
Email: sales@worldwide-china.com

Continued overleaf

India**Aimil Ltd.**

Naimex House
A-8, Mohan Cooperative Industrial Estate
Mathura Road
New Delhi - 110 044

Tel: +91 11 30810200
Fax: +91 11 26950011
Web: www.aimil.com
Email: info@aimil.com

Japan**Autex Inc.**

Takasago Bld 4F
16-5 Tomihisa-Cho
Shinjuku-Ku
Tokyo
162-0067

Tel: +81 3 3226 6321
Fax: +81 3 3226 6290
Web: www.autex-inc.co.jp
Email: sales31@autex-inc.co.jp

Korea**MMT Co., Ltd (Micro Motion Technology)**

173-282, Gajwa-Dong
Seo-Gu
Incheon
404-250

Tel: +82 32 710 8800
Fax: +82 32 710 8810
Web: www.micromt.com
Email: mmt@micromt.com

Singapore**Precision Technologies Pte Ltd**

211 Henderson Road
#13-02 Henderson Industrial Park
159552

Tel: +65 6273 4573
Fax: +65 6273 8898
Web: www.pretech.com.sg
Email: comms2@pretech.com.sg

Taiwan**Unice E-O Service Inc.**

No.5, Andong Road
Chung Li Industrial Park
Chung Li City
Taoyuan County 32063

Tel: +886 3 462 6569
Fax: +886 3 462 5586
Web: www.unice.com.tw
Email: unicehq@unice.com.tw

Issued: May 2019