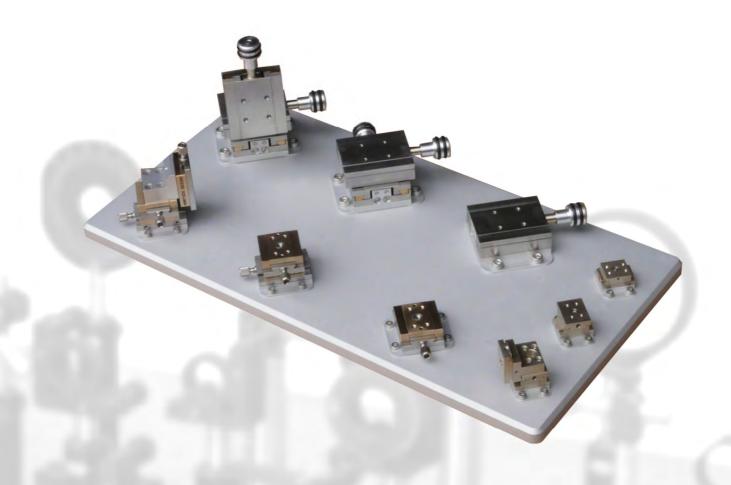
Opto-Mechanics 2011

Manual Positioners





Company Profile

Elliot Scientific is a major supplier of Opto-Mechanic components and systems under the Elliot|Martock and Elliot Scientific brands to the Scientific, Research and Industrial communities. In addition, we supply world-class Laser, Cryogenic, Magnetic, Telecom and Datacom systems sourced from many British, North American, European and Far Eastern companies.

Elliot Scientific is uniquely positioned to assist customers by being able to:

- Supply competitive components and systems
- Source, integrate and manufacture complex systems
- Design and manufacture for Custom or OEM requirements

Elliot|Martock

Martock Design became a wholly owned subsidiary of Elliot Scientific in 2003 following thirty years at the forefront of design, development and manufacture of high quality precision instruments and equipment. That tradition continues today as we continually strive to improve and expand the ranges of Elliot|Martock and Elliot Scientific own brand products.

These include our award winning optical tweezer systems, the lab essentials mirror mount range, fibre positioning components, waveguide manipulators, automated alignment systems, micropositioners and other class-leading products.

All of our customers - from academic institutions and government agencies through to commercial researchers and industry - are provided with the highest levels of service backed up by solid technical support from our team of experienced engineers.

Solution Science for Research and Industry

We pride ourselves in offering Solution Science for Research and Industry. We employ the best-qualified staff and scientists to help you sift through the multitude of options available to get the equipment and systems that match your needs. That's *Solution Science*.

Staff

We employ PhD level physicists, scientists and mechanical design engineers to assist you with your product search or application, and to ensure that our advice is correct and balanced. Many of the team have been with us for over ten years, bringing with them a huge amount of experience for you to tap into.

Quality

We have been BS EN ISO 9002 registered since 1993 and BS EN ISO 9001 registered since 2003. We understand the need for continual improvement in services and traceability, both in distribution and manufacture. Our commitment to this ensures our standards are the highest in our industry.

Catalogue & Custom Manufacturing

This catalogue only gives an overview of our extensive range. If you cannot find what you are looking for here, why not phone, fax or e-mail us. Many products have been supplied that started as ideas and concepts requested by customers requiring tailored manipulation systems. With our innovative design experience, we can offer unique solutions in opto-mechanical positioning and control systems. We are here to help you find the right products to meet your requirements.

Elliot Scientific Limited

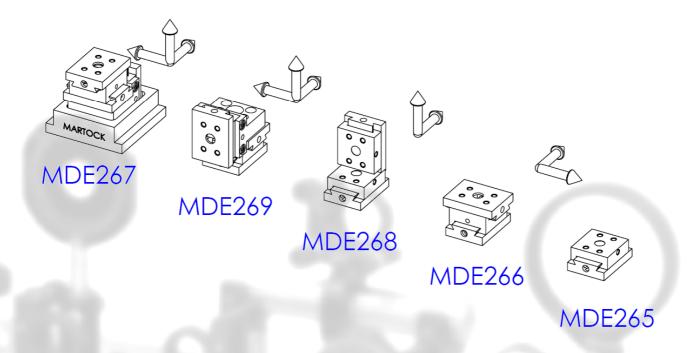
3 Allied Business Centre, Coldharbour Lane, Harpenden, AL5 4UT

Tel. +44 (0)1582 766300 Fax. +44 (0)1582 766340 Eml. sales@elliotscientific.com

Registered in England No. 2460146 VAT Registration No. GB 540 1277 78 WEEE Registration No. WEE/DF0052TQ

Opto-Mechanics 2011

Ultra Small Linear Stages









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



Specifications

 $\begin{tabular}{lll} Travel & 3 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

Adjuster 0.25 pitch with 1.27 mm hex socket

Top plate 12 x 12 mm

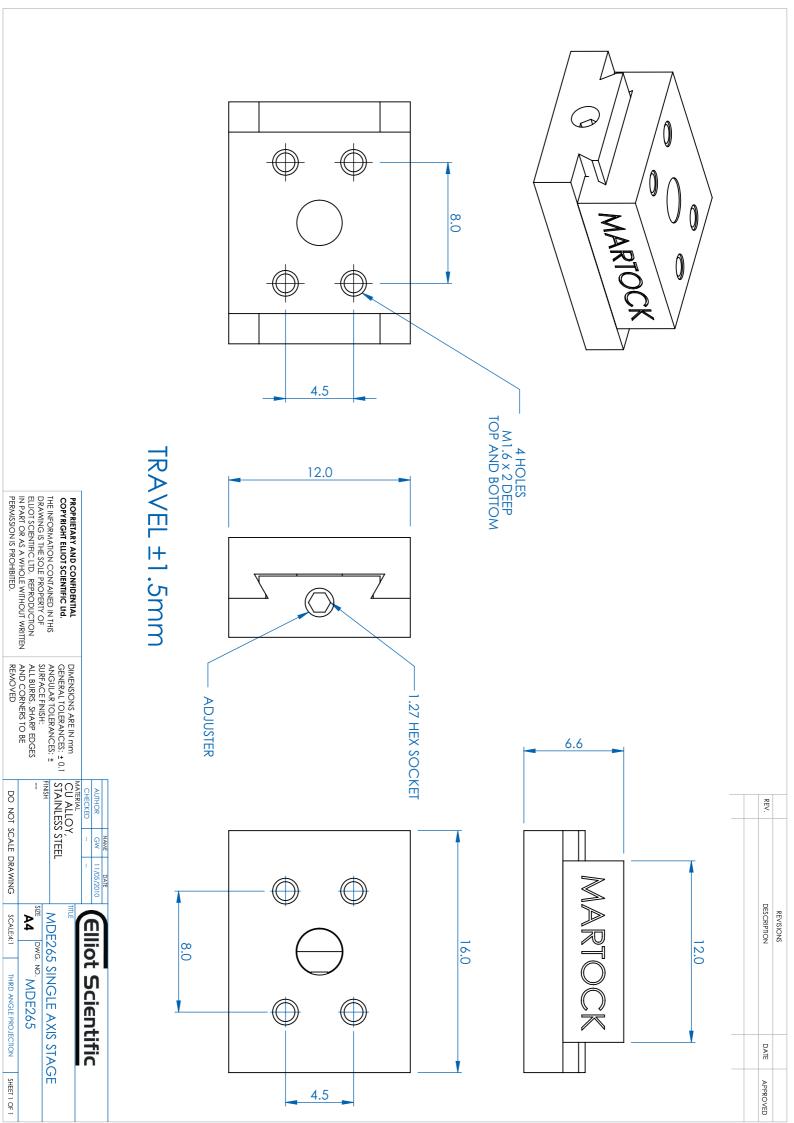
Mounting holes Four M1.6 x 2 mm deep on both sides

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 Non-magnetic versions available

Vacuum compatible versions available

Notes





MDE266 Dual Axis XY 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



Specifications

 $\begin{tabular}{lll} Travel & 3 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

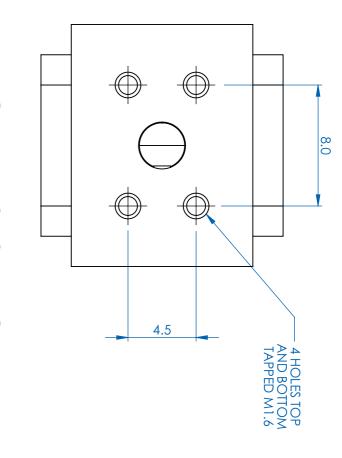
Adjusters 0.25 pitch with 1.27 mm hex socket

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



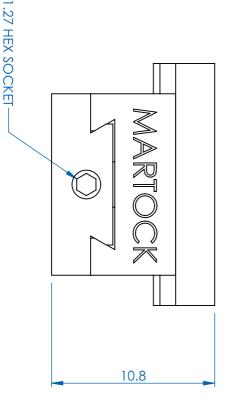
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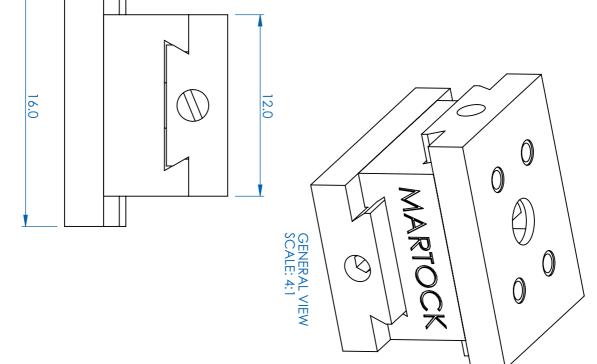
DESCRIPTION REVISIONS

DATE

APPROVED

BOTH AXES ±3mm OF TRAVEL





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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

CU ALLOY, STAINLESS STEEL

2 AXIS DOVETAIL SLIDE

Elliot Scientific

SCALE:4:1 ₽4 DWG. NO. MDE266

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

SHEET 1 OF 1



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



Specifications

 $\begin{tabular}{lll} Travel & 3 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

Adjusters 0.25 pitch with 1.27 mm hex socket

Ball hex driver supplied

Top plate 12 x 12 mm
Base M4 tapped

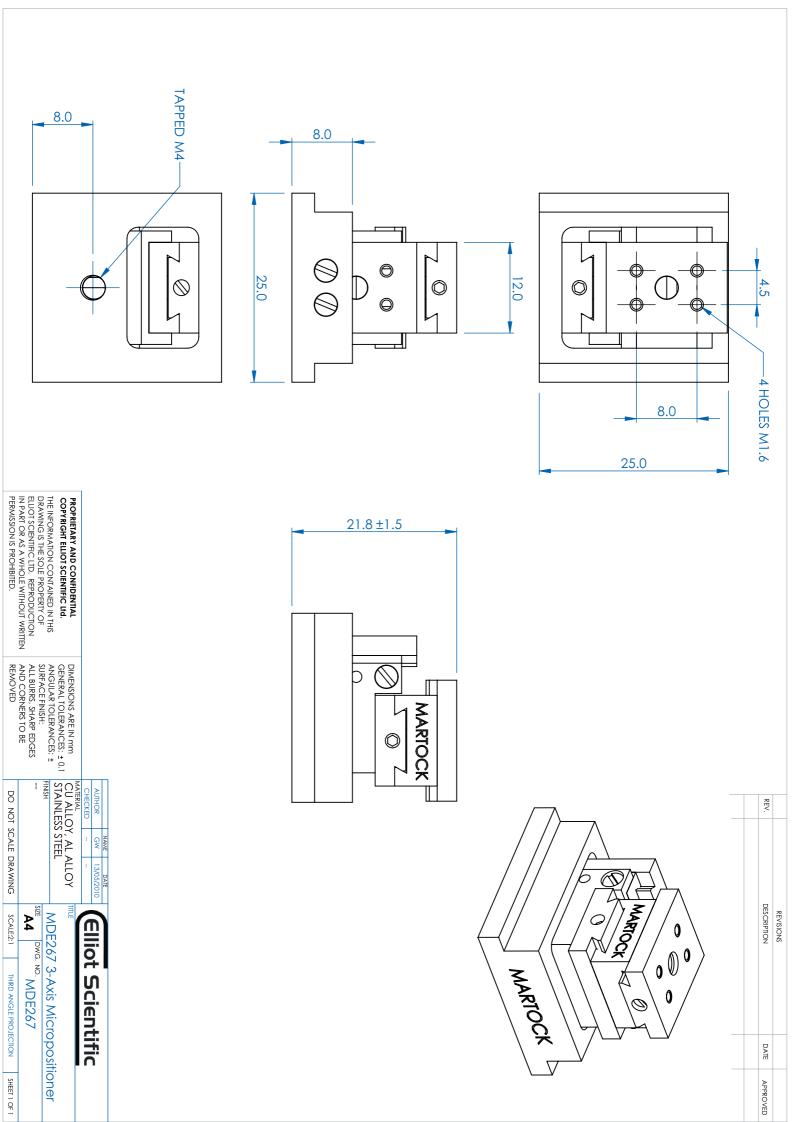
Options

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

Non-magnetic versions available

Vacuum compatible versions available

Notes



APPROVED



MDE268 Dual Axis XZ Micropositioner



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



Specifications

 $\begin{tabular}{lll} Travel & 3 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

Adjusters 0.25 pitch with 1.27 mm hex socket

Top plate 12 x 12 mm

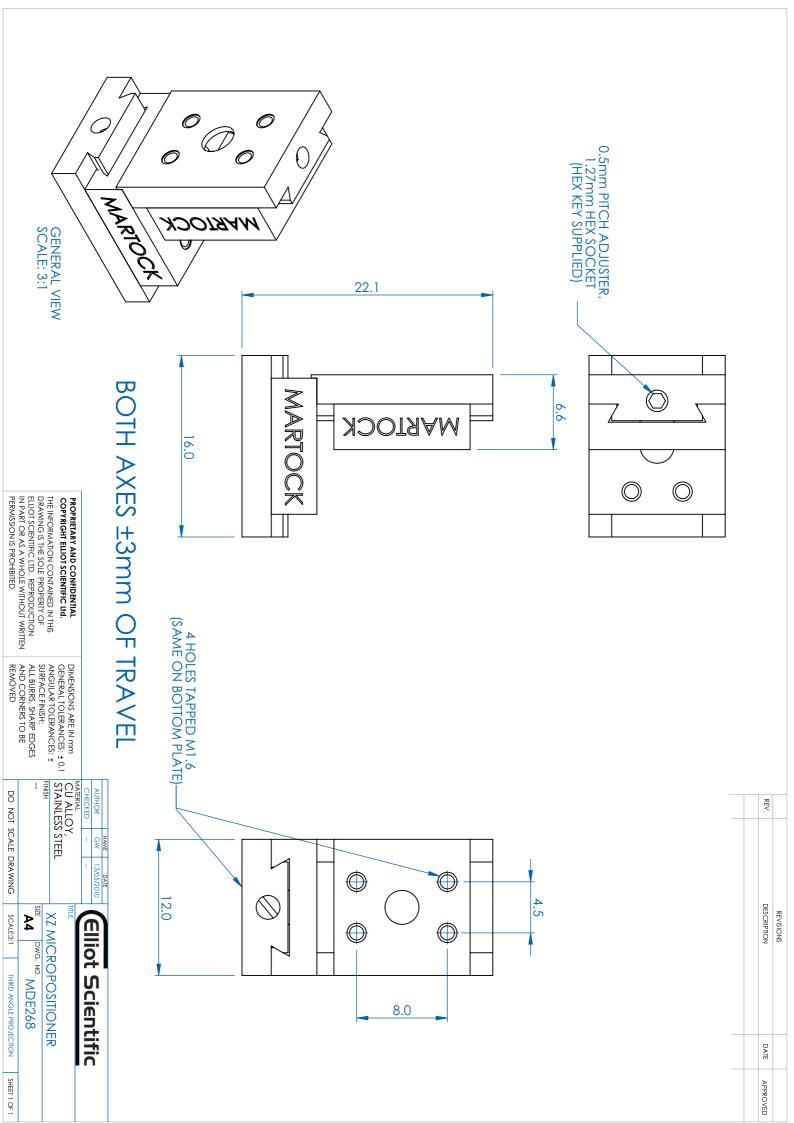
Mounting holes Four M1.6 x 2 mm deep on both sides

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 Non-magnetic versions available

Vacuum compatible versions available

Notes





MDE269 Three Axis XZ Micropositioner



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



Specifications

 $\begin{tabular}{lll} Travel & 3 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

Adjusters 0.25 pitch with 1.27 mm hex socket

Top plate 12 x 12 mm

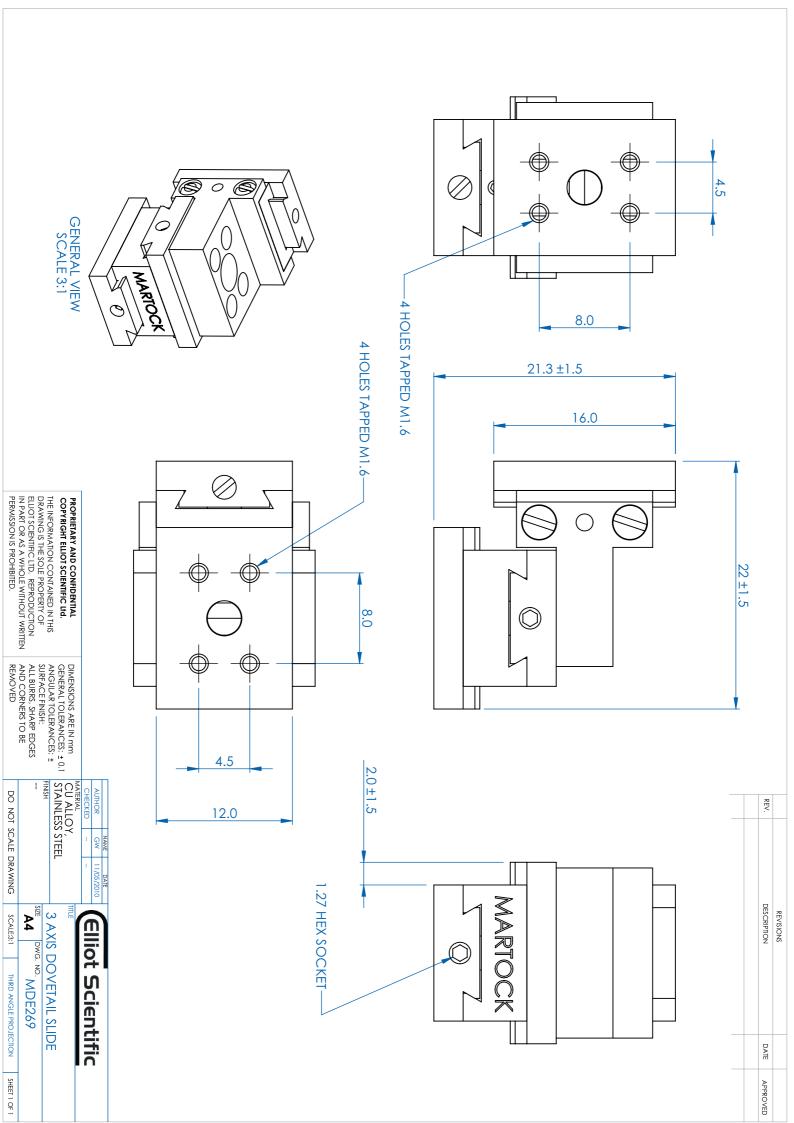
Mounting holes Four M1.6 x 2 mm deep on both sides

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 Non-magnetic versions available

Vacuum compatible versions available

Notes





MDE719 Fibre Rotator



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



The model 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° 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 ± 5° fine adjustment Resolution 30 arc secs

Mount Fits MDE265 Series Positioners Supplied with mounting screws

Options

MDE265 series micropositioners Clamp set (Model MDE154)



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)



The model MDE730 is a simple fibre holder utilizing a magnetic clamp. The standard V-groove accepts 125 μ m 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



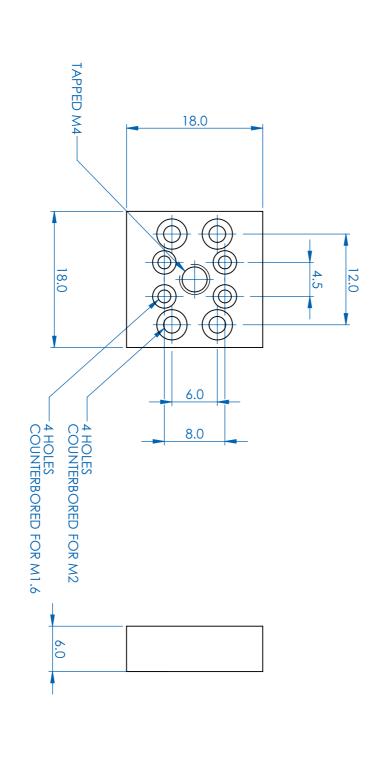
MDE857 MDE260 & MDE265 Post Adapter



- Mount slide horizontal on post
- Mount MDE260 and MDE265 series to any M4 stud post
- Post mount MDE260 and MDE265 series onto FEMTO-BENCH™
- Use with Elliot/Martock MDE260 and MDE265 series Ultra Small Micropositioners



MDE857 adapter fits MDE260 and MDE265 series slides.



REV. DESCRIPTION REVISIONS DATE APPROVED

GENERAL VIEW SCALE 2:1

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SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED DO NOT SCALE DRAWING SCALE2:1

ALUMINIUM ALLOY ANODISED CLEAR ANODISED CLEAR SIZE A DWG. NO. MDF857

THIRD ANGLE PROJECTION SHEET 1 OF 1



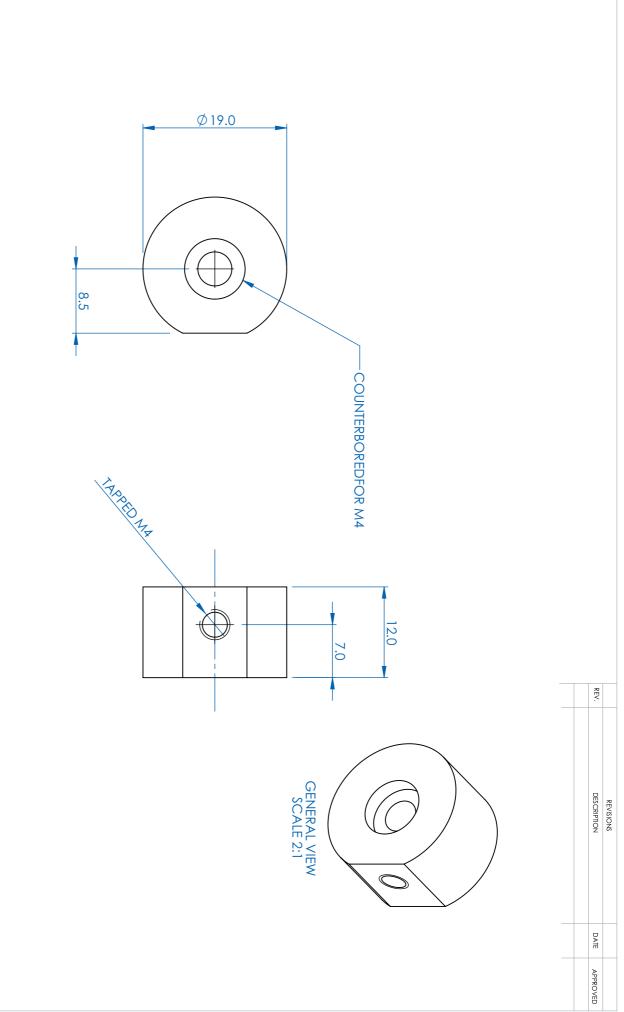
MDE858 MDE260 & MDE265 Post Adapter for MDE857



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



The MDE858 adapter 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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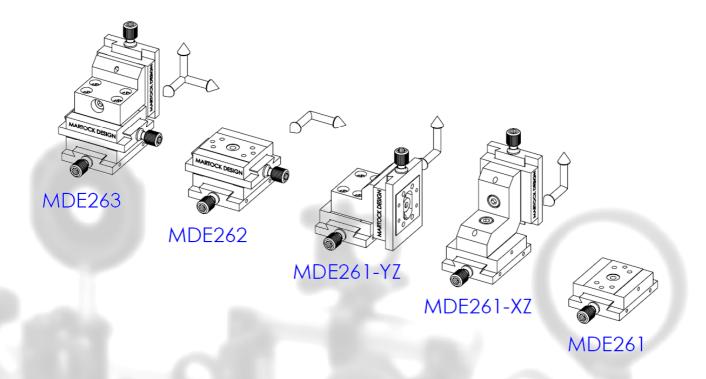
DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

ALUMINIUM ALLOY ANODISED CLEAR **ADAPTER MOUNT**

DO NOT SCALE DRAWING SCALE:2:1 GW 23/ ASIZE A **Elliot Scientific** DWG. NO. MDE858 THIRD ANGLE PROJECTION SHEET 1 OF 1

Opto-Mechanics 2011

Very Small Linear Stages









MDE261 Single Axis Very-Small Micropositioner



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



Specifications

 $\begin{tabular}{lll} Travel & 5 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

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)

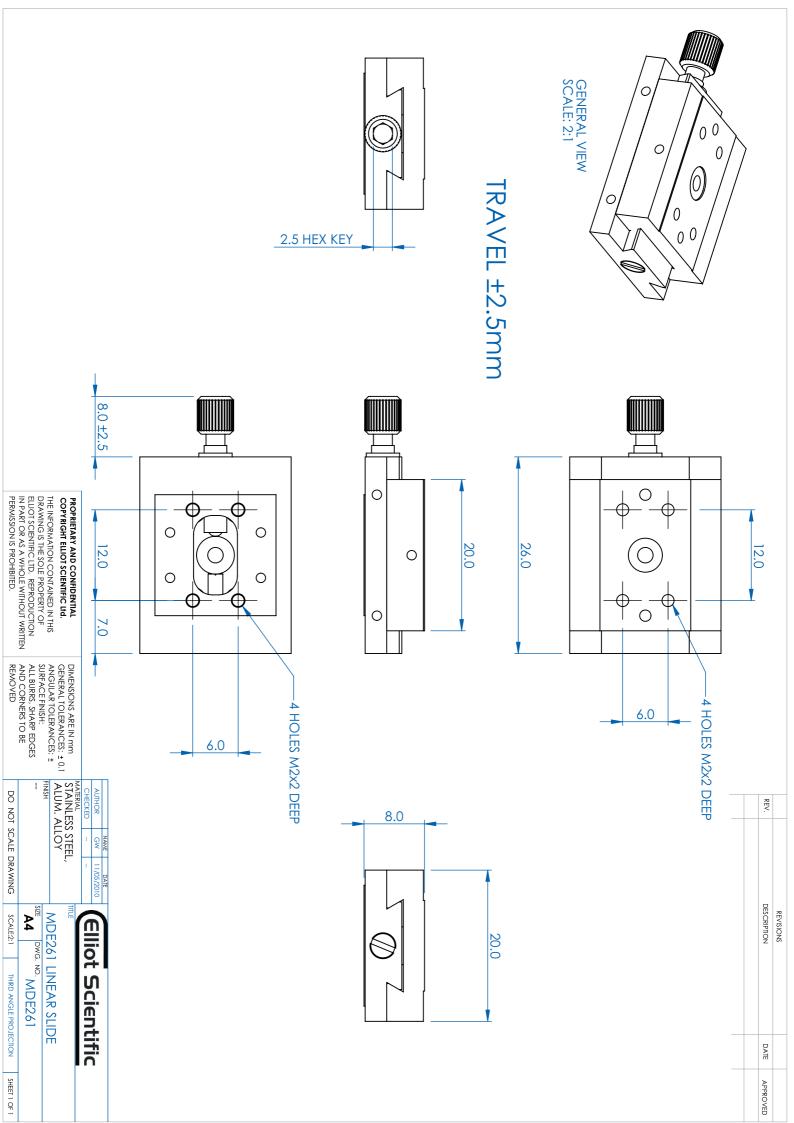
Fibre holder available: MDE72 Tilting option: MDE270 and MDE273

Rotation option: MDE283

Table-mounting option: MDE293

Vacuum version

Notes





MDE262 Dual Axis XY Very-Small Micropositioner



- Wide range of configurations
- Very smooth backlash-free motion

0.25 pitch with knurled knob and 2.5 mm hex socket

· Based on the Small dovetail slide series



Specifications

Travel Sensitivity Adjusters

Ball hex driver supplied

Top plate
Thickness

Mounting holes

26 x 20 mm 16 mm

5 mm

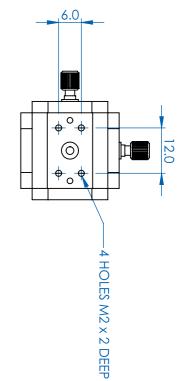
 $< 0.5 \mu m$

Four M2 x 2 mm deep on both sides

Variants

XZ and YZ versions Lockable travel Vacuum version Non-magnetic version

Notes

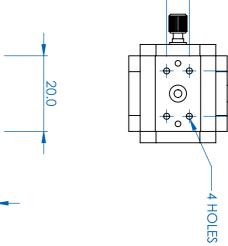


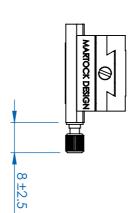
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DESCRIPTION REVISIONS

DATE

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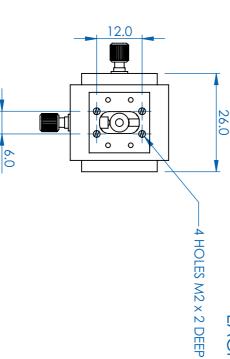


0

16.0

8.0

EACH AXIS HAS ±2.5mm OF TRAVEL





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

A4 MDE262				
SIZE DWG. NO.			!	
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TITLE		STEEL	STAINLESS STEEL,	
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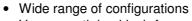
DO NOT SCALE DRAWING SCALE:1:1 THIRD ANGLE PROJECTION

SHEET 1 OF 1



MDE261-XZ Dual Axis XZ Very-Small Micropositioner





- Very smooth backlash-free motion
- Based on the Small dovetail slide series



Specifications

Travel Sensitivity Adjusters

Ball hex driver supplied

Top plate

Mounting holes

26 x 20 mm

5 mm

 $< 0.5 \mu m$

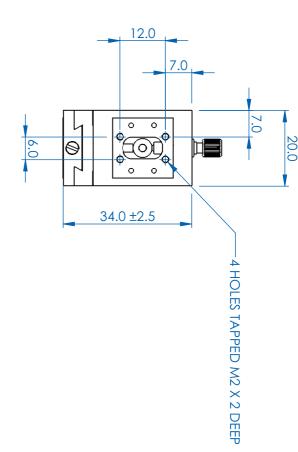
Four M2 x 2 mm deep on both sides

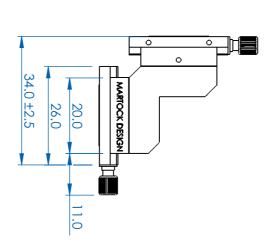
0.25 pitch with knurled knob and 2.5 mm hex socket

Variants

XY and XZ versions Lockable travel Vacuum version Non-magnetic version

Notes





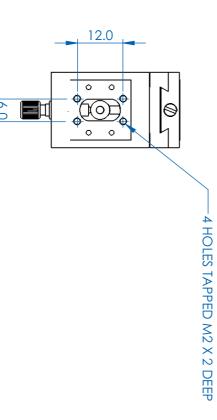
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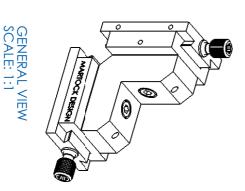
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EACH AXIS HAS ±2.5mm OF TRAVEL





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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

MATERIAL STAINLESS STEEL, ALUM. ALLOY XZ DOVETAIL SLIDE

DO NOT SCALE DRAWING NIZE A SCALE:1:1 **Elliot Scientific** DWG. NO. MDE261-XZ THIRD ANGLE PROJECTION SHEET 1 OF 1



MDE261-YZ Dual Axis YZ Very-Small Micropositioner



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

ELLIOTI MARTOCK

Specifications

Travel
Sensitivity
Adjusters

Ball hex driver supplied

Top plate

Mounting holes

26 x 20 mm

5 mm

 $< 0.5 \mu m$

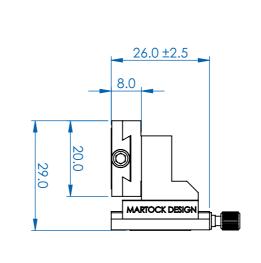
Four M2 x 2 mm deep on both sides

0.25 pitch with knurled knob and 2.5 mm hex socket

Variants

XY and XZ versions Lockable travel Vacuum version Non-magnetic version

Notes



12.0

0 0 7.0

7.0

4 HOLES TAPPED M2 X 2 DEEP

20.0

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DESCRIPTION REVISIONS

DATE

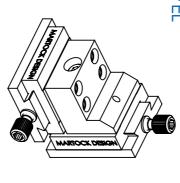
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6.0

 3.0 ± 2.5



4 HOLES TAPPED M2 X 2 DEEP



26.0

12.0

0

0

0 0



DIMENSIONS ARE IN MIN GENERAL TOLERANCES ANGULAR TOLERANCES SURFACE FINISH: ALL BURRS, SHARP EDG AND CORNERS TO BE REMOVED

	AUTHOR	GW	12/05/2010	לכוויס+ חלוקידולוי
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	MATERIAL			
Z mm	STAINLESS STEEL,	STEEL	ļ	TITLE
∠O.B. + O.I	ALUM. ALLOY	YO		Y-Z SLIDE ASSEMBLY
	HINIH			
FDGES	1			SIZE DWG. NO.
כככ				

GENERAL VIEW SCALE 1:1

NO. MD261-YZ

DO NOT SCALE DRAWING SCALE:1:1 Α4 THIRD ANGLE PROJECTION

SHEET 1 OF 1



MDE263 Three Axis XYZ Very-Small Micropositioner



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



Specifications

 $\begin{tabular}{lll} Travel & 5 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

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)

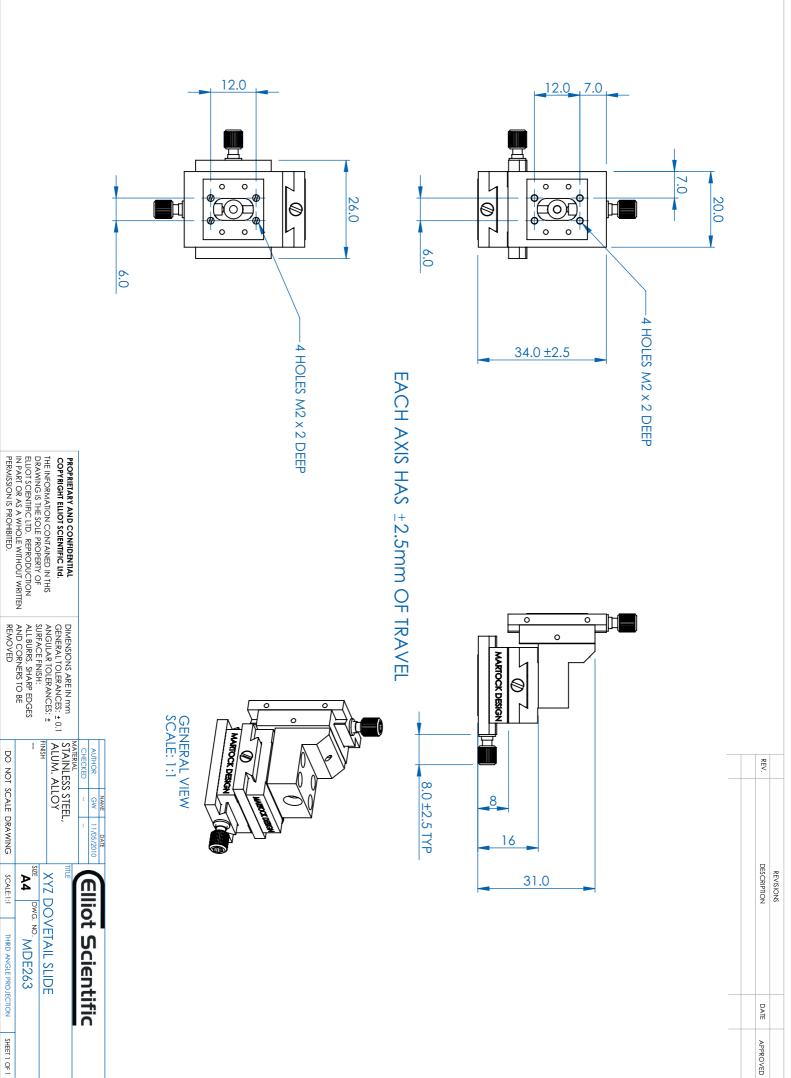
Fibre holder available: MDE72 Tilting option: MDE270 and MDE273

Rotation option: MDE283

Table-mounting option: MDE293

Vacuum version

Notes



DO NOT SCALE DRAWING

SCALE:1:1

THIRD ANGLE PROJECTION

SHEET 1 OF 1



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



Specifications

Travel 5 mm Sensitivity $< 0.5 \, \mu m$

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)

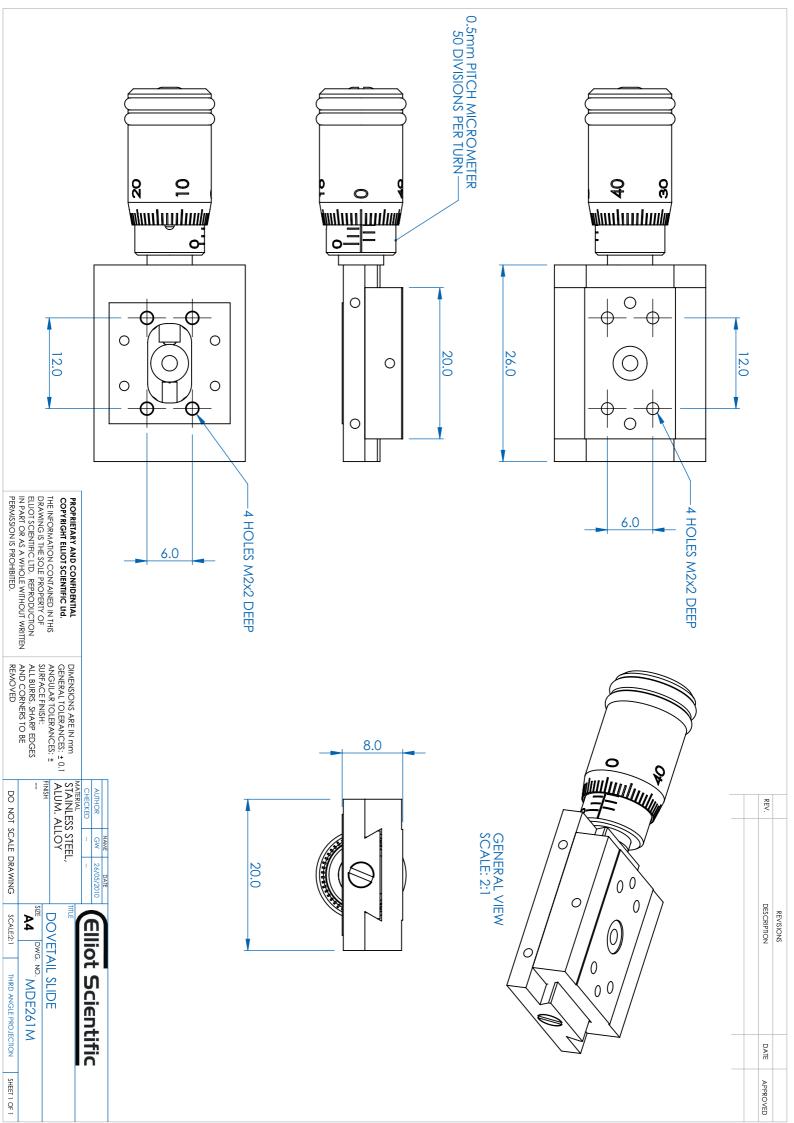
Fibre holder available: MDE72 Tilting option: MDE270 and MDE273

Rotation option: MDE283

Table-mounting option: MDE293

Vacuum version

Notes





MDE262M Dual Axis XY Very-Small Micropositioner with Micrometer



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



Specifications

Travel
Sensitivity
Adjusters

Top plate Thickness

Mounting holes

 $<0.5~\mu m$ Micrometer reading to 0.01 mm 26~x~20~mm 16~mm

5 mm

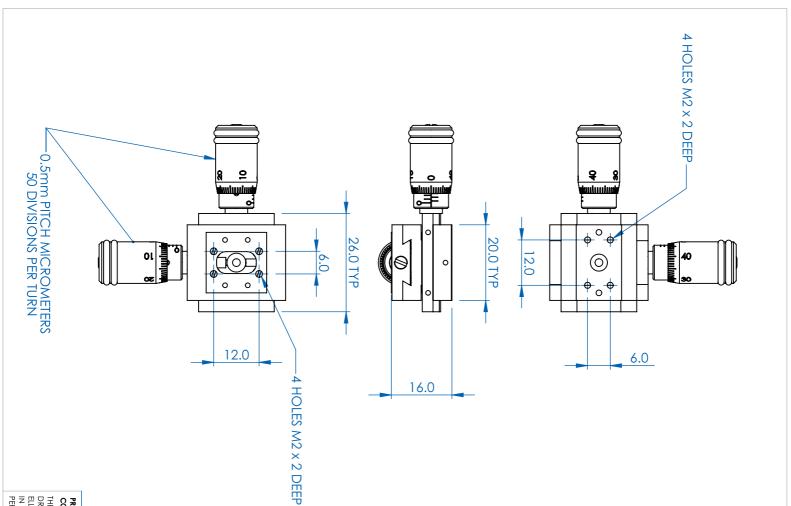
Variants

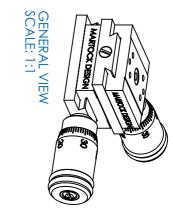
XZ and YZ versions Lockable travel Vacuum version Non-magnetic version

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.

Four M2 x 2 mm deep on both sides





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EACH AXIS HAS ±2.5mm OF TRAVEL

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

MATERIAL STAINLESS STEEL, ALUM. ALLOY 2 AXIS DOVETAIL SLIDE **A Elliot Scientific** DWG. NO. MDE262M

SCALE:1:1

DO NOT SCALE DRAWING

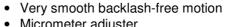
THIRD ANGLE PROJECTION

SHEET 1 OF 1



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





Micrometer adjuster

• Wide range of configurations

• Based on the Small dovetail slide series

Specifications

Travel 5 mm Sensitivity $< 0.5 \mu m$

Adjusters Micrometer reading to 0.01 mm

Top plate 26 x 20 mm

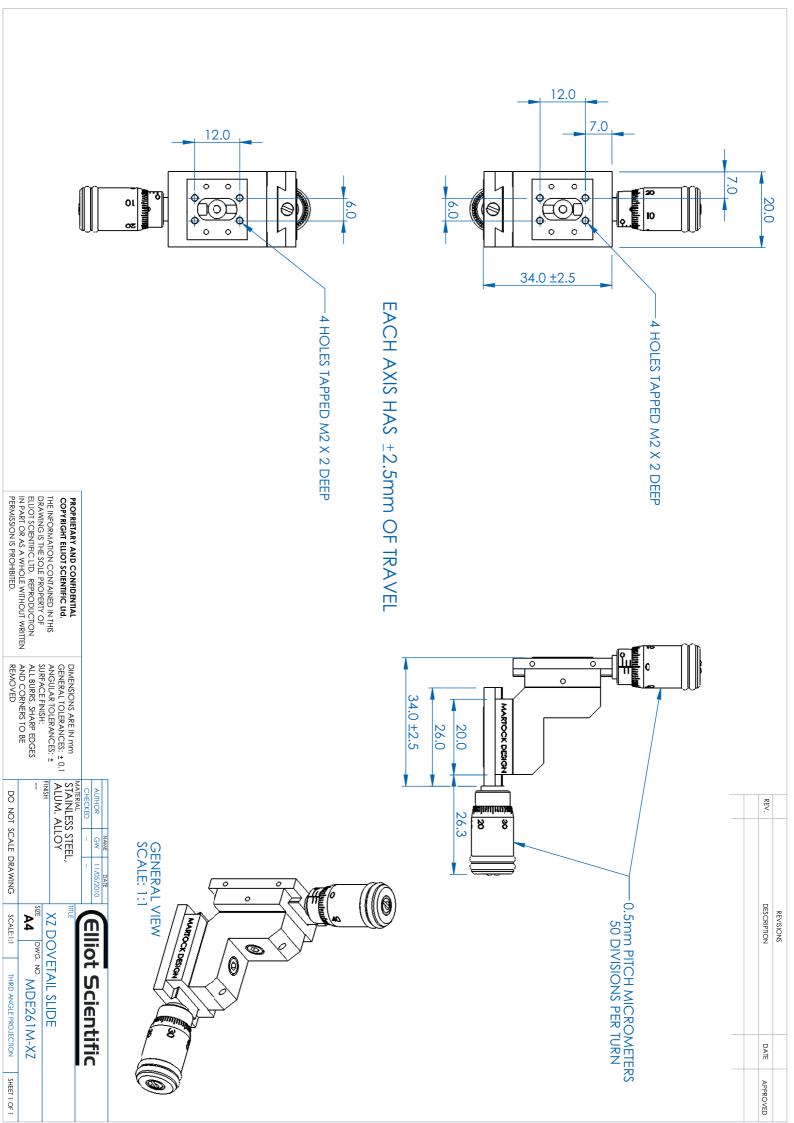
Mounting holes Four M2 x 2 mm deep on both sides

Variants

XY and XZ versions Lockable travel Vacuum version Non-magnetic 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.





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



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



Specifications

 $\begin{tabular}{lll} Travel & 5 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

Adjusters Micrometer reading to 0.01 mm

Top plate 26 x 20 mm

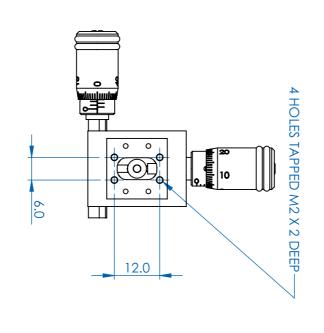
Mounting holes Four M2 x 2 mm deep on both sides

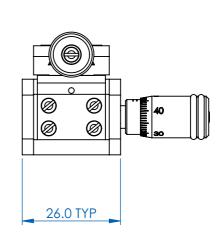
Variants

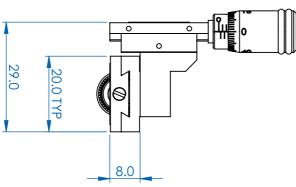
XY and XZ versions Lockable travel Vacuum version Non-magnetic version

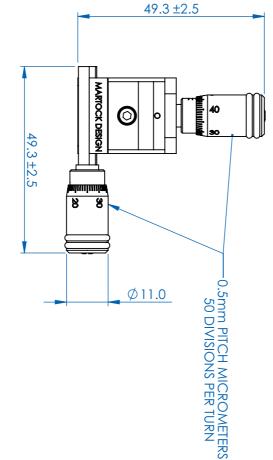
Notes

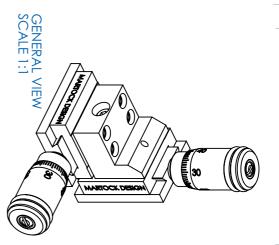
Surface mating with these micropositioners must be truly flat. Unflat surfaces or overtightened screws will cause the slide motion to be jerky and stiff due to distortion. Dovetail slides, unlike miniature ball slides, are unlikely to be permanently damaged by temporary distortion, as the load is supported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











REV.

DESCRIPTION REVISIONS

DATE

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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

MATERIAL STAINLESS STEEL, ALUM. ALLOY DO NOT SCALE DRAWING

Elliot Scientific

GW NAME

₽ DWG. NO.

Y-Z SLIDE ASSY WITH MICROMETERS MDE261M-YZ

THIRD ANGLE PROJECTION

SCALE:1:1



MDE263M Three Axis XYZ Very-Small Micropositioner with Micrometer



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



Specifications

 $\begin{tabular}{lll} Travel & 5 mm \\ Sensitivity & < 0.5 \ \mu m \end{tabular}$

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

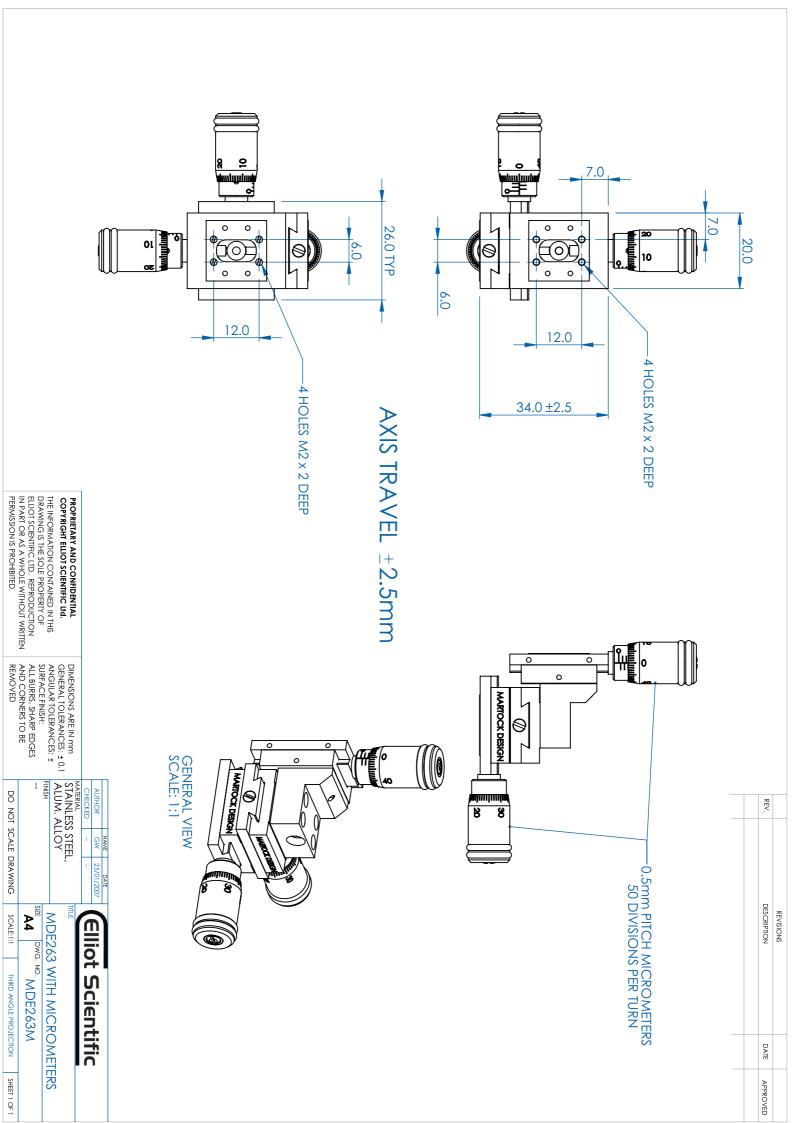
Rotation option: MDE283

Table-mounting option: MDE293

Vacuum version

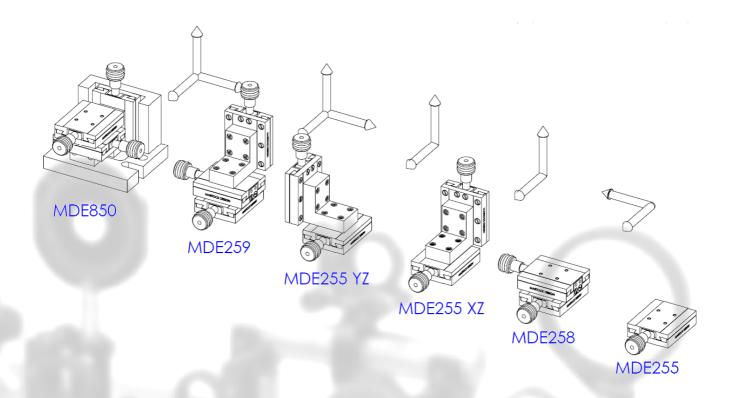
Notes

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.



Opto-Mechanics 2011

Small Linear Stages









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

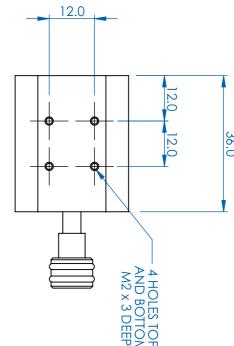


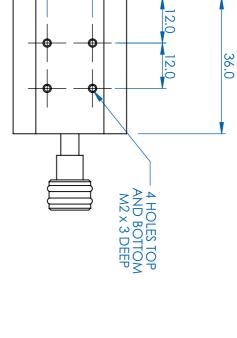
Specifications

Travel Sensitivity Adjuster

Variants

Lockable travel Vacuum version Non-magnetic version





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GENERAL VIEW SCALE: 1:1

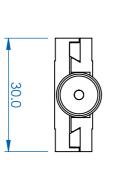
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20 ±5

TOP PLATE TRAVEL ±5mm

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DIMENSIONS ARE IN mm
GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
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DWG. NO.	SIZE		1	
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== 1 1	27/05/2008	GW	AUTHOR	

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



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



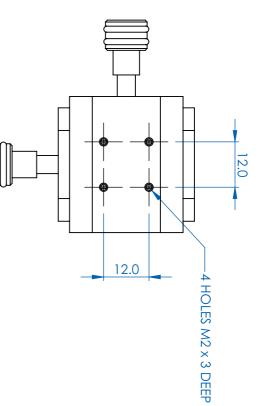
Specifications

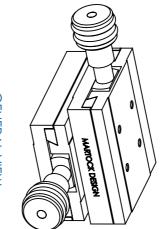
Travel Sensitivity Adjusters

Variants

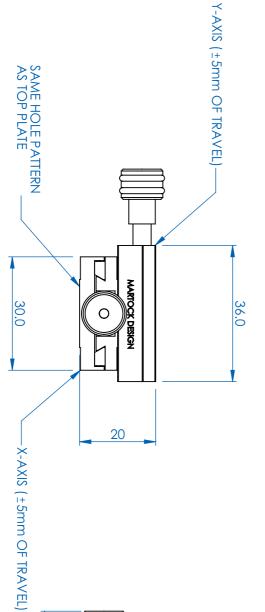
Lockable travel
Vacuum version
Non-magnetic version

	REV.	
	DESCRIPTION	REVISIONS
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

MDE258	NZE A 4			ı	
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20 ±5

MARTOCK DESIGN

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



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

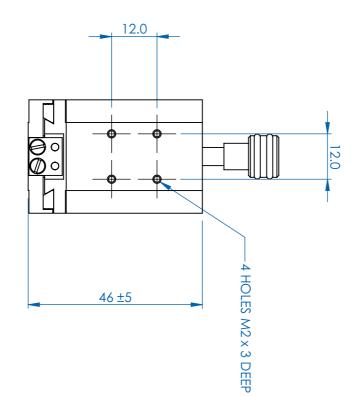


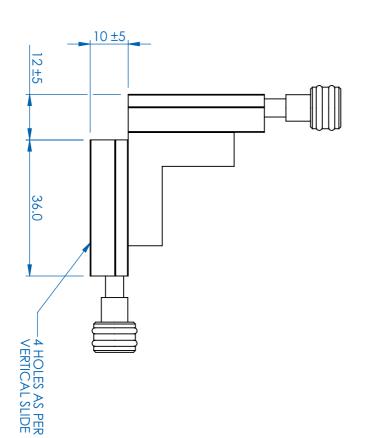
Specifications

Travel Sensitivity Adjusters

Variants

Lockable travel
Vacuum version
Non-magnetic version





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GENERAL TOLERANCES: ± 0.1
ANGULAR TOLERANCES: ±
SURFACE FINISH:
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AND CORNERS TO BE
REMOVED

MATERIAL STAINLESS STEEL, BRASS, ALUM. ALLOY DO NOT SCALE DRAWING **A** SCALE:1:1 XZ DOVETAIL SLIDE Elliot Scientific DWG. NO. MDE255 XZ THIRD ANGLE PROJECTION SHEET 1 OF 1



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

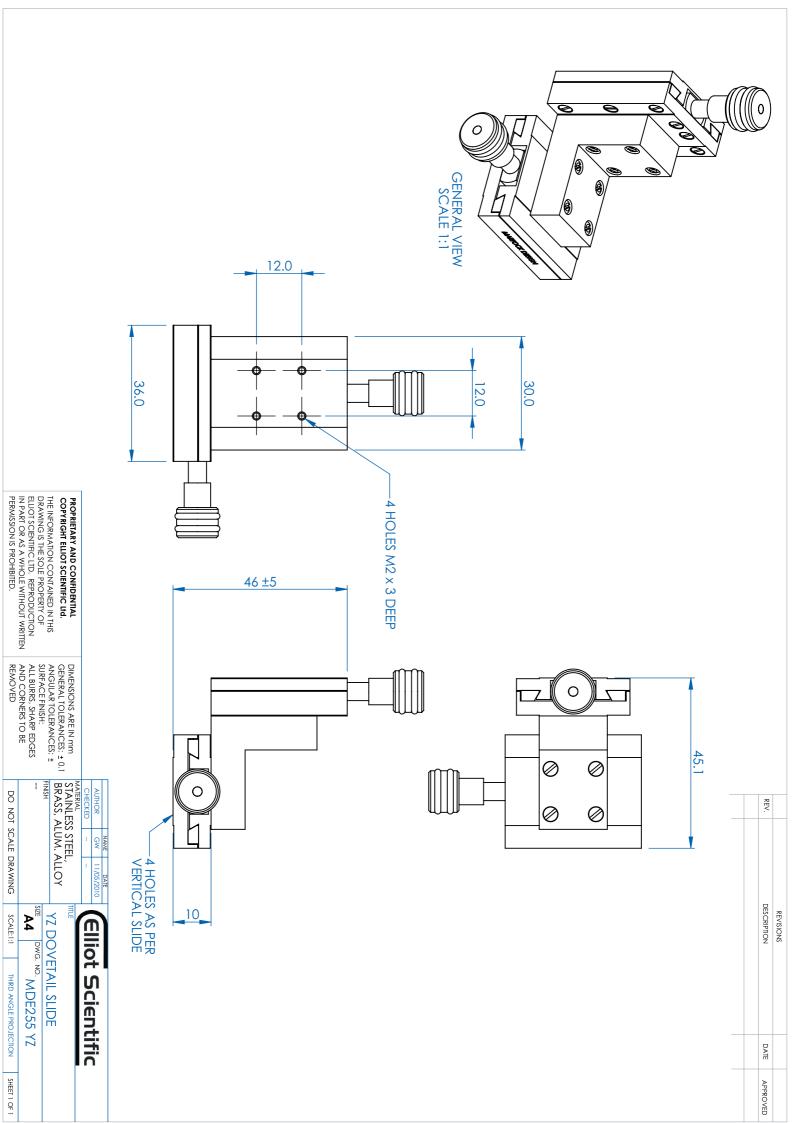


Specifications

Travel Sensitivity Adjusters

Variants

Lockable travel Vacuum version Non-magnetic version





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



Specifications

Travel
Sensitivity
Adjusters

Variants

Lockable travel Vacuum version Non-magnetic version

ALL THREE AXES ±5mm TRAVEL

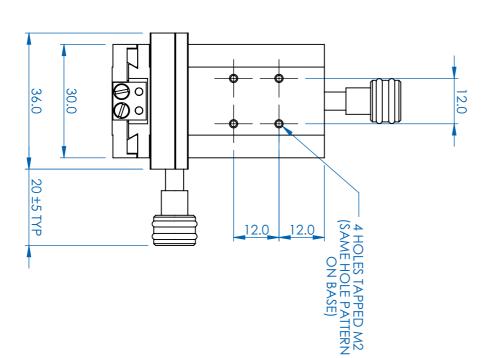
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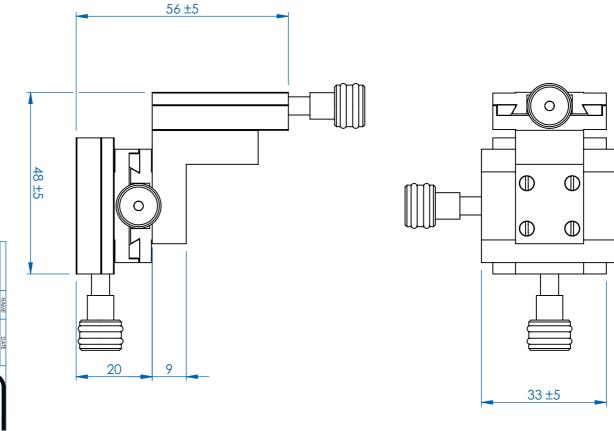
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

MATERIAL STAINLESS STEEL, BRASS, ALUM. ALLOY

DO NOT SCALE DRAWING

SCALE:1:1

SIZE A

3-Axis Mircropositioner Elliot Scientific

DWG. NO. MDE259

THIRD ANGLE PROJECTION



MDE850 Three Axis Horizontal Platform



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

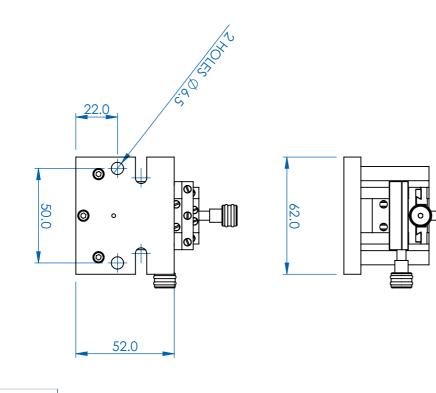


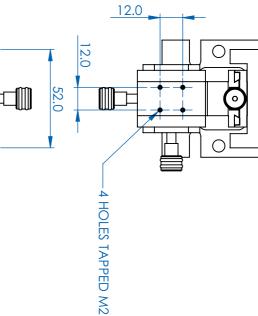
Specifications

Travel
Sensitivity
Adjusters

Variants

Lockable travel Vacuum version Non-magnetic version





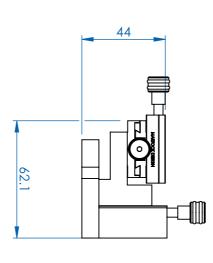
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ANGULAR TOLERANCES: ±
SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

MATERIAL STAINLESS STEEL, BRASS, ALUM. ALLOY

- FINISH

DO NOT SCALE DRAWING

SIZE . XYZ MICROPOSITIONER DWG. NO. MDE850

Elliot Scientific

SCALE:1:2 THIRD ANGLE PROJECTION



MDE255M Single Axis Small Micropositioner with Micrometer



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

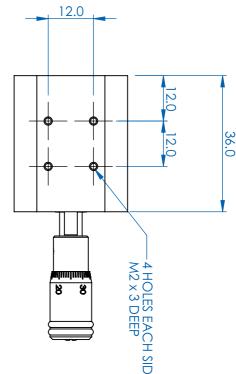


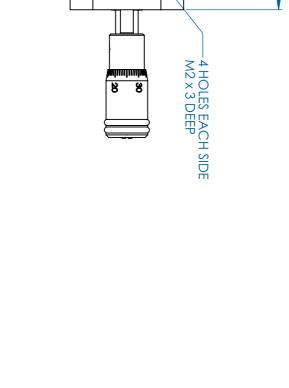
Specifications

Travel Sensitivity Adjuster

Variants

Lockable travel Vacuum version Non-magnetic version 10 mm $$<0.5~\mu m$$ Micrometer reading to 0.01 mm





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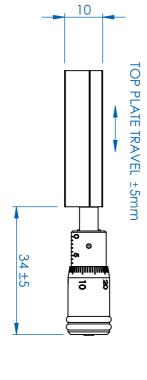
GENERAL VIEW SCALE: 1:1

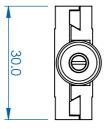
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SURFACE FINISH:
ALL BURRS, SHARP EDGES
AND CORNERS TO BE
REMOVED

AUTHOR GW Z8/J86/2008 CHECKED CHIOT OF THE STEEL, TAINLESS STEEL, RASS, ALUM. ALLOY IISH SIZE DWG. NO. A4 DWG. NO.	1	7	Б	S	3		
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	SIZE DWG. NO. MDE255M		SIDE WITH MICROMETE	TITLE		CIIIOL DCIEILLII	プロニッナ ついいしょ

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



MDE258M Dual Axis XY Small Micropositioner with Micrometer



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



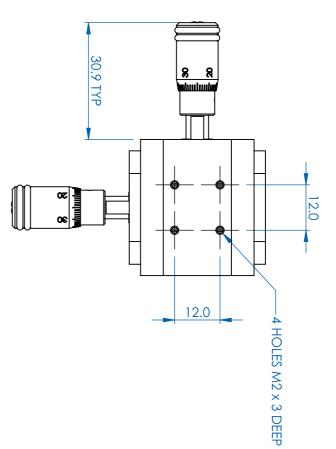
Specifications

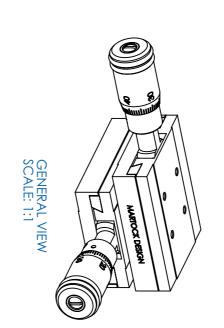
Travel
Sensitivity
Adjusters

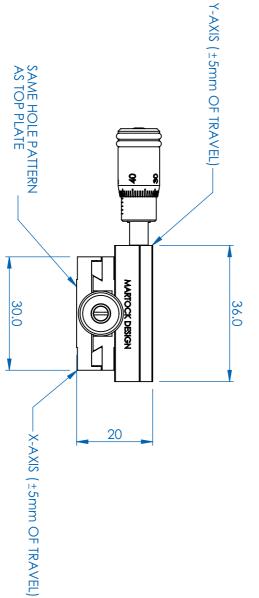
Variants

Lockable travel Vacuum version Non-magnetic version 10 mm $$<0.5~\mu m$$ Micrometer reading to 0.01 mm

	REV.	
	DESCRIPTION	REVISIONS
	DATE	
	APPROVED	







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DWG. NO. MDE258M	SIZE A4			1	ES
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		1. ALLOY	EEL,	
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MUENGAM	DWG. NO.		

DO NOT SCALE DRAWING | SCALE:1:1 | THRD ANGLE PROJECTION



MDE255M-XZ Dual Axis XZ Small Micropositioner with Micrometer



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



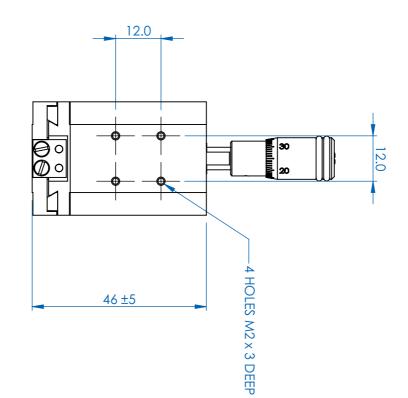
Specifications

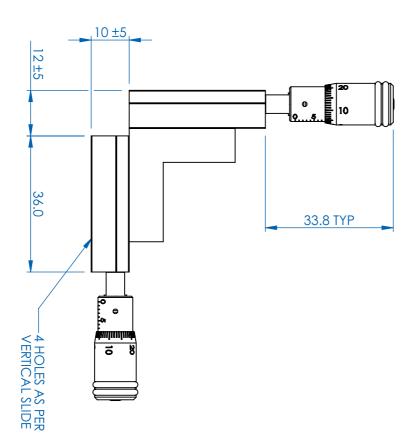
Travel Sensitivity Adjusters

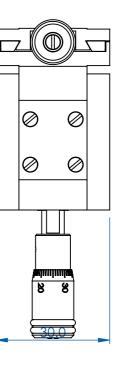
Variants

Lockable travel Vacuum version Non-magnetic version 10 mm < 0.5 μm

Micrometer reading to 0.01 mm







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

MATERIAL STAINLESS STEEL, BRASS, ALUM. ALLOY SIZE A **Elliot Scientific**

DO NOT SCALE DRAWING

SCALE:1:1

XZ DOVETAIL SLIDE

DWG. NO. MDE255M-XZ

THIRD ANGLE PROJECTION



MDE255M-YZ Dual Axis YZ Small Micropositioner with Micrometer



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

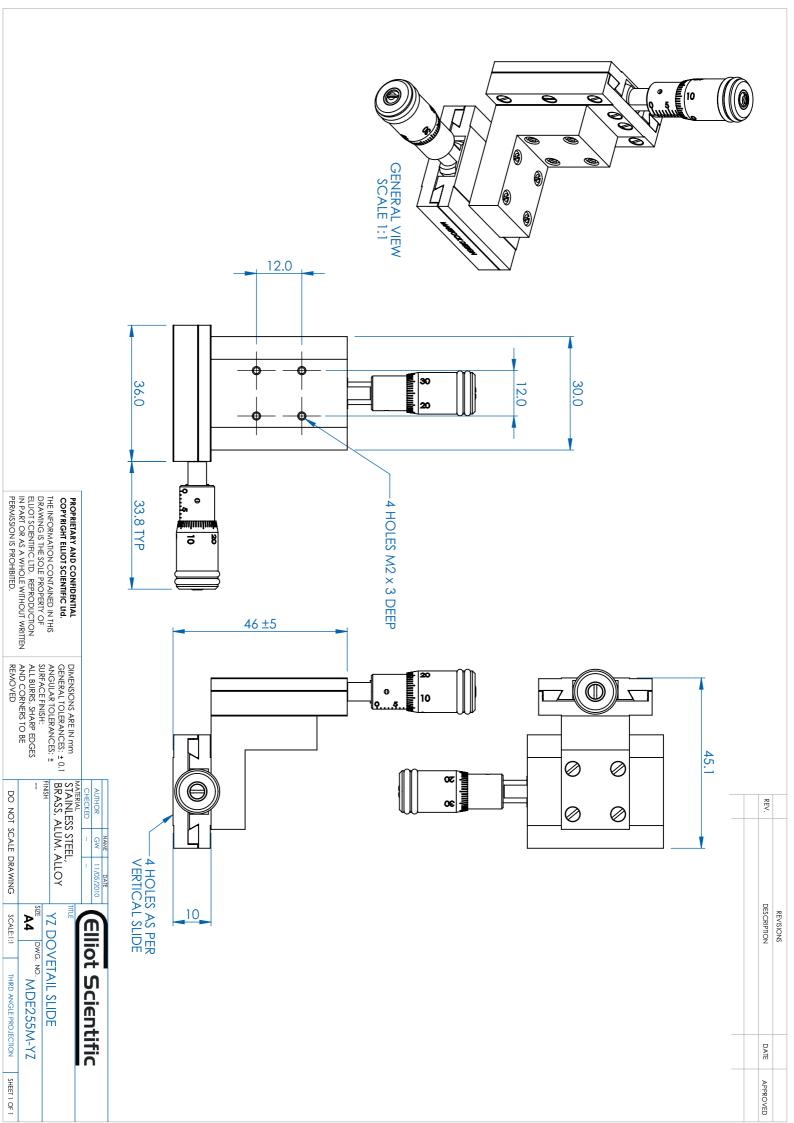


Specifications

Travel Sensitivity Adjusters

Variants

Lockable travel Vacuum version Non-magnetic version 10 mm $$<0.5~\mu m$$ Micrometer reading to 0.01 mm





MDE259M Three Axis XYZ Small Micropositioner with Micrometer





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

Specifications

Travel Sensitivity Adjusters

Variants

Lockable travel Vacuum version Non-magnetic version 10 mm $$<0.5~\mu m$$ Micrometer reading to 0.01 mm

ALL THREE AXES ±5mm TRAVEL

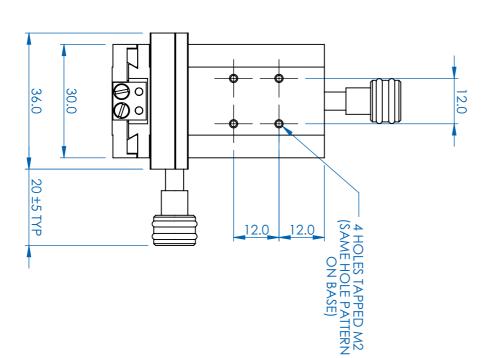
REV.

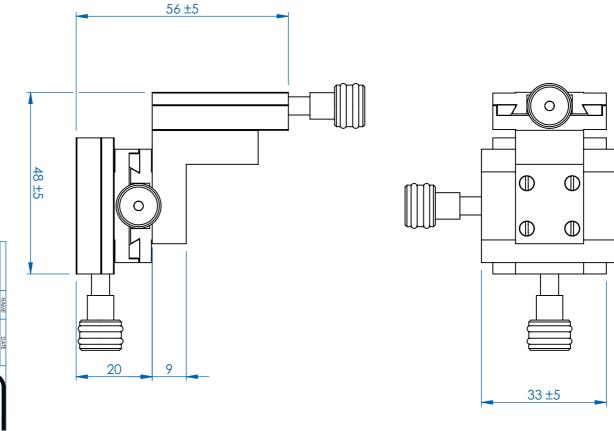
DESCRIPTION

DATE

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

MATERIAL STAINLESS STEEL, BRASS, ALUM. ALLOY

DO NOT SCALE DRAWING

SCALE:1:1

SIZE A

3-Axis Mircropositioner Elliot Scientific

DWG. NO. MDE259

THIRD ANGLE PROJECTION





Opto-Mechanics 2011

Centreing Micropositioners









Manual Positioners: Centreing Micropositioners

MDE250-S XY Simple Centreing Micropositioner



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



Specifications

Travel \pm 1 mm X and Y Sensitivity < 2 μ m Adjusters 0.25 pitch Bore diameter 11 mm

Mounting holes Two M2 x 3.5 mm deep

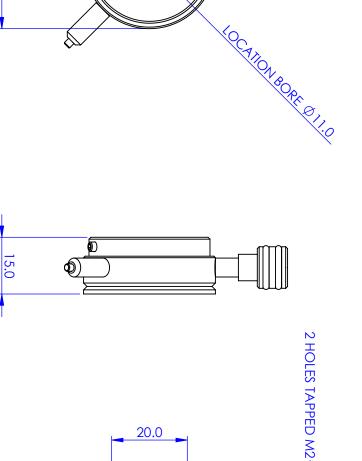
Thickness 13 mm

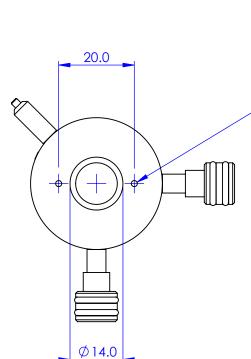
For the latest price, contact us today.



±1mm X&Y TRAVEL

36.5 TYP





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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 ST. O. DO NOT SCALE DRAWING | SCALE1:1 | THIRD ANGLE PROJECTION | SHEET 1 OF 1

'	ASH.	TAINLESS STEEL	CHECKED	AUTHOR GW 23/03/2010	NAME DATE
SZE DWG. NO. MDE250S	CENTRING MOUNT	THE THE	CIIIOL DCIEIICIIC	לתוויס+ תיויס +:הוי	



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



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



Specifications

 $\begin{array}{ll} \text{Travel} & \pm 1 \text{ mm X and Y} \\ \text{Sensitivity} & < 2 \text{ } \mu\text{m} \\ \text{Adjusters} & 0.25 \text{ pitch} \\ \text{Bore diameter} & 15 \text{ mm} \\ \end{array}$

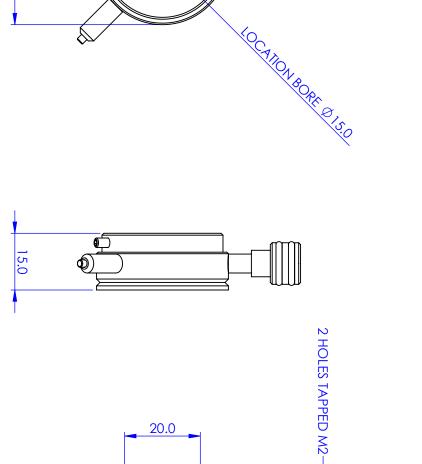
Mounting holes Two M2 x 3.5 mm deep

Thickness 13 mm



±1mm X&Y TRAVEL

36.5 TYP



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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

STAINLESS STEEL **CENTRING MOUNT**

DO NOT SCALE DRAWING SCALE:1:1 ₽ **Elliot Scientific** DWG. NO. MDE250-S-15 THIRD ANGLE PROJECTION SHEET 1 OF 1



MDE257 XYZ Simple Centreing Micropositioner



- X & Y centreing 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 model MDE257-15



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

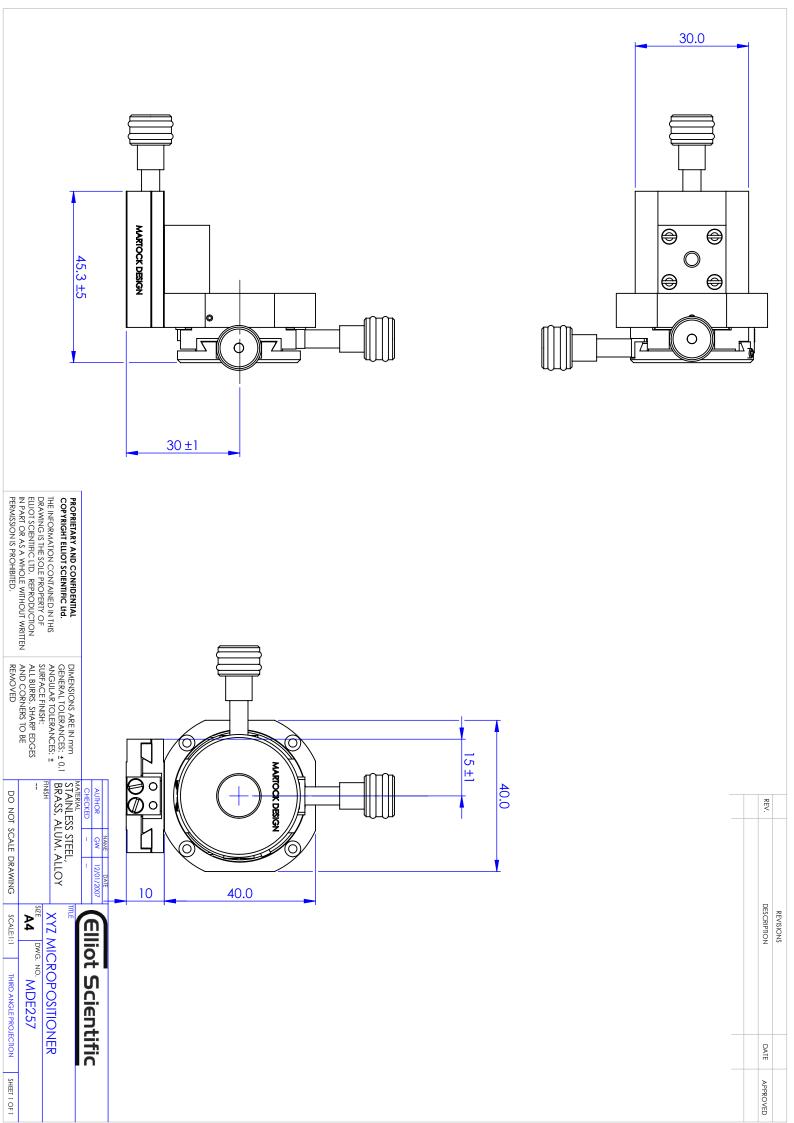
Specifications

 $\begin{array}{lll} \text{X-axis travel} & 10 \text{ mm} \\ \text{X-axis sensitivity} & < 0.5 \text{ } \mu\text{m} \\ \text{Z & Y-axis travel} & \pm 1 \text{ mm} \\ \text{Adjusters} & 0.25 \text{ } \text{pitch} \\ \end{array}$

Z & Y-axis location bore 11 mm Ø, 5 mm deep

Options

MDE257-15 Large Bore Model Vacuum version Non-magnetic version





MDE257M XYZ Simple Centreing Micropositioner with Micrometers



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



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

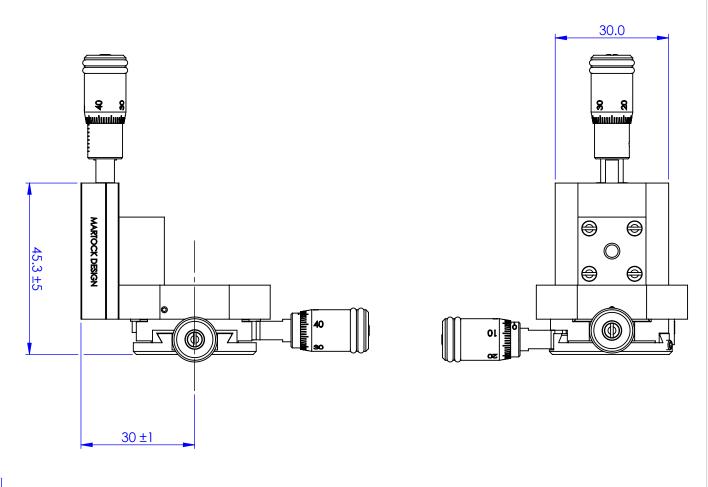
Specifications

 $\begin{array}{lll} \text{X-axis travel} & 10 \text{ mm} \\ \text{X-axis sensitivity} & < 0.5 \text{ } \mu\text{m} \\ \text{Z \& Y-axis travel} & \pm 1 \text{ mm} \\ \text{Micrometer scales} & 0.01 \text{ mm} \end{array}$

Z & Y-axis location bore 11 mm Ø, 5 mm deep

Options

MDE257M-15 Large Bore Model Vacuum version Non-magnetic version



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MATERIAL STAINLESS STEEL, BRASS, ALUM. ALLOY

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GW NAME

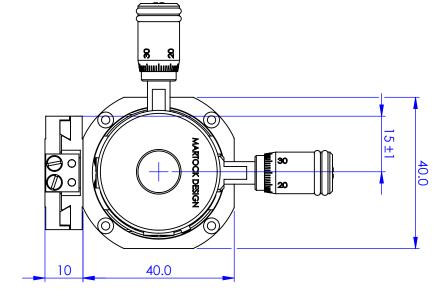
AUTHOR

Elliot Scientific

THIRD ANGLE PROJECTION SHEET 1 OF 1

SIZE A

XYZ MICROPOSITIONER DWG. NO. MDE257M



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DESCRIPTION REVISIONS

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MDE251 XY Precision Centreing Micropositioner





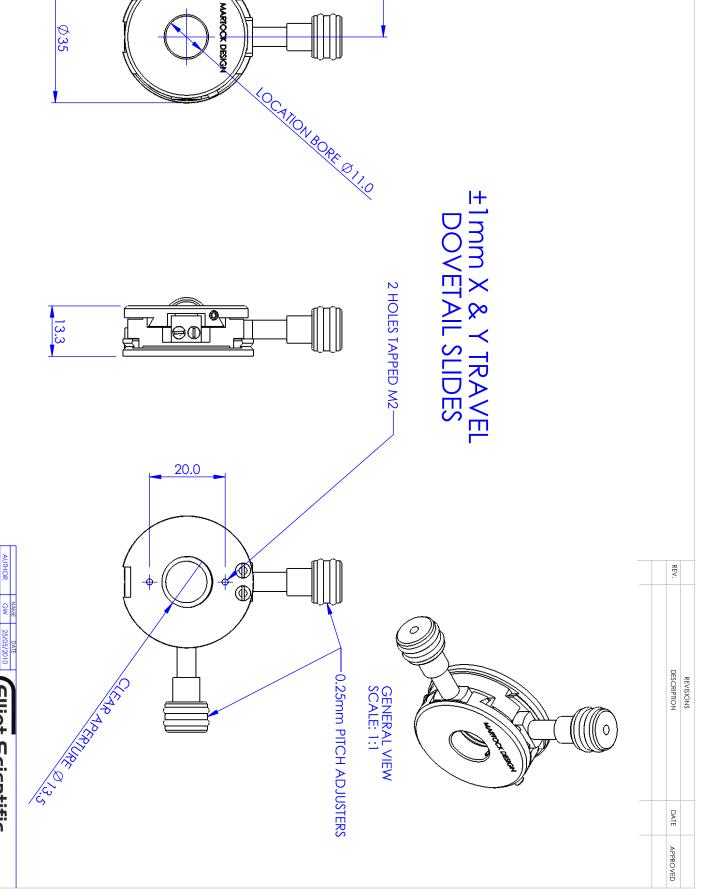
- Travel ± 1 mm
- Stainless steel body
- Two independent dovetail slides
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- Smooth backlash-free motion
- Standard 11 mm Ø bore (suits small laser diodes)

Specifications

Travel
Sensitivity
Adjusters
Bore diameter
Mounting holes
Thickness

± 1 mm X and Y < 0.5 μm 0.25 pitch 11 mm Two M2 x 3.5 mm deep

13 mm



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MATERIAL STAINLESS STEEL AL. ALLOY/AL. BRONZE

Elliot Scientific

PRECISION XY MICROPOSITIONER ₽ DWG. NO. MDE251

THIRD ANGLE PROJECTION SHEET 1 OF 1

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MDE251-15 XY Precision Centreing Micropositioner (Large Bore)



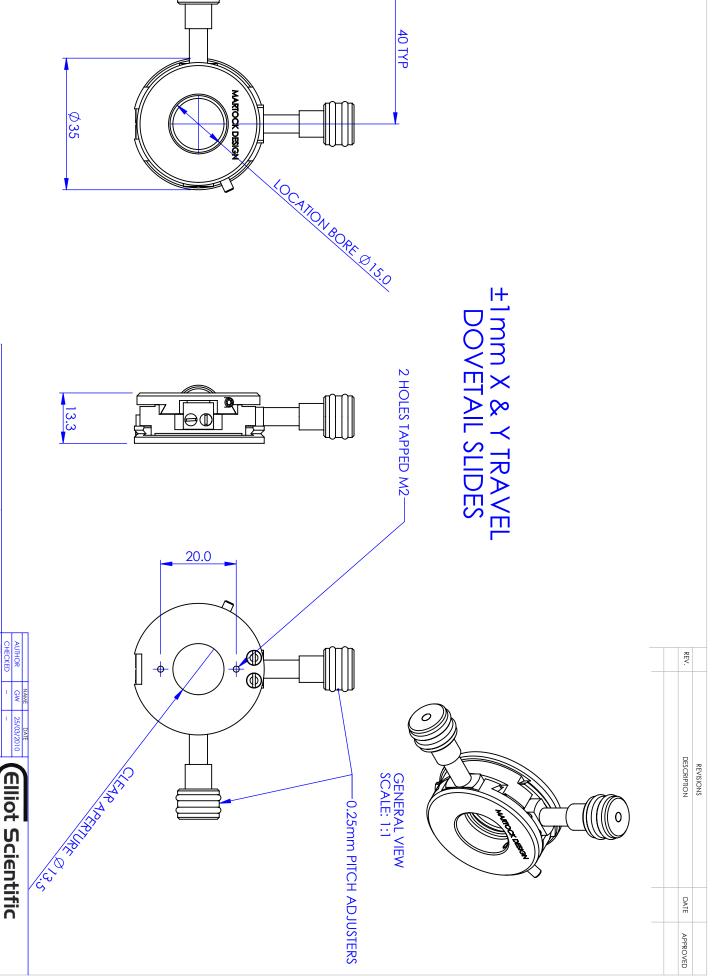


- Travel ± 1 mm
- Stainless steel body
- Two independent dovetail slides
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- Smooth backlash-free motion
- Large 15 mm Ø bore

Specifications

Travel
Sensitivity
Adjusters
Bore diameter
Mounting holes
Thickness

 \pm 1 mm X and Y < 0.5 μm 0.25 pitch 15 mm Two M2 x 3.5 mm deep 13 mm



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MATERIAL STAINLESS STEEL AL. ALLOY/AL. BRONZE

PRECISION XY MICROPOSITIONER

₽ DWG. NO. MDE251-15

SCALE:1:1 THIRD ANGLE PROJECTION

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SHEET 1 OF 1



MDE251M XY Precision Centreing Micropositioner with Micrometers (Large Bore)



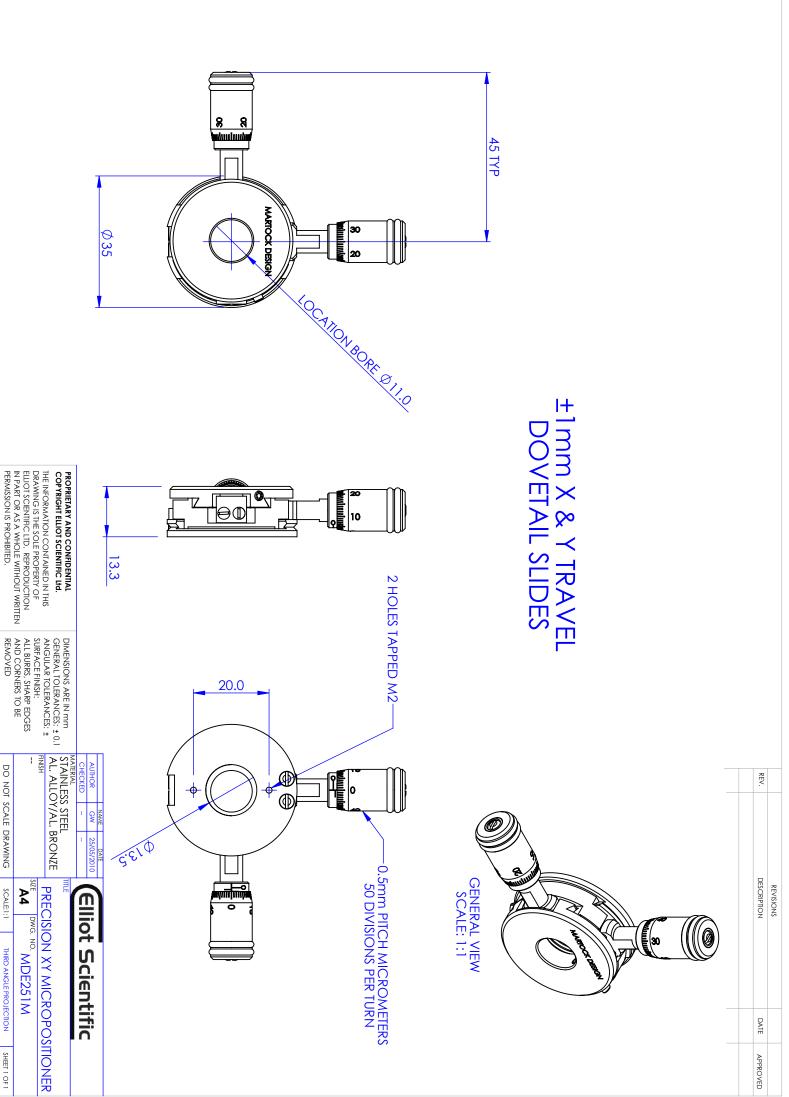


- Travel ± 1 mm
- · Stainless steel body
- Two independent dovetail slides
- Micrometer adjusters
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- · Smooth backlash-free motion
- Standard 11 mm Ø bore (suits small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

Specifications

Travel
Micrometer scale
Bore diameter
Mounting holes
Thickness

± 1 mm X and Y 0.01 mm 11 mm Two M2 x 3.5 mm deep 13 mm



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THIRD ANGLE PROJECTION

SHEET 1 OF 1

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



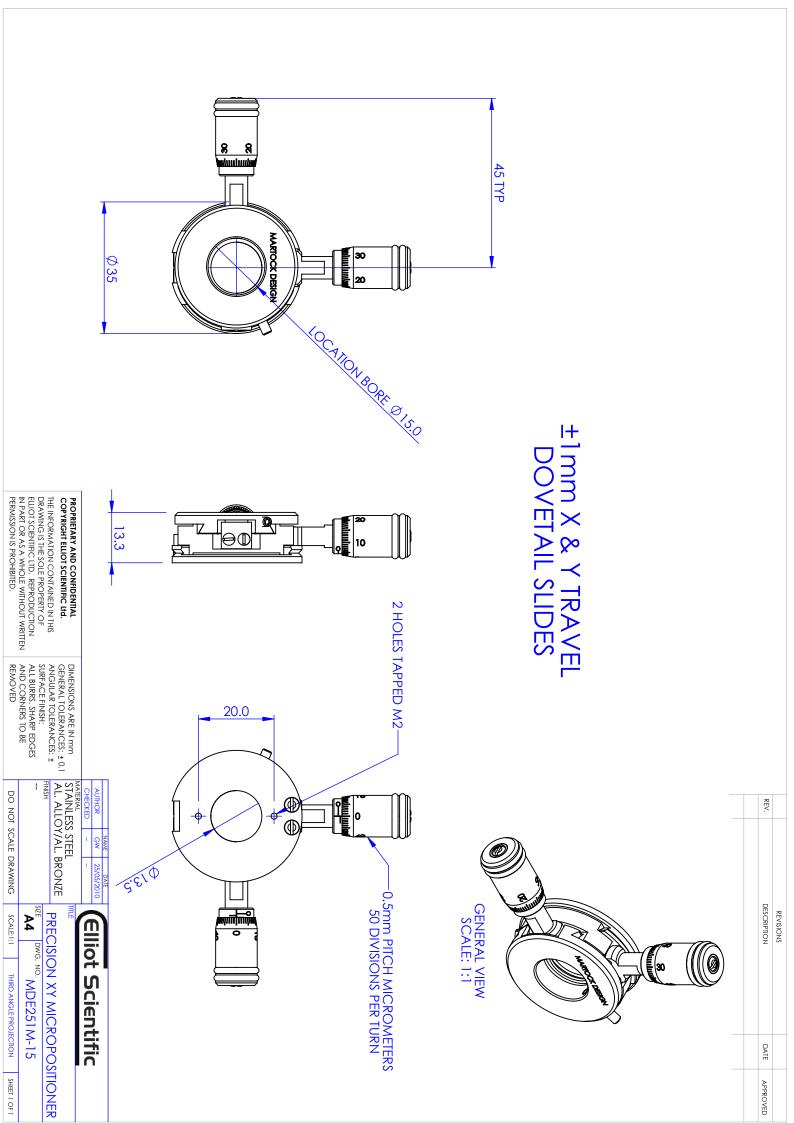


- Travel ± 1 mm
- · Stainless steel body
- Two independent dovetail slides
- Micrometer adjusters
- Fine thread 0.25 pitch adjusters
- No interaction between X & Y axes
- For use where space is limited
- Wide range of configurations
- · Smooth backlash-free motion
- Large 15 mm Ø bore

Specifications

Travel
Micrometer scale
Bore diameter
Mounting holes
Thickness

± 1 mm X and Y 0.01 mm 15 mm Two M2 x 3.5 mm deep 13 mm



Opto-Mechanics 2011

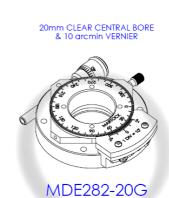
Rotation Stages

M6 CENTRAL BORE















MDE282 Compact Precision Rotation Stage



- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Smooth movement from lapped bearing
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range



The model 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 mr

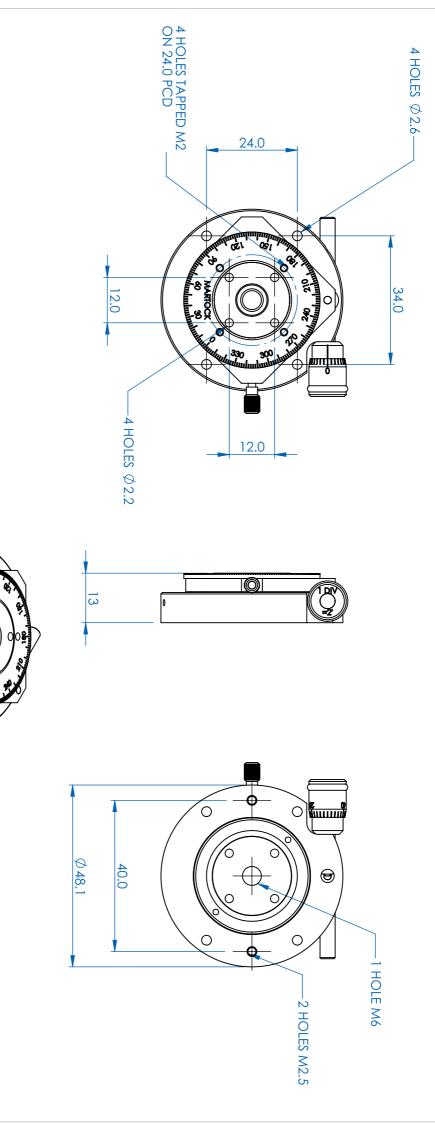
Standard bore tapped M6 with 8 mm counterbore

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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THIRD ANGLE PROJECTION

MATERIAL SIZE **A** SCALE:1:1 **ROTATION STAGE Elliot Scientific** DWG. NO. MDE282 SHEET 1 OF 1



MDE282G Compact Precision Rotation Stage with Vernier



- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Smooth movement from lapped bearing
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range
- 360° scale with 2° divisions and 10 arc minute vernier



The model 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

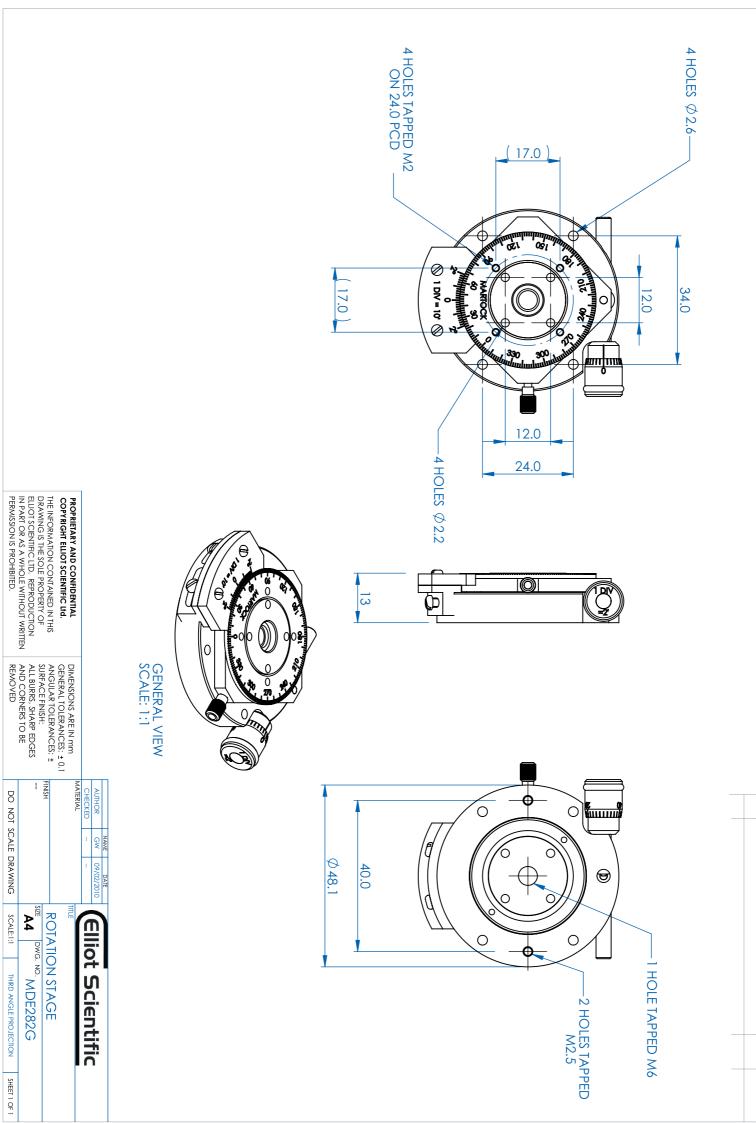
Hole array for mounting MDE255, MDE257, MDE258 or MDE259

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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MDE282-20 Compact Precision Rotation Stage, Large Bore



- Compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Smooth movement from lapped bearing
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range



The model 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

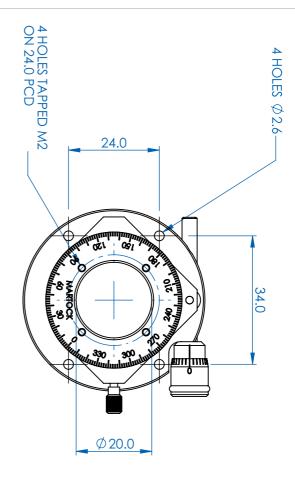
Thickness 13 mm
Bore 20 mm

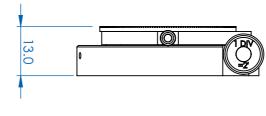
Hole array for mounting MDE255, MDE257, MDE258 or MDE259 micropositioners

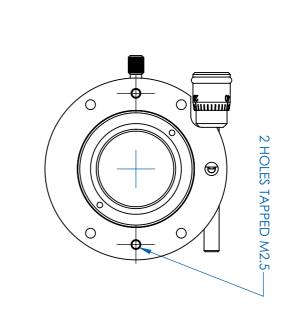
Variants

MDE282: Stage with M6 Tapped Bore MDE282-20: Stage with 20 mm Clear Bore

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





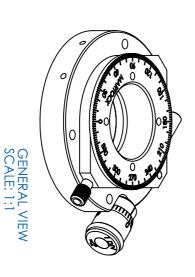


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SHEET 1 OF 1								



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



- Compact
- High precision design
- Stainless steel body
- · Resolution 5 arc seconds
- Smooth movement from lapped bearing
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range
- 360° scale with 2° divisions and 10 arc minute vernier



The model 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

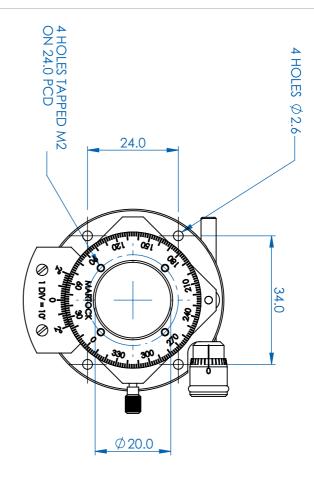
Hole array for mounting MDE255, MDE257, MDE258 or MDE259 micropositioners

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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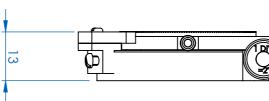
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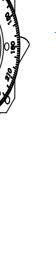
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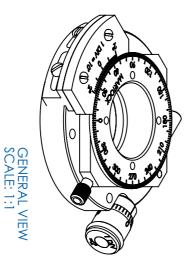
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SHEET 1 OF 1								



MDE283 Very Compact Precision Rotation Stage



- Very compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Smooth movement from lapped bearing
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range



The model 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

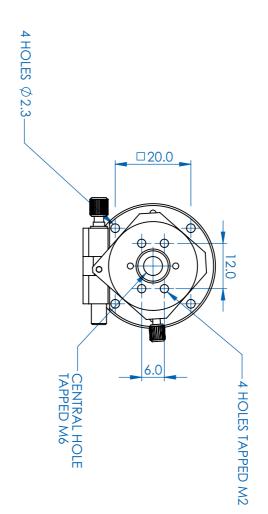
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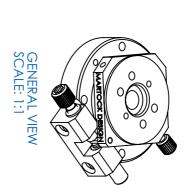
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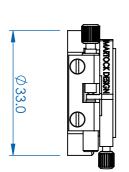
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MDE283 COARSE ADJUST: FULL 360° FINE ADJUST: ±5° RESOLUTION: 5 ARC.SEC







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SHEET 1 OF 1								



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



- Very compact
- High precision design
- Stainless steel body
- Resolution 5 arc seconds
- Smooth movement from lapped bearing
- 360° free rotation with clamp screw
- Tangent screw fine adjustment 10° range



The model 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 360° free rotation with clamp screw Rotation

Fine adjustment Tangent screw providing 10° range: 1 turn = 1° rotation of stage

Resolution 5 arc seconds

Thickness 13 mm 8 mm

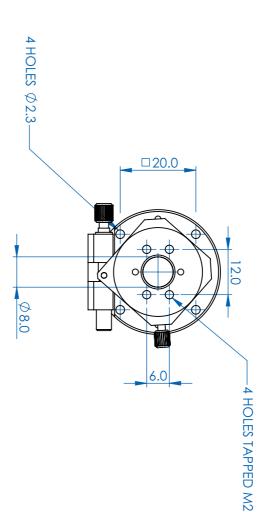
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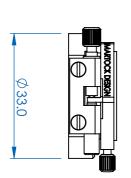
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MDE283-8 COARSE ADJUST: FULL 360° FINE ADJUST: ±5° RESOLUTION: 5 ARC.SEC







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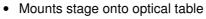
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MDE292 Compact Rotation Stage to Optical Table Adapter

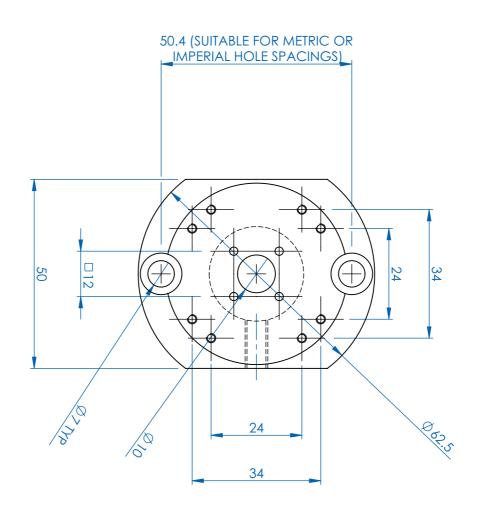




- Alternative M6 hole for post mounting
- Adapts MDE255 series micropositioners to optical tables



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



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MATERIAL

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A SIZE **Elliot Scientific**

ADAPTOR PLATE DWG. NO. MDE292

THIRD ANGLE PROJECTION

SHEET 1 OF 1

16 1 HOLE TAPPED M6

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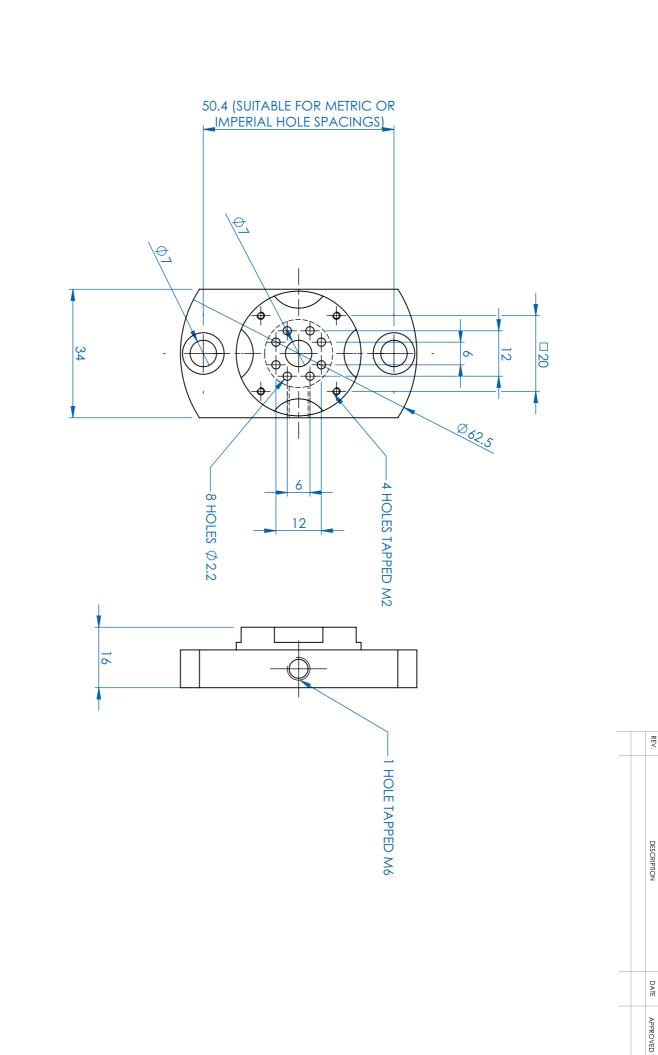
MDE293 Very Compact Rotation Stage to Optical Table Adapter



- 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 very compact rotation stages and the MDE260 series linear stages onto optical tables or M6 studded posts.



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MATERIAL A SIZE **Elliot Scientific**

ADAPTOR PLATE

SCALE:1:1 DWG. NO. MDE293 THIRD ANGLE PROJECTION

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SHEET 1 OF 1



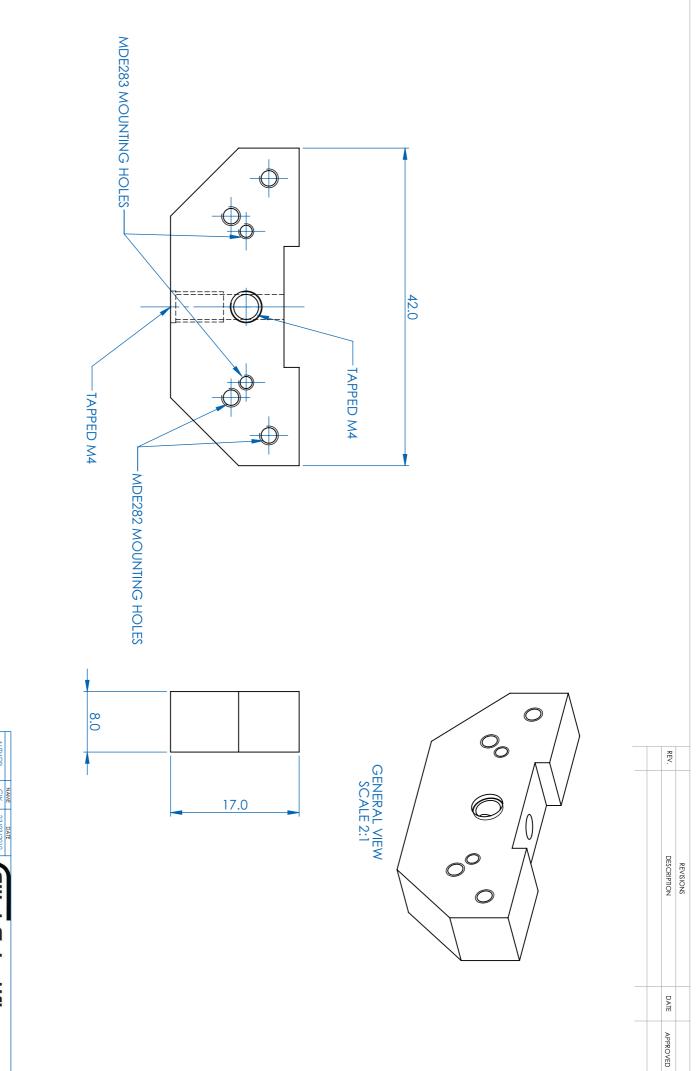
MDE859 Rotation Stage to Post Mount Adapter



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



The MDE859 adapter 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 adapter can also be used with FEMTO-BENCH™ accessories.



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THIRD ANGLE PROJECTION SHEET 1 OF 1



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