

Optic & Opto-Mechanics



- Optics
- Screws
- Mirror Mounts
- Mirror Mounts with Piezo Drive
- Lens Mounting
- Flip Mirror Mounts with Screws and/or Motor
- Prism Tilt and Rotation Stages
- Post, Post Holder, Holding Forks
- Linear Translation Stages
- Linear Translation Stages with Piezo Drive or Stepper Motor
- Optical tables & breadboards

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More than:



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1. Optics

We are able to offer all optics needed for all existing laser systems. Our product range includes optics for dye-, excimer, CO₂- N₂-, pulsed or cw-laser. Standard optics can be delivered ex stock, other components like special coatings, dichroits, special substrates or large -size optics are also available. We also deliver to wholesaler.

Please ask for a quotation.

- **Pump optics for all existing dye lasers**
- **Pump optic-set for Cu-steam laser**
- **Pump optic-set for OPO-operation**
- **Holographic gratings with 1.800, 2.400, 3000 l/mm**
- **Fabry-Perot Etalons**
- **Telescope for Nd:YAG laser**
- **Beam splitters and flat mirrors (R>98%)**

Substrate: MgF₂, BK7 and FQ in different reflectivities rates and dimensions: on request
Coating: 193, 248, 308, 355, 532nm, broadband, dichroid, etc...



Excimer laser-mirrors

(0° and 45°) and -windows:

Material: MgF₂ or CaF₂

Diameter, thickness : 36mm or 38mm (1,5"), d = 5mm

Mirror coating: Al or dielectric @ 193, 248, 308 nm



Cylindrical lenses

Material: BK7, FQ, MgF₂, CaF₂ in different Dimensions and focal length

Coating: VIS, UV, IR

Spherical Lenses

Material: FQ with different focal length

Diameter: 10, 14, 25, 40mm

AR-Coating: VIS, UV



Prisms (normal, Pellin Broca, Fresnel-Rhomb)

Material: FQ, CaF₂ in different dimensions

AR-Coating: VIS, UV

2. Screw options for all Mirror Mounts

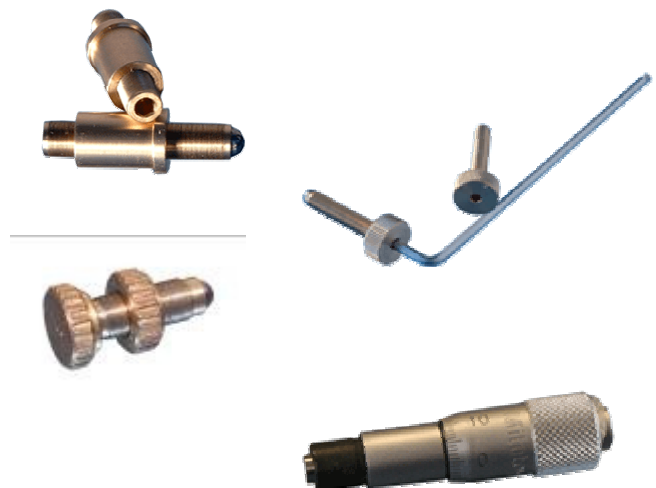


Model 1	Model 2	Model 3	Model 4
Fit liner: 6 mm with band	Fit liner: 6 mm with band	Fit liner: 9,5 mm with band	Fit liner: 9,5 mm with band
Adjustment line: 6 mm	Adjustment line: 8 mm	Adjustment line 19 mm	Adjustment line: 12 mm (option 8 mm)
Thread: M4.15 x 0,25	Thread: M4.15 x 0,25	Thread: M 6.15 x 0,25	Thread: M 6.15 x 0,25
Milled head	Milled head	4 mm fit for plastic heads	Milled head
Top with braze ball	Top with braze ball	Top with braze ball	Top with braze ball



Options:

- Fine threaded screws with **150 µm/turn**
- Hexagon socket
- Hexagon socket with knurled head
- Counter nut



Micrometer- and Differential Micrometer screws

with **0,25 mm** thread pitch or **0,5 mm** thread pitch

Opto-mechanics

3. Mirror Mounts



3.1 Mirror Holders of the series MIKRO

These mirror holders are manufactured of a special steel. They allow the assembly of a rigid resonator in a very small housing.

MRO-UL

Front plate 20 x 15 mm

MRO-ST-TR

beam splitter and trans adjustment

Front plate 20 x 15 mm

with 10 mm notch



3.2 MNI- Mirror holders



Features:

- Small stable Mirror Mount
- Open or closed body plate
- Several back-plates available
- Standard: With two or three 250 μm fine thread screws
- Option: with 150 μm fine thread screws
- Option: also available with micrometer screws



MNI-2-... MNI-3-... MNI-2G-... MNI-3G-...



...-3030 (1/2") ...-3021 (1/2") ...-3010 (6H7) ...-3000 ...-3035Up ...-3035Down ...-3025 (1")

The order number of the desired MINI mirror holder consists of the number of the screws and the number of the chosen front.

e.g. a body with three screws and an open 0.5" front plate has the order number MNI-3-3030

These mirror holders are used for the beam guidance, for the beam division and for the trans justing. With easy turning is this holder useable from the left and right side.

As accessories base plates and post holders are available.

3.3 MNI-H-Mirror holders (high stable)



Features:

- Small high stable Mirror Mount
- 4 springs
- Open or closed body plate
- Several back-plates available
- Standard: With two 250 µm fine thread screws
- Option: with 150 µm fine thread screws
- Option: also available with micrometer screws



MNI-H-2... MNI-H-2G...



...-3030 (1/2") ...-3021 (1/2") ...-3010 (6H7) ...-3000 ...-3035Up ...-3035Down ...-3025 (1")

The order number of the desired MINI mirror holder consists of the number of the screws and the number of the chosen front.

e.g. a body with two screws and an open 0.5" front plate has the order number MNI-H-2-3030

These mirror holders are used for the beam guidance, for the beam division and for the transjusting. With easy turning is this holder useable from the left and right side. The equipment with fine thread screws (0,25 mm pitch) is standard.

On special customer request: MNI-H-U

- 4 strong springs
- High-precision screws with hexagon socket
- Option: with locking device



MNI-H-U-2-3030
MNI-H-U-3-3030

3.4 Mirror holders of the series MDI



Features:

- Stable Mirror Mount
- Open or closed body plate
- Several back-plates available
- Standard: With two 250 µm fine thread screws
- Option: with 150 µm fine thread screws
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free

These mirror holders are used for the beam guidance, for the beam division and for the transjusting. As accessories alternate inserts, base plates and post holders are available. All MIDI holders will be delivered with a M6-thread and lowering for M4 screws as standard. On request M4- and M8-threads are available.

The order number of the desired MIDI mirror holder consists of the number of the screws and the number of the chosen front.

e.g. a body with three screws and an open 1" front plate has the order number MDI-3-3030.



3.5 Easy MIDI NEW

Precise adjustable but low-priced!!!



E-MDI-2-3031

The difference to the original MDI:

- shorter adjusting range
- with smaller screw head
- no carbide spikes
- without thread but with lowering for M4 screws
- only available with 2 screws

Sale only in 5; 10 and 20 units.

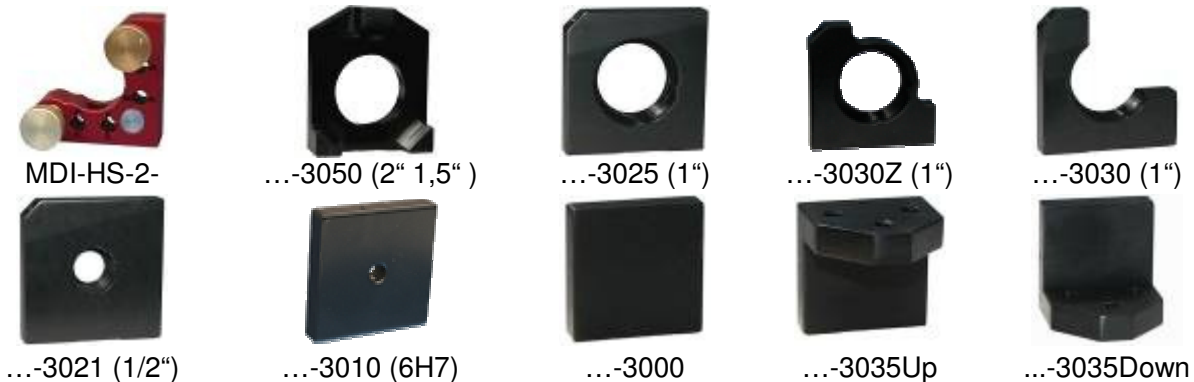
3.6 High Stable mirror mounts MDI-HS



MDI- HS

Features:

- High Stable Mirror Mount
- 4 springs
- Stainless steel insert for stabilisation
- Thicker open body plate
- Several back-plates available
- Standard: With two 250 μ m fine thread screws
- Option: with 150 μ m fine thread screws
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free



The order number of the desired MDI-HS mirror holder consists of the number of the screws and the number of the chosen front plate.

e.g. a body with two screws and an open 1" front plate has the order number MDI-HS-2-3030.

Due to strong spring forces we offer the MDI-HS and MDI-H only with two alignment screws. If a third screw should be necessary we recommend the screw as hexagon socket for easier alignment.

3.7 High Stable mirror mounts MDI-H



MDI-H

Features:

- High Stable Mirror Mount
- Standard MDI-H with Axial mounting ring for distortion free wavefront
- 4 springs
- Stainless steel insert for stabilisation
- Thicker open body plate
- Thicker front plates
- Several back-plates available
- Standard: With two 250 µm fine thread screws
- Option: with 150 µm fine thread screws
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free



MDI-H-2-



...-3010(6H7)



...-3021



...-E3021



...-3025

The order number of the desired MDI-H mirror holder consists of the number of the screws and the number of the chosen front.

e.g. a body with two screws and an 1" front plate has the order number MDI-H-2-3025.

- 1 inch mount with side set screw mounting

Optional

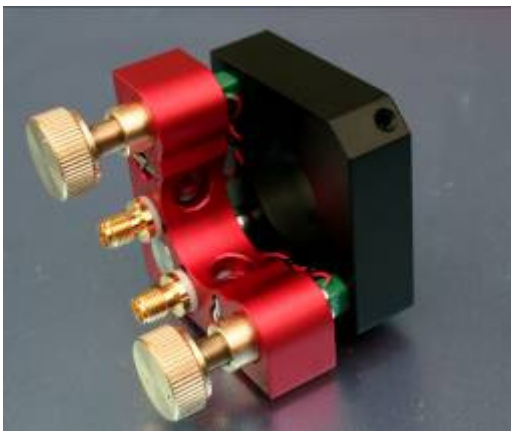
- 0.5 inch mounting adapter
- Fine thread screws with hexagon socket
- All screws are available in stainless steel

Due to strong spring forces we offer the MDI-HS and MDI-H only with two alignment screws. If a third screw should be necessary we recommend the screw as hexagon socket for easier alignment.

3.8 MDI-H with piezodrive



The new MDI-H with piezodrive is a mirror mount which is controlled by a piezo system with our own electronics. From now on, besides a manual adjustment by 0.15 mm per turn, the systems can be adjusted electronically within a μm -range.



We also offer a **piezo controlled translation stage** (page 25).



3.9 Mirror Holders of the series MAXI



Features:

- High Stable Mirror Mount
- 4 springs
- Thicker body plate
- Several back-plates available
- Standard: With two 250 μm fine thread screws
- Option: with 150 μm fine thread screws
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free



MXI-2G-...



MXI-3G-...



MXI-2-...



MXI-3-...



...-3025 (2")

...-3025 (1")

(without picture)



...-3030z (2")



...-3030 (2")



...-3021(1/2")



...-3010
(6H7)



...-3000

The equipment with fine thread screws (0,25 mm pitch) is standard.
As accessories alternate inserts, base plates and post holders are available.

The order number of the MAXI mirror holder consists of the number of the screws and the number of the chosen front. e.g. a body with three screws and an open 2" front plate has the order number MXI-3-3030.

All MAXI holders are delivered with a **M6-thread and lowering for M4 screws** as standard. On request M4- and M8-threads are available.

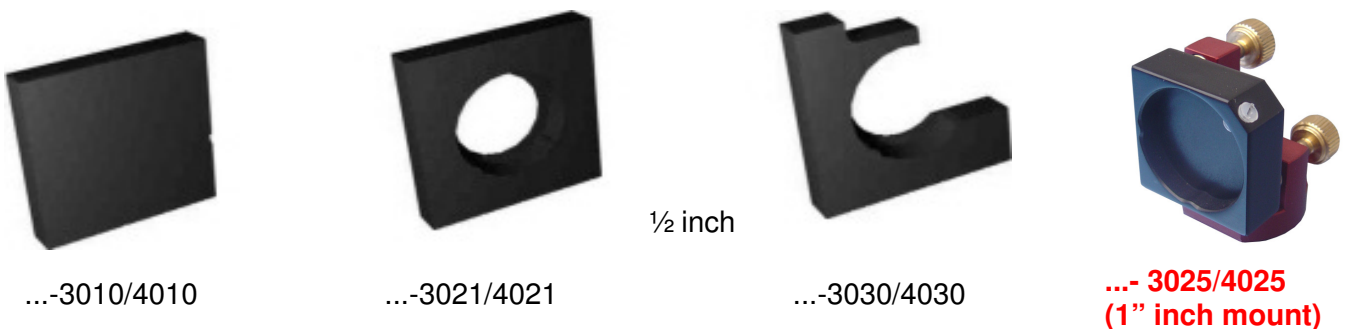
3.10 Mirror holders RD1



Features:

- Very Stable Mirror Mount
- Available in "right hand" and "left hand"
- Several back-plates available
- Standard: With two or three 250 µm fine thread screws
- Option: with 150 µm fine thread screws
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free

For high stability applications with two or three fine thread screws (compatible to Lees)



The dimensions of the series RD1- are 40 x 28 mm (h x w). These mirror holders are on request with M6-threads available.

The order number of the RD1 mirror holder consists of right or left hand, the number of the screws and the number of the chosen front. *e.g. a body with two screws, left hand and an open 1/2 " front plate has the order number RD1-L2-3030.*

3.11 Mirror holders RD1-HS

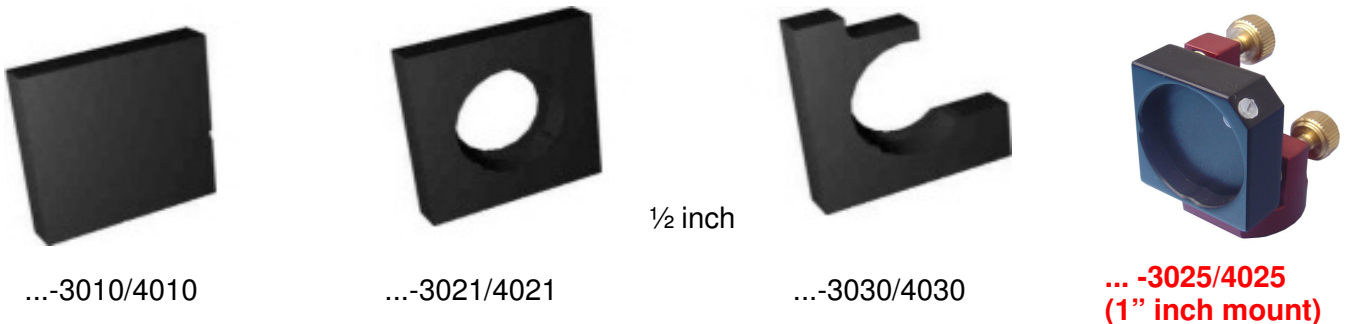
NEW: High stable version with 4 springs



Features:

- High Stable Mirror Mount
- Available in “right hand” and “left hand”
- 4 springs
- Stainless steel insert for stabilisation
- Several back-plates available
- Standard: With two or three 250 µm fine thread screws
- With M6 or M4 thread
- Option: with 150 µm fine thread screws
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free

For high stability applications with two or three fine thread screws (compatible to Lees)



The dimensions of the series RD1- are 40 x 28 mm (h x w). These mirror holders are on request with M6-threads available.

The order number of the RD1 mirror holder consists of right or left hand, the number of the body and the number of the chosen front. *e.g. a body with two screws, right hand and an closed ½" front plate has the order number RD1-HS-R2-3021.*

e.g. RD1-HS with 3 micrometer screws

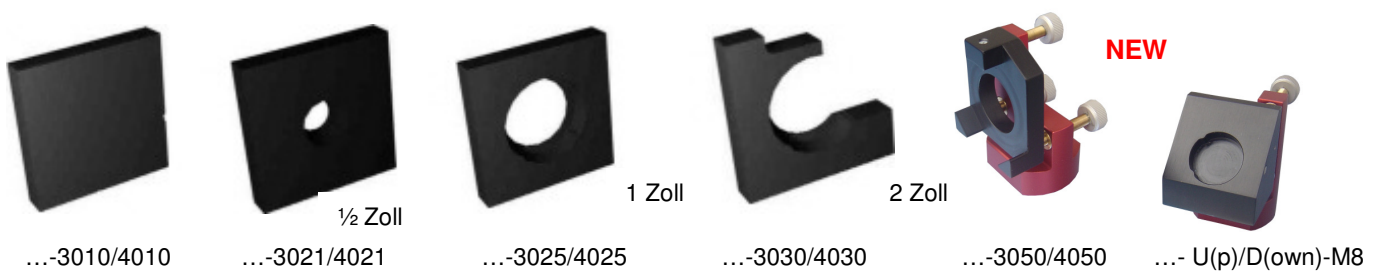


3.12 Mirror holder RD2



Features:

- Very Stable Mirror Mount
- Available in “right hand” and “left hand”
- Several back-plates available
- Standard: With two or three 250 µm fine thread screws
- Option: with 150 µm fine thread screws
- Option: instead of brass screws: Stainless steel screws, this improved screws guarantee an absolutely tug free adjustment
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free



The dimensions of the series RD2 are 76 x 50 mm (h x w).

These mirror holders have a M8 thread as standard, but on request with M6-threads available

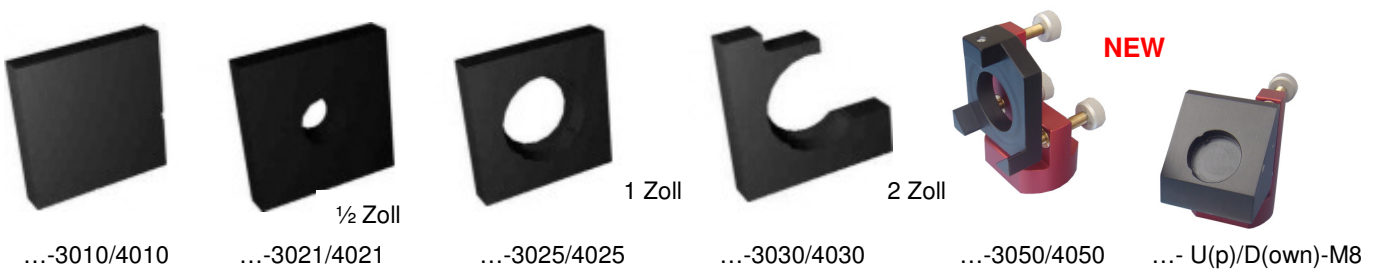
3.13 Mirror holder RD2-HS

NEW: High stable version with 4 springs



Features:

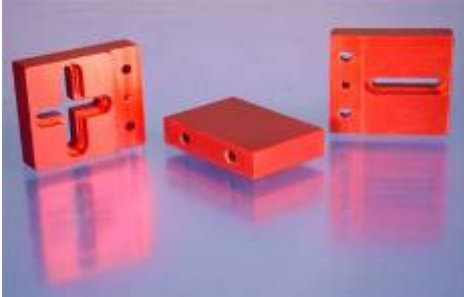
- High Stable Mirror Mount
- Available in “right hand” and “left hand”
- 4 springs
- Several back-plates available
- Stainless steel insert for stabilisation
- Standard: With two or three 250 µm fine thread screws
- Option: with 150 µm fine thread screws
- Option: instead of brass screws: Stainless steel screws, this improved screws guarantee an absolutely tug free adjustment
- Option: also available with micrometer screws
- Also available: stronger or softer springs for free



The dimensions of the series RD2 are 76 x 50 mm (h x w).
These mirror holders have a M8 thread as standard, but on request with M6-threads available

4. Accessories for Mirror Mounts:

Base plates and height adapter for MNI, MNI-H, MDI, MDI-H(S), MXI



The heights are always total heights:
Beam height =
Base plate + Height adapter + Mirror holder

MNI-Base plate:

- Available with long hole in longitudinal direction
- Available with long holes in crosswise direction

MNI Height Adapters:

- For 25 mm beam height
- For 50 mm beam height
- For 75 mm beam height

MDI-Base plate:

- Available with long hole in longitudinal direction
- Available with long holes in crosswise direction

MDI Height Adapters:

- For 50 mm beam height
- For 75 mm beam height

MXI-Base plate:

- Available with long hole in longitudinal direction
- Available with long holes in crosswise direction

MXI Height Adapters:

- For 75 mm beam height
- For 100 mm beam height

Base plates and height adapter for RD1 and RD2

Base plate



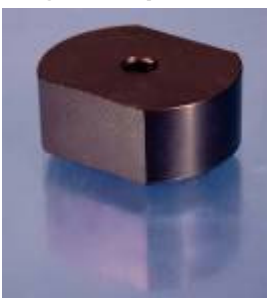
For RD1 Mirror Mounts:

- **RD1-GP**

For RD2 Mirror Mounts:

- **RD2-GP**

Height Adapter



For RD1 Mirror Mounts:

- **RD1-HA1**
Beam height 50 mm

For RD2 Mirror Mounts:

- **RD2-HA1**
Beam height 75 mm
- **RD2-HA2**
Beam height 100 mm

The heights are always total heights:
Beam heights=
Base plate+ Height adapter+ Mirror holder

5. Flip Mounts



Flip Mirror Mount RD-KLS

Our Flip Mount allows the user to flip an optic out of the beam path and back again without any realignment.

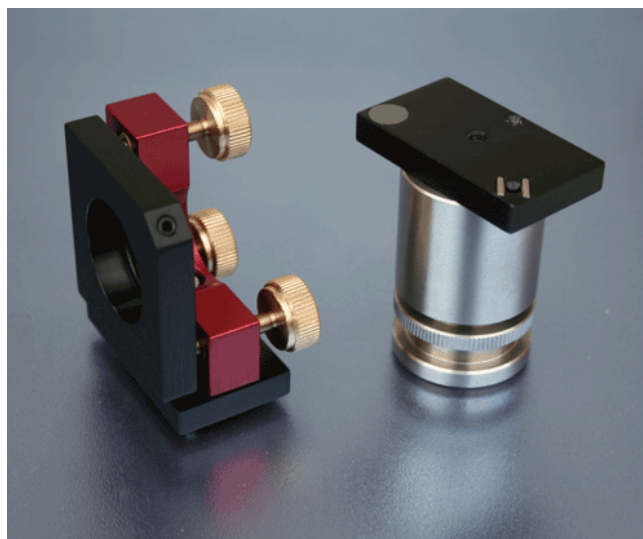
The Flip Mount is available in one and two inch (1", 2").

- RD-KLS-1"
- RD-KLS-2"

6. Magnet Plates

Repeatable, demountable clamp for mirror mounts with magnets *RD-MP*

The stable, repeatable and better option to flip mounts. 2 plates with 3 point bases fixed by a magnet.



7. Flip Mirror Mount RD-KLS-Motorized

Both Flip Mounts (1", 2") are also available as motorized version.

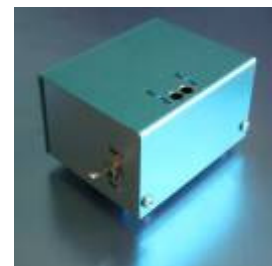
- RD-KLS-1"-M(otorized)
- RD-KLS-2"-M(otorized)



Flip mount Controllers



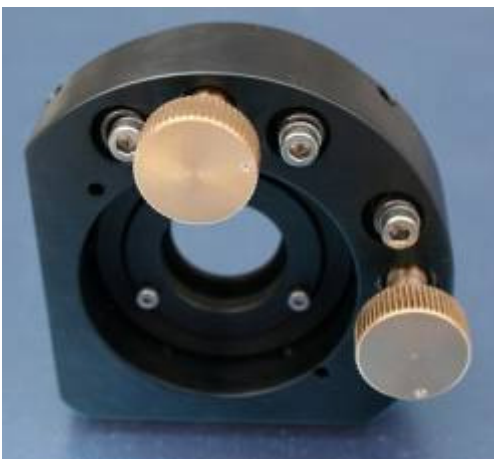
Controller with PC connection and manual Control



Controller with manual control

8. Gimbal Mirror holders

Mirror Mounts with cardanic suspension



SK- FGS-1

Cardanic mirror holders for 1" optics

SK-FGS-0.5

0,5" inserts for cardanic mirror holders



SK-FGS

Features:

- Gimbal Mount
- 2 brass screws with 0,25 mm pitch is standard
- Option: with 150 μ m fine thread screws
- On request micrometer screws with 0,25mm or 0,5mm pitch or stainless steel fine thread screws are available.

9. Beam Height Adjustment Unit VSHW

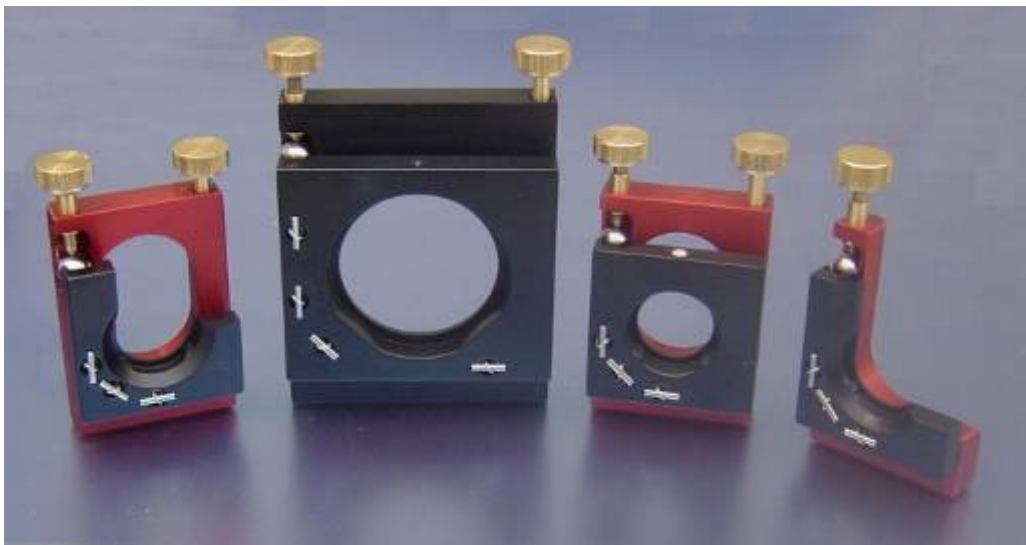


This system offers the possibility, to adjust the beam height over a broad range and to turn the beam direction at the same time continuously around an angle of 90° - 270° . It is possible to carry out a specific adaptation of the polarisation direction, because with a change of the angle a turn of the polarisation is combined. The installation sheet consists of different scanning and fastening possibilities.

VSHW **includes:**

- Two Mirror Mounts (you can chose between MDI or MDI-HS) with two fine thread screws and adapters
- Stainless Steel Pedestal (Standard length 200 mm, on request up to 300 mm)
- Holding Fork
- Option: with 150 μm fine thread screws
- On request stainless steel fine thread screws are available.

10. Mirror holders to use from above RD-VO



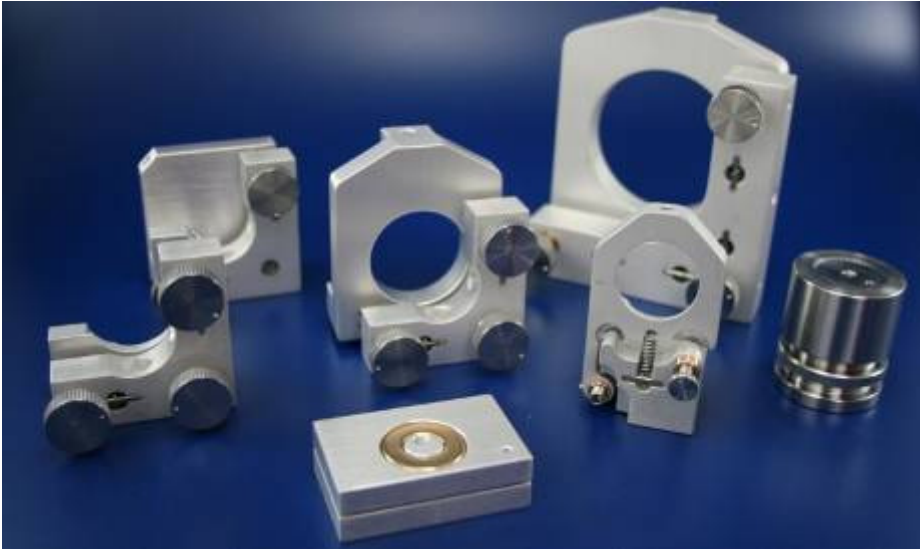
RD-VO-2-3030-1“ **RD-VO-2-3025-2”** RD-VO-2-3025-1“ RD-VO-1-3030-1“

- **NEW** Mirror holder RD-VO-2-3025-2” (inch)

These new mirror holders to use from above allow a tugfree and very precise adjustment without the danger to reach into the beam. The translation of the rotary motion through a ball facilitate a resolution of 0,125 mm per turn.

Because of their robust construction the mirror holder can be built into resonators without any problems.

11. Mirror Mounts, Lens Mounts and Pedestals for Vacuum applications



With a special choice of **vacuum suitable materials** and a **special cleaning process**, we guarantee an **optimal vacuum suitability** of our components.

We are able to supply a great number of our standart components for vacuum and UHV applications.

We offer the following products for Vacuum applications:

- MNI & MNI-H
- MDI & MDI-HS and MDI-H
- MDI-HC (Ceramic Mirror Mount)
- MXI
- RD1 & RD2
- RD-KLS-1" and 2"
- Lens Mounts
- Magnet Plates (RD-MP)
- Posts & Pedestals
- **RDS-HS (Height adjustable pedestals)**
- **Translation Stages**
- Breadboards & Optical Tables



12. Mirror Mounts as Antimagnetic Version



- Available anodized and non-anodized



With a special choice of **non-magnetic materials** we guarantee an **optimal non-magnetic suitability** of our components.

We offer the following products for non-magnetic applications:

- MNI & MNI-H
- MDI & MDI-HS and MDI-H
- MXI
- RD1 & RD2
- Lens Mounts
- Breadboards
- Aluminium Post Holders & Posts
- Etc.



13. Custom designed opto-mechanics



- For industry and science-

You design it – We manufacture it

- **Customized mirror mounts:**
 - From 2 inch up to 20 inch diameter
 - From aluminium to ceramic
 - From red to black
- **Customized lens mounts:**
 - Spherical or cylindrical lenses
- **Customized Filter Mounts:**
 - Rectangular or round filter
- **Customized Prism Mounts**
- **Customized Breadboards**
- **Customized Posts & Pedestals**

e.g:
6" (inch) mounts



For further questions please feel free to contact us

14. Lens Mounting

14.1 Variable Lens Mounting



RD-VL

Features:

- Stable Lens Mount
- 2 screws & 1 thread pin
- Several inserts available
- Option: with 150 μm fine thread screws
- Adjustment line in x-y direction: 8mm

This variable lens mounting consists of an adjustment body and an 1" lens insert (on request also 0,5"). The great advantage of the variable lens mounting is the possibility, to adjust the lens in the xy-plane. The lens mounting is delivered with thread pin.

RD-VL-MNI

- Inserts for RD-VL-MNI:
 - Ø 12 mm and Ø 12,7 mm lenses
 - Ø 18 mm and Ø 20 mm lenses
 - Ø 25 mm and Ø 25,7 mm lenses

RD-VL-MIDI

- Inserts for RD-VL-MIDI:
 - Ø 30 mm lenses
 - Ø 40 mm lenses

RD-VL-MAXI

- Inserts for RD-VL-MXI:
 - Ø 50 mm lenses
 - Ø 75 mm lenses



14.2 Lens inserts

(also usable as lens mounts)

Inserts for RD-VL-MNI:

- Ø 12 mm and Ø 12,7 mm lenses
- Ø 18 mm and Ø 20 mm lenses
- Ø 25 mm and Ø 25,7 mm lenses

Inserts for RD-VL-MIDI:

- Ø 30 mm lenses
- Ø 40 mm lenses

Inserts for RD-VL-MXI:

- Ø 50 mm lenses
- Ø 75 mm lenses



14.3 Lens Mounts

RD-LM



RD-LM

Features:

- Fixed Lens Mount
- With 3 point bases
- Available for several lens sizes
- Mountable on a M4 post

Available for the following lens sizes:

- Ø 12 and Ø 0,5" lenses
- Ø 18 and Ø 20mm lenses
- Ø 25 and Ø 1" lenses
- Ø 30 mm lenses
- Ø 40 mm lenses
- Ø 50 mm lenses & 2" lenses
- Ø 75 mm lenses

14.4 Lens Mounts with internal thread

RD-LM-WR



RD-LM-WR

Features:

- Fixed Lens Mount
- With internal thread
- One retaining ring included
- Mountable on a M4 post



Available for the following lens sizes:

- Ø 1" lenses
- Ø 2" lenses

14.5 Lens mounting RD-VL-Mirror Mounts

This variable lens mounting consists of an adjustment body and a lens mount (1" or 0,5"). The great advantage of the variable lens mounting is the possibility, to adjust the lens in the xyz-plane, with the aid of a small round mirror mount. The lens mounting is delivered with thread pin. Adjustment line in x-y direction: 8 mm

Available in the following sizes:

- RD-VL-MNI-Mirror Mount (1/2")
- RD-VL-MDI-Mirror Mount (1")
- RD-VL-MXI-Mirror Mount (2")



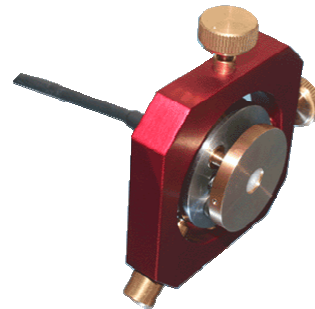
Lens mounting RD-VL-FC for Fiber Coupling:

Available in the following sizes:

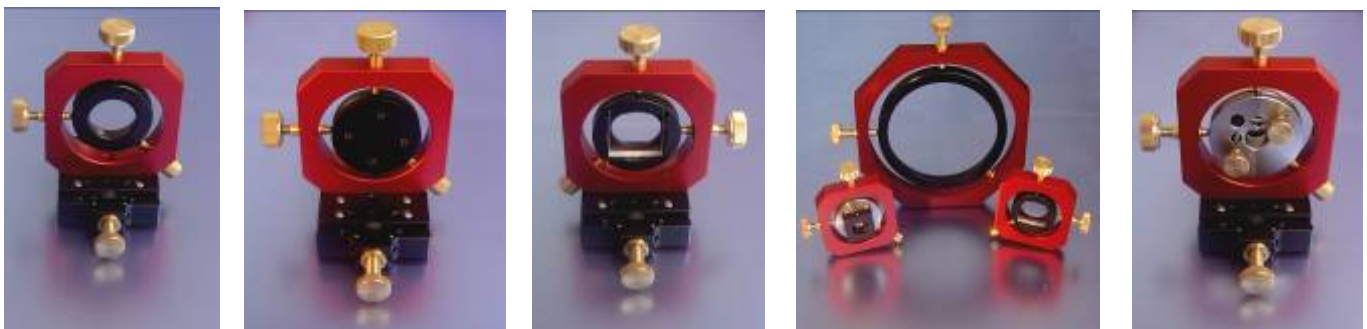
- RD-VL-MNI-Mirror Mount
- RD-VL-MDI-Mirror Mount

Ready to use for the following Fibers:

- SMA
- FC/PC



Examples: easily to fix on a translation stage:



15. Prism turn tables

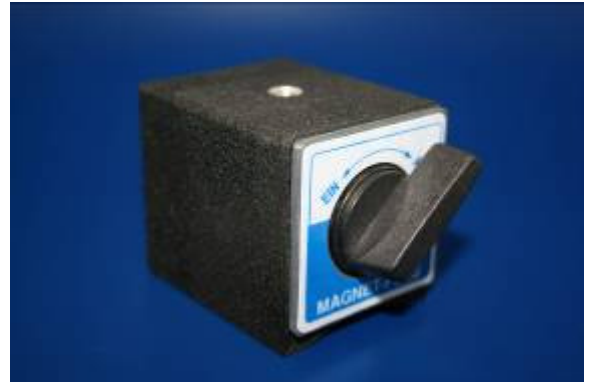


RD-PDT-B

NEW: RD-PDT-S

Maximum capacity central	100 N
Inclination around both horizontal axis	$\pm 3^\circ$
Turning around the vertical axis	$\pm 9^\circ$
Adjustment sensitivity	2'

16. Magnetic bases



Magnetic bases MF-OG
without adapter sheet

Magnetic bases MF-MA
with adapter sheet

17. Inclination tables on the basis of our Mini-, Midi- and Maxi- Mirror mounts

Our mirror mounts can also be used as inclination tables, because there is an M6-thread on the back. The mounts as inclination tables are completely offered with thread pin and alternate inserts for optical components. The alternate insert offers the possibility to rotate the optical components around the axis perpendicular to the inclination table.



MNI-inclination table

with alternate insert

MDI-inclination table

with alternate insert

MXI- inclination table

with alternate insert

18. Post Holders, Posts, Pedestals & Holding Forks



We offer a variety of posts, post holders and pedestals.

Post Holder RDS



Compatible to each on the market existing Posts and Holders

RDS

The RDS-post holders are suitable for post dimensions from 11 to 15 mm diameter, through a precise three point support.

Size	Order number
35 mm	RDS-35
50 mm	RDS-50
75 mm	RDS-75
100 mm	RDS-100

Other sizes on request!

Post RD-GS Stainless steel posts

Posts fit to all post holders.



Diameter	Size	Order number
Ø 15 mm	50 mm	RD-GS-50 Ø 15 mm
	75 mm	RD-GS-75 Ø 15 mm
	100 mm	RD-GS-100 Ø 15 mm

Diameter	Size	Order number
Ø 13 mm	50 mm	RD-GS-50 Ø 13 mm
	75 mm	RD-GS-75 Ø 13 mm
	100 mm	RD-GS-100 Ø 13 mm

Standard M4 inside thread + M4 grub screw
or M6 inside thread + M6 grub screw

Diameter	Size	Order number
Ø 0,5 inch	50 mm	RD-GS-50 Ø 0,5 inch
	75 mm	RD-GS-75 Ø 0,5 inch
	100 mm	RD-GS-100 Ø 0,5 inch

Holding Forks RDK-1

RDK-1 Holding Fork, flexible and stabile fixing of all RDS, RDS-G and RDS-OG post holders and pedestals through precise three point support.



Compatible to each on the market existing Pedestals.

- **RDK-1 mini**
- **RDK-1 midi**
- **RDK-1 maxi**

Holding Fork for RDK-2

RDK-2 Holding Fork, flexible and stabile fixing of RDS-G pedestals.



For RDS-G Pedestals:

- **RDK-2 midi**

For RDS-G-B Pedestals:

- **RDK-2 maxi**

Clamping Fork RD-PH

RD-PH Clamping Fork, stable fixing of our RD2 Mirror Mounts



- *Clamping Fork for our RD2 Mirror Mounts*



Table Clamp RD-TC

Table Clamp to fix several optomechanics on the table



- RD-TC-S
- RD-TC-B

Pedestals



All pedestals with thread (RDS-G and RDS-HS)
can be combined with each other

RDS-MNI

Stainless steel pedestal



The RDS-MNI System fits to our MNI Mirror Mounts:

Pedestal:

- RDS-MNI-P

Holding Fork:

- RDS-MNI-HF

Size in mm	Order number
25	RDS-MNI-HF-25
50	RDS-MNI-HF-50
75	RDS-MNI-HF-75

RDS-OG (Ø 25 mm)

Pedestal with *inner lowering* for M4, M6 or M8 screws.

Available in anodized Aluminium or Stainless Steel



Size in mm	Size in inch	Order number
12,7	1/2	RDS-OG-0,5
19,1	3/4	RDS-OG-0,75
25		RDS-OG-25
25,4	1	RDS-OG-1
38,1	3/2	RDS-OG-1,5
50		RDS-OG-50
50,8	2	RDS-OG-2
63,5	5/2	RDS-OG-2,5
75		RDS-OG-75
76,2	3	RDS-OG-3
100		RDS-OG-100
101,6	4	RDS-OG-4
127	5	RDS-OG-5
152,4	6	RDS-OG-6

Other sizes on request!

RDS-G- (Ø 25 mm)

Pedestals *with M4 (standard) or M6 thread*



Size in mm	Size in inch	Order number
12,7	1/2	RDS-G-0,5
19,1	3/4	RDS-G-0,75
25		RDS-G-25
25,4	1	RDS-G-1
38,1	3/2	RDS-G-1,5
50		RDS-G-50
50,8	2	RDS-G-2
63,5	5/2	RDS-G-2,5
75		RDS-G-75
76,2	3	RDS-G-3
100		RDS-G-100
101,6	4	RDS-G-4
127	5	RDS-G-5
152,4	6	RDS-G-6

RDS-G-M (Ø 31,5 mm)

Pedestal with M4 (standard) or M6 thread



- **Standard Stainless Steel**
- **Also available: anodized Aluminium**
- **Also available: Aluminium**

Size in mm	Size in inch	Order number
25		RDS-G-M-25
25,4	1	RDS-G-M-1
38,1	3/2	RDS-G-1,5
50		RDS-G-50
50,8	2	RDS-G-2
63,5	5/2	RDS-G-2,5
75		RDS-G-75
76,2	3	RDS-G-3
100		RDS-G-100

RDS-G-B (Ø 51mm)

Very stable pedestal with M4 or M6 or M8 thread.



- **This pedestal fits perfectly for our RD2 Mirror Mounts**
- **Standard anodized Aluminium**
- **Also Aluminium**

Mirror Holder will be fixed by a set screw



RDS-HS

Height adjustable pedestals



- Height **adjustable pedestals**
- easy to use
- precise and ultra stable design

Available in the following sizes:	
Size in mm	Order number
30-38 mm	RDS-HS-30-38
38-50 mm	RDS-HS-38-50
50-70 mm	RDS-HS-50-70
55-80 mm	RDS-HS-55-80
70-110 mm	RDS-HS-70-110

Developed by the University of Heidelberg Inst. of Physics AG Prof. Schmiedmayer by Dr. Alois Mair

RDS-HA

Height adapter



Available in the following sizes:		
Size in mm	Order number $\varnothing 1''$	Order number $\varnothing 31,5 \text{ mm}$
2 mm	RDS-HA-1"-2	RDS-HA-M-2
3 mm	RDS-HA-1"-3	RDS-HA-M-3
4 mm	RDS-HA-1"-4	RDS-HA-M-4
5 mm	RDS-HA-1"-5	RDS-HA-M-5
10 mm	RDS-HA-1"-10	RDS-HA-M-10

RD-TA

Thread adapter



Available in the following sizes:			
External Thread	Internal Thread	Length	Order Number
M8	M6	9mm	RD-TA-8-6-9
M8	M6	6mm	RD-TA-8-6-6
M6	M4	8mm	RD-TA-6-4-8
M6	M4	6mm	RD-TA-6-4-6

RD-TA-GS

Thread Adapter with Set Screw



Available in the following sizes:		
Grub Screw	External Thread	Order Number
M4	M6	RD-TA-GS-4-6
M4	M8	RD-TA-GS-4-8
M6	M8	RD-TA-GS-6-8

19. Laser beam guiding tools

Variable beam guiding tools to protect you against scattered laser light.

The beam guide components are easy to handle and can be fixed on each optical table with our RDS-G Pedestals and RDK-1 holding forks.

The tanks can be used together with our MIDI mirror mount series or any other compatible mirror mount for beam separation, beam folding or spectral filtering.

The following components are available:

- **Guiding tubes in any length**
- **Connection tubes**
- **Optic tank with two, three or four in/outputs for MIDI mirror mounts and compatible mounts**



20. Translation tables

Newport compatible translation stage

made of aluminium with high precision `Schneeberger` crossed roller way guides

With this kind of longitudinal guide we can offer a high precision guiding system with extremely low height (13mm). The use of cross roller way guides ensures a well fitted guide with a very smooth operation. These translation stages are equipped with a fine thread screw (thread pitch 0,25mm). The dimensions of the drill -holes are designed in that way, that two stages are easily mounted to one XY-unit. Using a special adapter it is possible to realise a XYZ-unit.

RD-KRU-NP-15-01 -02 -03

Translation stage with fine thread screws:

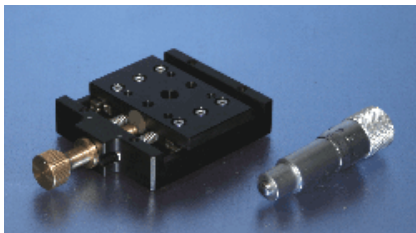
-0,25mm per turn

-0,15 mm per turn

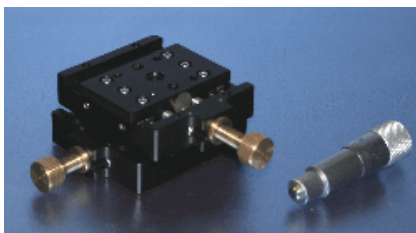
Translation stage with micrometer screws:

-0.5 mm per turn

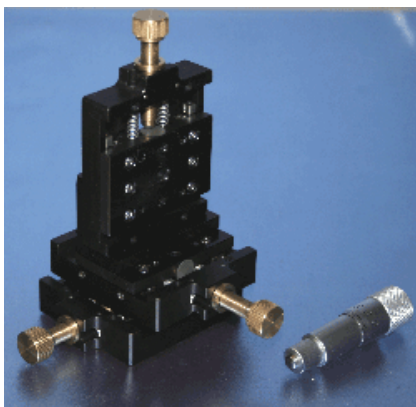
-0.25 mm per turn



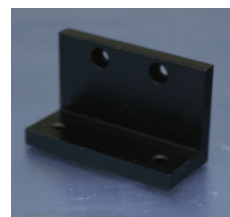
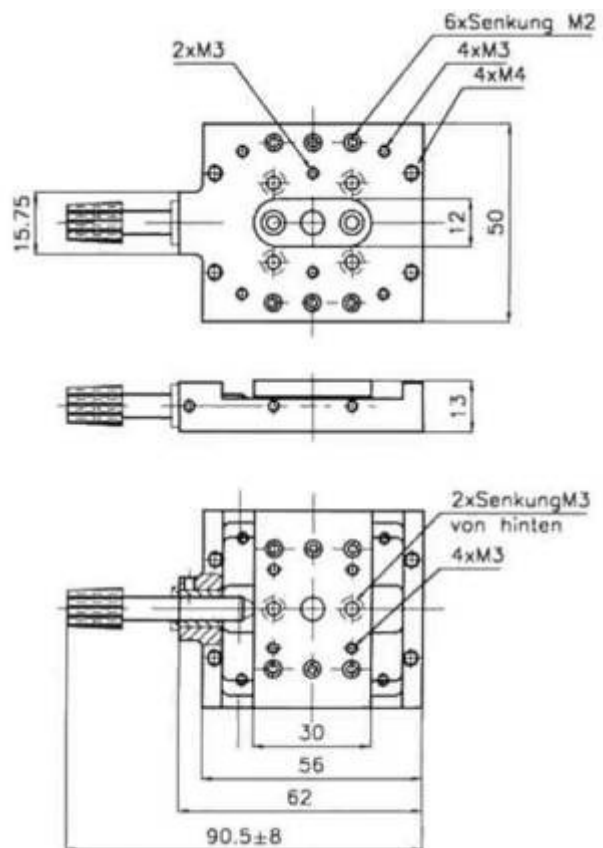
RD-KRU-NP-15-01



RD-KRU-NP-15-02



RD-KRU-NP-15-03



Adapter angle X-Y-Z

Translation stage with crossed roller way guides

With this kind of longitudinal guide we can offer a high precision guide system for high loading with well fitted guide and extremely smooth operation. The lateral guidance offers the possibility to build in a passage notch, f.e. for a laser beam.

RD-KRU-15-01 -02 -03

Translation stage with fine thread screws:

-0,25mm per turn

-0,15 mm per turn

Translation stage with micrometer screws:

-0.5 mm per turn

-0.25 mm per turn

NEW:

RD-KRU-15-01-piezodrive

-with fine screws 0,25mm per turn

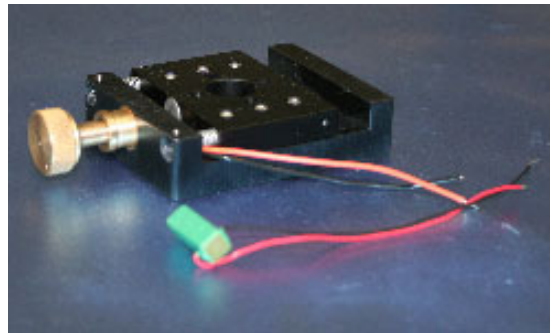
-with fine screws 0,15mm per turn

-with micrometer screws 0,5mm per turn

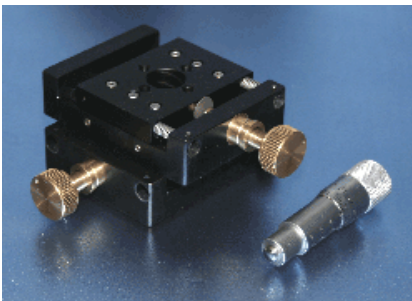
-piezodrive 27/35µm



RD-KRU-15-01



RD-KRU-15-01- piezodrive



RD-KRU-15-02

-RD-KRU-15-02-S-piezodrive

-RD-KRU-15-03-S-piezodrive

See without piezodrive



RD-KRU-15-03



RD-KRU-15-01-S

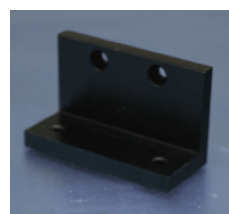
Also available:

-RD-KRU-15-02-S

-RD-KRU-15-03-S

Not available:

piezodrive



**Adapter angle X-Y-Z
For RD-KRU-15-03**

**Not necessary for
RD-KRU-15-03S**

25mm adjustment line

RD-KRU-25-01

Translation stage with fine thread screws:

-0,25mm per turn

-0,15 mm per turn

Translation stage with micrometer screws:

-0.5 mm per turn



NEW:

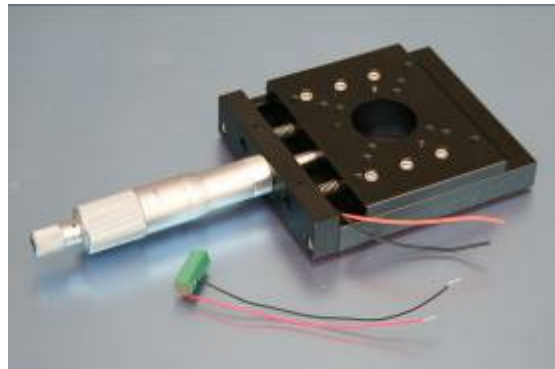
RD-KRU-25-01-piezodrive

-with fine screws 0,25mm per turn

-with fine screws 0,15mm per turn

-with micrometer screws 0,5mm per turn

-piezodrive 27/35µm



RD-KRU-25-02

RD-KRU-25-03

Look one Site before

RD-KRU-15-02,

RD-KRU-15-03

RD-KRU-25-02 -piezodrive

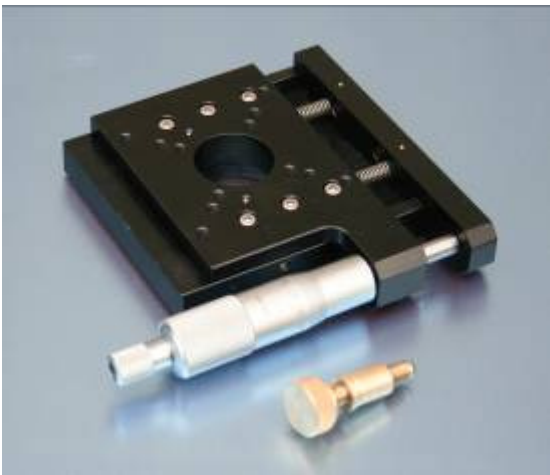
RD-KRU-25-03 -piezodrive

Look one Site before

RD-KRU-15-02 -piezodrive

RD-KRU-15-03 -piezodrive

RD-KRU-25-01-S



Also available:

-RD-KRU-25-02-S

-RD-KRU-25-03-S

Not available:

piezodrive

50mm adjustment line

Without Picture

- RD-KRU-50-01-S

- RD-KRU-50-02-S

- RD-KRU-50-03-S

The Translation Stage

without S (front screw) only on request

All the same like RD-KRU-25-01-S,

02-S, 03-S Not available: piezodrive

Translation stage with fine thread screws:

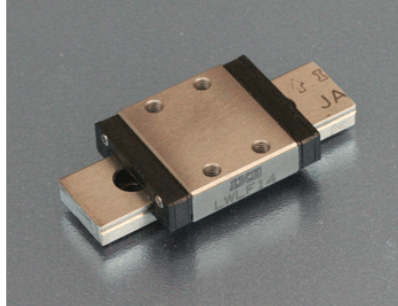
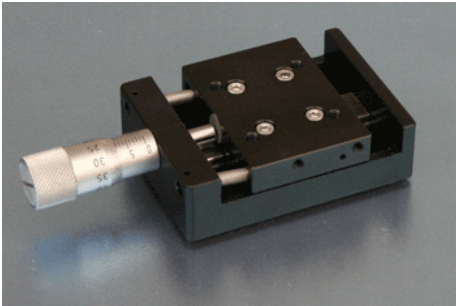
-0,25mm per turn

-0,15 mm per turn

Translation stage with micrometer screws:

-0.5 mm per turn

Translation stage with linear roller way guides
(not available for piezodrives)



The linear roller way guides are systems made by the industry, which we built in our sliding stages. We are in the position to offer inexpensive but high-quality systems, because of the simple assembly and the high precision. The linear roller way guides are delivered well fitted and with high rigidity. The slide units are also optionally available for custom-made units in different lengths. The adjustment of the sliding stages is carried out by fine thread or micrometer screws, stepper motor control on request.



RD-KUL-15-01

RD-KUL-15-01 -02 -03 For pictures look at RD-KRU

Translation stage with fine thread screws:

-0,25mm per turn

-0,15 mm per turn

Translation stage with micrometer screws:

-0.5 mm per turn

-0.25 mm per turn



RD-KUL-15-01-S

RD-KUL-15-01S -02S -03S For pictures look at RD-KRU

Translation stage with fine thread screws:

-0,25mm per turn

-0,15 mm per turn

Translation stage with micrometer screws:

-0.5 mm per turn

-0.25 mm per turn

Also available:

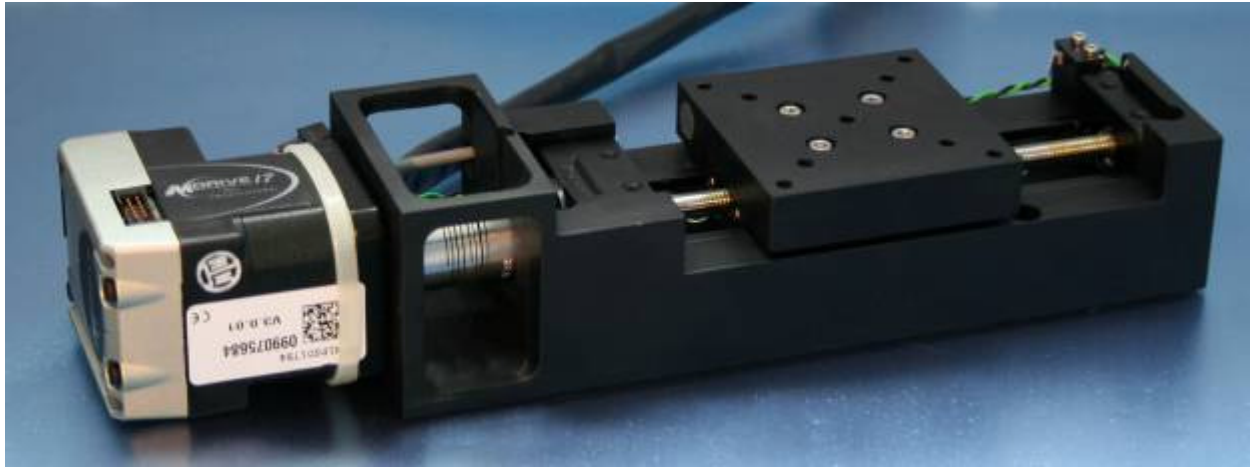
25 mm adjustment line:

RD-KUL-25-01

RD-KUL-25-02

RD-KUL-25-03

Translation stage with stepper motor



RD Stepper motor drive 55	55mm travel range	xy and xyz available
RD Stepper motor drive 130	130mm travel range	
RD Stepper motor drive 180	180mm travel range	

Specifications:

- Preloaded lead screw
- Min incremental motion 0,1 μ m (Higher resolution on request) *low cost version 0,3 μ m*
- Max load 200N
- Limit and reference switches
- Control unit for three motors *low cost version: control unit for 16 motors*

21. Optical Breadboards

Aluminium Breadboards

- All sizes up to 720x1300 mm
- Thread M6
- Raster 25 mm

Standard Thickness:

- 12 mm
- 15 mm
- 20 mm

Also available on request:

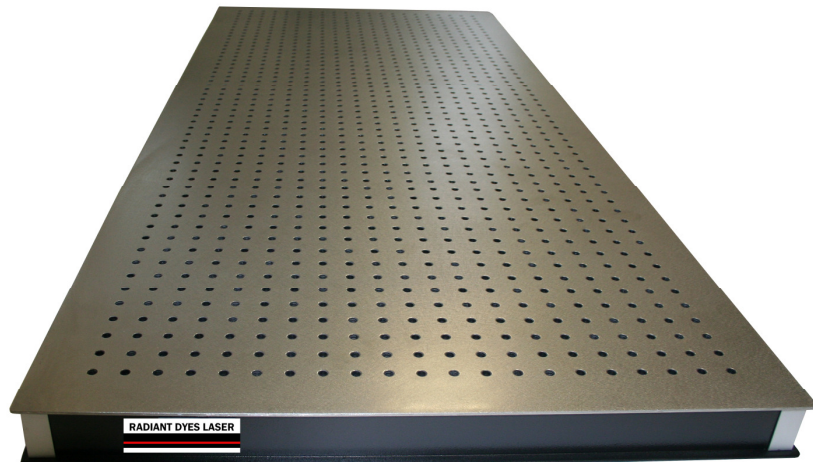
- 10 mm
- 25 mm



On request every custom product available

22. Optical Breadboards 33 mm

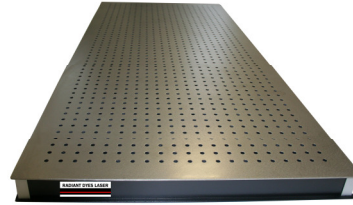
- Thread M6
- Raster 25 mm
- Thickness 33 mm
- Edge distance 37,5 mm
- Cover plate 3 mm
- Ferromagnetic stainless steel 1.4016



length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)
300	300	7	800	600	38	600	600	29	900	900	65
400	300	10	800	700	45	700	300	17	1000	300	24
400	400	13	800	800	51	700	400	22	1000	400	32
500	300	12	900	300	22	700	500	28	1000	500	40
500	400	16	900	400	29	700	600	34	1000	600	48
500	500	20	900	500	36	700	700	39	1000	700	56
600	300	14	900	600	43	800	300	19	1000	800	64
600	400	19	900	700	50	800	400	26	1000	900	72
600	500	24	900	800	58	800	500	32	1000	1000	80

Optical Breadboards 50 mm

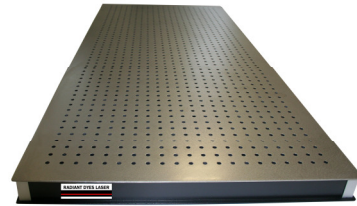
- Thread M6
- Raster 25 mm
- Honeycomb core
- Edge distance 50 mm
- Cover plate 3+2 mm
- Ferromagnetic stainless steel 1.4016



length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)
500	300	15	1100	300	33	1500	400	60
500	400	20	1100	400	44	1500	500	75
500	500	25	1100	500	55	1500	600	90
600	300	18	1100	600	66	1500	700	105
600	400	24	1100	700	77	1500	800	120
600	500	30	1100	800	88	1500	900	135
600	600	36	1100	900	99	1500	1000	150
700	300	21	1100	1000	110	1600	300	48
700	400	28	1200	300	36	1600	400	64
700	500	35	1200	400	48	1600	500	80
700	600	42	1200	500	60	1600	600	96
700	700	49	1200	600	72	1600	700	112
800	300	24	1200	700	84	1600	800	128
800	400	32	1200	800	96	1600	900	144
800	500	40	1200	900	108	1600	1000	160
800	600	48	1200	1000	120	1700	300	51
800	700	56	1300	300	39	1700	400	68
800	800	64	1300	400	52	1700	500	85
900	300	27	1300	500	65	1700	600	102
900	400	36	1300	600	78	1700	700	119
900	500	45	1300	700	91	1700	800	136
900	600	54	1300	800	104	1700	900	153
900	700	63	1300	900	117	1700	1000	170
900	800	72	1300	1000	130	1800	300	54
900	900	81	1400	300	42	1800	400	72
1000	300	30	1400	400	56	1800	500	90
1000	400	40	1400	500	70	1800	600	108
1000	500	50	1400	600	84	1800	700	126
1000	600	60	1400	700	98	1800	800	144
1000	700	70	1400	800	112	1800	900	162
1000	800	80	1400	900	126	1800	1000	180
1000	900	90	1400	1000	140			
1000	1000	100	1500	300	45			

Optical Breadboards 100 mm

- Thread M6
- Raster 25 mm
- Honeycomb core
- Edge distance 50 mm
- Cover plate 3+2 mm
- Ferromagnetic stainless steel 1.4016



length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)	length (mm)	width (mm)	weight (kg)
500	500	31	1300	500	81	1800	800	180
600	500	38	1300	600	98	1800	900	203
600	600	45	1300	700	114	1800	1000	225
700	500	44	1300	800	130	1900	500	119
700	600	53	1300	900	146	1900	600	143
700	700	61	1300	1000	163	1900	700	166
800	500	50	1400	500	88	1900	800	190
800	600	60	1400	600	105	1900	900	214
800	700	70	1400	700	123	1900	1000	238
800	800	80	1400	800	140	2000	500	125
900	500	56	1400	900	158	2000	600	150
900	600	68	1400	1000	175	2000	700	175
900	700	79	1500	500	94	2000	800	200
900	800	90	1500	600	113	2000	900	225
900	900	101	1500	700	131	2000	1000	250
1000	500	63	1500	800	150			
1000	600	75	1500	900	169			
1000	700	88	1500	1000	188			
1000	800	100	1600	500	100			
1000	900	113	1600	600	120			
1000	1000	125	1600	700	140			
1100	500	69	1600	800	160			
1100	600	83	1600	900	180			
1100	700	96	1600	1000	200			
1100	800	110	1700	500	106			
1100	900	124	1700	600	128			
1100	1000	138	1700	700	149			
1200	500	75	1700	800	170			
1200	600	90	1700	900	191			
1200	700	105	1700	1000	213			
1200	800	120	1800	500	113			
1200	900	135	1800	600	135			
1200	1000	150	1800	700	158			