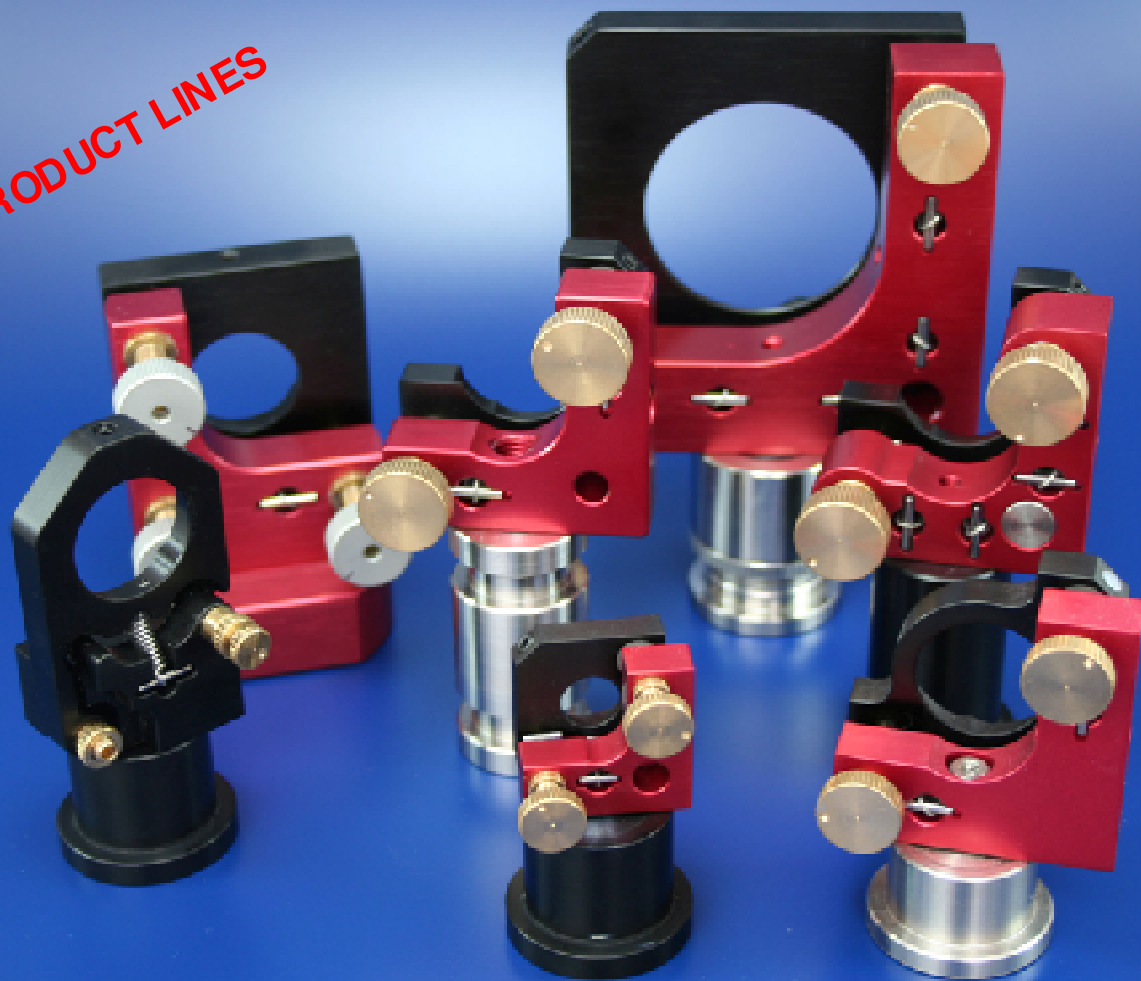


Opto-Mechanics & Optics

NEW PRODUCT LINES



Innovative Products for Scientific Applications

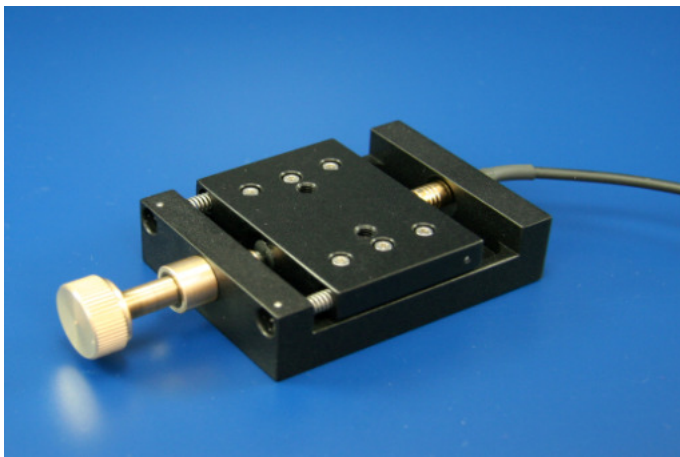
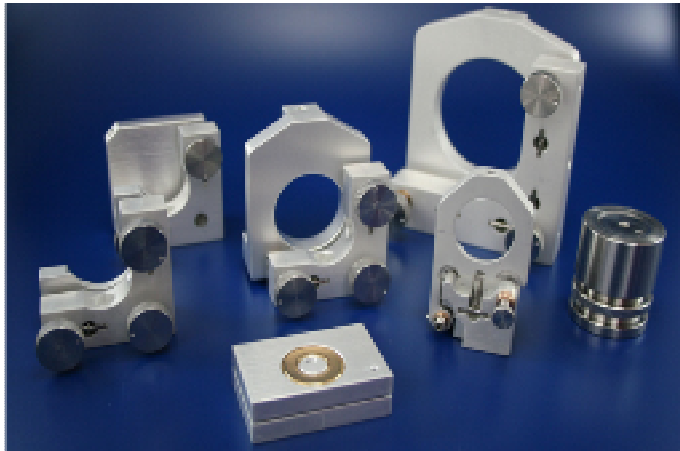


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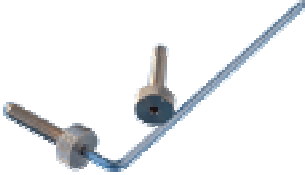


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Screws

Fine Thread Screws




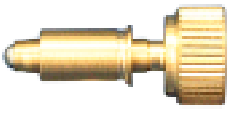
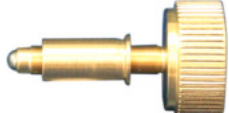
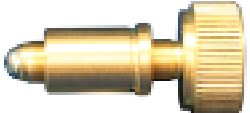
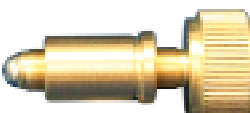
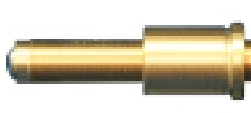
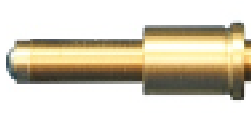
Radiant Dyes offer a variety of fine thread screws and micrometer screws. The screws are made in single-part production and are aligned to the nuts. This guarantees that the screws do not scratch or bounce and they can turn smoothly without jerking.

Options for all Fine Thread Screws	
<ul style="list-style-type: none">• 4 mm fit for plastic heads	
<ul style="list-style-type: none">• Hexagon socket without knurled head	
<ul style="list-style-type: none">• Hexagon socket with knurled head	
<ul style="list-style-type: none">• Counter nut (Screw length +2 mm)	
<ul style="list-style-type: none">• Stainless steel screws	

Besides our standard models we also produce custom-made screws

Fine Thread Screws

Models

Model 1	Model 2	Model 3	
<p>Fit liner: 6 mm</p> <p>Adjustment line: 5 mm</p> <p>Thread: M4.15 x 0.25 milled head topw ith braze ball (100 TPI) M4.15 x 0.15 milled head topw ith braze ball (170 TPI)</p>	<p>Fit liner: 6 mm</p> <p>Adjustment line: 6 mm</p> <p>Thread: M4.15 x 0,25 milled head topw ith braze ball (100 TPI) M4.15 x 0,15 milled head topw ith braze ball (170 TPI)</p>	<p>Fit liner: 6 mm</p> <p>Adjustment line: 8 mm</p> <p>Thread: M4.15 x 0.25 milled head topw ith braze ball (100 TPI) M4.15 x 0.15 milled head topw ith braze ball (170 TPI)</p>	
			
Model 4S	Model 4L	Model 5	Model 6
<p>Fit liner: 9,5 mm</p> <p>Adjustment line: 6,5 mm <i>Model 4S</i> 8 mm <i>Model 4L</i></p> <p>Thread: M6.15 x 0.25 milled head topw ith braze ball (100 TPI) M6.15 x 0.15 milled head topw ith braze ball (170 TPI)</p>	<p>Fit liner: 9,5 mm</p> <p>Adjustment line: 12 mm</p> <p>Thread: M6.15 x 0.25 milled head topw ith braze ball (100 TPI) M6.15 x 0.15 milled head topw ith braze ball (170 TPI)</p>	<p>Fit liner: 9,5 mm</p> <p>Adjustment line: 29 mm</p> <p>Thread: M6.15 x 0.25 milled head topw ith braze ball (100 TPI) M6.15 x 0.15 milled head topw ith braze ball (170 TPI)</p>	
			

Screw Heads

Screw heads to adjust mirror mounts with hexagon socket
Screws:

RD-SH-S for Model 1

RD-SH-M for Model 2




RD-SH-B for Model 3, 4, 5, 6






Screws

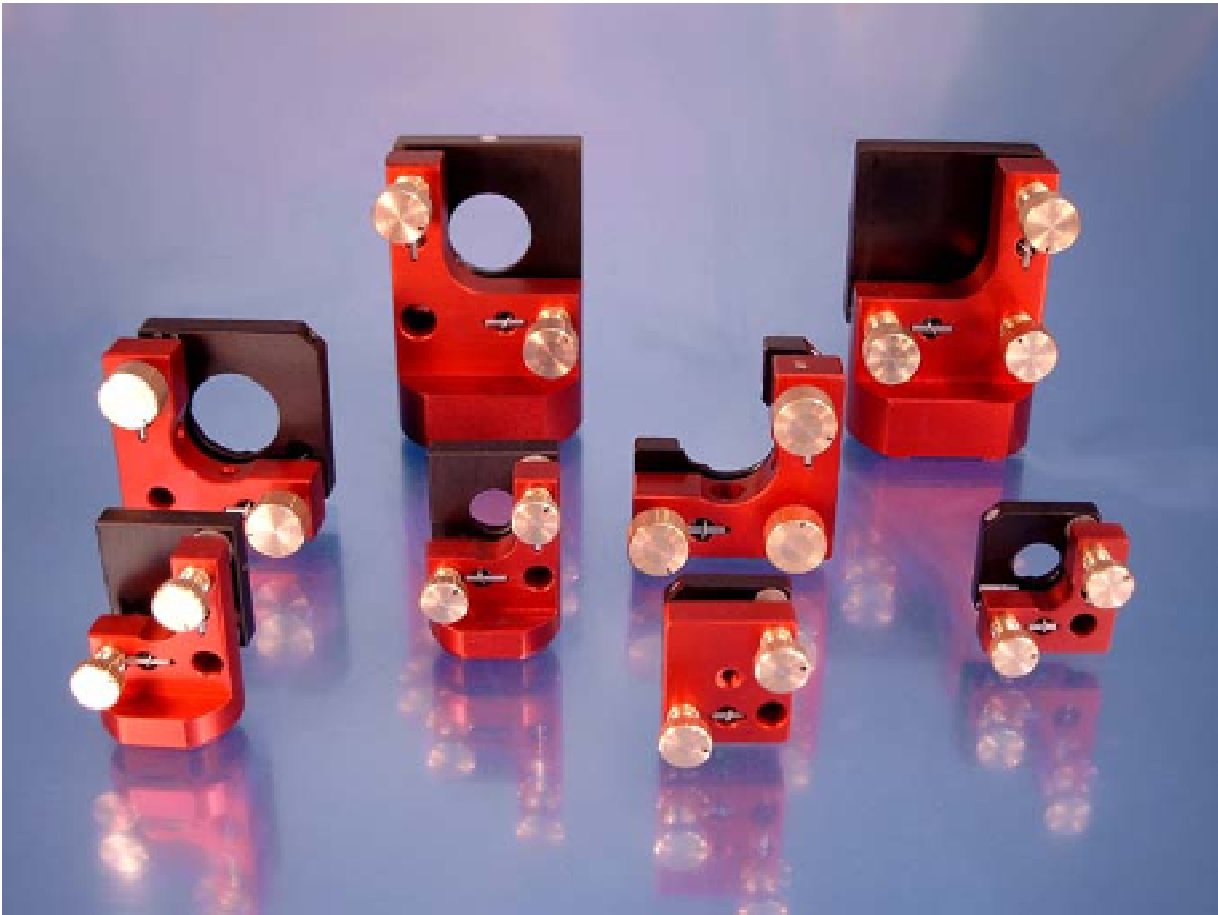
Micrometer Screws

Radiant Dyes offer a variety of precise micrometer screws. Different threads (500, 250, 100 $\mu\text{m}/\text{turn}$) and adjustment lines are available.

Model 1/2	Model 3/4	Model 5
Adjustment line : Model 1: 0-5 mm Model 2: 0-10 mm Thread: 500 $\mu\text{m}/\text{turn}$ (50 TPI) 250 $\mu\text{m}/\text{turn}$ (100 TPI) Crowned measuring surface 6H7 shank	Adjustment line : Model 3: 0-10 mm Model 4: 0-15 mm Thread: 500 $\mu\text{m}/\text{turn}$ (50 TPI) 250 $\mu\text{m}/\text{turn}$ (100 TPI) 100 $\mu\text{m}/\text{turn}$ (250 TPI) Crowned measuring surface 9.5H7 shank	Adjustment line : 0-25 mm Thread: 500 $\mu\text{m}/\text{turn}$ (100 TPI) Flat measuring surface 12H6 shank
		

Model 6	Model 7	Model 8
Adjustment line : 0-6,5 mm Thread: 100 $\mu\text{m}/\text{turn}$ (250 TPI) Crowned measuring surface 6 mm shank	Adjustment line : 0-6,5 mm Thread: 100 $\mu\text{m}/\text{turn}$ (250 TPI) Crowned measuring surface 9.5 mm shank	Differential Micrometer screw Adjustment line : 0-15 mm Thread: Fine: 25 $\mu\text{m}/\text{turn}$ (1000 TPI) Crowned measuring surface 9.5H7 shank
		

Mirror Mounts



We, Radiant Dyes Laser Accessories GmbH, produce high-quality opto-mechanical components in our own manufacturing centre. The screws are made in single-part production and are aligned to the nuts. This guarantees that the screws do not scratch or bounce and they can turn smoothly without jerking.

We offer a wide range of front plates for the various mirror mounts from closed up to two inch, and for special applications for optics up to six inch.

Due to the fact that we produce everything in our own factory, we are able to manufacture also custom-made products.

Our high-quality and stable opto-mechanical components will help you to build up successful experiments.

Mirror Mounts

Options for all Mirror Mounts

Colors

All mirror mounts are available in four colors to signalize different optical beams :

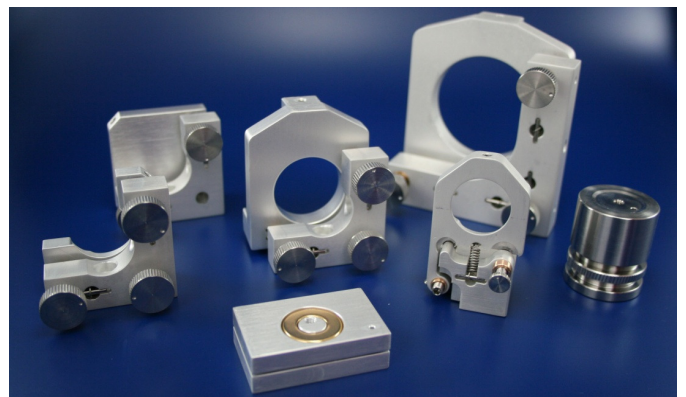
Red
Black
Gold
Silver

The standard color is red.



Operational Safety

For optimal operational safety all opto-mechanical components are also available with a sandblasted surface.



MIKRO

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

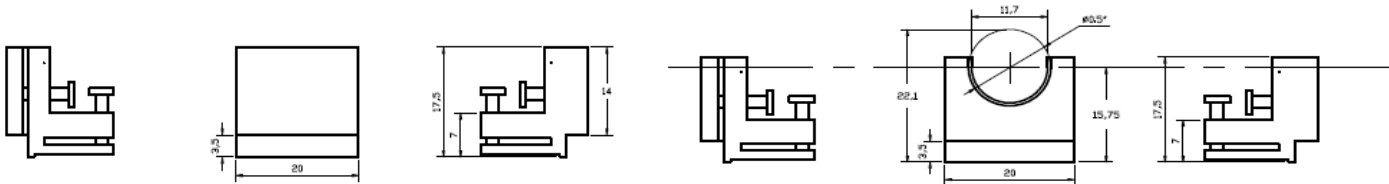
MRO-UL

Front plate 20 x 15 mm

MRO-ST-TR

- Beam splitter and trans adjustment
- Front plate 20 x 15 mm
- With 10 mm notch

Other versions on request.



Easy MDI

E-MDI-2-3031

The Easy MDI is a low cost version of the MDI mirror mount. But the Easy MDI also guarantees a precise and repeatable adjustment for one inch optics.

Features:

- Precisely adjustable
- Low price



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 with **250** $\mu\text{m}/\text{turn}$ (**100** TPI)

Mirror Mounts

MNI



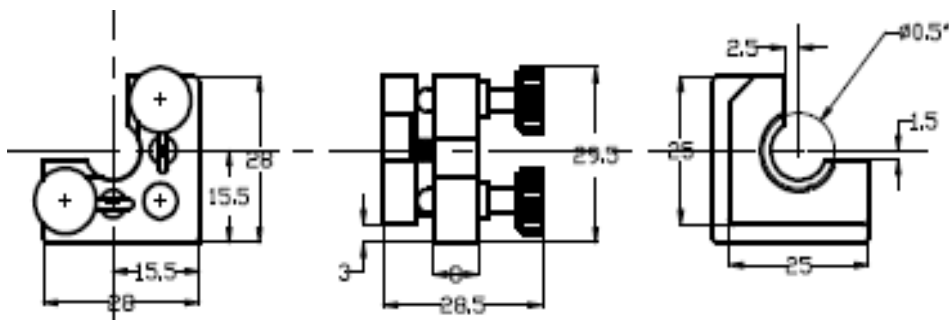
The MNI mount is a very compact mirror mount which is ideal for application with low space. It can be used for optics up to one inch.

Features:

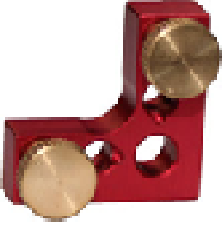



- Small stable mirror mount
- Open or closed back plate
- Different front plates available
- M4 thread
- #8-32 thread available on request

Screw Options:

- Fine thread screws Model 1:
with **150 $\mu\text{m}/\text{turn}$ (170 TPI)**
- Micrometer screws:
500 $\mu\text{m}/\text{turn}$ (50 TPI)
250 $\mu\text{m}/\text{turn}$ (100 TPI)
100 $\mu\text{m}/\text{turn}$ (250 TPI)



Back plates

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

Front plates

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

The order number of the desired MNI mirror mount consists of the number of the back plate including the quantity of the screws and the number of the chosen front plate.

Mirror Mounts

MNI-H



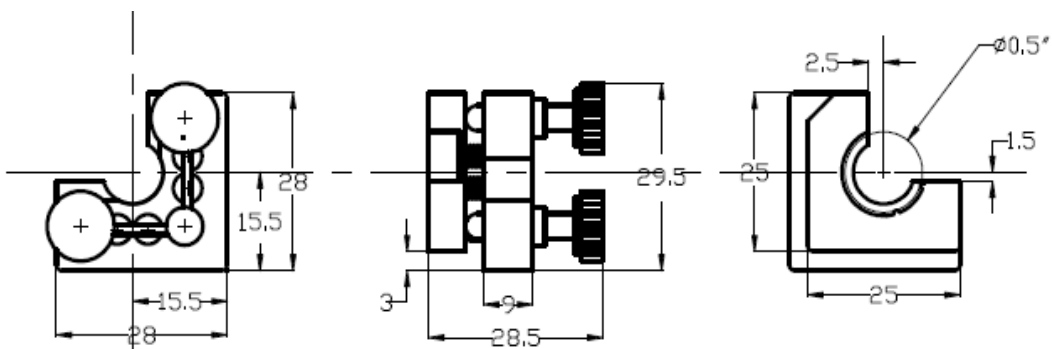
The MNI-H is the high stable version of the MNI mirror mount. The MNI-H can be used for applications where a high stability is necessary.

Features:

- Small high stable mirror mount
- 4 springs
- Open or closed back plate
- Different front plates available
- Stainless steel insert for stabilization
- M4 thread
- #8-32 thread available on request

Screw Options


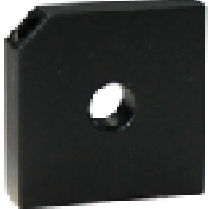
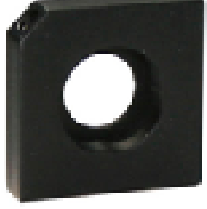


- Fine thread screws Model 1:
with 150 $\mu\text{m}/\text{turn}$ (170 TPI)
- Micrometer screws:
500 $\mu\text{m}/\text{turn}$ (50 TPI)
250 $\mu\text{m}/\text{turn}$ (100 TPI)
100 $\mu\text{m}/\text{turn}$ (250 TPI)



Back plates

		<p><i>Due to strong spring forces we offer the MNI-H only with two alignment screws. If a third screw should be necessary, we recommend the screw as hexagon socket for easier alignment</i></p>
MNI-H-2-...	MNI-H-2G-...	

Front plates

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

The order number of the desired MNI-H mirror holder consists of the number of the back plate including quantity of the screws and the number of the chosen front plate.

MNI-H-U

- Extra small mirror mount
- 4 strong springs
- High-precision screws with hexagon socket with M4 inner lowering
- Option: with locking device

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



Mirror Mounts

MDI



The MDI is our most popular mirror mount. The mount is available with different front plates (from closed up to two inch) and two or three screws. It is our standard mirror mount which can be used for most applications in the lab.

New design with M6 screws for more stability

Features:

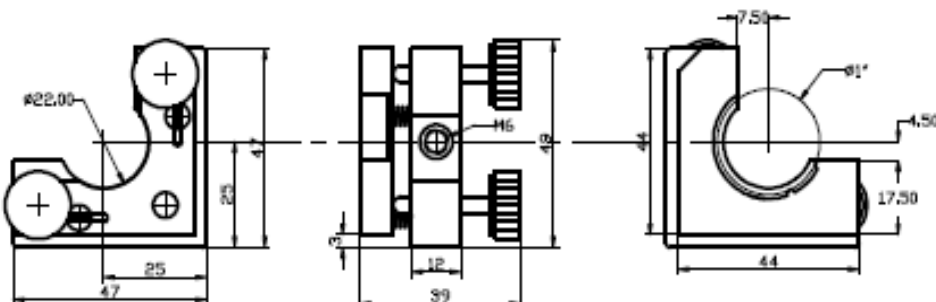
- Stable mirror mount
- Open or closed back plate
- Different front plates available
- M6 thread with M4 inner lowering (standard)
- M4 or M8 thread available on request
- #8-32 or #1/4-20 thread available on request

Screw Options:

- Fine thread screws Model 4: **NEW**
with **250 μm /turn (100 TPI)**
with **150 μm /turn (170 TPI)**

- Micrometer screws:

500 μm /turn (50 TPI)
250 μm /turn (100 TPI)
100 μm /turn (250 TPI)



MDI-HS



The MDI-HS is the high stable version of the MDI mirror mount. The MDI-HS can be used for applications where a high stability is necessary.

Features:

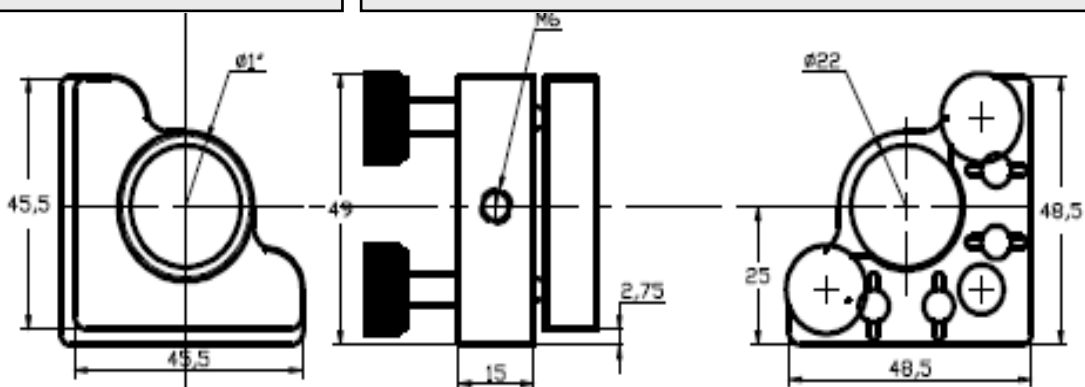
- High-stable mirror mount
- 4 springs
- Stainless steel insert for stabilisation
- Thicker open back plate
- Different front plates available
- M6 thread with M4 inner low-ring (standard)
- M4 thread available on request
- #8-32 or #1/4-20 thread available on request

Screw Options :

- Fine thread screws Model 4:
with **250 µm/turn (100 TPI)**
with **150 µm/turn (170 TPI)**

- Micrometer screws:

- with **500 µm/turn**
- with **250 µm/turn**
- with **100 µm/turn**




Mirror Mounts

Back plates MDI

			
MDI-2-...	MDI-3-...	MDI-2G-...	MDI-3G-...





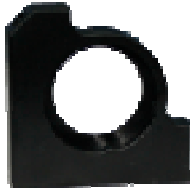
The order number of the desired MDI mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front plate.



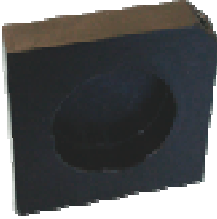


Back plates MDI-HS






	<p><i>Due to strong spring forces we offer the MDI-HS only with two alignment screws. If a third screw should be necessary, we recommend the screw as hexagon socket for easier alignment.</i></p>
MDI-HS-2-...	





The order number of the desired MDI-HS mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front plate.



Front plates

				
...-3000	...-3010 (6H7)	...-3021 (1/2")	...-3025 (1")	...-3030z (1")

				
...-3030 (1")	...-3060 (1")	...-3000-25 (1")	...-3040 (1,5")	...-3050 (1,5")

				
...-3000-50 (1,5")	...-3045 (2")	...-3055 (2")	...-3035Up	...-3035Down

				
...-3000-27 (Optics 27x50 mm)	...-3030PH (Prism Holder)	...-3030H (1")	...-3025/50 (1" and 1,5")	...-3012l (12 mm)

	
...-3012T (12 mm)	...-RM (Rotation Mount)

NEW

Mirror Mounts

MDI-H



The MDI-H is the most stable mirror mount in our product range. The optics are fixed by a retaining ring instead of a set screw.

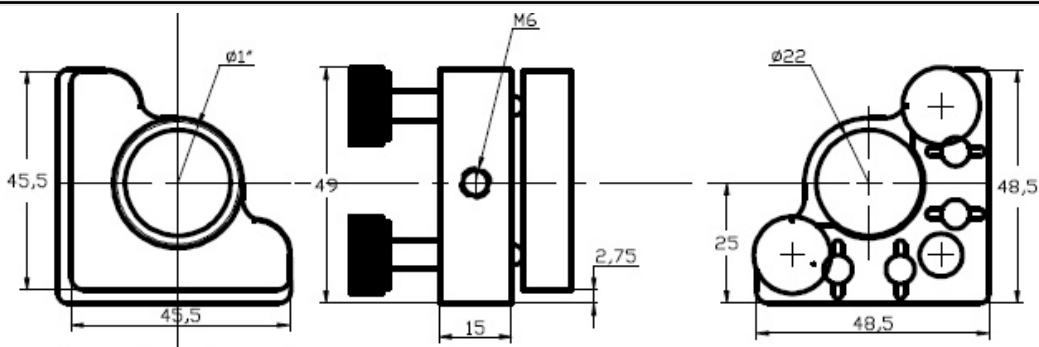
Features:

- High stable mirror mount
- Standard MDI-H with axial mounting ring for distortion free wavefront
- 4 springs
- Stainless steel insert for stabilisation
- Thicker open back plate
- Thicker front plates
- Different front plates available
- M6 thread with M4 inner lowering (standard)
- M4 thread available on request
- #8-32 or #1/4-20 thread available on request

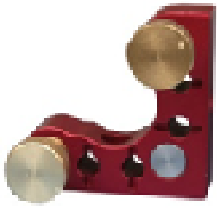
Screw Options:

- Fine thread screws Model 4:
 - with 250 $\mu\text{m}/\text{turn}$ (100 TPI)
 - with 150 $\mu\text{m}/\text{turn}$ (170 TPI)
- Micrometer screws:
 - 500 $\mu\text{m}/\text{turn}$ (50 TPI)
 - 250 $\mu\text{m}/\text{turn}$ (100 TPI)
 - 100 $\mu\text{m}/\text{turn}$ (250 TPI)

The order number of the desired MDI-H mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front plate.



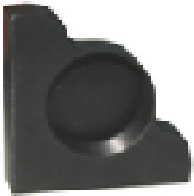
Back plates



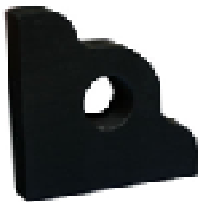
Due to strong spring forces we offer the MDI-H only with two alignment screws. If a third screw should be necessary, we recommend the screw as hexagon socket for easier alignment.

MDI-H-2-...

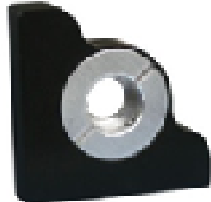
Front plates



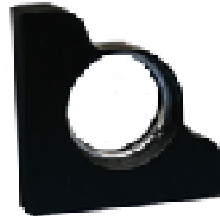
...-3010
(1")



...-3021
(1/2")



...-E3021
(1/2")



...-3025
(1")

NEW
MDI-HSS Stainless steel

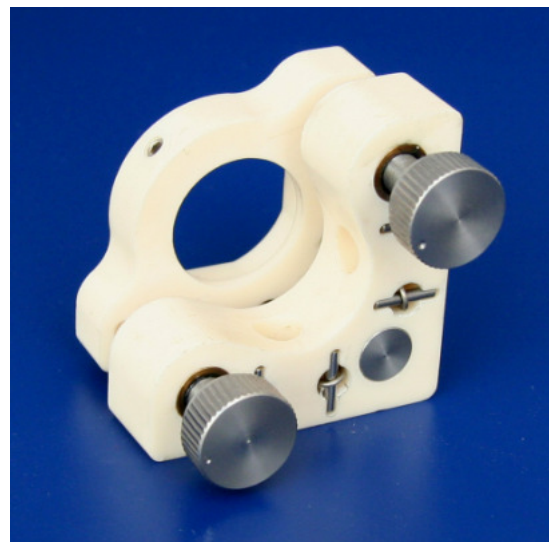
As special option for ultimate stability we offer the MDI-HSS. The back plate, the front plate and the screws are made of stainless steel. This mirror mount guarantees high thermal and highest dimensional stability.

- Thick back plate and thick front of special stainless steel
- 4 strong springs
- Equipped with two stainless steel fine thread screws with **150 µm/turn (170 TPI)** thread
- M6 thread with M4 inner lowering (standard)
- M4 thread available on request
- #8-32 or #1/4-20 thread available on request

MDI-HC Ceramic

For ultimate thermal stability we offer the MDI-HC. The back plate and the front plate are made of ceramic. This mirror mount is available with brass or stainless steel screws.

- Thick back plate and thick front plate of ceramic
- 4 strong springs
- Equipped with two brass or stainless steel fine thread screws with **150 µm/turn (170 TPI)** thread
- Inner lowering for M4 screws



Mirror Mounts

MXI



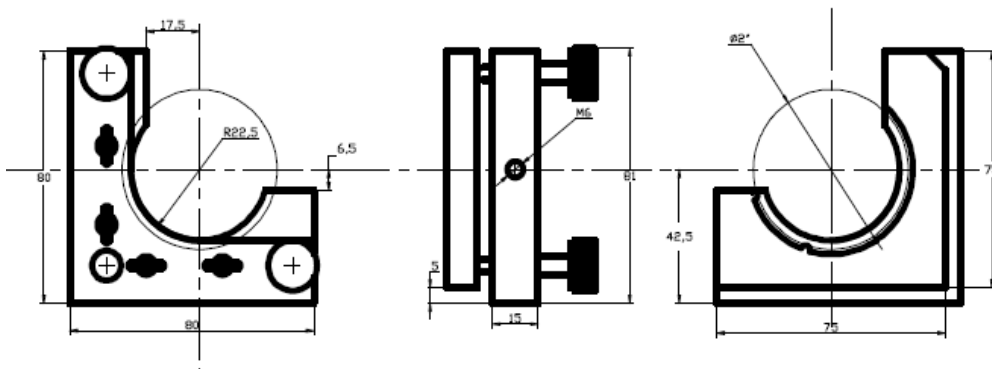
The MXI mirror mount is our standard mount for two inch optics. Due four strong springs this mount is high stable.

Features:



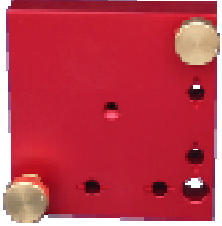

- High stable mirror mount
- 4 springs
- Thicker back plate
- Different front plates available
- M6 thread with M4 inner lowering (standard)
- M4 thread available on request
- #8-32 or #1/4-20 thread available on request

Screw Options :


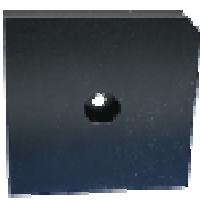

- Fine thread screws Model 5:
 - with **250 μm /turn (100 TPI)**
 - with **150 μm /turn (170 TPI)**
- Micrometer screws:
 - 500 μm /turn (50 TPI)**
 - 250 μm /turn (100 TPI)**
 - 100 μm /turn (250 TPI)**

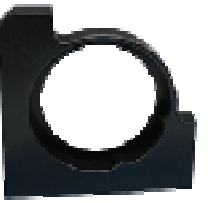

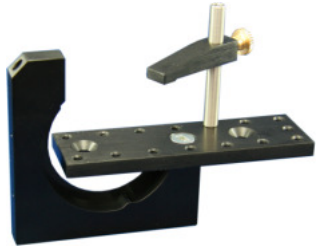


Back plates

			
MXI-2-...	MXI-3-...	MXI-2G-...	MXI-3G-...

Front plates

				
...-3000	...-3010 (6H7)	...-3021 (1/2")	...-3025 (1") ...-3027 (2")	...-3030 (2")

		
...-3030z (2")	...-3050 (1,5")	...-3030PH (Prism Holder)

The order number of the desired MXI mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front-plate.

Mirror Mounts

RD1



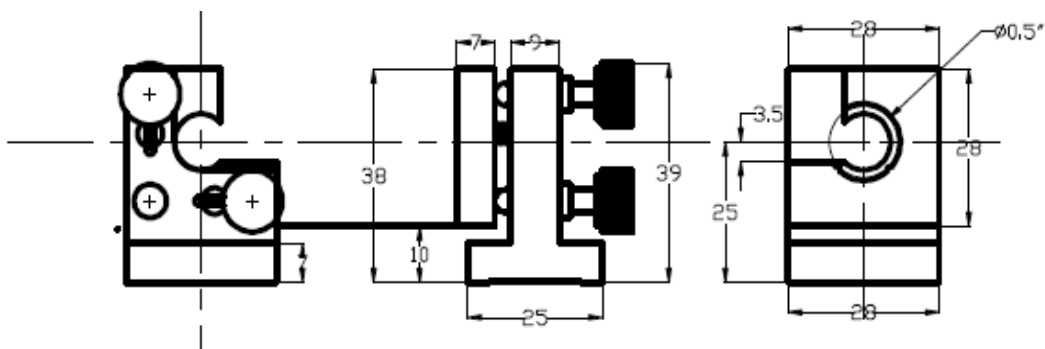
The RD1 is a small stable mirror mount with an integrated base.

Features:


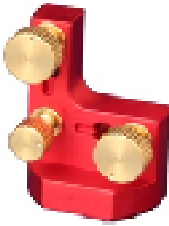
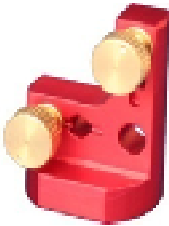

- Very Stable mirror mount
- Available in “right hand” and “left hand”
- Different front plates available
- With M6 thread (standard)
- M4 and M8 thread are also available
- #8-32 or #1/4-20 thread available on request

Screw Options :


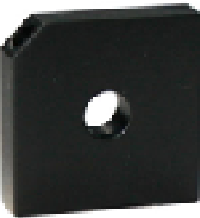



- Fine thread screws Model 2:
with **150 $\mu\text{m}/\text{turn}$ (170 TPI)**
- Micrometer screws:
500 $\mu\text{m}/\text{turn}$ (50 TPI)
250 $\mu\text{m}/\text{turn}$ (100 TPI)
100 $\mu\text{m}/\text{turn}$ (250 TPI)



Back plates

			
RD1-L2-30...	RD1-L3-30...	RD1-R2-40...	RD1-R3-40...

Front plates

				
...-3000/4000	...-3010/4010 (6H7)	...-3021/4021 (0,5")	...-3030/4030 (0,5")	...- 3025/4025 (1")

	
...-3035Up ...-4035Up	...-3035Down ...-4035Down

The order number of the desired RD1 mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front-plate.

Mirror Mounts

RD1-HS



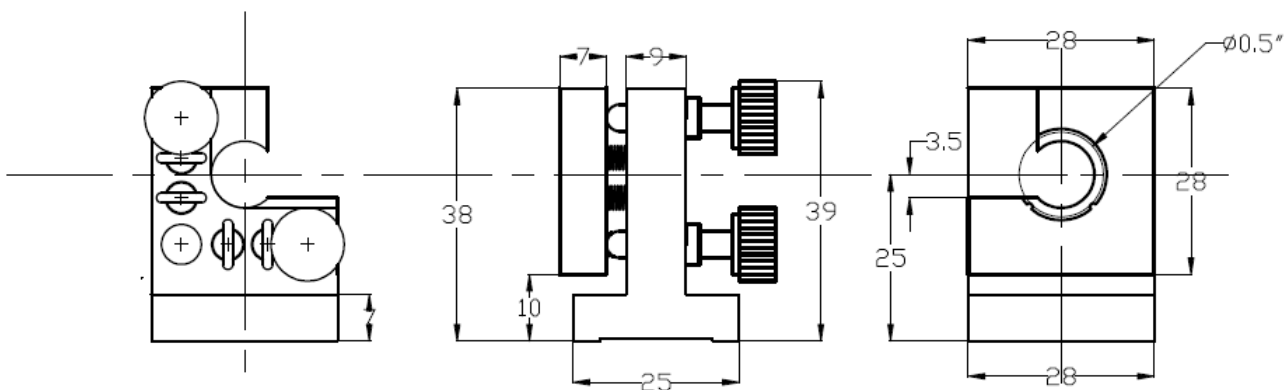
The RD1-HS is the high stable version of the RD1 mirror mount. The RD1-HS can be used for applications where a high stability is necessary.

Features:


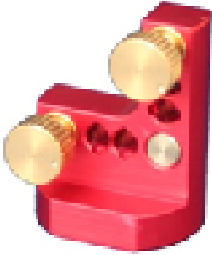
- High stable mirror mount
- Available as “right hand” and “left hand” version
- 4 springs
- Stainless steel insert for stabilisation
- Different front plates available
- With M6 thread (standard)
- M4 and M8 thread are also available
- #8-32 or #1/4-20 thread available on request

Screw Options :


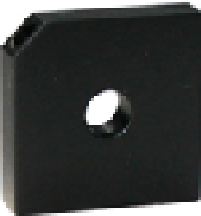



- Fine thread screws Model 2:
with **150 $\mu\text{m}/\text{turn}$ (170 TPI)**
- Micrometer screws:
500 $\mu\text{m}/\text{turn}$ (50 TPI)
250 $\mu\text{m}/\text{turn}$ (100 TPI)
100 $\mu\text{m}/\text{turn}$ (250 TPI)





Back plates

		<p><i>Due to strong spring forces we offer the RD1-HS only with two alignment screws. If a third screw should be necessary we recommend the screw as hexagon socket for easier alignment.</i></p>
RD1-HS-L2-30...	RD1-HS-R2-40...	

Front plates

				
...-3000/4000	...-3010/4010 (6H7)	...-3021/4021 (0,5")	...-3030/4030 (0,5")	...- 3025/4025 (1")

	
...-3035Up ...-4035Up	...-3035Down ...-4035Down

The order number of the desired RD1-HS mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front-plate.

Mirror Mounts

RD2



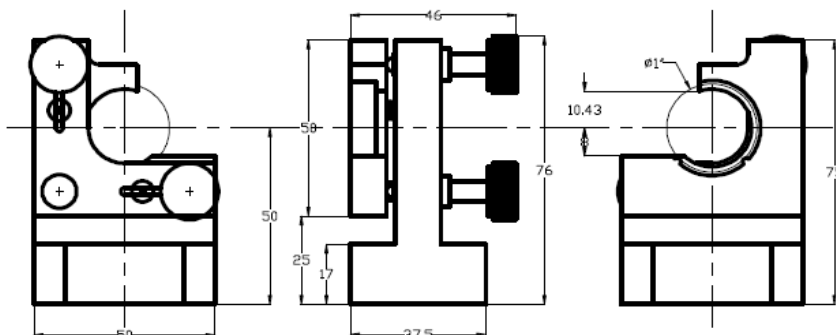
The RD2 is a stable mirror mount with an integrated base. It can be used for optics up to two inch.

Features:

- Very stable mirror mount
- Available as “right hand” and “left hand” version.
- Different front plates available
- With M8 thread (standard)
- M6 thread is also available
- #1/4-20 thread available on request

Screw Options :

- Fine thread screws Model 5:
 - with **250 μm /turn (100 TPI)**
 - with **150 μm /turn (170 TPI)**
- Micrometer screws:
 - 500 μm /turn (50 TPI)**
 - 250 μm /turn (100 TPI)**
 - 100 μm /turn (250 TPI)**



RD2-HS



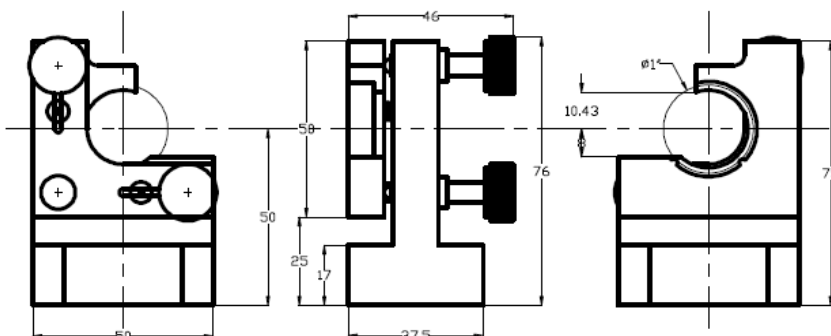
The RD2-HS is the high stable version of the RD2 mirror mount. The RD2-HS can be used for applications where a high stability is necessary.

Features:

- High stable Mirror Mount
- Available as “right hand” and “left hand” version
- 4 springs
- Stainless steel insert for Stabilisation
- Different front plates available
- With M8 thread (standard)
- M6 thread is also available
- #1/4-20 thread available on request



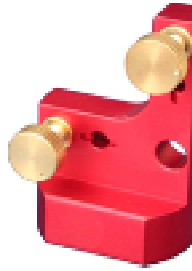

Screw Options :

- Fine thread screws Model 5:
 - with **250** µm/turn
 - with **150** µm/turn (**170** TPI)
- Micrometer screws :
 - 500** µm/turn (**50** TPI)
 - 250** µm/turn (**100** TPI)
 - 100** µm/turn (**250** TPI)



Mirror Mounts

Back plates RD2

			
RD2-L2-30...	RD2-L3-30...	RD2-R2-40...	RD2-R3-40...



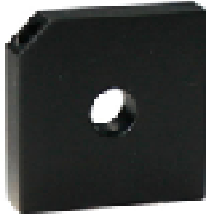


The order number of the desired RD2 mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front plate.

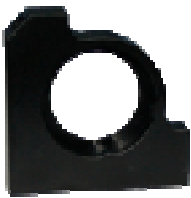




Back plates RD2-HS

		<p><i>Due to strong spring forces we offer the RD2-HS only with two alignment screws. If a third screw should be necessary we recommend the screw as hexagon socket for easier alignment</i></p>
RD2-HS-L2-30...	RD2-HS-R2-40...	



The order number of the desired RD2-HS mirror mount consists of the number of the back plate including quantity of the screws and the number of the chosen front plate.

Front plates

				
...-3000/4000	...-3010/4010 (6H7)	...-3021/4021 (1/2")	...-3025/4025 (1")	...-3030/4030 (1")

				
3030z/4030z (1")	...-3000-25 (1") ...-4000-25 (1")	...-3060/4060 (1")	...-3040/4040 (1,5")	...-3045/4045 (2")

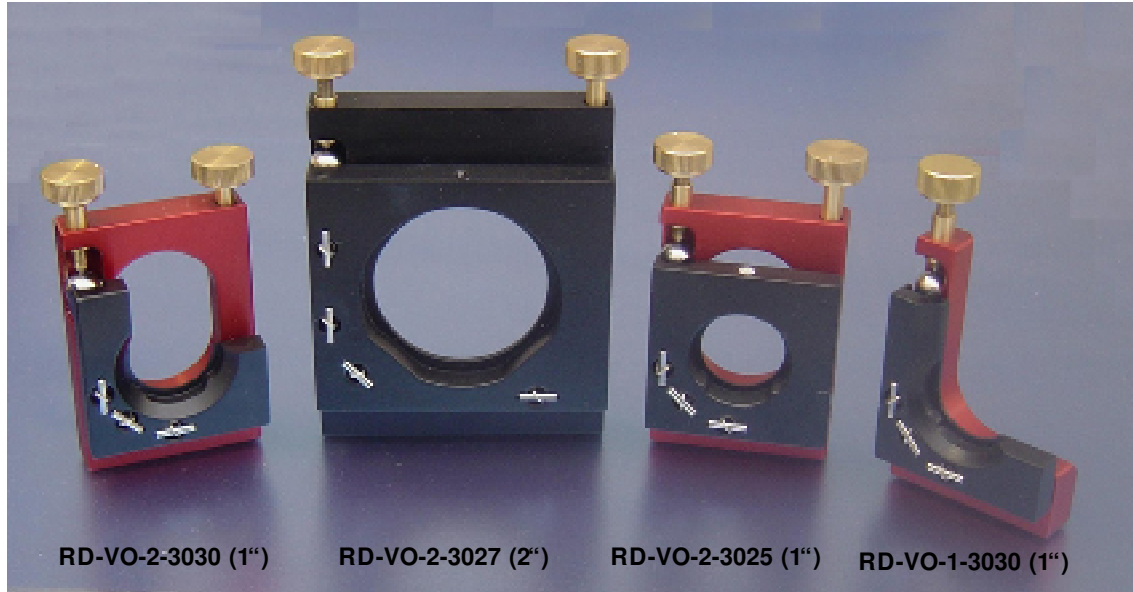
				
...-3050/4050 (1,5")	...-3055/4055 (2")	...-3035Up/ ...-4035Up	...-3035Down/ ...-4035Down	...-U(p) (1")

	
...-D(own) (1")	...-RM (Rotation Mount)

NEW

Mirror Mounts


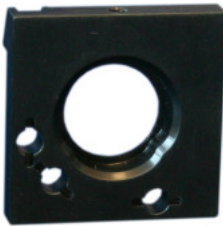


RD-VO



These mirror holders can be used from above allow a smooth and very precise adjustment without the danger to reach into the beam path. 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.

Available in the following versions :

- **RD-VO-1-...** One fine thread screw
- **RD-VO-2-...** Two fine thread screws
- For 1/2, one or two inch optics
- four different front plates

			
...-3030 (1")	...-3025 (1")	...-3027 (2")	...-RM (0,5 "or 1" Rotation Mount)

NEW



Gimbal Mirror Mounts

SK-FGS

Features:

- Gimbal Mount
- 2 brass screws with 0.25 mm pitch is standard
- Option: with 150 μm fine thread screws
- On request micrometer screws with 0.25 mm or 0.5 mm pitch or stainless steel fine thread screws are available.

SK- FGS-1

Cardanic mirror mount for 1" optics

SK-FGS-0.5

0,5" inserts for cardanic mirror mount



Beam Height Adjustment Unit VSHW

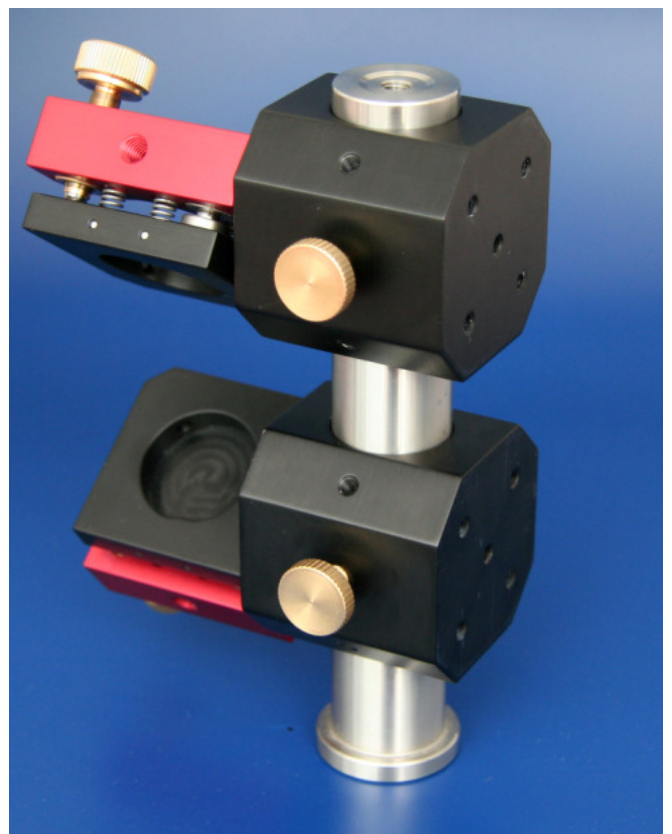
This system offers the possibility to adjust the beam height over a broad range and to turn the beam direction at the same time continuously around an angle of $90^\circ - 270^\circ$. It is possible to carry out a specific adaptation of the polarisation direction, because with a change of the angle a turn of the polarisation is combined.

The installation sheet consists of different scanning and fastening possibilities.

VSHW

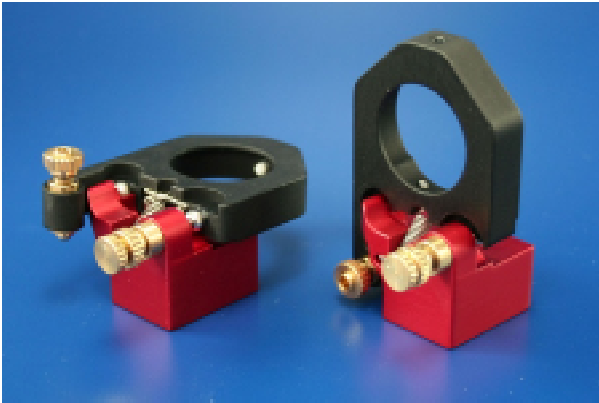
includes:

- 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.



Mirror Mounts

Flip Mounts



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

- With M4 thread

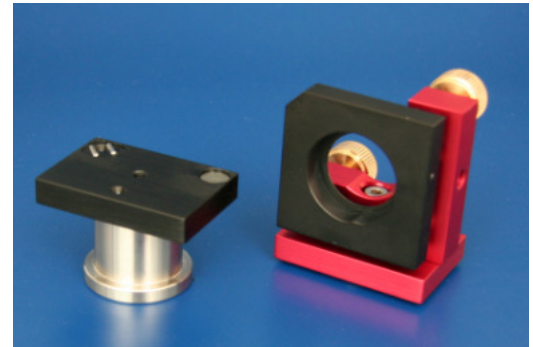
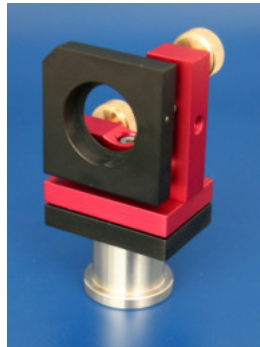
The Flip Mount is available in one and two inch (1" and 2").

Magnet Plates

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

RD-MP

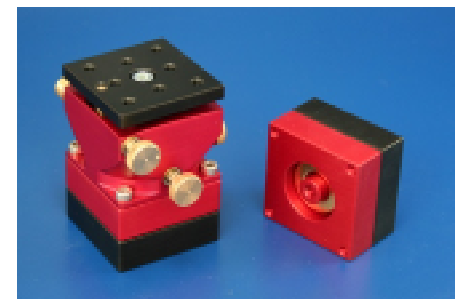
- With M4 thread



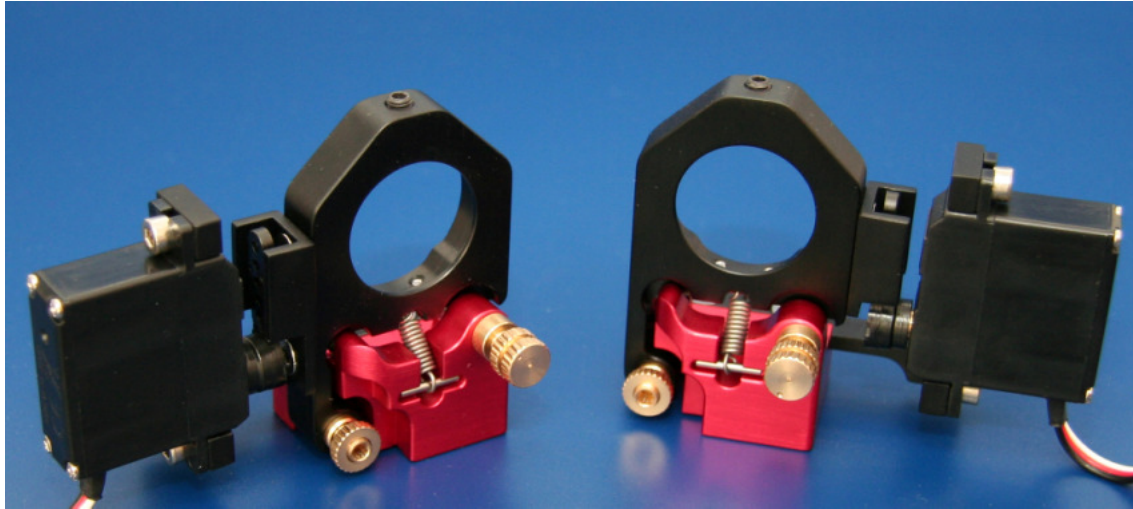
Magnet Plates for Prism Turn Tables

Repeatable, demountable option for Prism Turn Tables with magnets.

RD-MP-PDT-S for **RD-PDT-S**
RD-MP-PDT-B for **RD-PDT-B**



Flip Mount Motorized



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

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

Option: Motor left or right handed

Flip Mount Controller

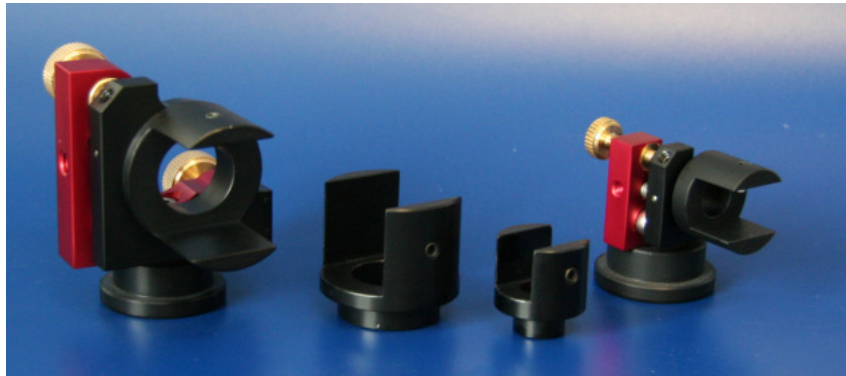
Position control is realized by Atmel RISC processor ATmega8 and standard servomechanism (servo) used in automation. RS-232C interface is used to control position and speed of the servo, connected to a mirror mount. Alternatively, the position can be controlled manually by switch. All parameters are stored in EEPROM memory and can be controlled by the user. LabVIEW sample driver is included. Depending on HW/SW versions concurrent control of one or two servos is possible.



Adapters for Opto-mechanics

Cube Holders

NEW



- Cube Holders
- Can be mounted on mirror mounts with an intake of 0,5 inch or 1 inch

For 0,5 inch intakes and cubes up to 0,5 inch

RD-CH-05-05

For 1 inch intakes and cubes up to 0,5 inch

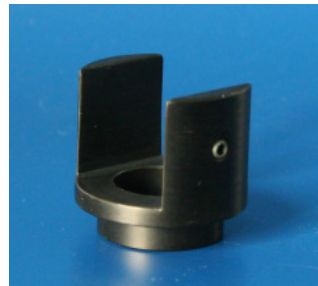
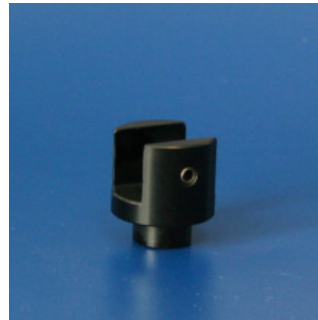
RD-CH-1-05

For 1 inch intakes and cubes up to 22 mm

RD-CH-1-22

For 1 inch intakes and cubes up to 1 inch

RD-CH-1-1



90° Adapter

- 90° Adapters for mirror mounts
- For optics 0,5 inch or 1 inch
- Intakes 0,5 inch or 1 inch

For 0,5 inch intakes and 0,5 inch optics

RD-90°M-05-05

For 1 inch intakes and 0,5 inch optics

RD-90°M-1-05

For 1 inch intakes and 1 inch optics

RD-90°M-1-1

NEW



Stepper Motors and Piezo Motors for Opto-mechanics

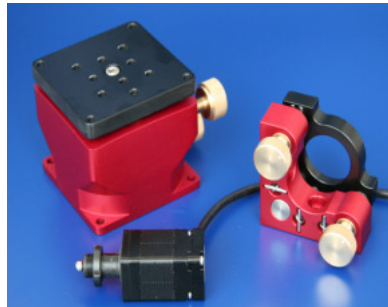
Many of our opto mechanical components can be equipped with stepper motors or piezo motors.

MDI-HS Mirror Mounts MDI-H Mirror Mounts

MXI Mirror Mounts RD-2 Mirror Mounts

RD2-HS Mirror Mounts Prism Turn Tables

Translation Stages



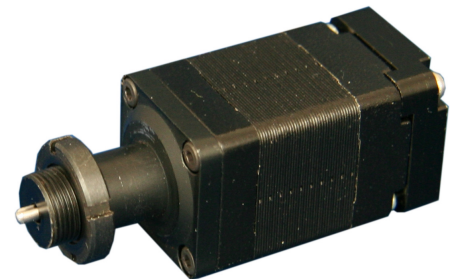
Stepper Motors & Stepper Motors with integrated controller

Specifications of the Stepper Motor :

- Travel range 12 or 15 mm
- Unidirectional repeatability down to 0.4 μm
- Maximum speed 5 mm/sec
- Force max. 40 N
- Integrated limit switch

Specifications of the Stepper Motor with integrated controller:

- Travel range 13 or 28 mm
- Built-in controller
- Maximum speed 4 mm/sec
- Force max. 15 N



Piezo Motors

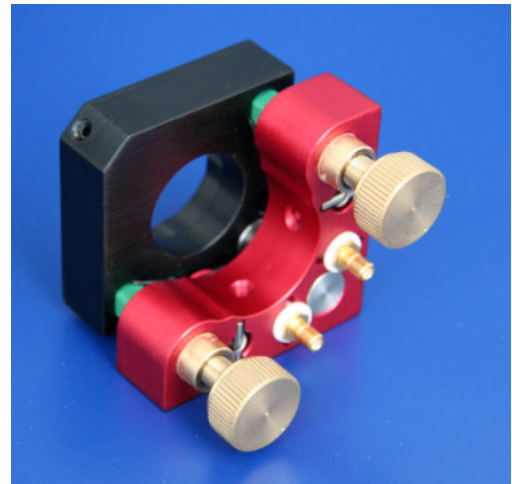
We also offer piezo motors for our opto-mechanics.
For more information please contact us.

MDI-H with Piezo Drive



The MDI-H with piezodriven is a mirror mount which is controlled by a piezo system with our own electronics. Besides a manual adjustment by 0.15 mm / 0.25 mm per turn, the systems can be adjusted electronically within a μm -range. The piezoelectric actuators are built into the mirror holder. Each of them having the following specifications:

The operation voltage range is -10 V ... +150 V, leading to maximum stroke of $> 20 \mu\text{m}$ (typically $23 \mu\text{m}$).



Opto-mechanical Components with Piezo Drive

Many of our opto-mechanical components can be equipped with piezo drives.

For detailed information please contact us.

Piezo controller



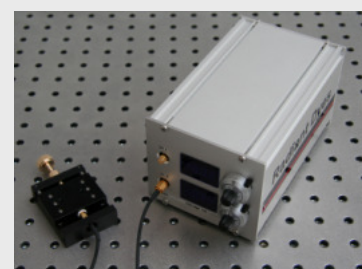
The power supply RD2-16020 was developed for two axes positioning of piezo-electrically controlled mirror mounts.

Piezo Driver Datasheet:

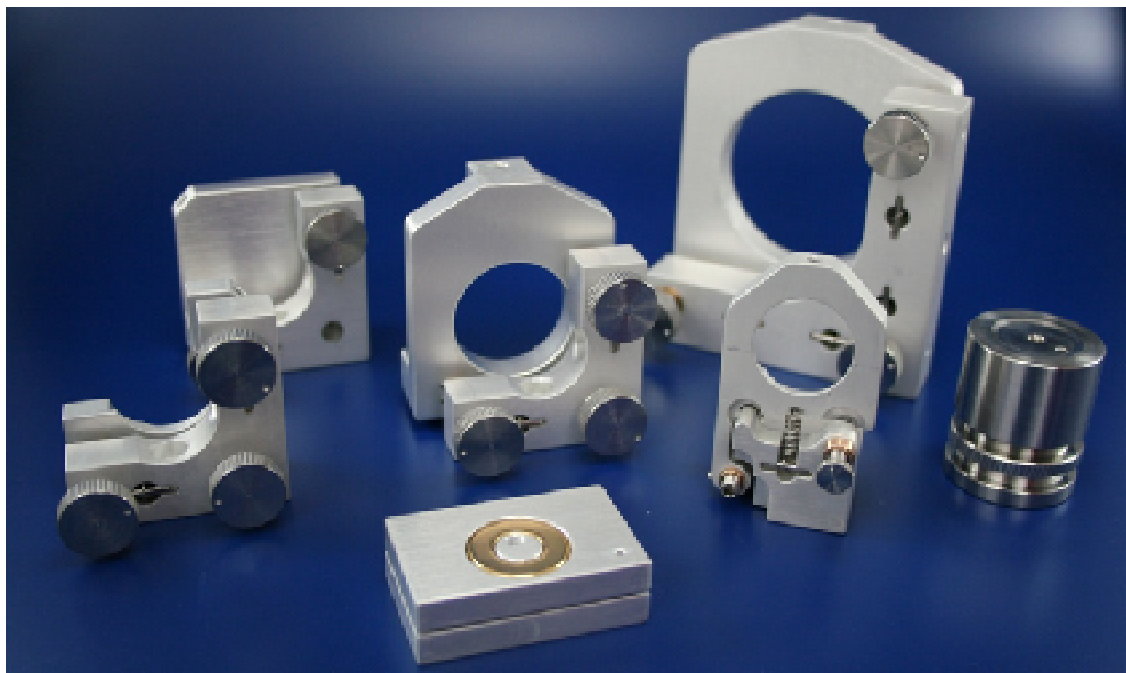
Power supply	AC 230V internal
Dimensions HxWxD (mm)	65 x 110 x 165
Front panel HxW (mm)	65 x 110
Channels	2
Output power per channel (W)	3
Output current per channel (mA)	20
Output voltage (V)	-10...+150
Output noise (mV _{RMS} @500Hz)	<0.3
Output noise amplitude (mV _{pp})	3 (typical)
Output connector for piezo ¹⁾ (front side)	SMA
Monitor voltage connector ¹⁾ (back side)	BNC
Monitor voltage (V)	-0.67...+10
Modulation input connector ¹⁾ (back side)	BNC
Modulation input (V)	0...5
Modulation input resistance (kΩ)	1
Output indicator ¹⁾ (front side)	LED or LCD (max -10.0...+150.0)
Manual adjustment ¹⁾ (front side)	Potentiometer 10 turns, precision

¹⁾ one item per channel

We also offer **piezo controlled translation stages** (page 68)



Mirror Mounts & Accessories for Vacuum Applications

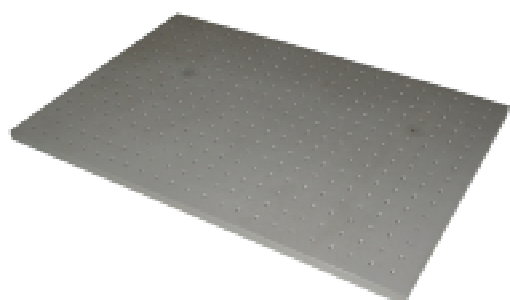
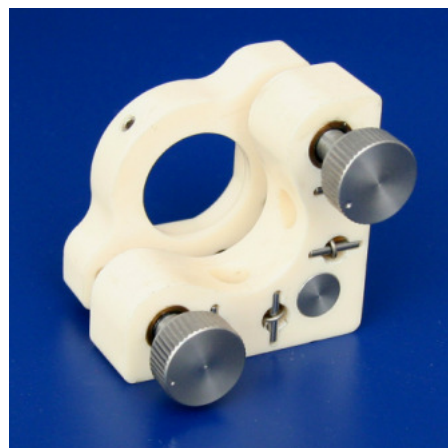


With a special choice of **vacuum suitable materials** and a **special cleaning process**, we guarantee an **optimal vacuum suitability** of our components.

We are able to supply a great number of our standard 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



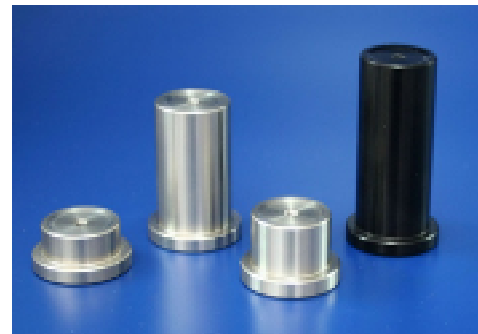
Mirror Mounts & Accessories as nonmagnetic Versions



By choosing special **nonmagnetic materials** we guarantee an **optimum nonmagnetic suitability** of our components. All nonmagnetic products are available as anodized and non-anodized.

We offer the following products for non-magnetic applications :

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



Custom designed Opto-Mechanics



You design it – We manufacture it!

Customized mirror mounts:

- From 2 inch up to 20 inch diameter
- From aluminum 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



For further questions please feel free to contact us.

Lens Mounting



Lens Mounting– Lens Mounts RD-LM

RD-LM

Features:

- Fixed lens mount
- With 3 point bases
- Available for several lens sizes
 - Ø 12 mm and Ø 0.5"
 - Ø 18 mm and Ø 20 mm
 - Ø 25 mm and Ø 1"
 - Ø 30 mm
 - Ø 40 mm
 - Ø 50 mm and Ø 2"
 - Ø 75 mm
- Mountable on a M4 post



Lens Mounting– Lens Mounts with internal thread

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 0.5"
- Ø 1"
- Ø 2"

Adapters:

RD-LM-I Adapter with integrated iris



NEW



RD-VL

RD-VL

Features:

- Stable lens mount
- 2 screws & 1 thread pin
- Several inserts available
- with **250** $\mu\text{m}/\text{turn}$ (**100** TPI) with **150** $\mu\text{m}/\text{turn}$ (**170**TPI) fine thread screws
- Adjustment line in x-y direction: 8 mm

This variable lens mounting consists of an adjustment body and a 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:

- \varnothing 12 mm and \varnothing 1/2" lenses
- \varnothing 18 mm and \varnothing 20 mm lenses
- \varnothing 25 mm and \varnothing 1" lenses

RD-VL-MDI

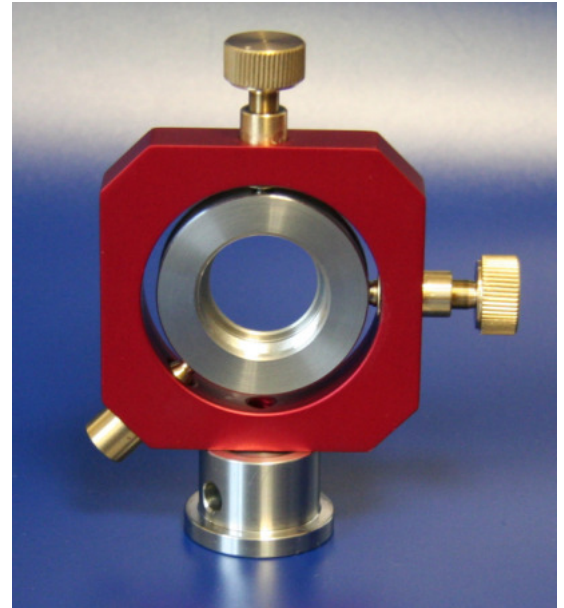
Inserts for RD-VL-MDI:

- \varnothing 30 mm lenses
- \varnothing 40 mm lenses

RD-VL-MXI

Inserts for RD-VL-MXI:

- \varnothing 50 mm lenses
- \varnothing 75 mm lenses



NEW

New design with M6 screws for more stability

Lens Mounting– Lens Inserts

Inserts for RD-VL-MNI:

- \varnothing 12 mm and \varnothing 1/2" lenses
- \varnothing 18 mm and \varnothing 20 mm lenses
- \varnothing 25 mm and \varnothing 1" lenses

Inserts for RD-VL-MDI:

- \varnothing 30 mm lenses
- \varnothing 40 mm lenses

Inserts for RD-VL-MXI:

- \varnothing 50 mm lenses
- \varnothing 75 mm lenses

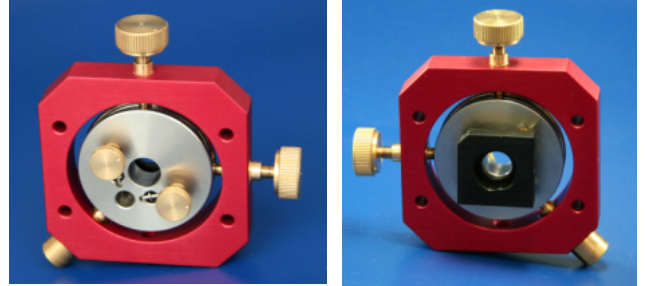


RD-VL Mirror Mounts

This variable lens mount consists of an adjustment body and a lens mount (1" or 0.5"). The great advantage of the variable lens mount 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")



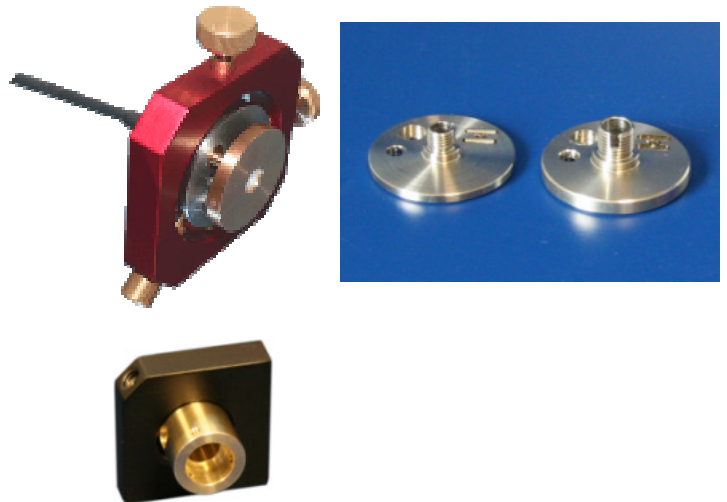
Lens mounting RD-VL-FC for Fiber Coupling

Ready to use for the following fibers:

- SMA RD-VL-FC-SMA
- FC/PC RD-VL-FC-FC/PC

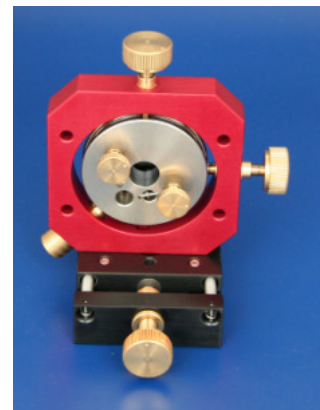
Mounts for

- 6 mm, 8 mm, or 12 mm fiber couplers



Example:

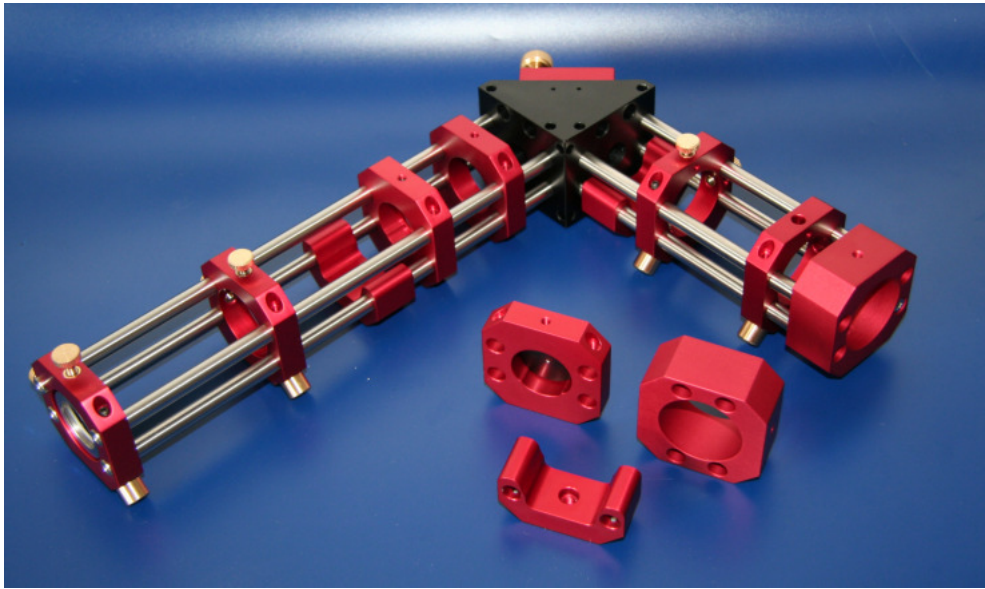
Easy to fix on a translation stage



Lens Mounting

Beam Guide System

NEW

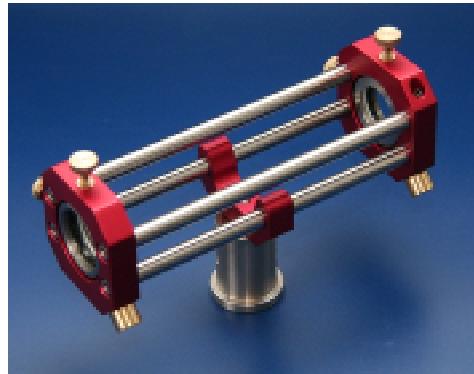


Based on our variable lens mounts RD-VL we created a high stable Beam Guide System **RD-BGS** with a rod diameter of 8 mm.

Telescope

- Telescope for 1 inch or 1/2 inch optics

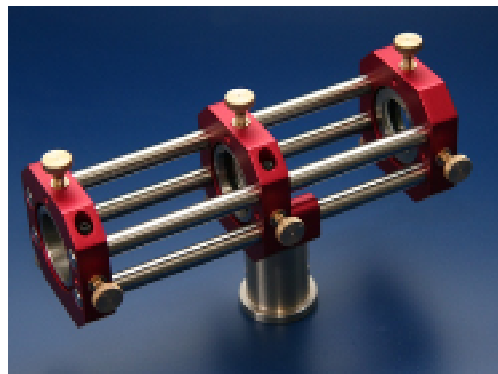
RD-BGS-T-0,5" 0,5 inch
RD-BGS-T-1" 1 inch



Spatial Filter

- Spatial Filter for 1 inch or 1/2 inch optics

RD-BGS-SF-0,5" 0,5 inch
RD-BGS-SF-1" 1 inch



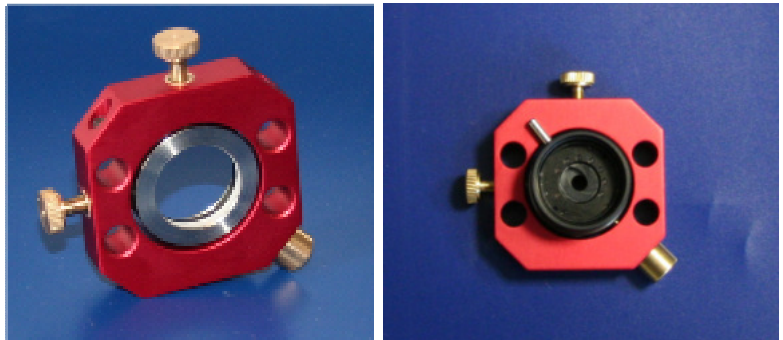
Variable Lens Mount

- Variable lens mount for 1 inch or 1/2 inch optics or with an iris

Features:

- Stable lens mount
- 2 screws & 1 thread pin
- Several inserts available
- Option: with 150 µm fine thread screws

- RD-BGS-VL-0,5" 0,5 inch
- RD-BGS-VL-1" 1 inch
- RD-BGS-VL-I iris



Variable Mirror Mount & Fiber Coupler

This variable lens mount consists of an adjustment body and a lens mount. The great advantage of the variable lens mount is the possibility to adjust the lens in the xyz-plane with the aid of a small round mirror mount.

Features:

- Stable lens mount
- 2 screws & 1 thread pin
- Several inserts available
- Option: with 150 µm fine thread screws

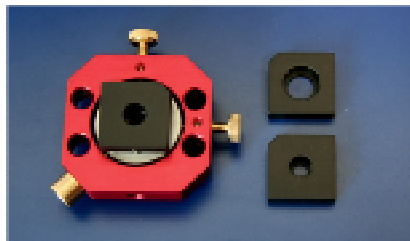
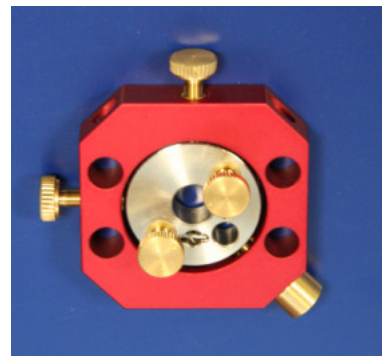
- RD-BGS-VL-MM-6H7
- RD-BGS-VL-MM-1/4"
- RD-BGS-VL-MM-0,5"

The variable lens mount is also available with two different fiber couplers:

- SMA
- FC/PC

Mounts for

- 6 mm, 8 mm, 12 mm fiber couplers



Fixed Plate

- For Lenses, Pinholes, Optical Diaphragms etc.
- For 1 inch or 1/2 inch

- RD-BGS-FP-0,5" 0,5 inch
- RD-BGS-FP-1" 1 inch

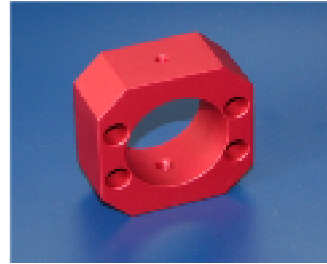


Lens Mounting

Laser Holders

- For mounting of e.g. HeNe-Laser
- Diameter 35 mm

RD-BGS-LH



Rod Bases

- Mounting Base for Rods
 - M4 Thread
- or
- M6 Threads with Counterbore for M4

RD-BGS-RB



Rods

- Diameter 8 mm

RD-BGS-R-100 50 mm - 100 mm
RD-BGS-R-200 150 mm - 200 mm
RD-BGS-R-300 250 mm - 300 mm

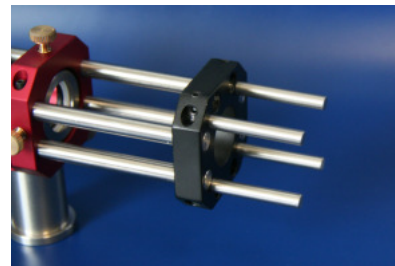
- Other length on request



Adapter Plates

- Adapter plates for Rods with a diameter of 6 mm

RD-BGS-AP

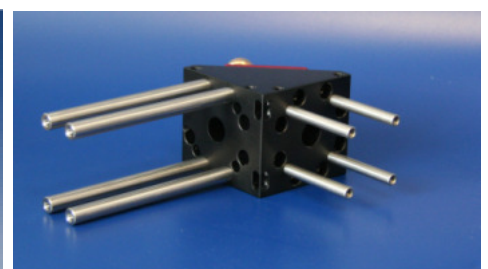
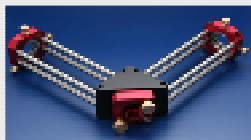


90° Mounts

- 90° Mount

RD-BGS-90°M

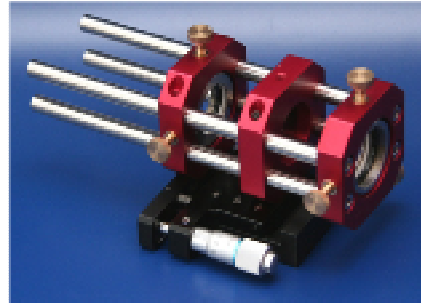
Example of use:



Translation Stages

- Integrated Translation Stage for precise adjustment
- Adjustment line 30 mm

RD-BGS-TS

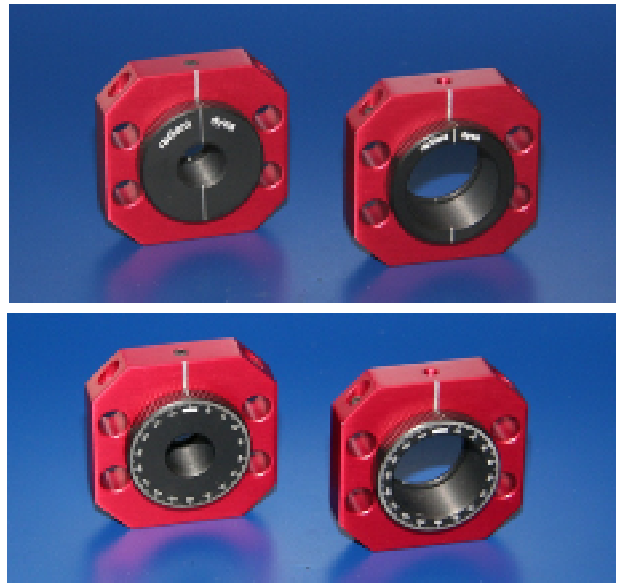


Rotation Mounts

- Rotation mounts for ½ inch or 1 inch
- With or without scale
- With grub screw including a spring mounted ball for precise adjusting
- Optics are fixed by a retaining ring

RD-BGS-RM- 0,5" 0,5 inch without scale
RD-BGS-RM- 1" 1 inch without scale

RD-BGS-RM-SK- 05" 0,5 inch with scale
RD-BGS-RM-SK- 1" 1 inch with scale



Cubes

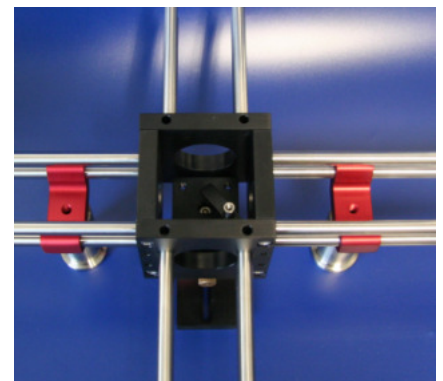
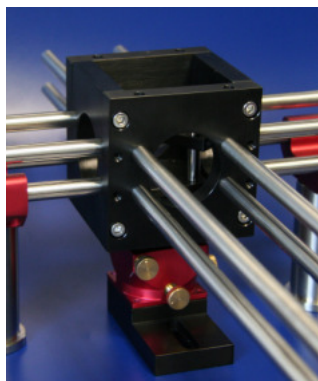
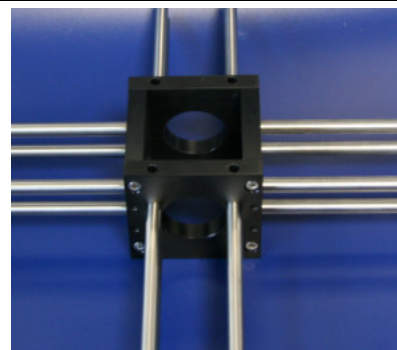
- Beam Guide Cubes
- To combine up to four Beam Guide Systems in one center position

RD-BGS-C

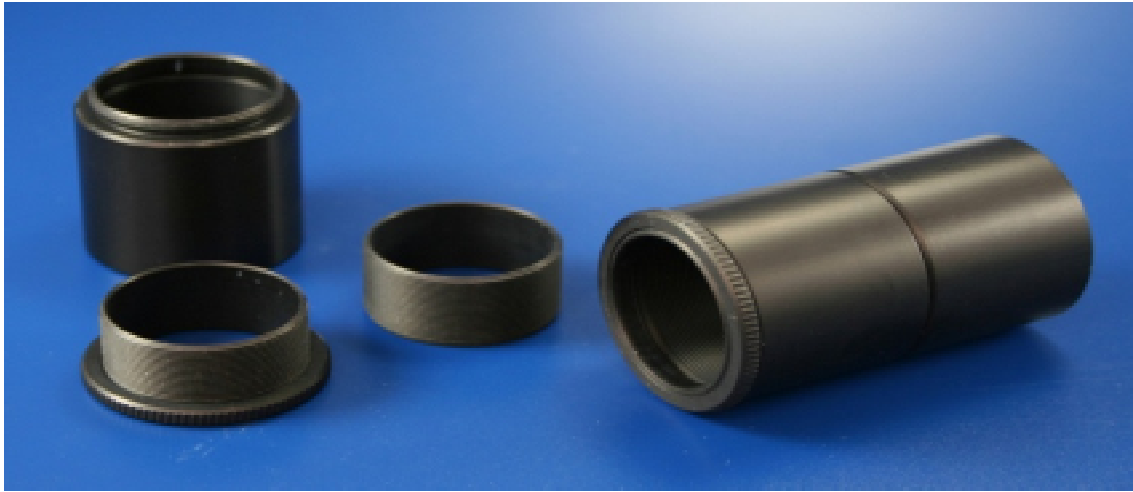
Special application:

- Cubes with integrated prism turn table *RD-PDT-S* for mounting of optical devices

RD-BGS-C-PDT



Lens Tube System



The Radiant Dyes Lens Tube System (**RD-LT**) is an easily combinable system to build up complex optical systems. The Lens Tubes are available with the diameters 0.5" and 1". The system is compatible with the Radiant Dyes Lens Mounts (RD-LM-WR) and also compatible to other manufacturing companies.

Lens Tubes Ø 0,5"

External/internal thread 0,5"-40

Size	Order number
0,3"	RD-LT-05-03
0,5"	RD-LT-05-05
1"	RD-LT-05-1
2"	RD-LT-05-2
3"	RD-LT-05-3

Lens Tubes Ø 1"

External/internal thread 1"-40

Size	Order number
0,3"	RD-LT-1-03
0,5"	RD-LT-1-05
1"	RD-LT-1-1
2"	RD-LT-1-2
3"	RD-LT-1-3



Iris

- **RD-LT-IR**

NEW



Retaining Rings

- **RD-LT-RR-05** (for Ø 0.5")
- **RD-LT-RR-1** (for Ø 1")

With the retaining ring different optics can be mounted into the lens tubes. Two retaining rings are necessary to mount one optic.

Lens Tube Couplers

- **RD-LT-C-05** (for Ø 0.5")
- **RD-LT-C-1** (for Ø 1")

Lens Tube Couplers with external thread.

Counter Rings

- **RD-LT-CR-05** (for Ø 0,5")
- **RD-LT-CR-1** (for Ø 1")

Adjustable Lens Tubes

- **RD-LT-A-05-05** (for Ø 0.5" -Thread size 0.5")
- **RD-LT-A-05-1** (for Ø 0.5" -Thread size 1")
- **RD-LT-A-1-05** (for Ø 1" -Thread size 0.5")
- **RD-LT-A-1-1** (for Ø 1" -Thread size 1")

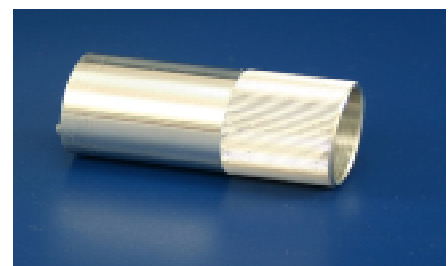
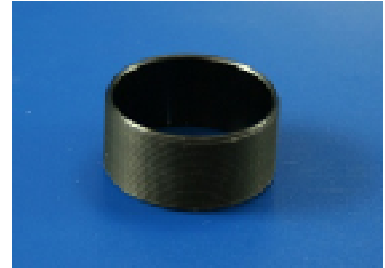
Lens Tube Inserts

- **RD-LT-I-05** (for Ø 0.5")
- **RD-LT-I-1** (for Ø 1")

Mounting Tools

- **RD-LT-MTRR-05** (for Ø 0.5")
- **RD-LT-MTRR-1** (for Ø 1")

This tool is for installation and adjustment .



NEW

Small Rotation Mounts

- With plastic screw
- Small dimensions
- Integrated notch for safe fixing
- Optics are fixed by a retaining ring

RD-RM-S-0,5" 0,5 inch without scale



Rotation Mounts

- With plastic screw
- Integrated notch for safe fixing
- Optics are fixed by a retaining ring

RD-RM-0,5" 0,5 inch without scale
RD-RM-1" 1 inch without scale



Rotation Mounts with Scale

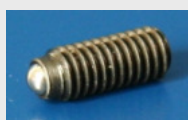
- With plastic screw
- Integrated notch for safe fixing
- Optics are fixed by a retaining ring
- With 360° laser-engraved scale

RD-RM-SK-0,5" 0,5 inch with scale
RD-RM-SK-1" 1 inch with scale



High precise Rotation Mounts

- With grub screw including a spring mounted ball for precise adjusting
- Integrated notch for safe fixing
- With 360° laser-engraved scale
- Optics are fixed by a retaining ring



RD-RMM-SK- 0,5" 0,5 inch with scale
RD-RMM-SK- 1" 1 inch with scale



RD-RM-PTT & RD-RM-PTT-SK

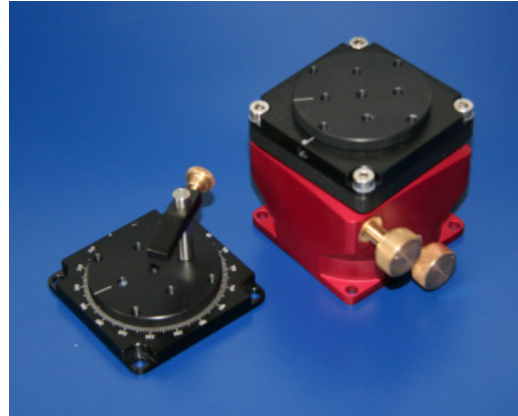
- Rotation Mounts for Prism Turn Tables
- Available with and without scale
- One clamping arm included

For the small Prism Turn Table (RD-PDT-S):

RD-RM-PTTS without scale
RD-RM-PTTS-SK with scale

For the big Prism Turn Table (RD-PDT-B):

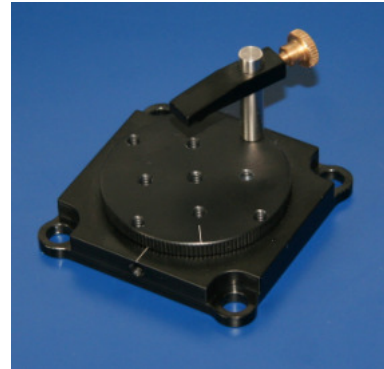
RD-RM-PTTB without scale
RD-RM-PTTB-SK with scale



Rotation Mounts for Optical Tables

- Rotation Mounts for Optical Tables
- Compatible to optical tables
- with 25 mm x 25 mm raster
- Hole spacing 50 mm x 50 mm
- Available with and without scale
- One clamping arm included

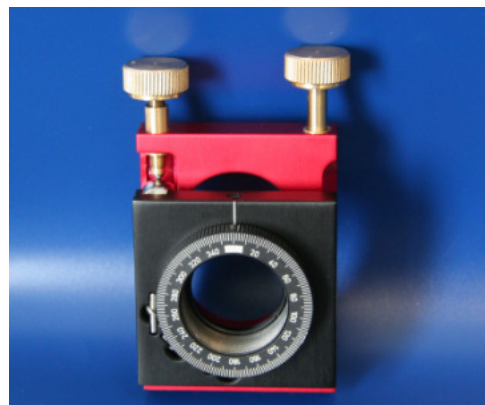
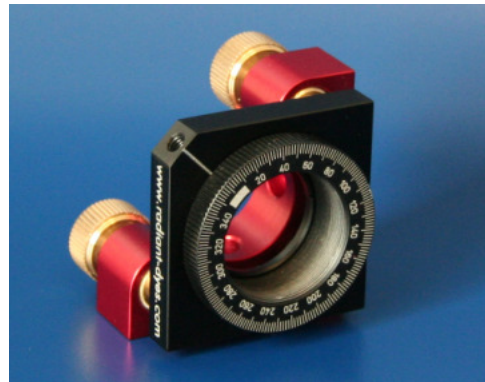
RD-RM-OT without scale
RD-RM-OT-SK with scale



Rotation Mounts for Mirror Mounts

- Mirror Mounts equipped with a Rotation Mount
- With and without scale
- With grub screw including a spring mounted ball for precise adjusting
- Available for:

MDI
MDI-HS
RD2
RD2-HS
RD-VO



Double Rotation Mounts

- Double Rotation Mount
- With grub screw including a spring mounted ball for precise adjusting
- With scale
- Optics are fixed by a retaining ring

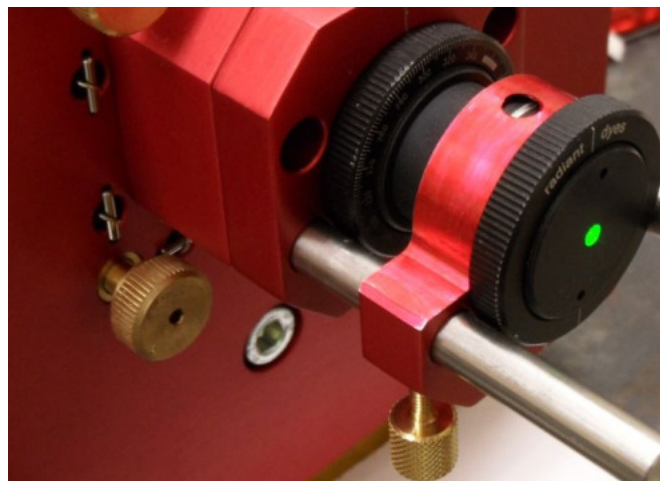
RD-RM-DRM



Double Rotation Mount Special Applications

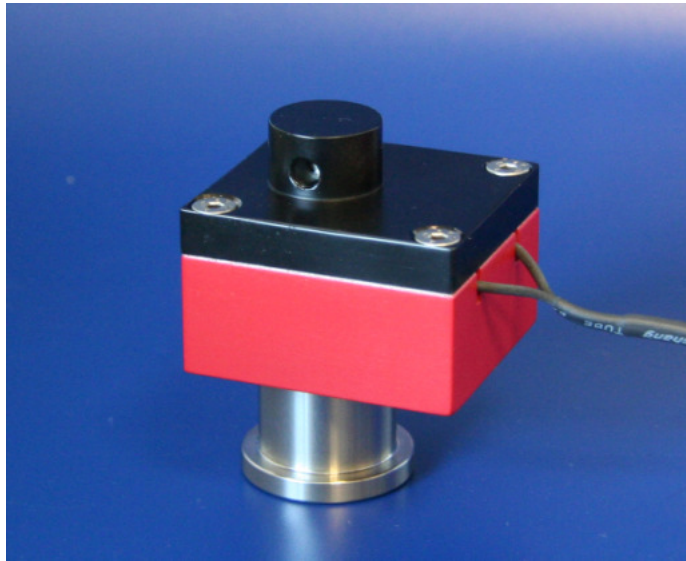
Laser beam attenuator

- can be used to lower the output power of a dye laser to the desired value
- Working with two polarizing beam splitter cubes
- The polarization of the output beam can be adjusted with the second cube and with the first one the power can be regulated



Mechanical Shutter

NEW



Simple and low cost bipolar mechanical shutter for light beams.

RD-MS

Features:

- Low cost
- Fast switching
- High timing precision
- Ultimate extinction

Specifications:

- Aperture 5mm
- Maximum speed 0.17 mm/ms
- Timing jitter less than 10 μ m

Options:

- Combined with polarization optics the device can be used as an **alterable switch** and **adjustable attenuator**

For more informations please contact us.

Prism Mounting & Post Holder

Prism Turn Tables

RD-PDT-B (big)

RD-PDT-S (small)

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

(One clamping arm included)



Mirror Mounts for Prism Mounting

New back plate with clamping arm for mounting of prisms.
(One clamping arm included)



Inclination Tables

Our mirror mounts with a closed back plate can also be used as inclination table, because there is a M6 thread on the back. The mounts as inclination tables are 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 **RD-ICT-MNI**
MNI-2G with alternate insert and one clamping arm

MDI-inclination table **RD-ICT-MDI**
MDI-2G with alternate insert and one clamping arm

MXI-inclination table **RD-ICT-MXI**
MXI-2-G with alternate insert and one clamping arm



Beam Dump

RD-BD

- With M4 thread
- Passive cooling

RD-BDL

- Beam dump for lens mounts



Post Holders, Posts, Pedestals, Bases & Holding Forks



Magnetic Bases

Magnetic bases **MF-OG** without adapter sheet
 Magnetic bases **MF-MA** with adapter sheet



Post Holder RDS

The RDS-post holders (including base) are suitable for post dimensions from 11 to 15 mm diameter. Very stable through a precise three-point-support. They are compatible to posts and post holders on the market.

Clearance hole (100% of the height is usable)
Magnetic base (for fast mounting)

NEW



Size	Inner lowering for M6 or M8 screws	With M6 thread	Clearance Hole 15 mm	Magnetic Base
25 mm	---	---	RDS-H-25	RDS-M-25
35 mm	RDS-35	RDS-T-35	RDS-H-35	RDS-M-35
40 mm	RDS-40	RDS-T-40	RDS-H-40	RDS-M-40
50 mm	RDS-50	RDS-T-50	RDS-H-50	RDS-M-50
75 mm	RDS-75	RDS-T-75	RDS-H-75	RDS-M-75
100 mm	RDS-100	RDS-T-100	RDS-H-100	RDS-M-100



Post Holders, Posts, Pedestals, Bases & Holding Forks

Post Holder without Base

- Post Holder without base
- M6 thread on the bottom
- Suitable for post from 11 to 15 diameter

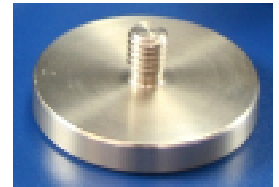
Size	Order Number
25 mm	RDS-OF-25
40 mm	RDS-OF-40
65 mm	RDS-OF-65
90 mm	RDS-OF-90



Post Holder Base for RDS-OF

RDS-F

- Base for RDS-OF
- Height 4,5 mm
- With M6 thread



Mounting Bases for Post Holders and Pedestals

RD-MB-2 (76 mm x 26 mm x 10 mm)

RD-MB-1 (58 mm x 25 mm x 10 mm)



Posts RD-GS

- Stainless steel posts
- Posts fit to all post holders
- Standard M4 inside threads on the one side and M6 on the other side
- One grub screw (M4) including

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

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

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



Post Holder Connector

RD-PHC

- 90° connection between two posts



Mounting option

Holding Forks RDK-1

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

Compatible to other pedestals on the market.

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



Holding Forks RDK-2

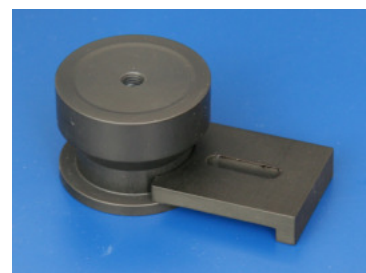
RDK-2 Holding Fork, flexible and stable fixing of RDS-G pedestals

For RDS-G Pedestals:

RDK-2 midi (Ø 25 mm)

For RDS-G-B Pedestals:

RDK-2 maxi (Ø 51 mm)



Clamping Forks RD-PH

RD-PH clamping fork, stable fixing of our RD1 and RD2 Mirror Mounts:

- **RD-PH-1** (38 mm x 16 mm x 9 mm)
- **RD-PH-2** (50 mm x 19 mm x 17 mm)
- **RD-PH-3** (50 mm x 19 mm x 23 mm) *for RD2*
- **RD-PH-4** (50 mm x 12 mm x 8 mm) *for RD1*



Table Clamps RD-TC

Table Clamp to fix several opto-mechanics on the table.



RD-TC-B RD-TC-S



RD-TC-D

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 height=

Base plate + height adapter + mirror mount

Base Plates & Height Adapters for MNI, MNI-H, MDI, MDI-H(S), MXI

MNI-Base plate:

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

MNI Height Adapters:

- 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:

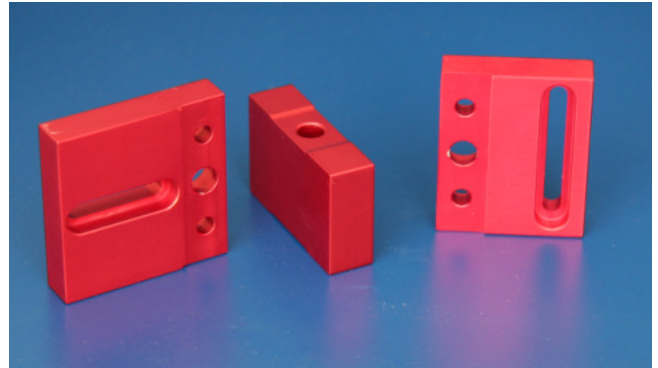
- For 50 mm beam height
- For 75 mm beam height

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



The heights are always total heights:

Beam height=

Base plate + height adapter + mirror mount

Cap Screws & Washers

Cap screws

RD-CS-M4-16 (M4 x16 mm)

RD-CS-M6-16 (M6 x16 mm)

RD-CS-M6-20 (M6 x 20 mm)

Washers

RD-W-M4 (for M4 screws)

RD-W-M6 (for M6 screws)

NEW



Pedestals



NEW



All pedestals with thread (RDS-G and RDS-HS) can be combined with each other. All Posts and Pedestals are also available with a lateral hole.

All pedestals are available with a magnetic base for fast alignment.

RDS-MNI

- Stainless steel pedestal
- Diameter 25.4 mm
- The RDS-MNI system fits to our MNI Mirror Mounts
- Can be used on both sides
- Top side M4, bottom side M6 thread (standard)

Pedestal:

RDS-MNI-P

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

Other sizes on request

Holding Fork:

RDS-MNI-HF-S (small)
RDS-MNI-HF-M (medium)

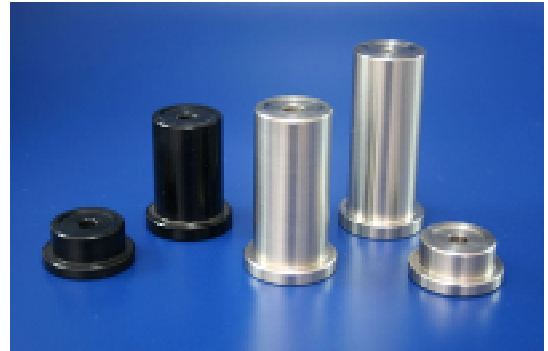


RDS-OG

- Diameter 25.4 mm
- Pedestal with inner lowering for M4, M6 or M8 screws
- Available in aluminium, 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

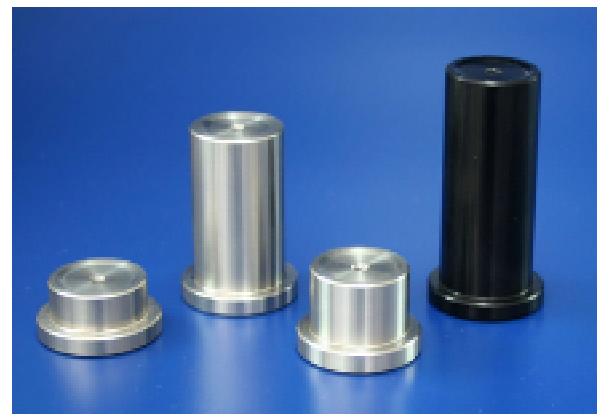


RDS-G

- Diameter 25.4 mm
- Top side M4, bottom side M6 thread (standard)
- Available in aluminium, anodized aluminium or stainless steel

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

Other sizes or threads on request



Post Holders, Posts, Pedestals, Bases & Holding Forks

RDS-G-M

- Diameter 31.5 mm
- Pedestal with M4 (standard) or M6 thread on top
- Available in aluminium, anodized aluminium or stainless steel

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-M-1,5
50		RDS-G-M-50
50.8	2	RDS-G-M-2
63.5	5/2	RDS-G-M-2,5
75		RDS-G-M-75
76.2	3	RDS-G-M-3
100		RDS-G-M-100

Other sizes on request



RDS-G-B

- Diameter 51 mm
- Very stable pedestal with M4, M6 or M8 thread on top
- Available in aluminium, anodized aluminium or stainless steel
- Fits perfectly for our RD2 mirror mounts

Other sizes on request



- Mirror mounts will be fixed by a set screw



RDS-HS

- Height adjustable pedestals
- Top side M4, bottom side M6 thread (standard)
- 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-HSA

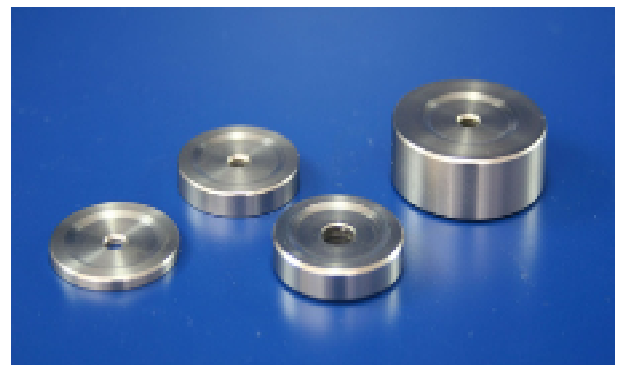
- Height adjustable adapter for pedestals
- Compatible to all pedestals
- Size 20-29 mm



RDS-HA

- Height adjustable adapter for pedestals
- With M4 (standard) or M6 clearance hole
- Compatible to all pedestals
- Size 20-29 mm

Available in the following sizes:		
Size in mm	Order number Ø 1"	Order number Ø 31.5 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



Clamping Arms

RD-CA-S

Clamping height < 23 mm
Thread M4

RD-CA-L

Clamping height < 40 mm
Thread M4

Mounting Options:



V-mounts

For mounting of cylindrical objects
(one clamping arm included)

RD-VM-S

Ø 0.5 mm - Ø 22 mm

RD-VM-L

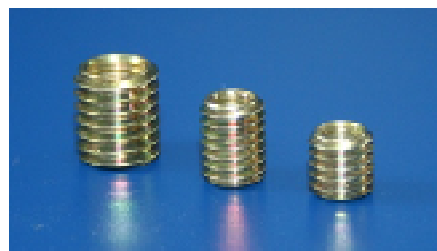
Ø 14 mm - Ø 50 mm



Thread adapters

Available in the following sizes:

External Thread	Internal Thread	Length	Order Number
M8	M6	9 mm	RD-TA-8-6-9
M8	M6	6 mm	RD-TA-8-6-6
M6	M4	8 mm	RD-TA-6-4-8
M6	M4	6 mm	RD-TA-6-4-6



Thread Adapters 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



Set screws

Set screws

RD-SC-M4-12 (length 12 mm)

RD-SC-M6-16 (length 16 mm)

Other length on request

NEW



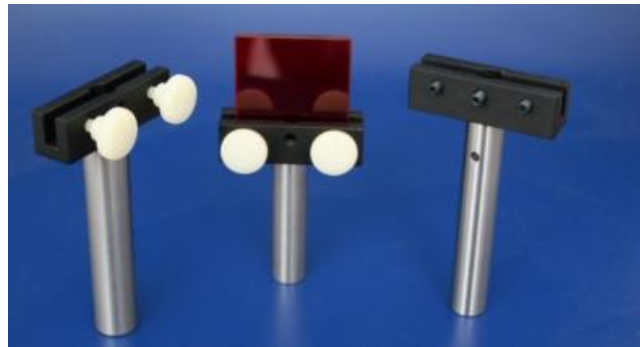
Filter Holder

RD-FH-K

Plastic thread screw with knurled head

RD-FH-M

Including Grub Screws with plastic inserts



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 MDI 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 MDI mirror mounts and compatible mounts

Translation stages

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 (13 mm). 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:

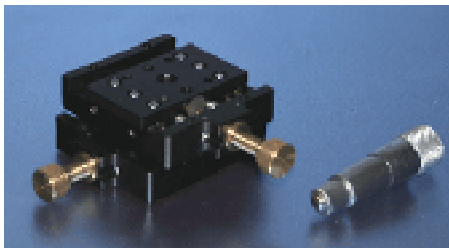
- 0.25 mm per turn
- 0.15 mm per turn

Translation stage with micrometer screws:

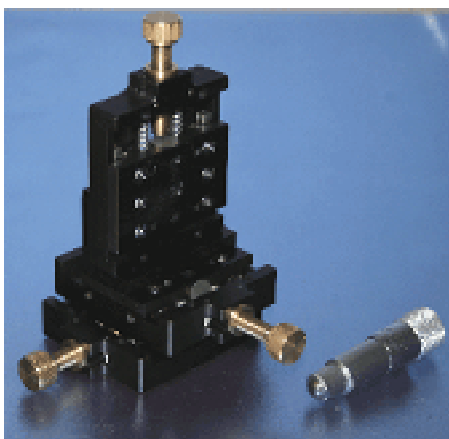
- 0.5 mm per turn
- 0.25 mm per turn



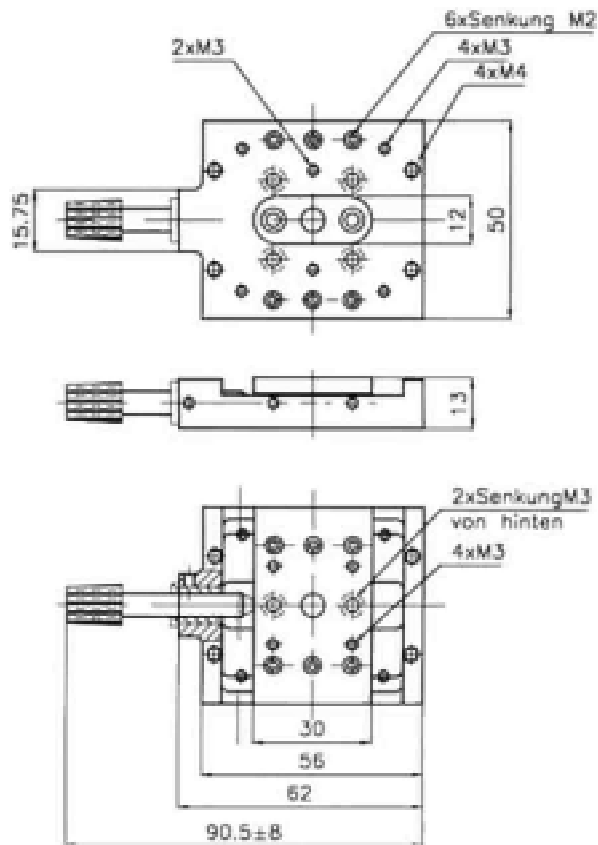
RD-KRU-NP-15-01



RD-KRU-NP-15-02



RD-KRU-NP-15-03



Adapter angle X-Y-Z

Translation stages

Translation stage with crossed roller way guides 15 mm adjustment line

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

With fine thread screws:

- 0.25 mm per turn
- 0.15 mm per turn

With micrometer screws:

- 0.5 mm per turn
- 0.25 mm per turn

RD-KRU-15-01-piezodrive

With fine thread screws:

- 0,25 mm per turn
- 0,15 mm per turn

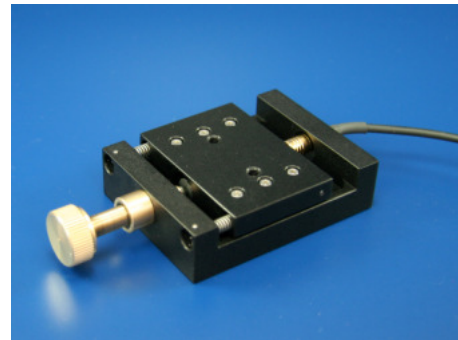
With micrometer screws:

- 0.5 mm per turn
- 0.25 mm per turn

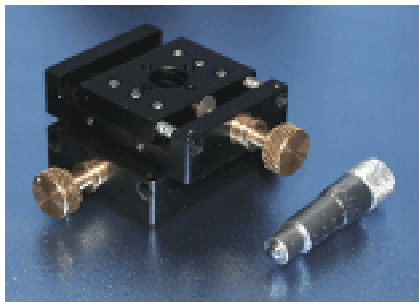
-piezo drive 27/35µm



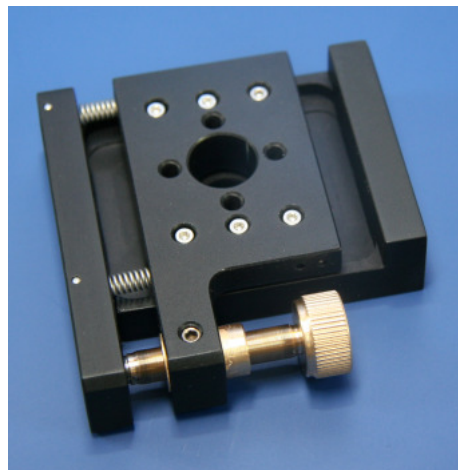
RD-KRU-15-01



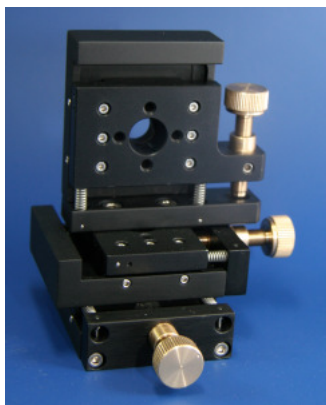
RD-KRU-15-01- piezo drive



RD-KRU-15-02



RD-KRU-15-01-S



RD-KRU-15-03

Also available:

-RD-KRU-15-02-S

-RD-KRU-15-03-S

Translation Stages

Translation stage with crossed roller way guides 25 mm adjustment line

RD-KRU-25-01 -02 -03

With fine thread screws:

- 0.25 mm per turn

- 0.15 mm per turn

With micrometer screws:

- 0.5 mm per turn

RD-KRU-25-01- -02 -03

-piezo drive

With fine thread screws:

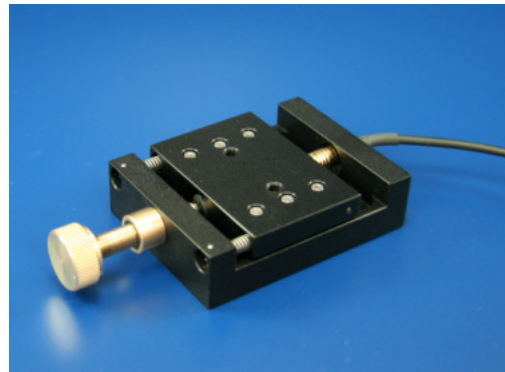
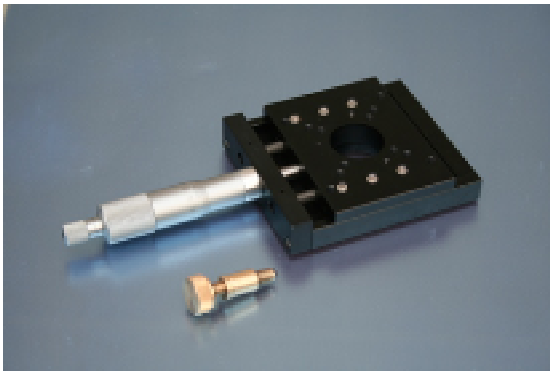
- 0.25mm per turn

- 0.15 mm per turn

With micrometer screws:

- 0.5 mm per turn

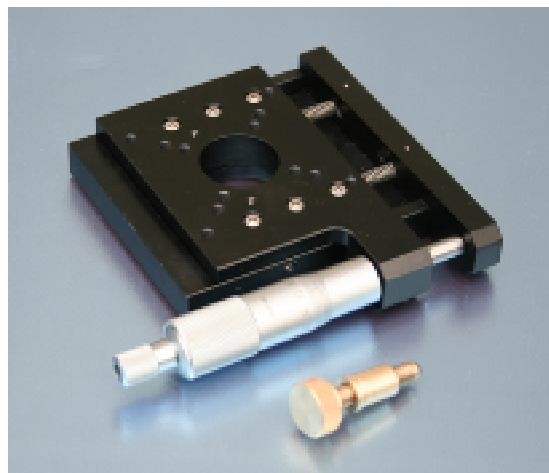
-piezo drive 27/35µm



RD-KRU-25-01-S

RD-KRU-25-02-S

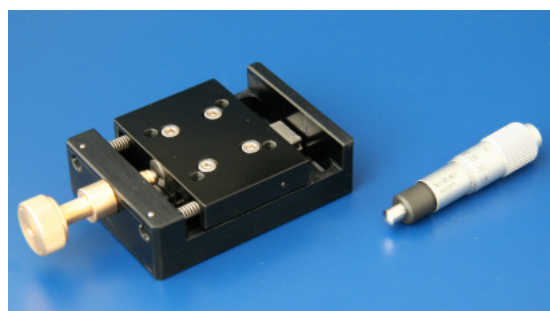
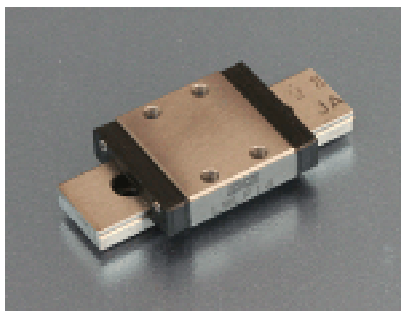
RD-KRU-25-03-S



RD-KRU-25-01-S

Translation stage with linear roller way guides 15 mm adjustment line

The linear roller way guides are commercial systems which we build 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 sliding units are also 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 -02 -03

Translation stage with fine thread screws :

- 0.25 mm per turn

- 0.15 mm per turn

Translation stage with micrometer screws :

- 0.5 mm per turn

- 0.25 mm per turn



RD-KUL-15-01S -02S -03S

Translation stage with fine thread screws :

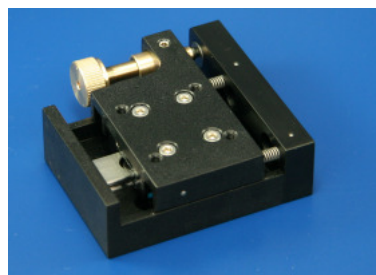
- 0.25 mm per turn

- 0.15 mm per turn

Translation stage with micrometer screws :

- 0.5 mm per turn

- 0.25 mm per turn



Translation stage with linear roller way guides 25 mm adjustment line

RD-KUL-25-01

RD-KUL-25-02

RD-KUL-25-03

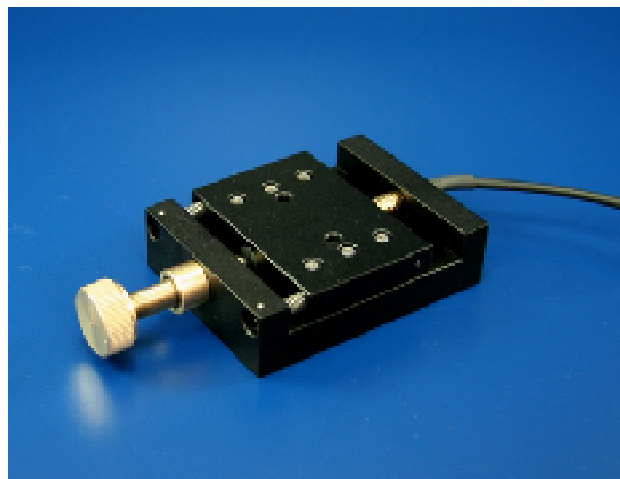
Translation Stages

Translation Stage with Piezo Drive

The new MDI-H with piezo drive is a mirror mount which is controlled by a piezo system with our own electronics. Besides a manual adjustment by 0.15 mm/0.25 mm per turn, the systems can be adjusted electronically within a μm -range.

The piezoelectric actuator is built into the translation stage. Specifications:

The operation voltage range is -10 V.....+150 V, leading to maximum stroke of $> 20 \mu\text{m}$ (typically $23 \mu\text{m}$).



Piezo Controller



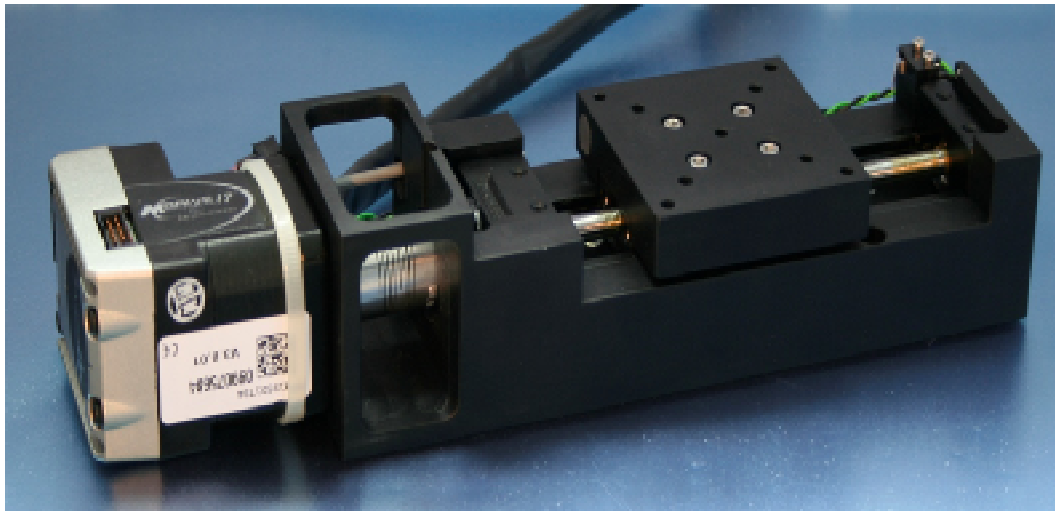
For further information please see on page 37

Translation Stage with Stepper Motor

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

Specifications:

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



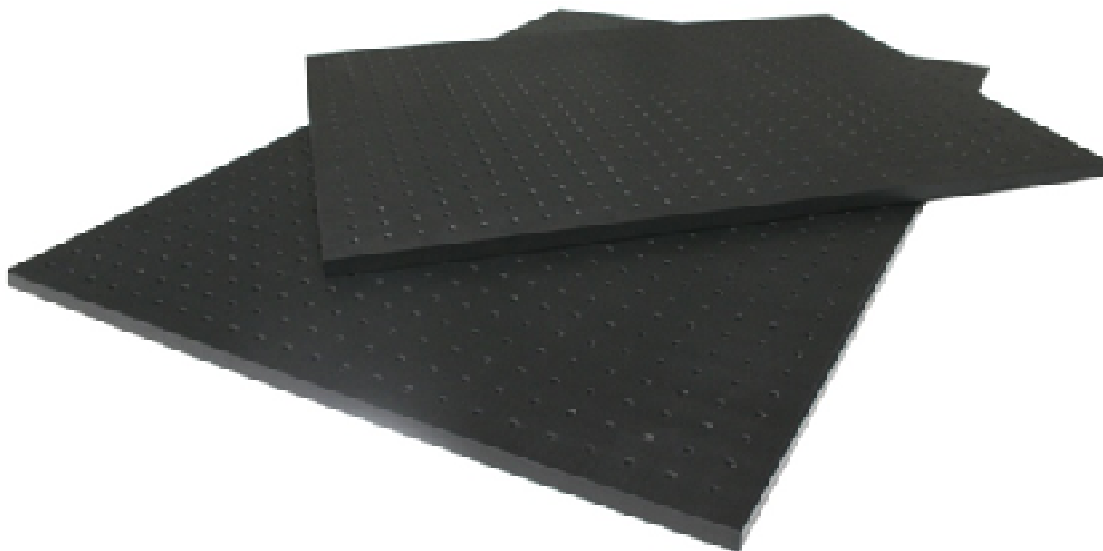
Stepper Motors for Translation Stages

For further information please see on page 35



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

Standard sizes (12 mm)
300 x 450 x 12 mm
450 x 600 x 12 mm
600 x 600 x 12 mm
900 x 600 x 12 mm

Standard sizes (15 mm)
300 x 450 x 15 mm
450 x 600 x 15 mm
600 x 600 x 15 mm
900 x 600 x 15 mm

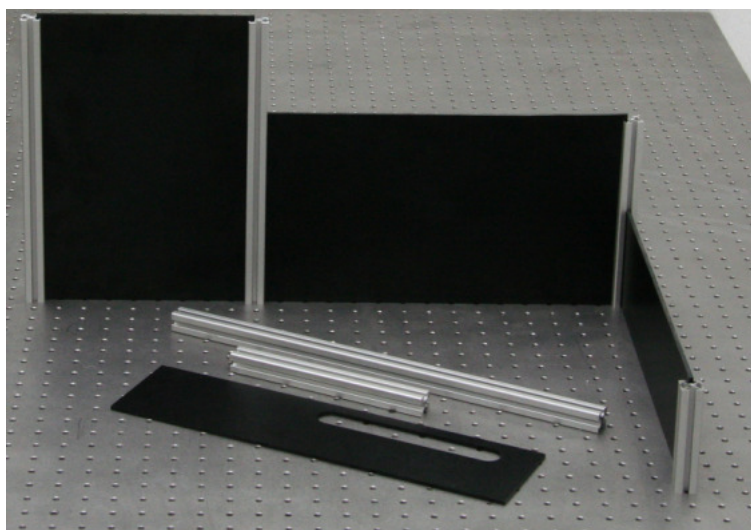
Standard sizes (20 mm)
600 x 600 x 20 mm
900 x 600 x 20 mm

Other sizes also available

On request every custom product available

Laser Safety Barriers

NEW



Radiant Dyes offers a system to build up laser safety barriers on optical and aluminium breadboards. The barriers are available in different heights and for low or high power laser radiation.

Barriers

Safety Barriers for low power

- Made of special plastic material
- Three different heights
- Custom made length on request

RD-LSB-BL-100 (Height 100 mm)

RD-LSB-BL-200 (Height 200 mm)

RD-LSB-BL-300 (Height 300 mm)

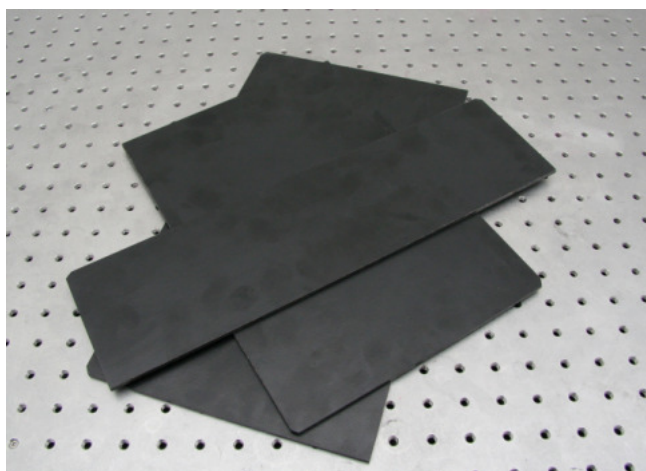
Safety Barriers for high power

- Made of anodized aluminium
- Three different heights:
- Custom made length on request

RD-LSB-BH-100 (Height 100 mm)

RD-LSB-BH-200 (Height 200 mm)

RD-LSB-BH-300 (Height 300 mm)



Mounting Rails

Mounting Rails

- Made of aluminium or anodized aluminium for more safety
- M6 thread on top and bottom

RD-LSB-MR-100 (Height 100 mm)

RD-LSB-MR-200 (Height 200 mm)

RD-LSB-MR-300 (Height 300 mm)



Mirrors for Nd:YAG Laser

Size	Material	Flat-ness	Wavelength / Type	Polarisation	AOI
Ø25/5	Fused Silica	$\lambda/10$	HR 355/532nm	s-pol	5°
Ø25/5	Fused Silica	$\lambda/10$	HR 355/532nm	s-pol	45°
Ø25/5	Fused Silica	$\lambda/10$	HR 532nm/HT 1046nm	532:s-pol, 1064:p-pol	45°
Ø25/5	FusedSilica	$\lambda/10$	HR 355nm / HT 532nm / HT 1064 Backside: AR 532/1064nm	355nm: p-pol 532nm: s-pol 1064nm:p-pol	45°

Beamsplitter

Size [mm]	Material	Wavelength	Reflection	Polarisation	AOI
Ø25 x 5	Fused Silica	355/532nm	5%	s-pol	45°
Ø25 x 5	Fused Silica	355/532nm	15%	s-pol	45°

Pump Optics Set for Dye Laser

Size [mm]	Material	Wavelength	Set Contains:	Polarisation
Ø25x5	Fused Silica	355nm & 532nm	3 mirrors and 2 beamsplitters	s-pol



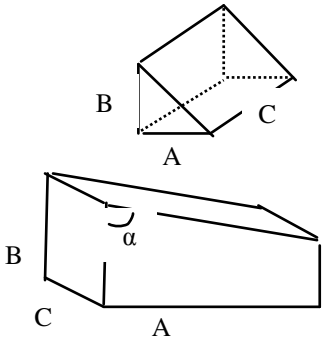
Mirrors for CW Laser

Size[mm]	Material	Wavelength [nm]	Radius	AOI
Ø12.7 x 6.35	BK7	HR 400-700nm	R= -100 mm	0°
Ø12.7 x 6.35	Herasil	HR 306 / HR 612nm	R= -100 mm	0°-15°
Ø12.7 x 6.35		HR 400-700nm	R= -150 mm	0°
Beamsplitter				
Ø12.7 x 6.35		540-560 nm, R = 95%	plane	45°

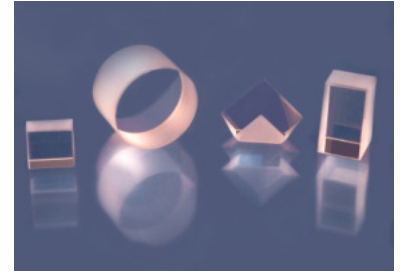
BBO Type I Crystals

Size [mm]	Cutting Angle theta	phi	Output Wavelength
8 x 5 x 7	34 °	0°	300 – 400 nm
8 x 5 x 7	52°	0°	220 – 320 nm
8 x 5 x 7	76°	0°	205 – 220 nm

90°/180° Prisms



Size [AxBxC mm]	Material	Coating
5 x 5 x 5 (90°/180°)	BK7	Uncoated
25 x 15 x 15 (Pellin broka)	Fused Silica	



Cylindrical Lenses and Spherical Lenses

Size[mm]	Material	Coating	Focal Length
12 x 28	Fused Silica	AR 355nm/532nm	F = +120 mm
12 x 28	Fused Silica	AR 355nm/532nm	F = +110 mm
24 x 24	Fused Silica	AR 355nm/532nm	F = -55 mm
24 x 24	Fused Silica	AR 355nm/532nm	F = -30 mm

Size [mm]	Material	Coating	Type	Focal Length
Ø25.4	BK7	AR VIS	plano- concave	F= -50 mm
Ø25	BK7	AR VIS	plano- concave	F= -100 mm
Ø25	BK7	AR VIS	Plano- convex	F= +150 mm

Optics for cw Ring Lasers

Optic set for self-made ring laser and Coherent 699

- Optic set VIS (without Tweeter), P1, M1, M4, M5
- Tweeter with mechanics and piezo-element, M3
- Tweeter for self-made dye laser

Optic set for self-made ring laser and Coherent 699

- Optic Set BLUE (without Tweeter), P1, M1, M4, M5
- Tweeter with mechanics and piezo-element, M3
- Tweeter for self-made dye laser

Optic set for self-made ring laser and Coherent 899

- Optic Set TiSa (without Tweeter), P1, P2, P3, M1, M4, M5
- Tweeter with mechanics and piezo-element, M3
- Tweeter for self-made dye laser

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