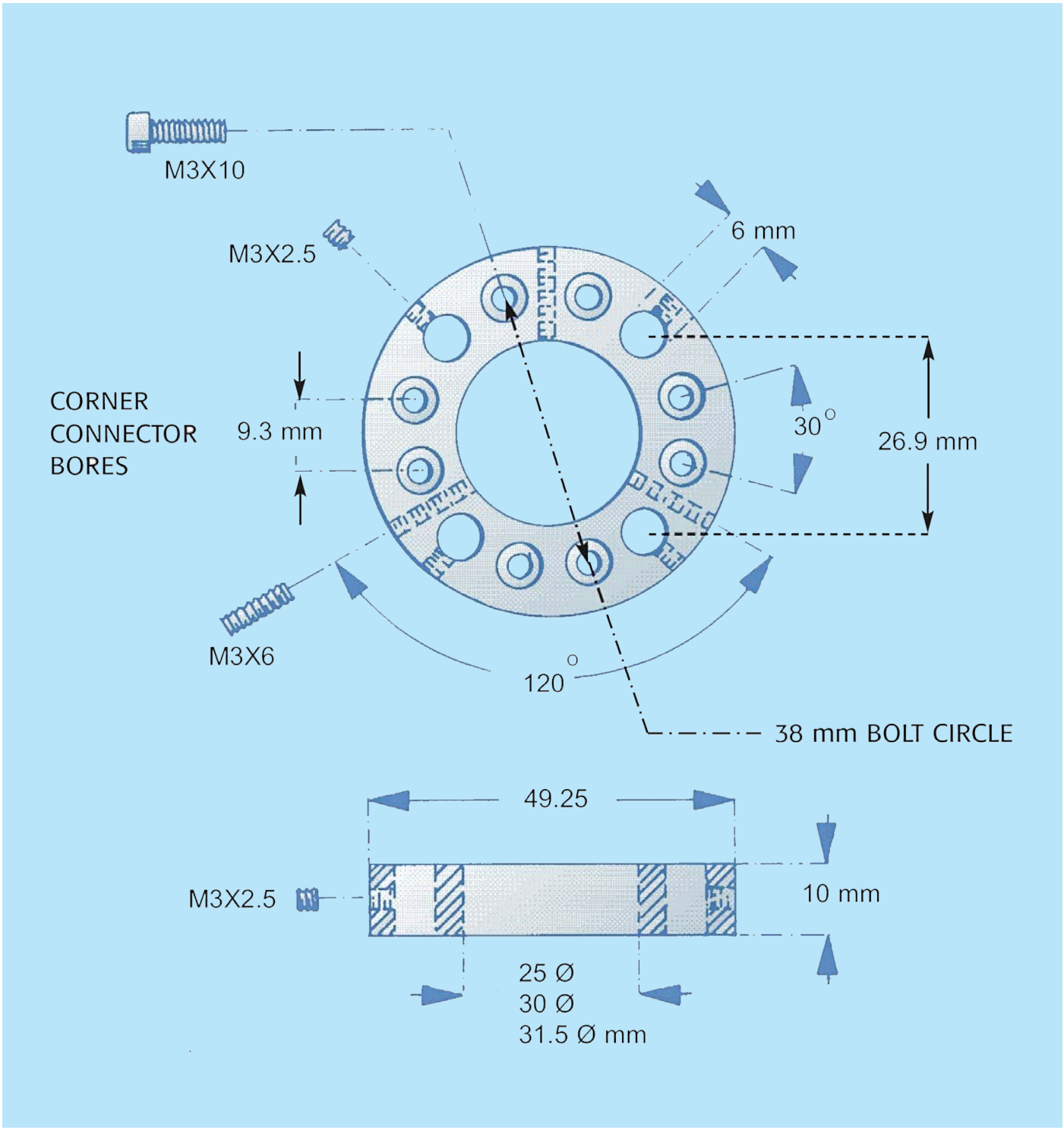
Optoform

Microptic System 50

How to use Microptic 50

Microptic 50 Accessories

Microptic 50 Applications

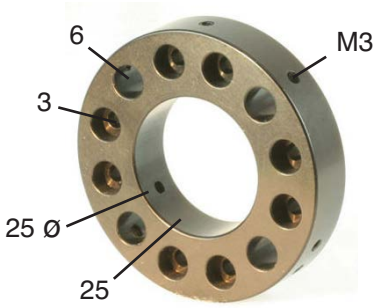


Be Different. Think Different. Do it with Taste. Make it a better Product

Microptic 50

50-100 Standard Microptic Mount 25

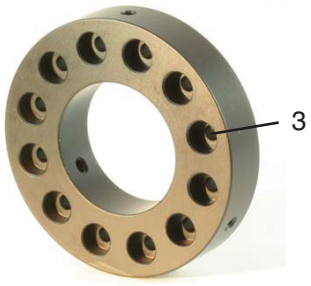
This is the heart of the Microptic 50 construction system. The bore pattern in all Microptic mounts follow the same 38 mm bolt circle. Microptic mounts accept mounted optics up to 31.5 mm in diameter. Support rods are secured inside four 6 mm bores 90 degrees apart. These tight tolerance bores allow the mounts to freely slide along the rods, and be rigidly secured at any point. The remaining eight counter-bores work with corner connectors to build multiplicity of setups, and space frames.



50-100 Mount 25

50-104 Angle Plate 25

Angle plates allow bending the light path from one Microptic arm to another, in 30 degree increments. Its 3 mm counter-bores allow mounting of corner connectors at any position around the plate.



50-104 Mount 25

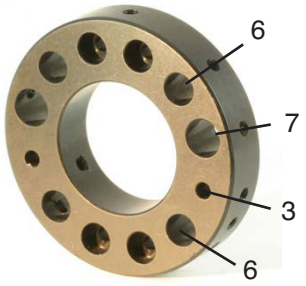
50-106 Micrometer Anvil 30

Micrometer anvil has four precision 6 mm bores, and it may be mounted along two support rods, and secure 6 mm micrometers in between, i.e., to secure micrometer 120-110 next to linear bearing plates (50-110).

50-106 Anvil

50-108 Fixed Linear Bearing Plate 25

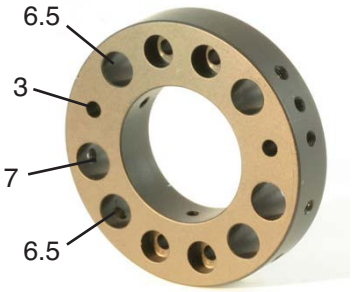
Works in conjunction with linear bearings (50-324) to build a fine focusing unit. Four 6 mm precision bores allow mounting along the rods, and locked in any position. 50-108, and 50-110 have precision 3 mm, and 7 mm bores to install linear bearings.



50-108 FLB Mount 25

50-110 Traveling Linear Bearing Mount 25

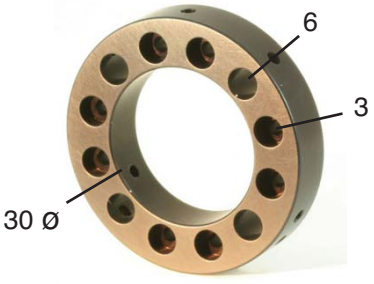
Works with 50-108 as the traveling mount to secure the optics. With four 6.35 mm clearance bores, this mount rides on the linear bearing ourter shell or inner rod without touching the 6 mm rods.



50-110 TLB Mount 25

50-112 Standard Mounting Plate 30

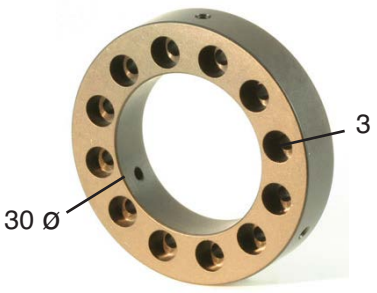
Identical to 50-100 but with 30 mm inner bore to accept 30 mm optics cells, and accessories.



50-112 Mount 30

50-114 Angle Plate 30

Identical to 50-104 but to support 30 mm mounted optics, and accessories.

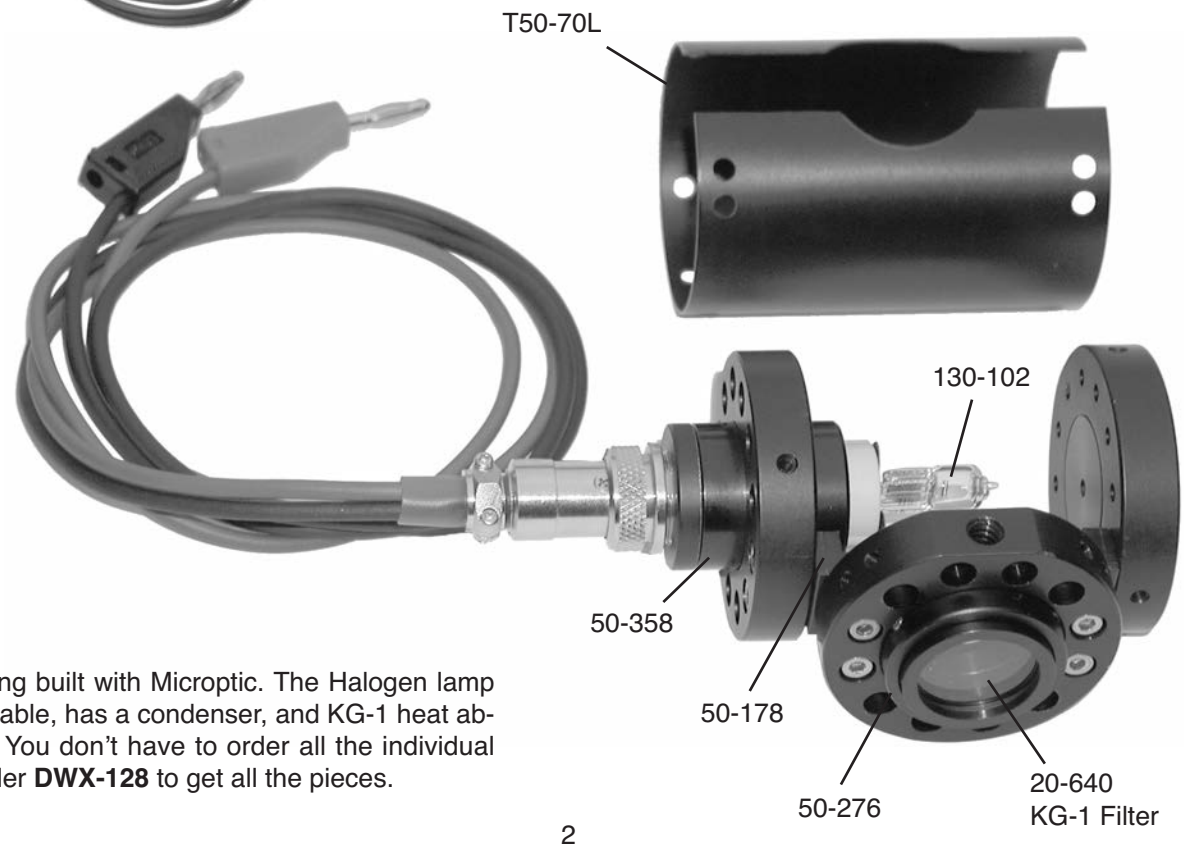


50-114 Mount 30

50-114S Angle Plate 30

Identical to 50-114 but with 2” O.D. Works with filter holder 50-153.

Linear bearing example utilizing 50-108, and 50-110. This is most useful in building spatial filters. You don't have to order individual parts, just order **DWX-102** to get all the parts.



A lamp housing built with Microptic. The Halogen lamp is post mountable, has a condenser, and KG-1 heat absorbing filter. You don't have to order all the individual parts, just order **DWX-128** to get all the pieces.

50-116 Sphere 50/30/43

Sphere 50 is a 2” cube that allows four Microptic rails to be rigidly jointed together at right angles. The 5th side is normally utilized to secure a tilt platform. The 43 mm openning of the sphere is utilized for insertion of large beam splitters. There is an end cap to cover the 43 mmm openning. Other sides of the beamsplitter can be covered by 50-117S. Four threaded bores are provided for mounting Microptic 2x2 mounts.

50-116 Sphere 50/30/43

50-116S Sphere 50/30

Sphere 116S can be utilized to mount up to six T50 tubes, or six rod supported Microptic 50 extensions. The threaded bores around the sphere accept end cap 50-117S to light seal the setup.

50-116S Sphere 50/30

50-117 End Cap 43

To light seal the 43 mm openning of sphere 50-116. The M3 securing screw on this plate is accessed from its center via a 1.5 mm ball driver.

50-117 End Cap 43

50-117S End Cap 50

Works in conjunction with Button-Head screws 00-160 to light seal unused openning of 50-116 or 50-116S. This plate may be easily bent or cut to size for custom light baffling. See page 24.

50-117S End Cap 50

50-124 Mounting plate 30 with Post Mount M6

Identical to 50-112 but with M6 threaded mounting bore at its bottom for post mounting. An alternate choice would be to utilize M6 post mountable corner connector 50-182.

50-124 Post Mount 25

50-126 Mounting plate 25 with Post Mount M6

Identical to 50-100 but with M6 threaded mounting bore at its bottom for post mounting. An alternate choice would be to utilize M6 post mountable corner connector 50-182.

50-126 Post Mount 25

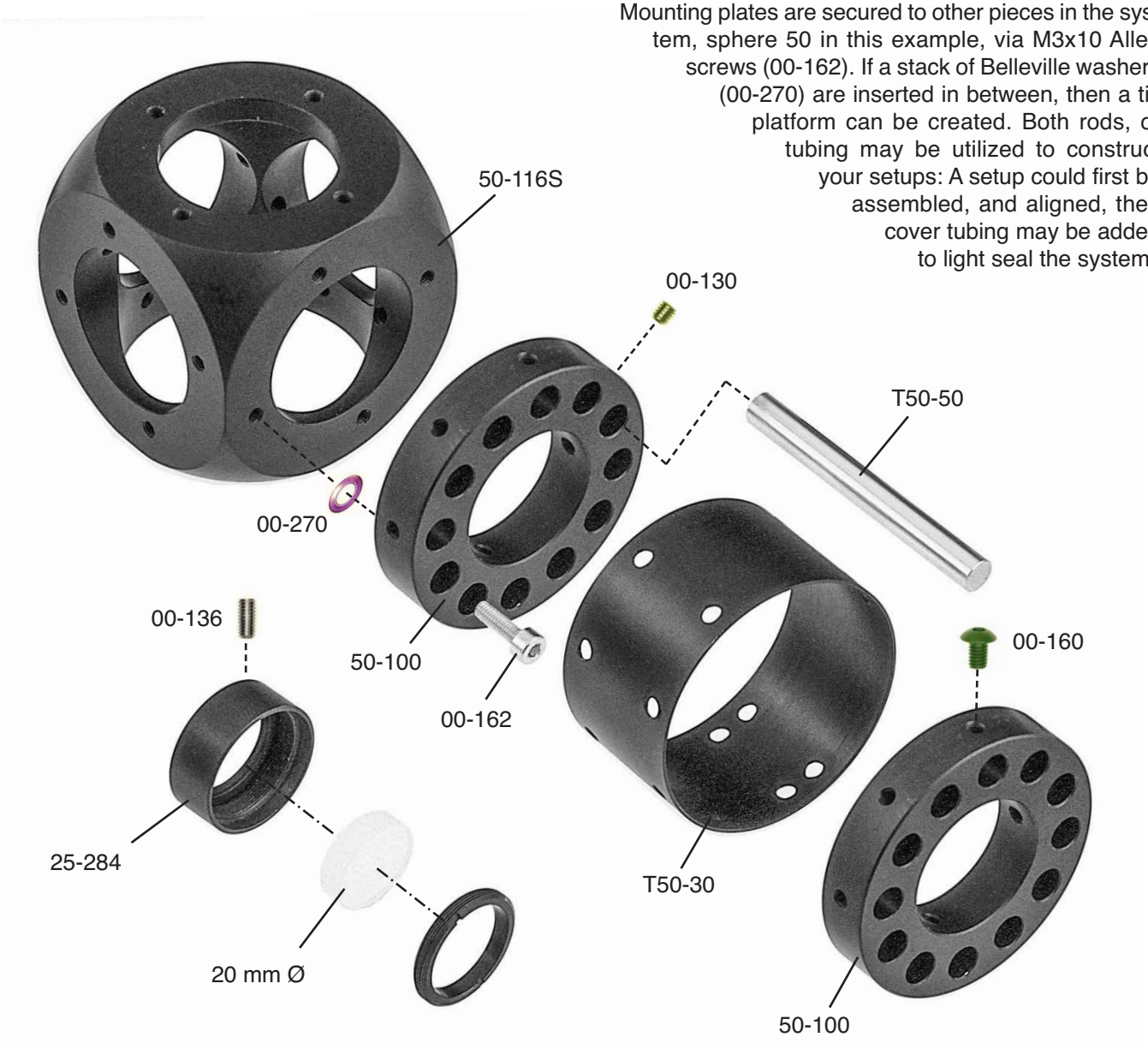
50-128 Combination Plate 25

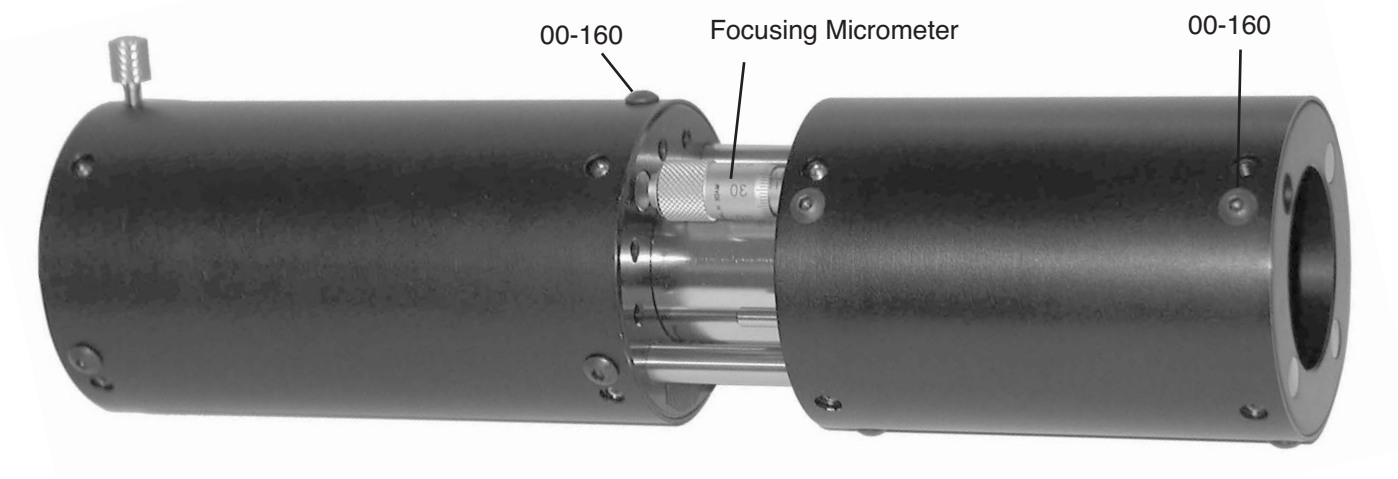
Identical to 50-100 but with one side removed to clear the 25 mm optical path when two side by side rail systems are combined. The center to center distance between the two optical axis turns out to be 26.8 mm.

50-128 Combination Plate 25

Just a few things to know about Microptic 50 concept: Rods are secured via M3x2.5 screws (00-130) to clear the outside diameter to allow sliding cover tubing (T50-30). Tubes are secured in place via Button Head screws (00-160) around the mount, on the same threaded bore that optics securing screw (00-136) is inserted securing the optics.

Mounting plates are secured to other pieces in the system, sphere 50 in this example, via M3x10 Allen screws (00-162). If a stack of Belleville washers (00-270) are inserted in between, then a tilt platform can be created. Both rods, or tubing may be utilized to construct your setups: A setup could first be assembled, and aligned, then cover tubing may be added to light seal the system.

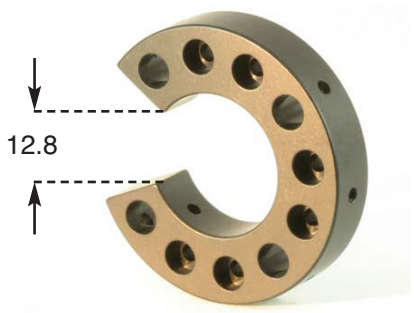




A near focus microsocpe is enclosed inside this Microptic assembly covered by tubing. Go to next page to see inside.

50-142 Side Access Mount 25

In addition to allowing easier access to removal, and placement of optics, side access mounts allow reading off the lens engravings while installed inside setups. see page 25.



50-142 Side Access 25
50-144 Side Access 30

50-144 Side Access Mount 30

Identical to 50-142, also accepts optic holder 50-391 with handling pin.

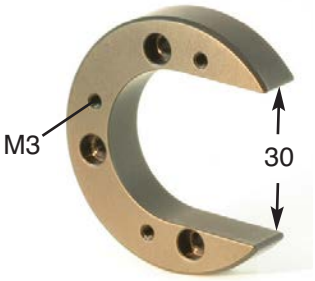
50-150 Compact Mount 25

Compact mount is useful in securing 25 mm mounted optics, and accessories in tight setups. It also allows bending of light path at tighter angles, i.e., less than 90 degrees between two arms.

50-150 Compact Mount 25

50-152 Filter Holder 30

Works in conjuction with sphere 50-116, angle plate 50-114S, heat sink 50-367, and T50 tubing to create a slot for 50-153 filter holder. The 30 mm openning of filter mount 50-152 allows insertion of 50-391 optic holder with a handling pin.

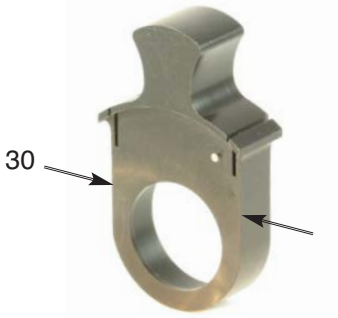


50-152 Filter Holder

50-153 Fiter / Target Holder 25

50-153 secures 25 mm mounted filters, i.e, interference filters that are mounted in 25 mm O.D. cells, etc.

50-153S accepts 25.4 mm mounted lens cells, and filters. M3 screw secures the filter in place.



50-153 Filter Holder 25
50-153S Filter Holder 25.4

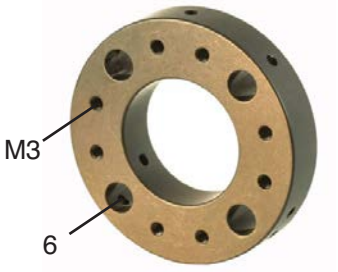
50-156 Continuous Angle Plate 25

Similar to 50-104 angle plate but with continuous slot to allow securing two or three arms at any given angle from 90 to 180 degrees. Wider angles are possible by utiizing 50-150..

50-156 Continuous 25

50-162 / 50-163 Intermediate Mount 30 / 25

Identical to 50-100 but with M3 bores in place of counter-bored holes. Other mounts can be secured against this plate via M3 screws, i.e., intermediate corner connector 50-184.

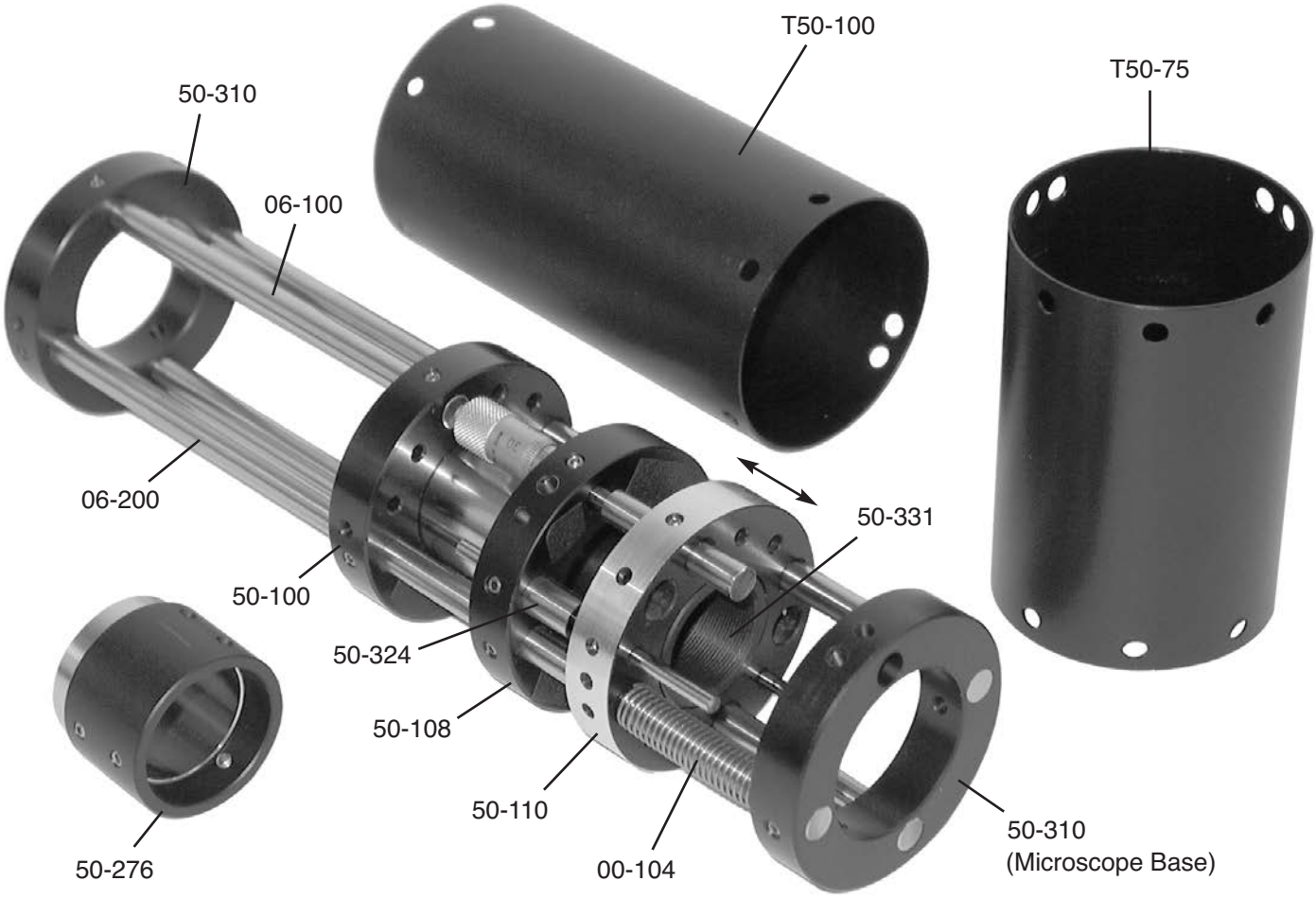


50-162 Intermediate Mount 30
50-163 Intermediate Mount 25

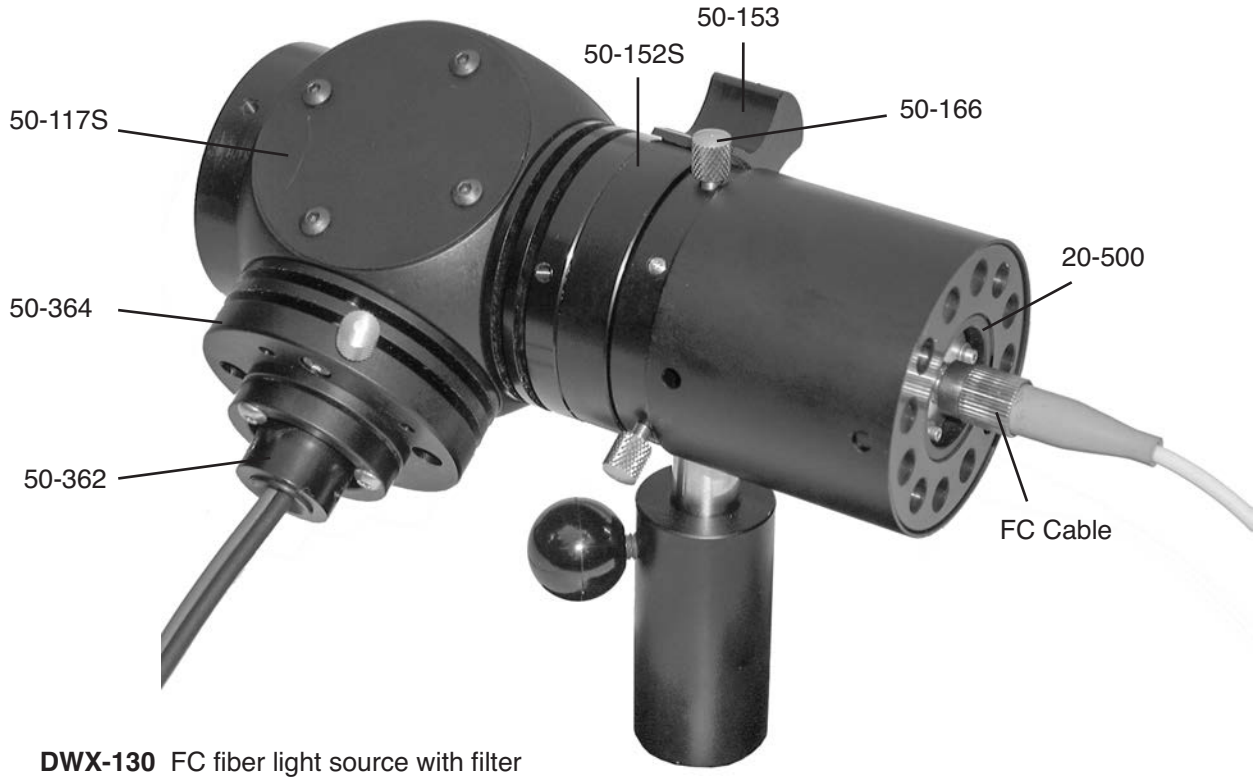
50-166 Centering Mount 25

Compact centering mount similar to 50-100 but its center is adjustable with two knurled thumb screws. The third thumb screw is to secure the mounted optics or accessories in place.

50-166 Centering Mount 25



A near focus inspection microscope built with Microptic 50. While the microscope is placed vertically on a table, the microscope objective is focused onto the surface via a micrometer. A CCD camera that is mounted on the other end captures the image on a computer screen. Below, a 50W Halogen light source focused on a FC fiber cable. Note light beam centeration adjustment using 50-166, and interchangeable filter 50-153. Various cooling fins are utilized to keep temperature from rising due to the 50W Halogen lamp.



DWX-130 FC fiber light source with filter

50-170 SHift Mount 25

The shift mount is specially useful when working with beamsplitter plates. It allows shifting of the optical path as it goes through beamsplitter plates. In many setups utilizing sphere 50-116, this mount would work in conjunction with tilt mount 50-352 to compensate for the image shift in beamsplitters.

50-170 Shift Mount 25

50-172 Rotary Mount 25

The rotary mount works with polarizers, and other optical elements such as cylinderical lenses that require angular adjustments. Graduated in 5 degree increments. A locking knob secures the angular rotation.

50-172 Rotary Mount 25

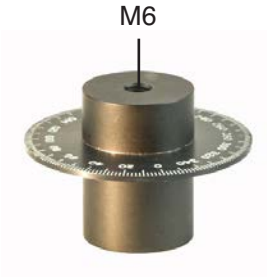
50-173 Graduated Cylinder 25

Works with angle plate 50-104, and swivel mount 50-192 to readout prismatic angles in spectroscopy. See page 25.

50-173 Graduated Cylinder

50-175 Graduated Disc 25

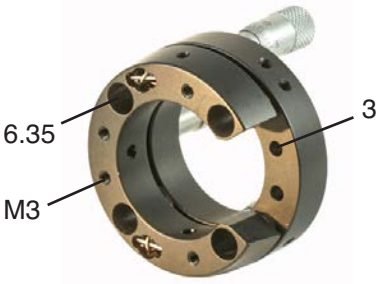
Identical to 50-173 but in plate form, allowing the angular readout from above.



50-175 Graduated Disc

50-176 Tilt Mount 30 with 0.5 mm Micrometer

Suitable for interferometry, and optical alignment. May be post mounted via 50-182. Fine pitch micrometers allow tilt adjustments +/-3 degrees.



50-176 Tilt Mount 30
0.5 mm Micrometer

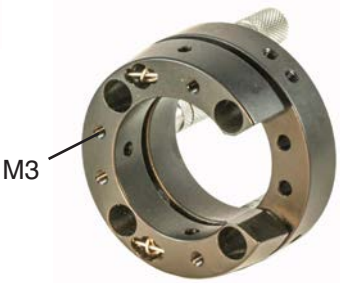
50-176S Tilt Mount 30 with 0.25 mm Micrometer

Suitable for interferometry, and optical alignment. Can be post mounted via 50-182. Finer pitch 0.25 micrometers allow tilt adjustments +/-3 degrees.

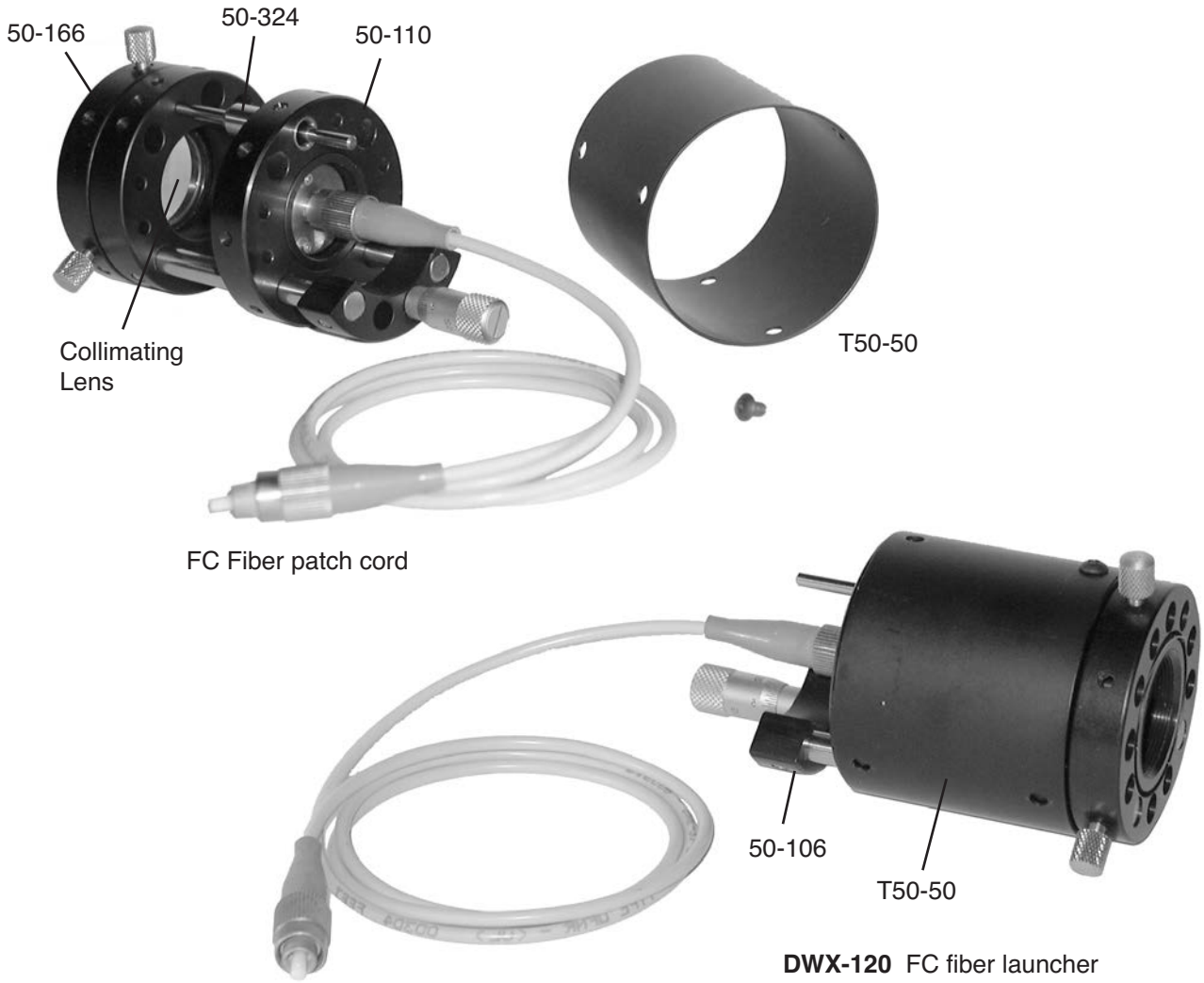
50-176S Tilt Mount 30
0.25 mm Micrometer

50-177 Tilt Mount 30 with 0.5 mm Thumb Screws

Identical with 50-176, and 50-176S but with fine pitch thumb screws. All the tilt stages are 4-rod compatible.

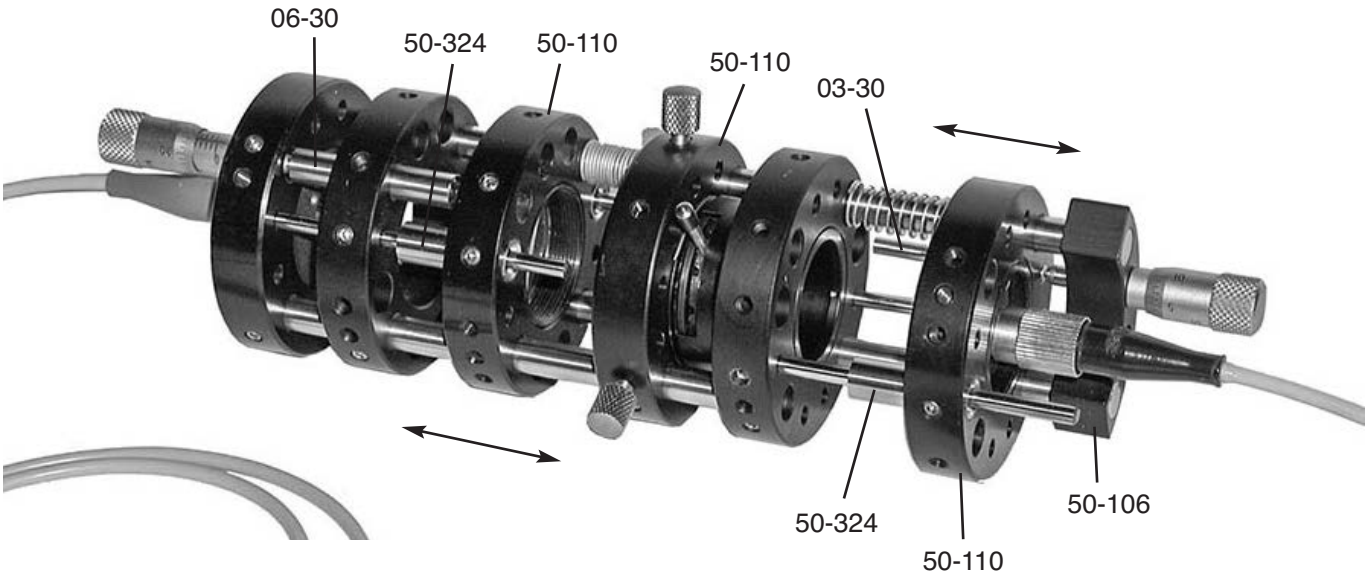


50-177 Standard Tilt Mount 30



DWX-120 FC fiber launcher

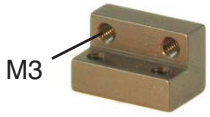
Above, a FC fiber launcher with tilt adjustment, and centering stage. This setup is covered with T50-50 tubing, and it's post mountable. Below, a FC to FC coupling arrangement with iris diaphragm in the middle for transmission control. Push rods 03-30 on the right, and 06-30 on the left are utilized to translate linear bearing plate 50-110 while both micrometers stay outside of the assembly. Again, the entire assembly could be covered with tubing. Microptic mounts are easily machinable on a lathe. Both linear bearing mounts may be machined to have no friction with tube enclosure (see page 6).



DWX-122 FC to FC fiber coupler with iris control

50-178 Standard Corner Connector

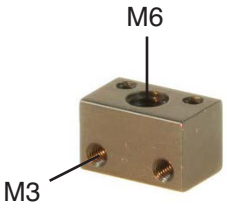
These are interconnecting elements between two adjascent mounts, at right angles. Corner connectors would mount to any pair of counter-bored holes in, i.e., 50-100.



50-178 Corner Connector

50-182 4-Way Corner Connector M6

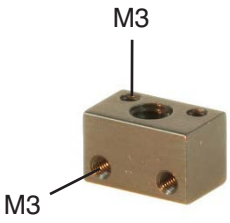
Combine this corner connector with any mounting plate, and it will become post mountable to M6 post mounts.



50-182 4-Way Connector M6

50-183 4-Way Corner Connector 1/4-20

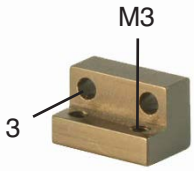
Identical to 50-182 but with 1/4-20 thread for inch post mounts. 4-way connectors also allow mounting of two mounts face to face (parallel).



50-183 4-Way Connector 1/4-20

50-184 Intermediate Corner Connector

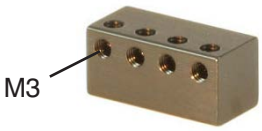
Connects one standard mount, i.e., 50-100 with an intermediate mount 50-163 at right angles.



50-184 Intermediate Connector

50-188 Shift Connector

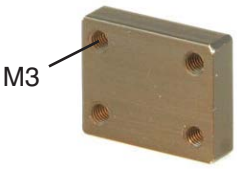
Works similar to 50-178 but with the option to shift in 4.65 mm increments. The capabilities are more pronounced when combined with shift mount 50-170.



50-188 Shift Connector

50-190 Side Connector

Connects two side by side Microptic mounts with 50.8 mm spacing between their optical axis.



50-190 Side Connector

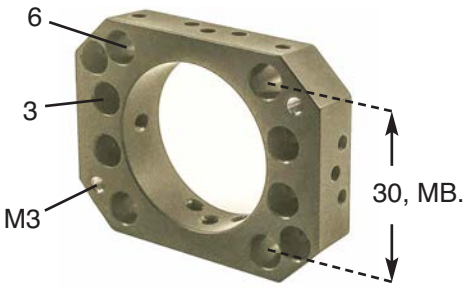
50-192 Swivel Mount 25

50-192 Swivel Connector 25

Mounts diectly to mounting plates like a corner connector, allowing rotation about the 25 mm center axis. A spectroscope can be built using four of these mounts, in which case graduated disc 50-173 would work best as the central pivot point. See page 25.

50-812 Microbench Adapter 30

Interfaces the 30 mm Microbench/Thorlabs system with the Optoform rod spacing. Mates with 50-112, has four 6 mm mounting bores with Microbench rod spacing.



50-210 Microbench Adapter 30

20-500

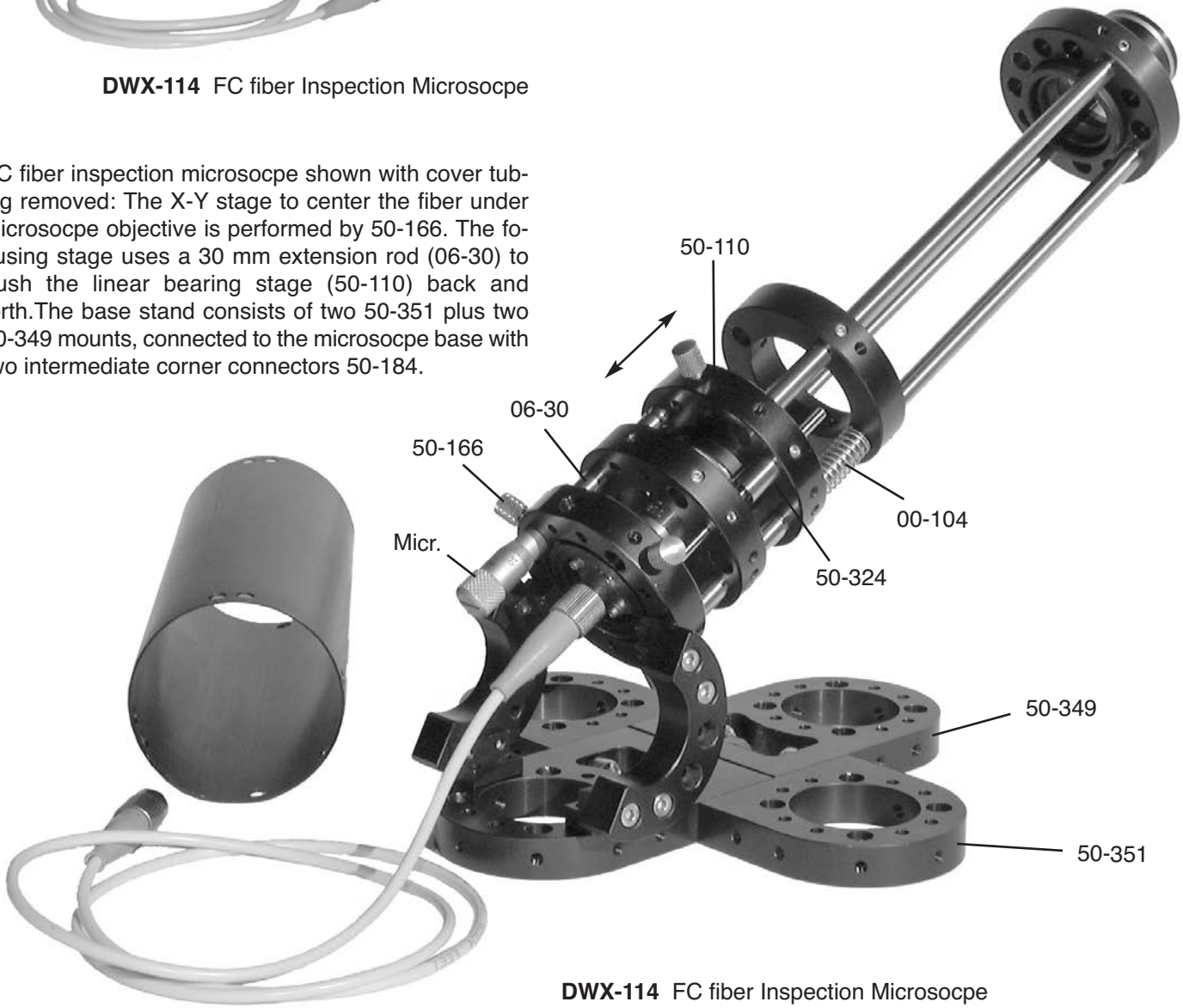
20-502

FC/SMA fiber Face Plates

FC fiber light source

DWX-114 FC fiber Inspection Microsocpe

FC fiber inspection microsocpe shown with cover tubing removed: The X-Y stage to center the fiber under microsocpe objective is performed by 50-166. The focusing stage uses a 30 mm extension rod (06-30) to push the linear bearing stage (50-110) back and forth.The base stand consists of two 50-351 plus two 50-349 mounts, connected to the microsocpe base with two intermediate corner connectors 50-184.



DWX-114 FC fiber Inspection Microsocpe

Opto-Electronics

50-276 Opto-Electronics Housing 30/25, L = 30

A compact housing to secure 25 mm mounted optics, electronics connectors, and accessories.

50-276 Tube 25/30, L=30

50-278 Opto-Electronics Housing 30/25, L = 50

A compact housing to secure 25 mm mounted optics, and accessories, i.e., Socket 50-278, electric connector 50-282, and any desired electronics circuit board sealed inside. The entire electronics circuit/connector assembly may be pulled out by loosening the M3 screws.

50-278 Tube 30/25, L=50

50-280 Socket 25

50-280 Electronic Socket 25 wit 8-Pin Socket

Works with housing 50-278 to, i.e., secure diode lasers, and SPD detectors.

50-282 Connector 25

50-282 Electronic Connector 25, 8-Pin

Lockable connector and socket to apply power, and extract signals form electronics housing 50-278.

50-284 Srain Relief Adapter 25

50-284 Electronics Cable Strain Relief 25

For securing wires with a strain relief to electronics housing 50-276/50-278.

50-286 Centering Disc 30

50-286 Centering Holder 30/12.7

For securing diode lasers within Microptic 30 mounts such as 50-308 for optoelectronics setups. Has six threaded M3 bores 120° apart for securing cylindrical devices up to 12.7 mm in diamerter.

50-291 Blank Disc 50

50-291 Microptic Blank Disc 50

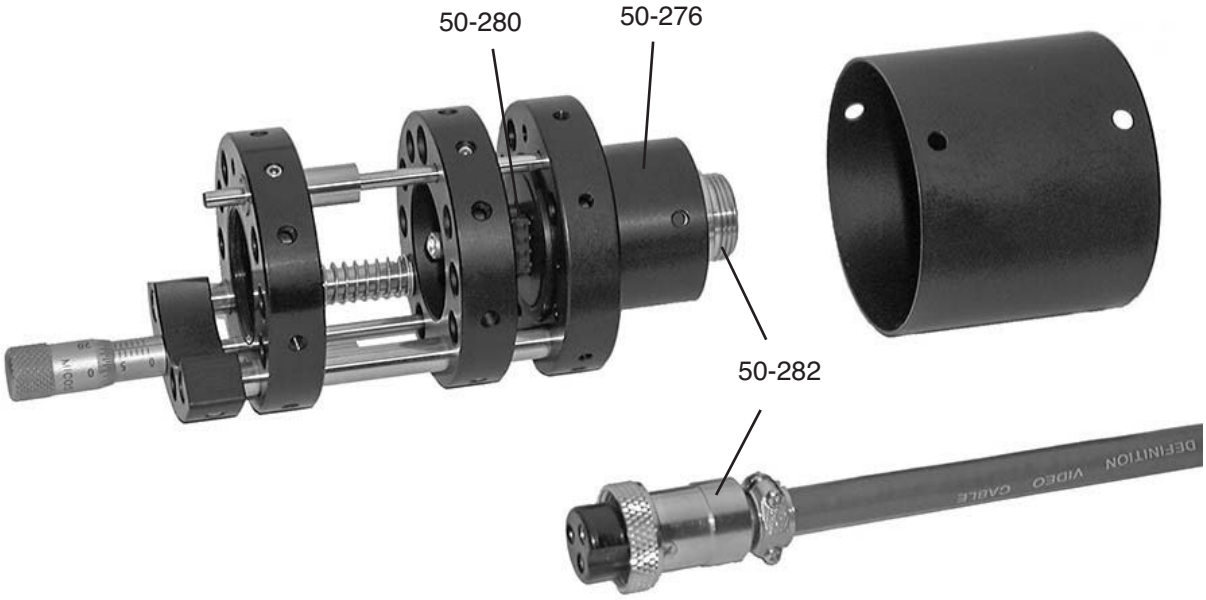
When combined with end plate 50-306, tube T50-75, and electronics connector 50-282, a much larger electronics enclosure may be built (than 50-278) to construct self contained opto-electronics assemblies.

50-294 Lens Mount 25/25.4

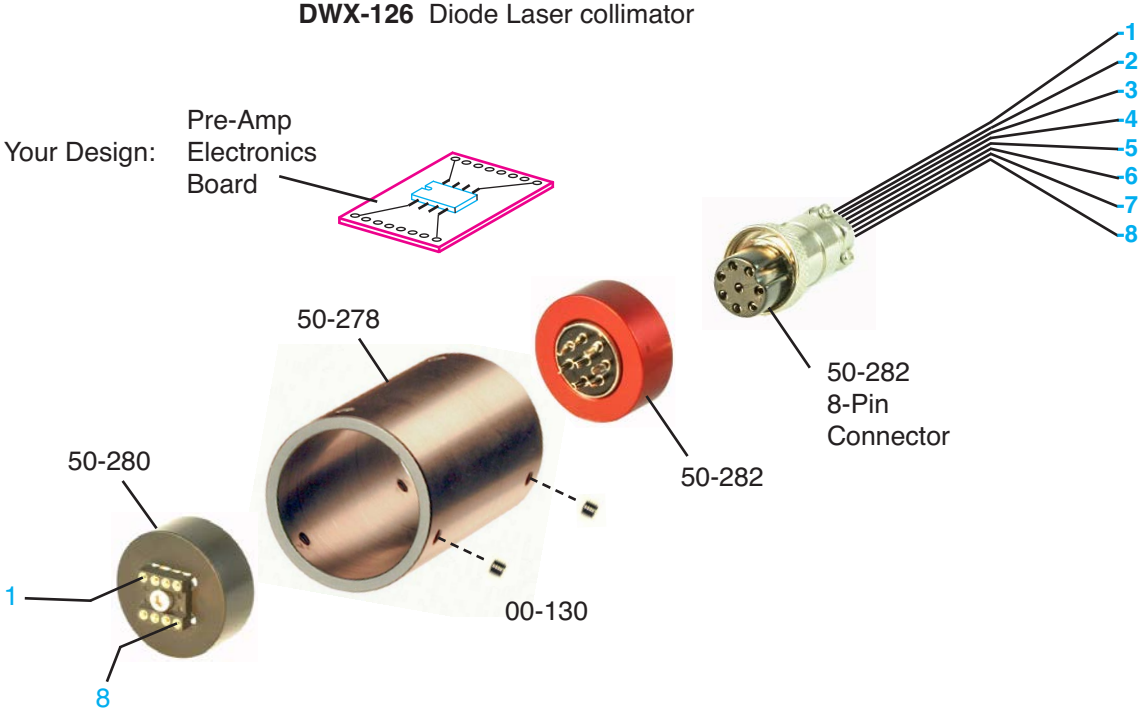
50-294 Lens Mount 25/25.4

25 mm, and 1” optics can be secured inside this lens cell without the need for spanner wrenches. May be secured inside 25, and 30 mm mounts.

DWX-126 Diode Laser collimator



DWX-126 Diode Laser collimator



Typical wiring diagram for 50-280 + 50-282

50-306 End Plate 30

Blank mount that secures to T50 tubing when there is no need (or space) for support rods.

50-306 End Plate 25
50-308 End Plate 30

50-308 End Mount 25

Blank mount that secures to T50 tubing when there is no need (or space) for support rods.

50-310 Rod End Plate 30

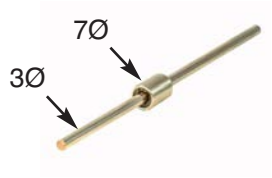
50-310 Rod End Plate 30

For builting light tight enclosures that only need the 6 mm support rods (no corner connectors).

50-312 Rod End Plate 25

50-312 Rod End Plate 25

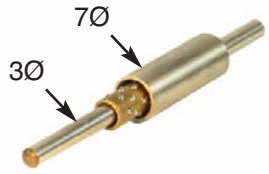
Identical to 50-310 but with 25 mm lens mounting bore.



50-322 LT Linear Bearing

50-322 Long Travel Linear Bearing

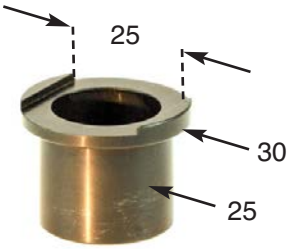
For long travel applications, i.,e, scanning optics, and delay lines. Works with 3 mm rods, L = 120 mm.



50-324 SP Linear Bearing

50-324 Super Precision Linear Bearing

For fine focusing applications in microsocpy or interfer-ometery. Works in conjunction with 50-106, 50-108, and 50-110, with 30 mm Max travel range.



50-326 Prism Mount 25
50-327 Prism Mount 12.7

50-326/50-327 Prism Mount 25/Prism Mount 12.7

A pair of these prism mounts, oriented at 90° orientation, would secure a 25 mm, or 12.7 mm beamsplitter cube without the need for adhesive bonding. When in paralell orientation, it will secure long rectangular Dove prisms.

50-328 Prism Table 25

50-328 Prism Table 25 With Clamp

Basic prism table could secure a variety of prisms in vertical or horizontal directions up to 20 mm in width. Supplied with three lengths of M3 clamping screws. 19.5 mm clear aperture.

50-330 Microscope objective Mount, L = 15 mm

For securing standard microsocpe objectives with W0.8x1/36 thread.

50-330 Microscope Obj Holder 25/15

50-331 Microscope aobjective Mount, L = 10 mm

For securing standard microsocpe objectives with W0.8x1/36 thread.

50-331 Microsocpe Obj Holder 25/10

50-333 Post mount Adapter M6

This is the standard prism holder for most Microptic setups. At any swivel joint, a pair of these post mount adapters could clamp the prism in the middle.

50-333 Post Mount 25/M6

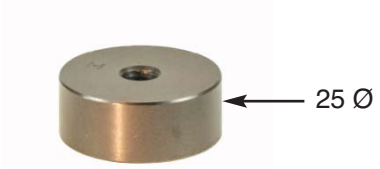
50-341 Post mount Adapter 1/4-20

Identical to 50-333 but for 1/4-20 mounting posts. A nice feature of these post mounts, and Microptic 50 mounts is the height/rotational adjustment is built into its 25 mm cylindrical form. See page 25.

50-341 Post Mount 25/1/4-20

50-334 / 50-343 Compact Post mount Adapter

This is similar with 50-333, and 50-341 but are in low profile. May be also utilized for increasing the mounting heights of hardware.

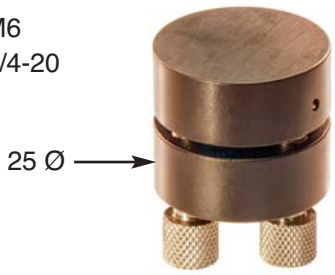


50-334 Post Mount 25/M6

50-343 Post Mount 25/1/4-20

50-335 Prism Tilt Platform 25

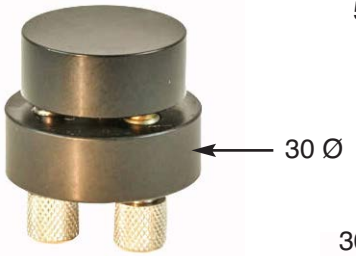
To secure prisms inside Microptic assemblise. Requires epoxy to secure the prism. An alternative way would be to also support the prism from top with a cuisioned pad bound to, i.e., 50-341.



50-335 Prism Tilt Mount 25

50-335S Prism Tilt Platform 30

Identical to 50-336 but for larger 30 mm aperture mounting plates. Larger base allows easier extraction, and in sertion, without any physical impediment or obstruction.



50-335S Prism Tilt Mount 30

50-336 Kinematic Mirror Mount 30

A versatile Kinematic Tilt mount for mirrors in both axial or 45 degree orientations (Via 50-339S). May be locked in place via 2.5 mm ball drivers. 12 mm clear aperture.

50-336 Kinematic Tilt Mount 30

50-337 45 Degree Tilt Mount 25

Ideal for telescope making applications, i.e, Newtonian designs. Designed for 20-456 front surface elliptical mirror 22.4x31x3.5 mm.

50-337 45° Tilt Mount 25

50-337S 45 Degree Tilt Mount 30

Identical to 50-337 but for mounts with 30 mm aperture. Larger base allows easier insertion, and extraction, in most cases, without mirror / housing obstruction.

50-337S 45° Tilt Mount 30

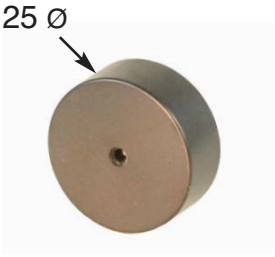
50-339S 45 Degree Mirror Mount 25

Designed for 50-336 Kinematic mount to secure 45 degree oriented elliptical mirrors. Clear aperture is 12.7 mm.

50-339S 45° Mount 25

50-342 Blank Disc 25

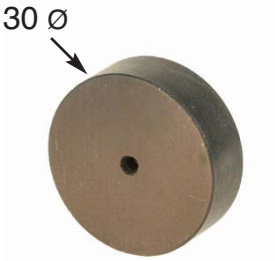
Machinable blank disc to secure mirrors, prisms, or optical fibers.



50-342 Blank Disc 25

50-344 Blank Disc 30

Machinable blank disc to secure Lenses, mirrors, and prisms.



50-344 Blank Disc 30

50-345 Reducer Ring 30/25

Converts 30 mm mounts as if they were designed for 25 mm optics, i.e., 50-112 to 50-100, or 50-349 to a 25 mm mount. It utilizes the mount's original securing screws, i.e., 00-136 to secure the inner lens cell.

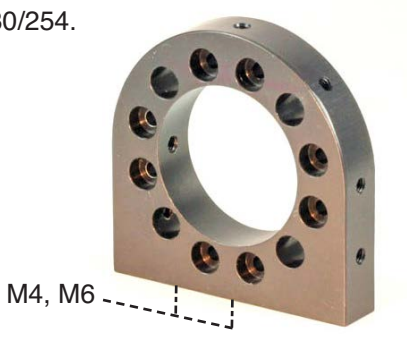
50-345 Reducer 30/25
50-347 Reducer 30/254.

50-347 Reducer Ring 30/25.4

Identical to 50-345 but with 25.4 mm inside diameter. Mates with 3-point lens mounting schemes, i.e., 50-112, and 4-point mounting schemes, i.e., 50-349.

50-349 Support Plate 30, H = 25.4

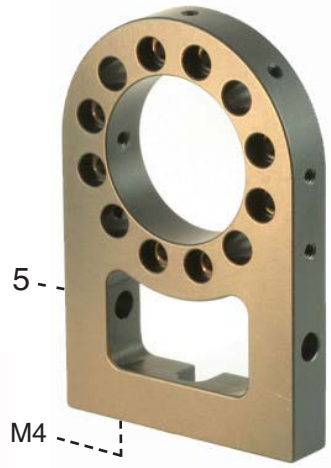
Mounts Microptic assemblies at 25.4 mm hight from the breadboard, or optical table. Has a central M6 thread at the base with two M4 mounting threads, 20 mm apart.



50-349 Support Plate 30,H25.4

50-351 Support Plate 30, H = 50.8

Mounts Microptic assemblies at 50.8 mm hight from the breadboard, or optical table. Has open slot at the base for securing via M6 or 1/4-20 screws. Has 5 mm side holes to mount in combination with 50-349 mounting plates (Identical to Microbench), see page 10.



50-351 Support Plate 30,H50.8

50-352 Beamsplitter Tilt Mount 25

Secures beamsplitters inside sphere 50-116, or other Microptic 50 assemblies, without the need for adhesives.

50-352 Beamsplitter Tilt Mount 25

50-352S Beamsplitter Tilt Mount 30

Identical with 50-352 but with 30 mm base. Larger base allows easier extraction with no beamsplitter / housing obstruction.

50-352S Beamsplitter Tilt Mount 30

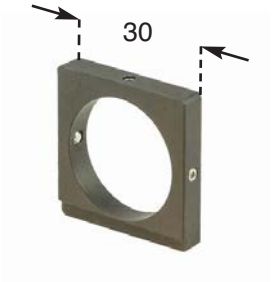
50-352L Beamsplitter Tilt Mount 25, L = 25

Identical to 50-352 but designed for deeply seated optics, such as in the middele of a swivel mount, where its base could act ast the center of rotation.

50-352L Deep B.S. Mount 25

50-353 Optic Holder 25.4

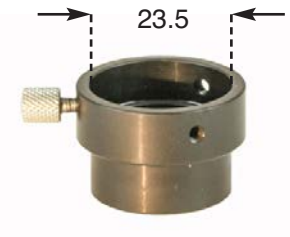
For securing round optics on top of tilt mounts 50-352, etc. Secures on its tilt platform the same way as a beamsplitter plate.



50-353 Holder 25.4

50-354 Microscope Eyepiece Holder 23.5

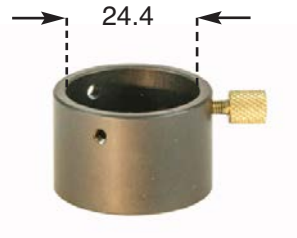
To secure 23.5 mm microsocpe objectives within Microptic mounts.



50-354 Microscope Eyepiece Holder 23.5

50-355 Telescope Eyepiece Holder 24.4

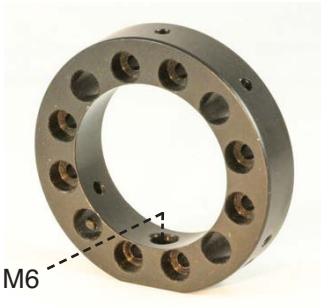
To secure 24.4 mm Japanese style telescope objectives within Microptic mounts.



50-355 Eyepiece Holder 24.4

50-356 Telescope Eyepiece Holder 1.25”

Microptic mount with 31.5 mm clear aperture to accommodate cylindrical laser housings, and large 1.25” telescope objectives. Post mountable with M6 threaded bore at its base. To accommodate larger accessories, Microptic 2 x 2 mounts are recommended.



50-356 Eyepiece Holder 1.25”

50-358 Lamp Socket 25, 10/20 W

Lamp housing for miniature lamps, 6V/10W, or 12V/20W. Has detachable 3-pin connectorized L = 3ft power cable, with standard 4 mm male banana plugs.

50-358 Lamp Housing 10/20 W

50-359 Lamp Socket 25, 20/50 W

Lamp housing for mid size lamps, 12V/20W, or 50W/12V. Has detachable 3-pin connectorized power cable, L = 3ft, with standard 4 mm male banana plugs.

50-359 Lamp Housing 20/50 W

50-362 Indexable Lamp Housing 30 / 50 / 100W

A lamp housing with internal X-Y-Z height adjustments. Orientation slot on the 30 mm housing insures correct lamp position when removed from special heat sink 50-364. It otherwise fits all 30 mm Microptic mounts. Power cable L = 3ft, with standard 4 mm male banana plugs.

50-362 Indexable Lamp Housing 20/50 W

50-364 Heat SInk for Indexable Lamp Housing 30

Works in conjunction with indexable lamp housing 50-362. Features an alignment pin that always orients the lamp fiament to the original position. Mates directly with 50-116, and 50-116S to offer 4-way illumination path.

50-364 Heat Sink for 50-362 Indexable Lamp

50-367 Heat SInk for Lamp Housing 30

General heat sink can be mounted on different sides of sphere 50-116, and 50-116S to increase its cooling properties. May be combined with fiter holder 50-152, and angle plate 50-114S to construct a multi spectral lamp housing.

50-367 Heat Sink 50.8/30

50-391 Optics Holder WIth Handling Pin 30/25

Allows easy handling of 25 mm mounted optics, and filters. Works in conjunction with 50-144 side access mount, and filter holder 50-152.

50-391 Holder with Handling Pin

50-396 4-Objective Microscope nosepiece Turret

Accepts up to four standard microscope objectives. Has interchangeable 50-163 as its rear interface. Would mate with 150-130, and 100-184 for more advanced microsocpy setups.

50-396 4-Objective Nosepiece

50-402 C-Mount Adapter 30

CCD mount is utilized mostly in construction of video tubes in microsocpy, and imaging systems. Also functions as the mounting flange for C-mount lenses and beam expanders.

50-402 C-Mount Adapter 30

50-410 Iris Diaphragm Unit 30/25

Works most effectively with side access mounts 50-144 but could also be secured in standard mounts like 50-100. Clear aperture variance = 3 ~ 18 mm.

50-410 Iris Unit 30/25

50-415 Micro Adjustment X-Y Positioner

Minature X-Y stage needed in building spatial filters, and microscopy applications. The centering mount has W0.8x1/36 thread to accept standard microscope objectives, and pinholes. It works within the 4-rod system, with +/- 5 mm adjustment. See page 25.

50-415 X-Y Stage 25

50-416 Clamping Plate 25

For securing Microptic 25 mounts, such as 50-100 on top of optical tables, or mechanical stages via M6 or 1/4-20 allen screws. See page 26.

50-416 Clamping Plate 25

50-418 Clamping Plate 30

For securing 30 mm Microptic mounts, such as 50-112 on top of optical tables, or mechanical stages via M6 or 1/4-20 allen screws. See page 26.

50-418 Clamping Plate 30

50-430 Post Mount Adapter 25/M6

For securing Microptic accessories on post mounts with M6 thread. Has M6 securing thread on its base, and lower front, for horizontal, and vertical mounting.

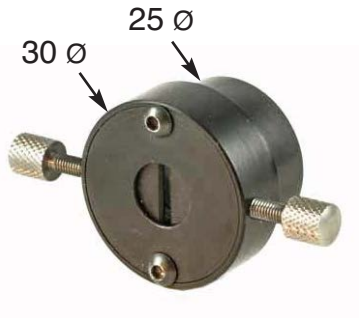
50-432 Post Mount Adapter 25/ 1/4-20

Identical with 50-430 but for 1/4-20 post mounts. Has 1/4-20 securing thread on its base, and lower front, for horizontal, and vertical mounting.

50-430 Post Mount 25/M6
50-432 Post Mount 25/1/4-20

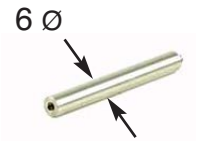
50-444 Variable Slit Unit 30/25

Variable slit has 10 mm wide slit with 0 ~ 5 mm variable slit width. The slit width as well as its centration may be adjusted.

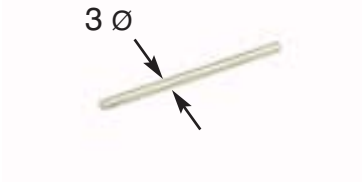


50-444 Variable Slit 25

T50-xx Cover Tubing, L =
-30 -50 -70L -75 -100 -150
-200 -300 -450 -1000



06-xx Support Rods, L =
-30 -50 -75 -100 -150 -200
-300 -450



03-xx Support Rods, L =
-30 -50 -75 -100 -150 -200

Support Tube 50.8

Support rods are made of Aluminum 60-61 dull black anodized to reduce internal reflections. They contain matching hole pattern around Minioptic 50 mounts. Tubes are secured in place using M3 Button-head screws 00-160.

Support Rods 6 mm, and 3 mm

Support Rods are made of Stainless Steel, case hardened to Rockwell 55, and are super polished for smooth translation of mounting plates along the rods. 3 mm rods are utilized as micrometer extension rods in conjunction with linear bearing setups, using 50-108, and 50-110.

00 Mounting Hardware consists of bolts, Set screws, and springs specially suited for Microptic system.

00-162
M3 x 10

00-164
M3 x 16

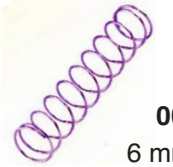
00-136
M3 x 6

00-130
M3 x 2.5

00-132
M3 x 3

00-160
M3 x 4

00-270
Bellevile
Washer



00-104
6 mm Spring

00-100
3 mm Spring

00-212
M3 Thumb

00-210
M3 Thumb

00-224
M3 Nut

00-118
3.5 mm Ball

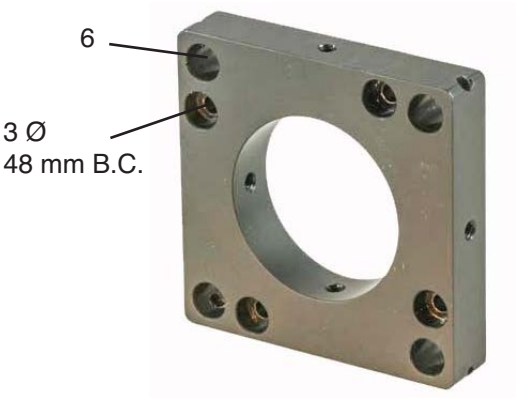
Microptic 2 X 2

50-500 Standard Microptic 2x2 Mount 30

Expands the capacity of Microptic 50 system by placing the rods on four corners of the 2”x2” Mounts. When combined with Microptic 50 mounts, it has the same exact 1” optical center height. The increased rod spacing allows insertion of up to 50.8 mm optics.

50-502 Standard Microptic 2x2 Mount 30

Identical to 50-500 but with 30 mm clear aperture. Accepts all 30 mm Microptic accessories such as mirror and prism holders, and Micromax 30 system components.

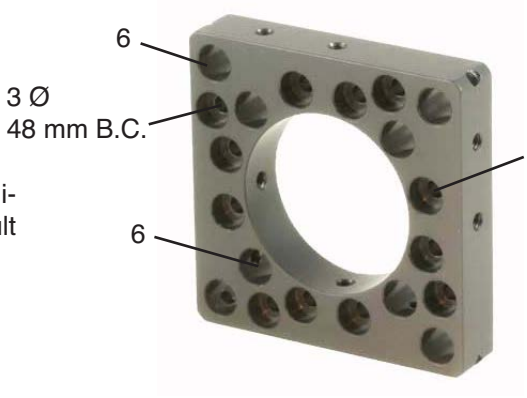


50-500 2x2 mount 35

50-502 2x2 mount 30

50-504 Interface Plate 30

Interface plate between the 2x2 and standard Microptic 50 rod spacing such as 50-100. The result is an 8-rod mount that works with both systems.



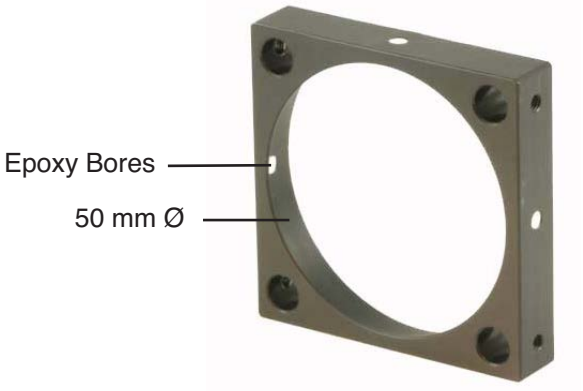
50-504 Interface Platet 30

50-506 Standard Microptic 2x2 Mount 40

For mounting 40 mm diameter lasers and beam expanders within the Microptic system.

50-508 Lens Mount 40 with 2 Retaining Rings

For securing 40 mm optics within the 2x2 system.



50-514 Lens Mount 50

50-512 Lens Mount 45

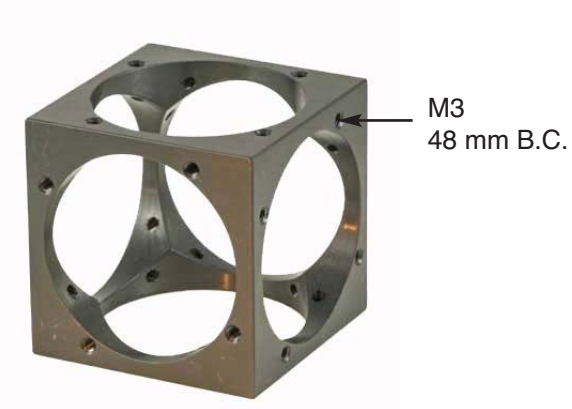
For securing 45 mm accessories within the 2x2 system. Has no M3 counter bores for mounting.

50-514 Lens Mount 50

For securing 50 mm optics within the 2x2 system. The lens has to be cemented in place via four epoxy bores around the mount.

50-516 Microptic 2x2 cube 43

Light weight 2”x2” cube accepts Microptic 2x2 mounts on all its six sides. It mates with Minioptic centering ring 100-186.



50-516 2x2 Cube 43

50-516S Special Cube 43

50-516S Microptic 2x2 cube 43 with cover Plate

Special version with a 43 mm square machined pocket to accept larger cubes and beamsplitters.

50-544 Side Access Mount 30

Identical to 50-504 but with a portion removed for easier access to mounted optics. One of the uses of side access mounts is in fiber optics setups where the fiber cable may be routed through the mounts without obstruction.

50-544 Side Access Mount 30

50-546 Support Mount 35

Identical to 50-351 but with 2x2 rod spacing to support large cylindrical accessories such as lasers, and beam expanders on top of bread-boards, and optical tables.

50-546 Support Mount 35

50-548 Support Mount 40

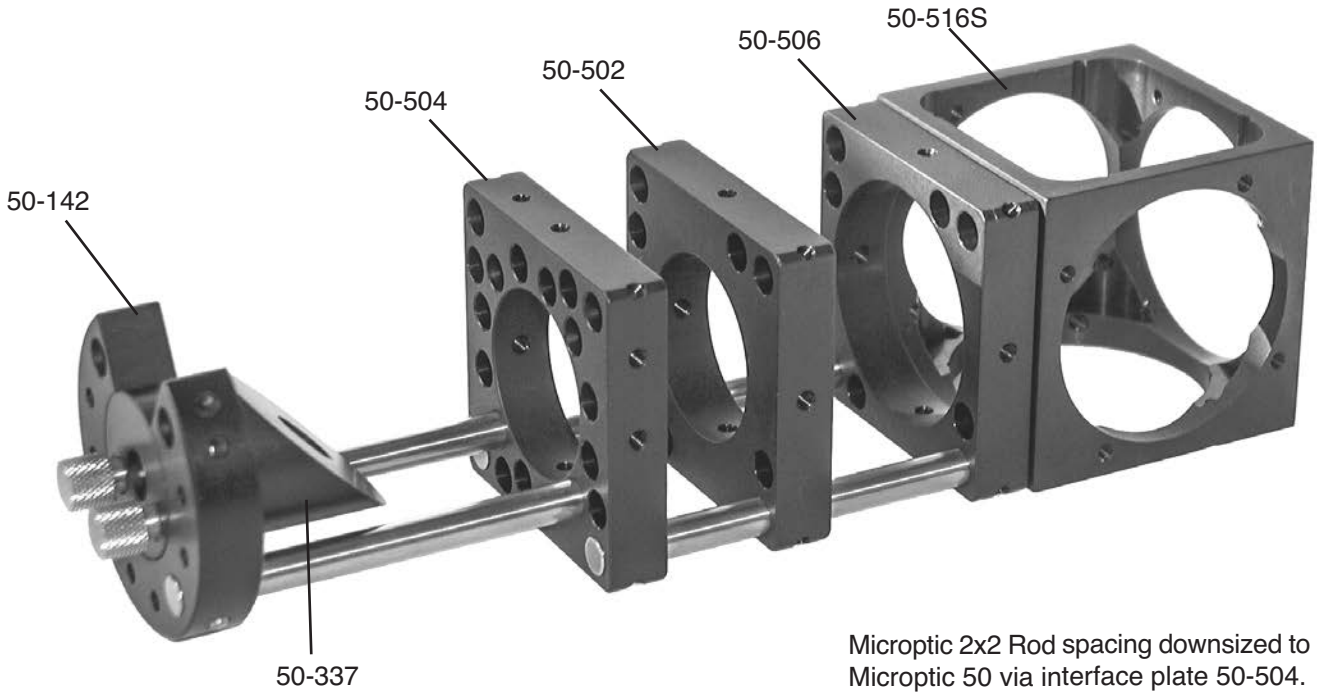
Identical to 50-546 but with 40 mm clear aperture. We offer three sizes of this support plate because the most rigid mounting is when the inner bore matches with the outer cylindrical diameter of accessories.

50-548 Support Mount 40

50-550 Support Mount 45

Has the largest 45 mm clear aperture. This mount features 3-point optics securing scheme allowing a wide range of accessories to be centered on the optical axis. The rest of the setup could be down sized to standard Microptic mounts by utilizing 50-504 interface plate.

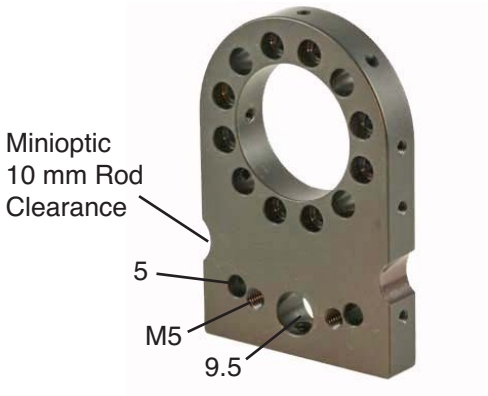
50-550 Support Mount 45



Microptic 2x2 Rod spacing downsized to Microptic 50 via interface plate 50-504.

50-492 Fixed Linear Bearing 30

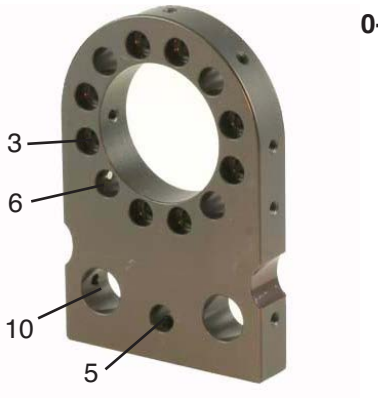
This is a heavy duty version of 50-108, utilizing larger 10 mm linear bearing 100-214. It also has threaded bores for direct mounting to Minioptic 100 mounts. Has two M4 mounting bores at their base, 20 mm apart.



0-492 FLB Mount 30

50-494 Traveling Linear Bearing 30

Itentical to 50-492 but this is the traveling piece that rides on the outer shell of linear bearing 100-214. Both 50-492, and 494 mounts have precision 6 mm rod securing bores (no clearance bores) so they could both secure rod supported Microptic assemblies. In Microscopy, it can be utilized to secure the nosepiece turret 50-396, carrying four objectives. Has two M4 mounting bores at their base, 20 mm apart.

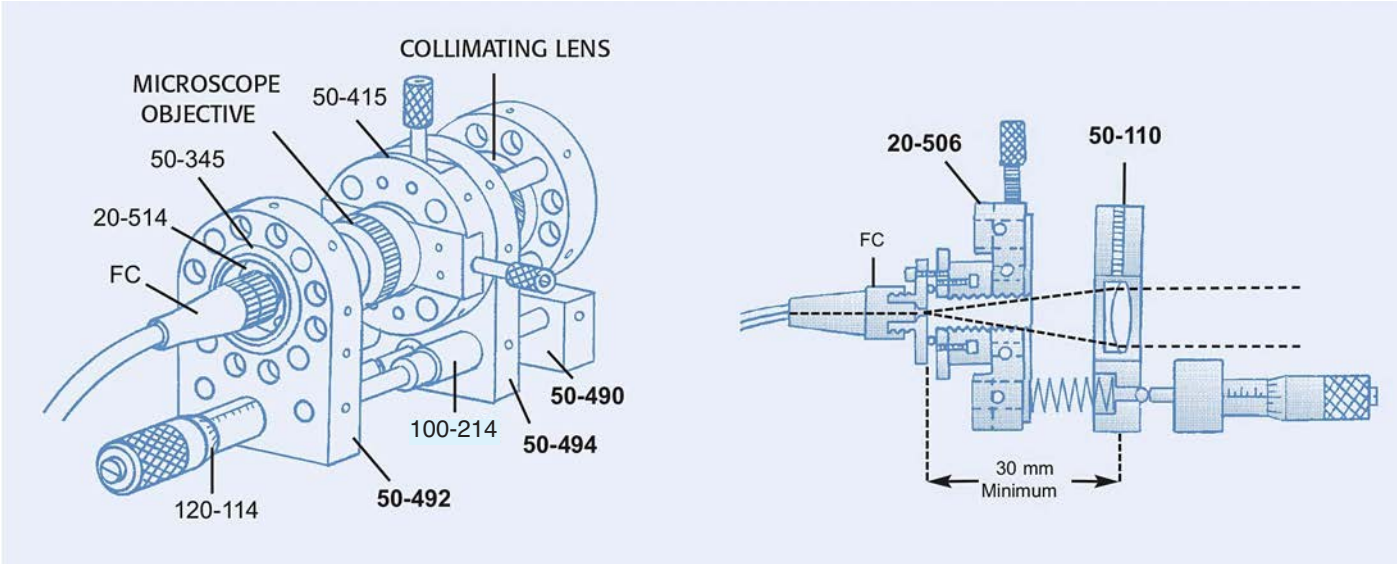


50-494 TLB Mount 30

50-490 Micrometer Anvil

Works in conjunction with 50-492 at one of the two ends of linear bearing setups. This is a compact Micrometer platform to push against the traveling Linear bearing 50-494. Accepts standard 9.5 mm micrometers.

50-490 Micrometer Anvil



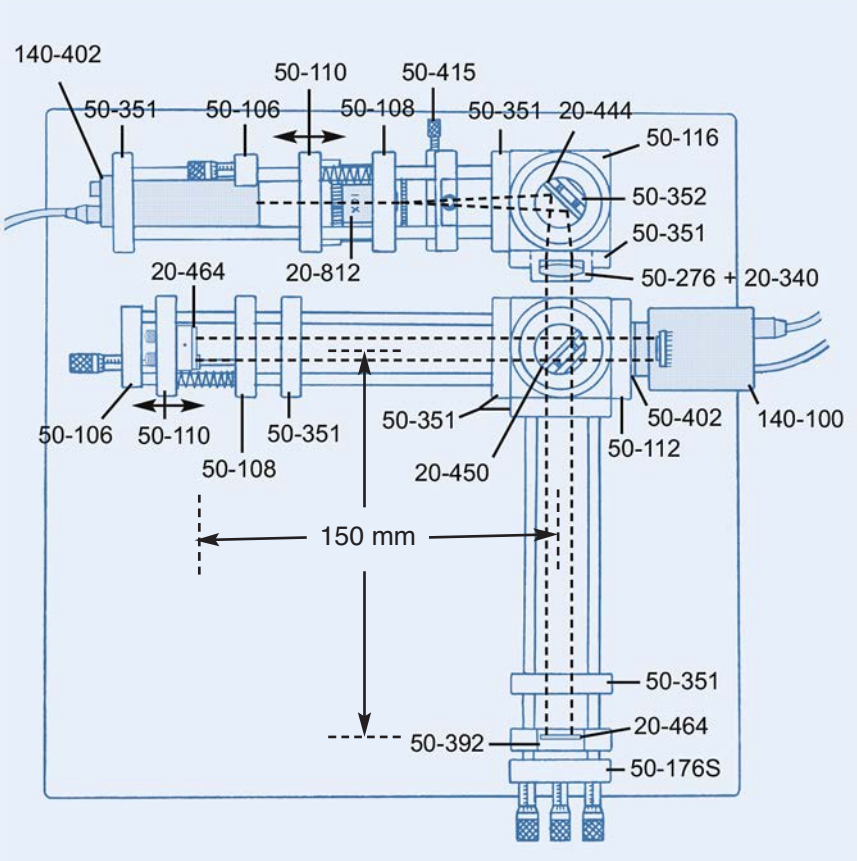
Microptic linear bearing arrangement with 50-490, 492, and 494 mounts utilize heavy duty 10 mm linear bearings for more critical applications. The X-Y micropositioner 50-416 centers the beam focused by the microsocpe objective while the liner bering stage focuses the beam to the fiber core for maximum transmissin. Other uses of this arrangement could be in microscopy (see **Minioptic 100** Catalog Page 2), and in telescopes (see **Macroptic 150** Catalog Page 2). Right, traveling linear bearing mount 50-110 for lighter setups.

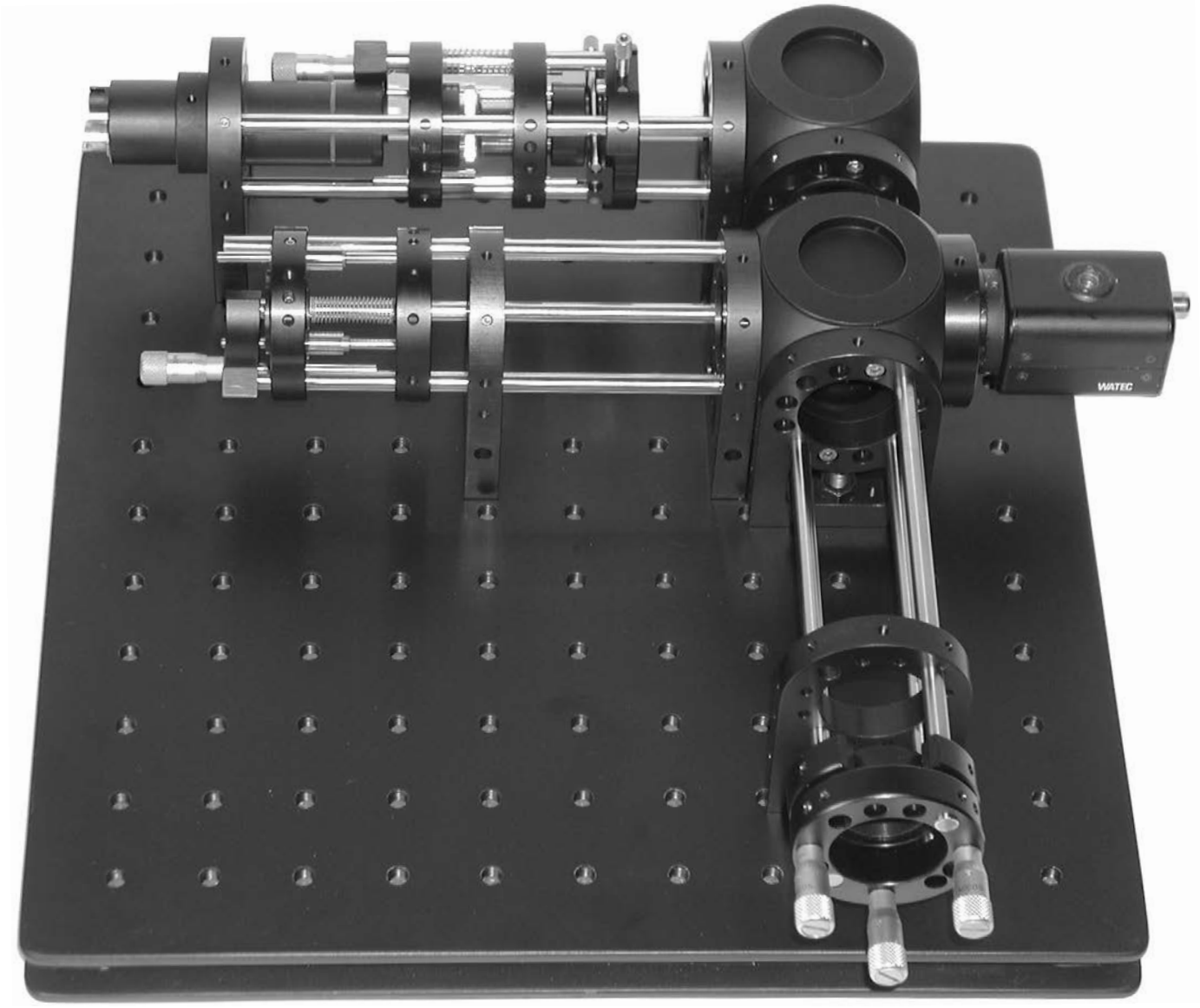
Michaelson Interferometer

DWX-150

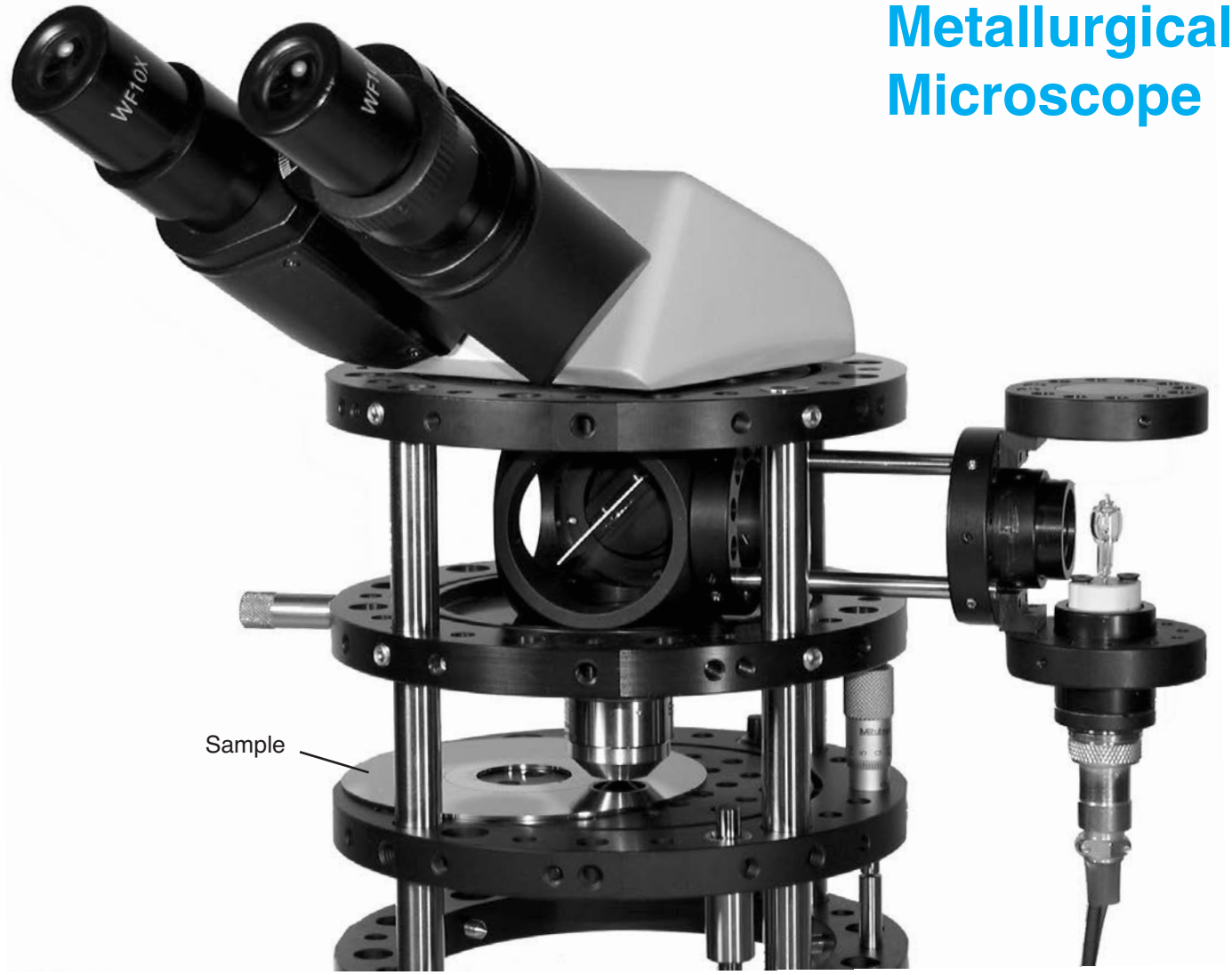
DWX-150 consists a laser diode with circular beam spot output, a 6X beam expander similar to DWX-100, a fold mirror, a beam splitter, and two flat mirrors, each at the end of 150 mm arms. The interferometer fringes are projected onto a CCD camera (right).

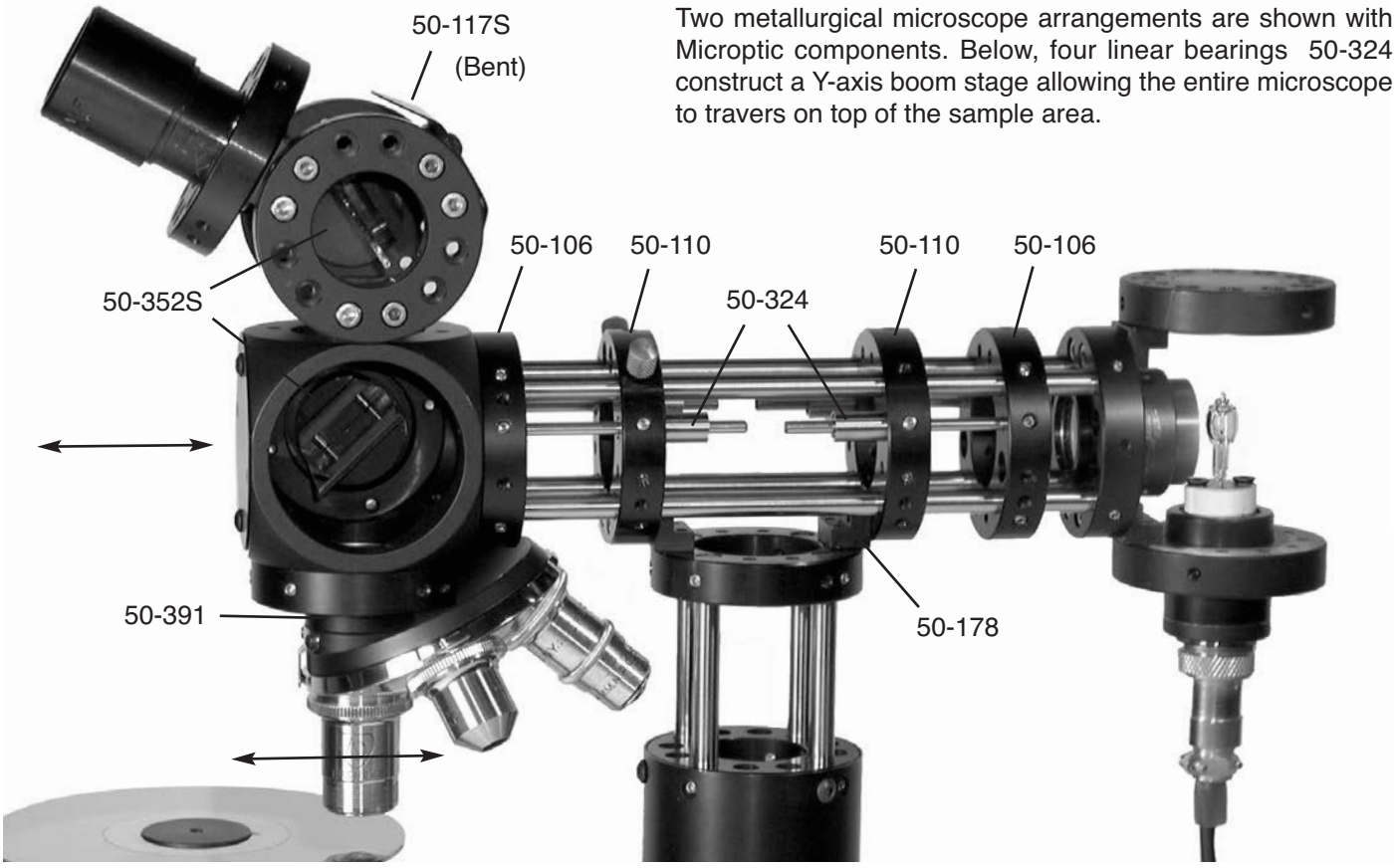
One arm of the interferometer is equipped with a linear bearing delay line carrying an adjustable prism table 50-335. The other arm carries a kinematic stage with 0.25 mm pitch micrometers.





Metallurgical Microscope



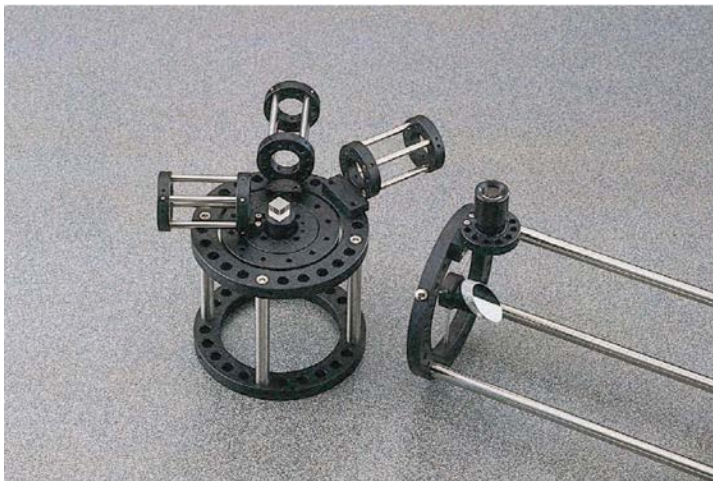


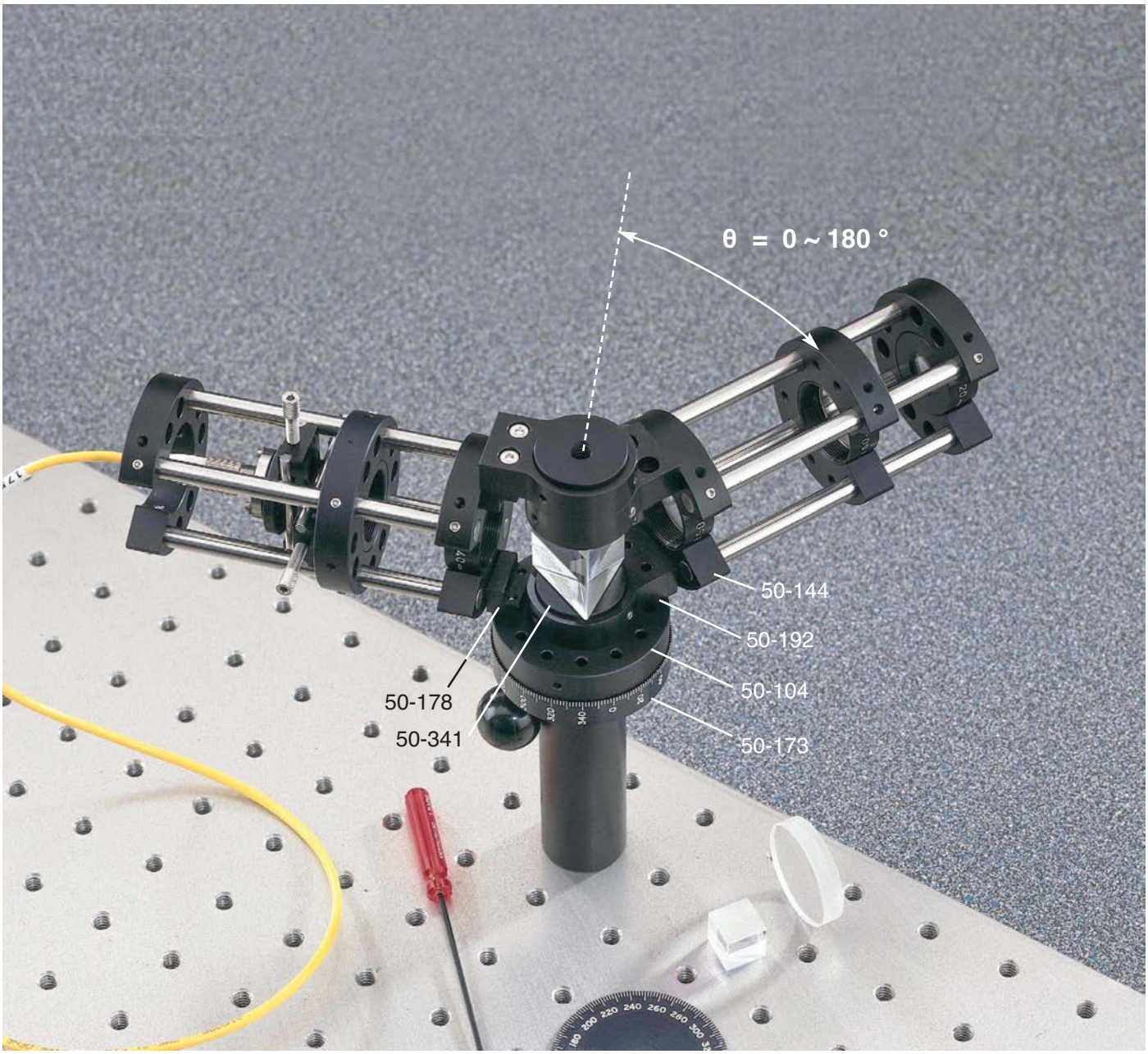
Two metallurgical microscope arrangements are shown with Microptic components. Below, four linear bearings 50-324 construct a Y-axis boom stage allowing the entire microscope to travers on top of the sample area.

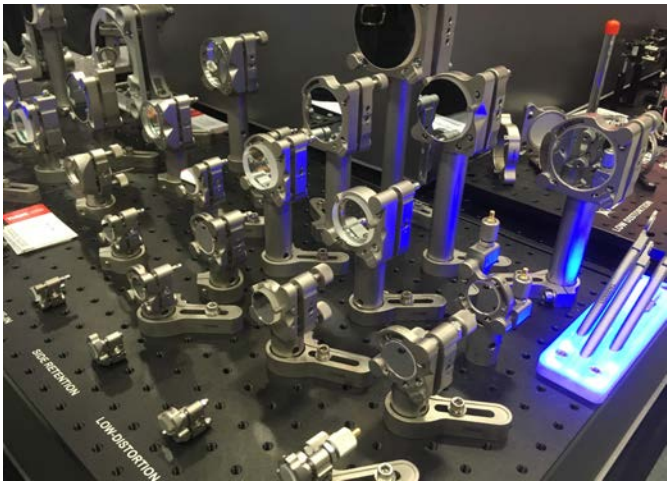
Spectroscopy

Spectroscopy is what Optoform is really good at among all the optical erector sets, and cage systems simply because of its round shape. This isn't just useful in classical spectroscopy using equilateral prisms, but it applies to many optical setup requiring angular deviation in the light path.

The system has a natural ability to rotate about any given axis in 3D space. At system level, Optoform is designed to be arranged in unlimited combination of mounting possibilities that is unmatched by any other system in the market.



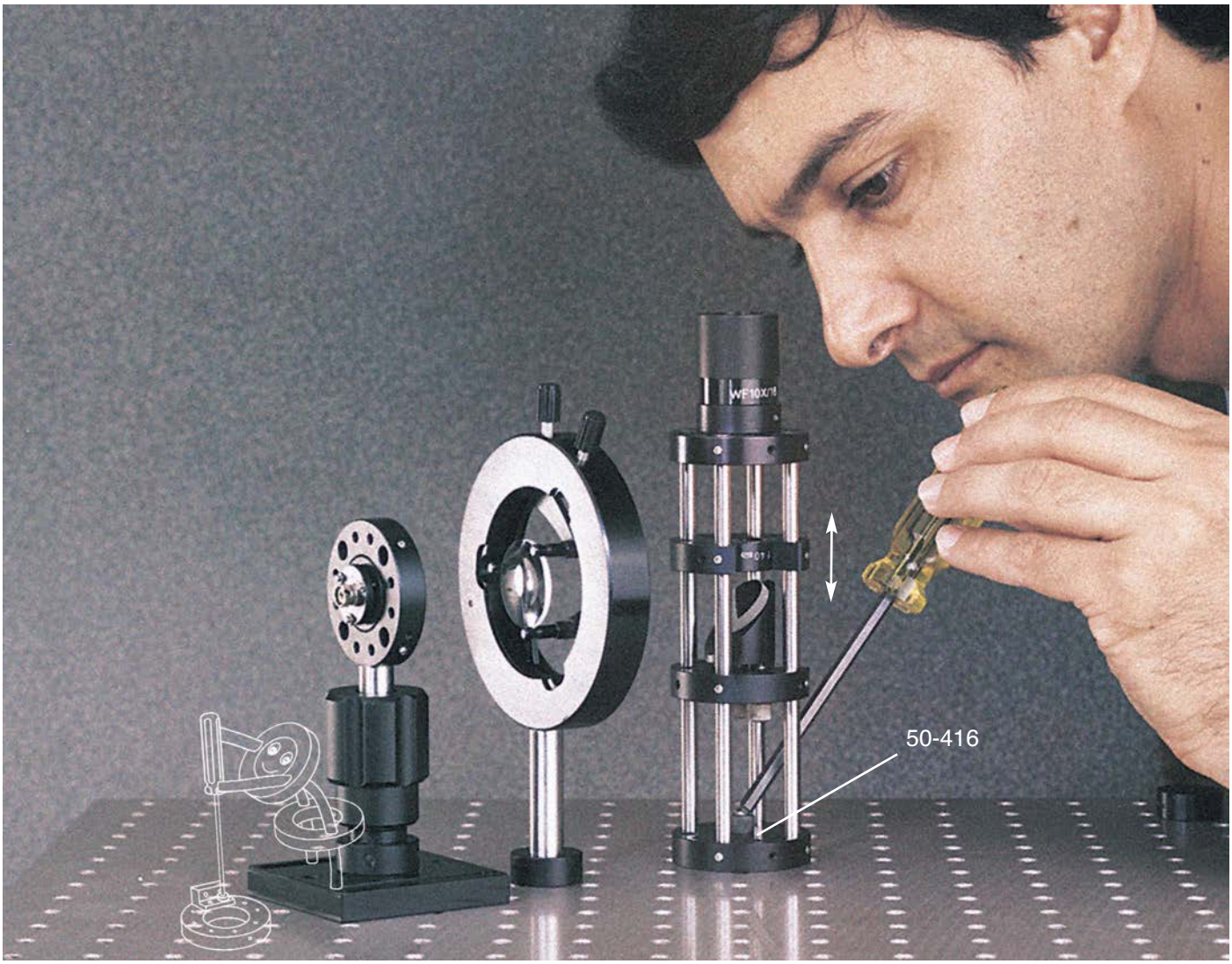




Alignment Telescope

The alignment telescope built with Optoform (below) is the simplest, yet one of the most useful tools in the lab. The basic idea is to have a horizontally pointing reference telescope with a reticule that could be focused at various distances, and its field of view be aligned parallel with the breadboard by a 45° oriented tiltable mirror.

Left, the complexity, and overcrowdedness of research labs with sometimes hundreds of post mounted elements.



This handy scope helps to setup the physical height of everything that is mounted on top of the optical table. Experimenters usually use the light beam itself to line up things. But that approach is usually misleading because the light beam could bend up or down as it goes through the optics. The scope may be focused to near or far, and with its reticule, every post mounted optical device could be adjusted to have the same physical height. The focusing is performed by moving its objective lens up or down as shown.

Opto-Mechanical Design

Opto-Mechanical design has always been in the hands of graphic designers because there has never been the right tool to design optical packaging of products. This gap is being crossed over now with 3D printers. People are starting to realize that design is not only the inner optics, but in many cases, its the usability of a product that dictates its optical design.

So what's being made inside the lab can completely change course by learning how it will be used outside of the lab. That's where Optoform plays its niche role in product development. It is the only product that allows you to take your experiment outside the lab without a machine shop. **Your experiment is your product.**

Company Website:
Optomechanix.com

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