

# Optoform

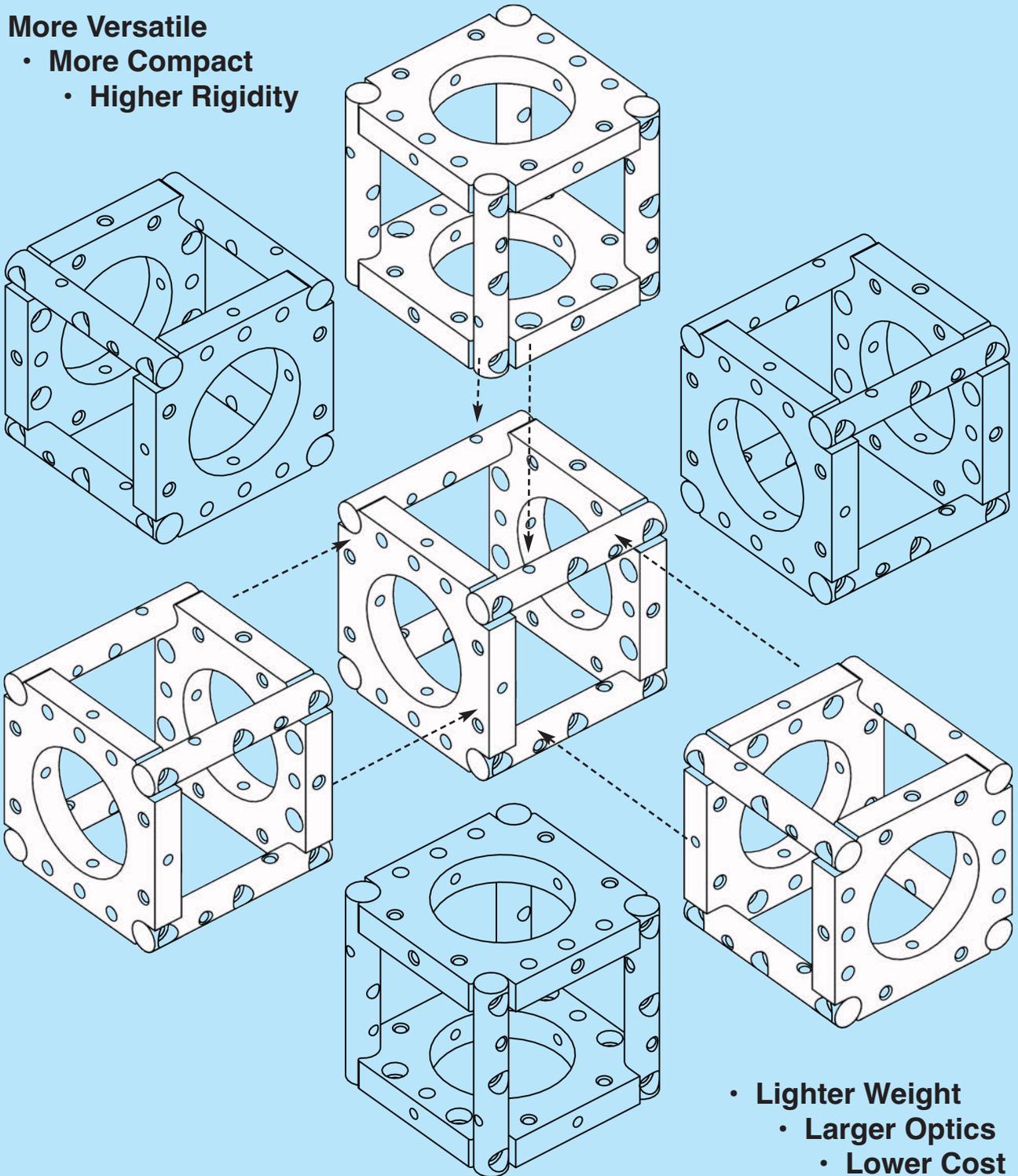
## Microptic system 40

Introducing a new System

How to use the new Optoform

Build without limits

- More Versatile
  - More Compact
  - Higher Rigidity



- Lighter Weight
  - Larger Optics
  - Lower Cost

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

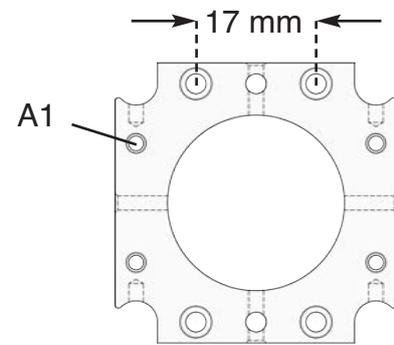
## Introducing a new concept

There are a few design features in new Optoform that you need to know about so you could use it more effectively. To get more hands on experience, we offer a basic kit to go with your current Optoform or Microbench line of accessories. First, the bore spacing on the rods as well the bolt pattern on the mounts is based on a minimalist design concept that offers you various mounting possibilities:

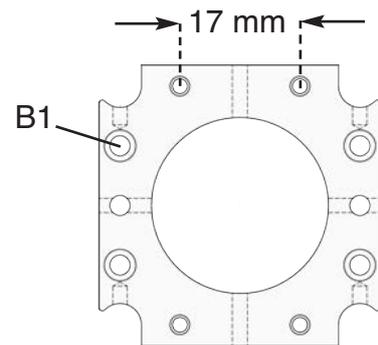
- 1) The counter-bored pattern on the rods allow securing mounting plates along the rods.
- 2) Tapped bores on support rods are intended for direct mounting of mounting plates laid against them.
- 3) Every assembly can be side mounted or face to face mounted by lining up counter-bores with tapped bores on the plates or on the rods (see cover page). Corner connectors that existed in classical Optoform mounts to interconnect sub-assemblies are thus eliminated.

## Mounting Plates

Mounting plate 40-100, and 40-106 (right), have matching counter-bores B1, and tapped bores A1 to allow securing them face to face, i.e., for joining two sub-assemblies. These are some basic features of Optoform that will become more clear as we cover more examples.

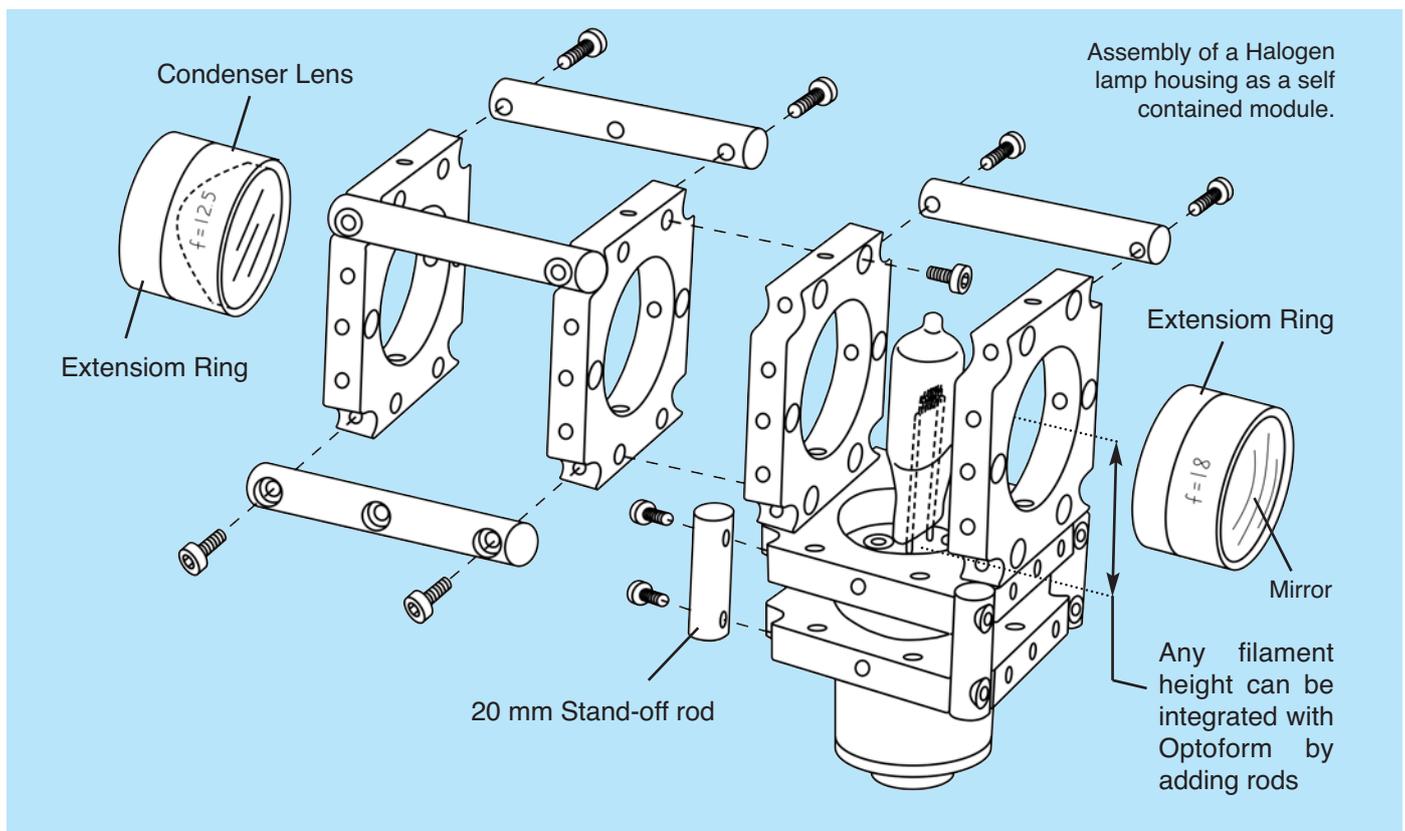


40-100



B1

40-106



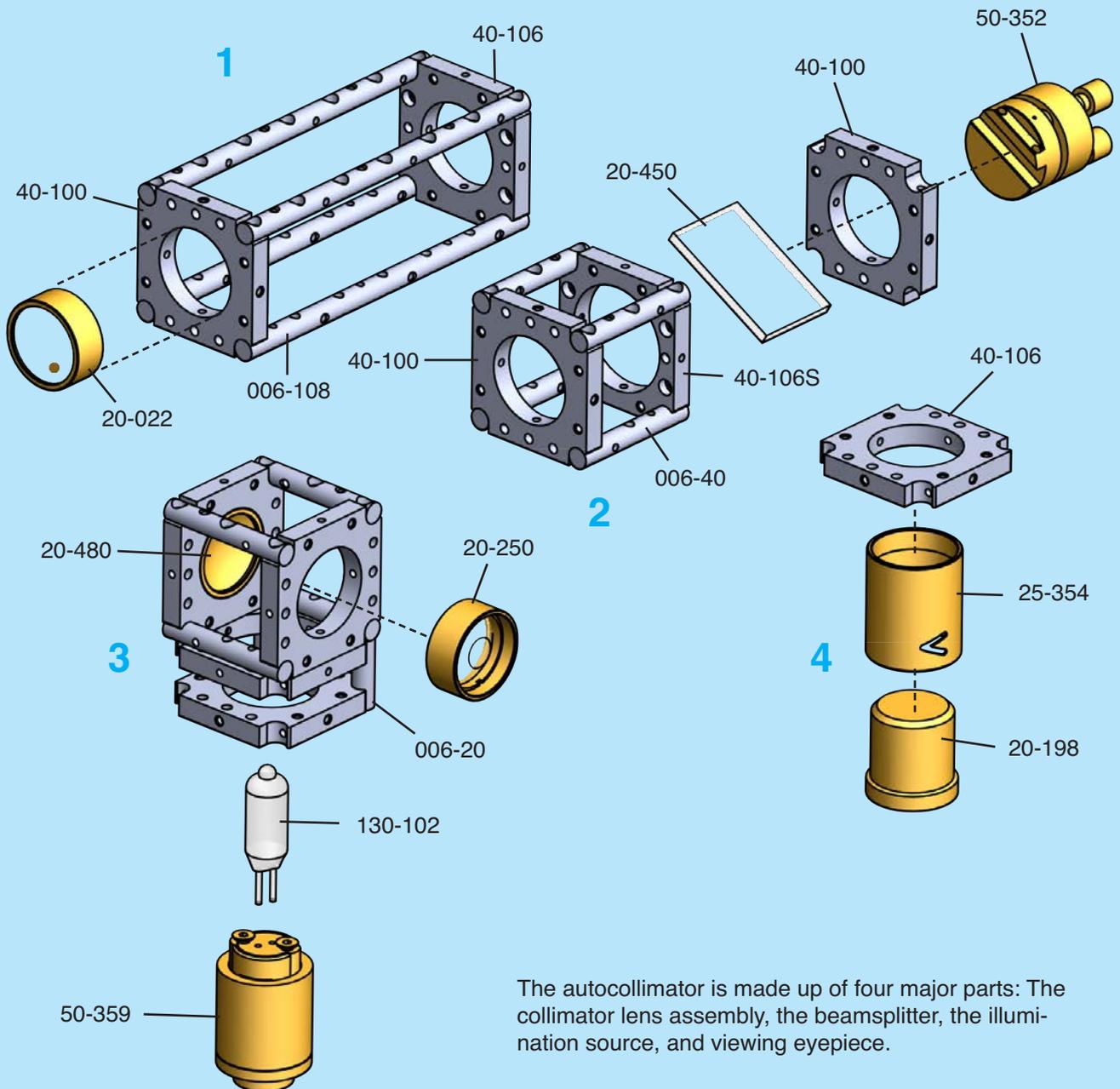
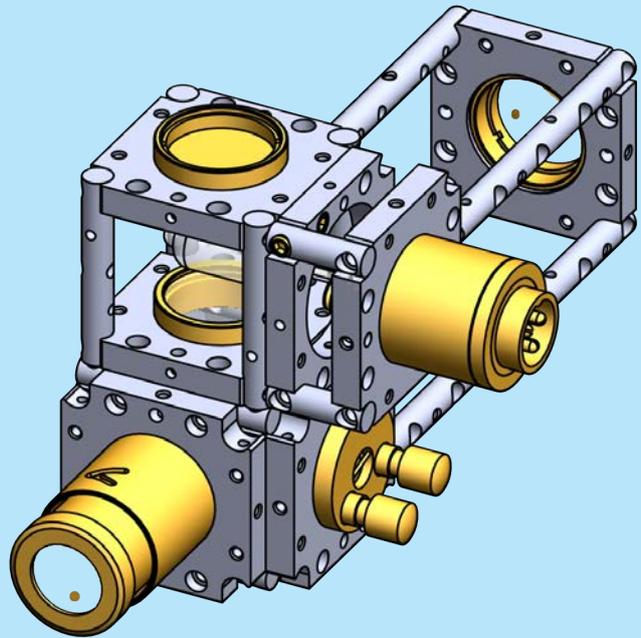
## The Most Intuitive Way to Focus Optics

While building your laboratory experiments, focusing of optical elements is accomplished by positioning each lens cell within the mounts. You could also adjust the filament height inside a lamp housing (above). As exercised in most Microbench setups, extension tubes are utilized (above) to secure an optical mount beyond its physical length.

## Building an Autocollimator

If you visit [Optoform.com](http://Optoform.com), and click on "Built with Optoform" you'll see many examples of Optoform instruments. To build an autocollimator, there are two devices that would need stand-off: One is the lamp which uses 006-20 as stand-off rods, and the other is 50-352 which uses a combination stack of 40-100, and 40-106S to center the beamsplitter 20-450 on the optical path.

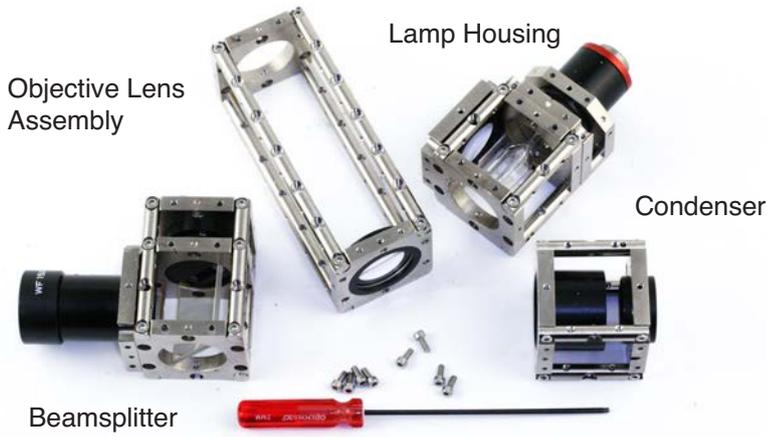
Objective lens 20-022 may be replaced with an achromatic lens 20-358 ( $f = 140$  mm) for better image quality.



The autocollimator is made up of four major parts: The collimator lens assembly, the beamsplitter, the illumination source, and viewing eyepiece.

## New Modular Concept

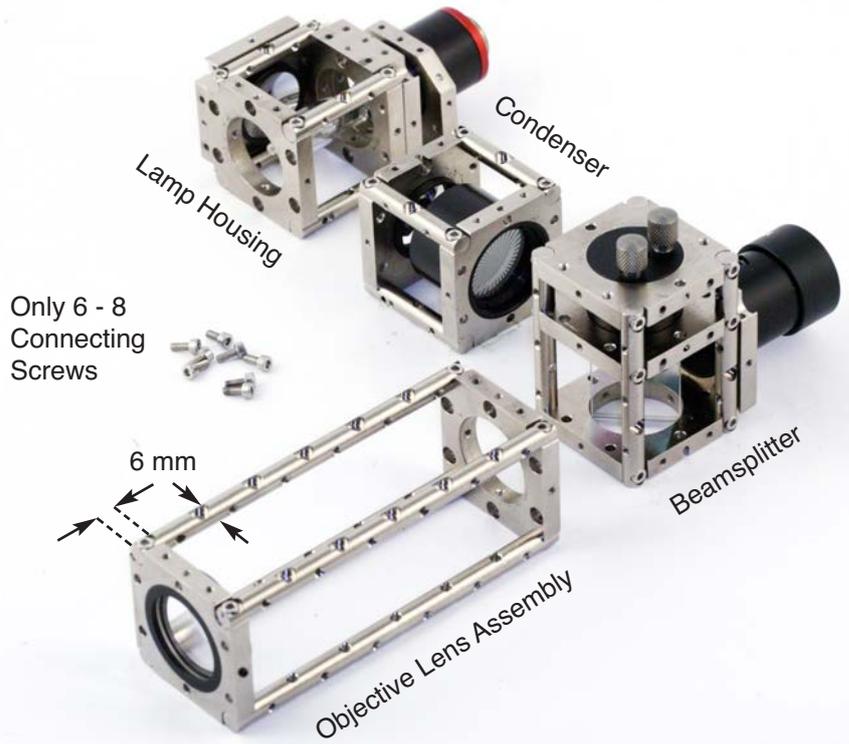
Optoform 40 is assembled with tiny M2.5 screws. Don't take apart your subassemblies. Leave them assembled.



## Modules Instead of Parts

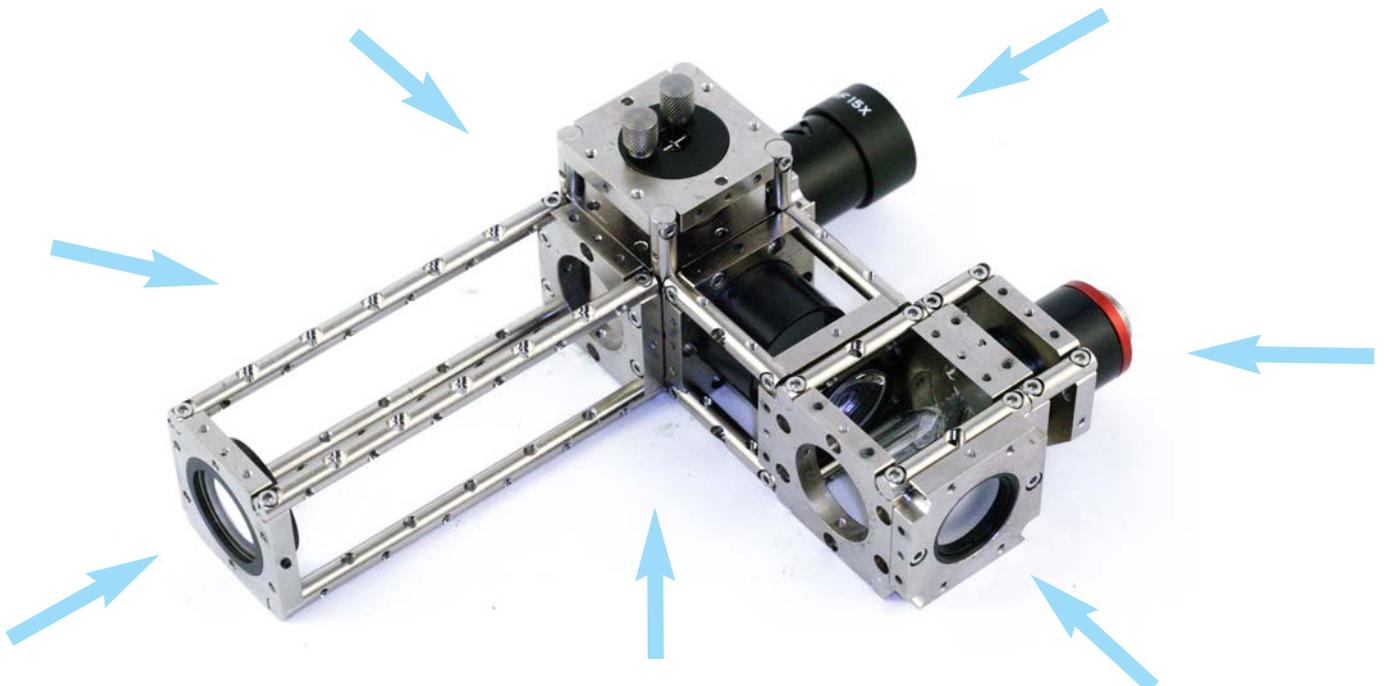
You could build your next setups with already assembled modules.

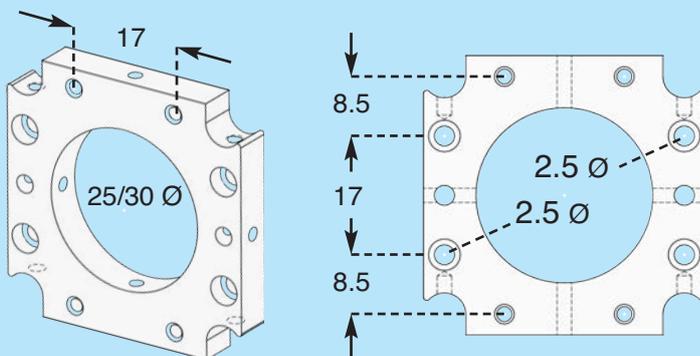
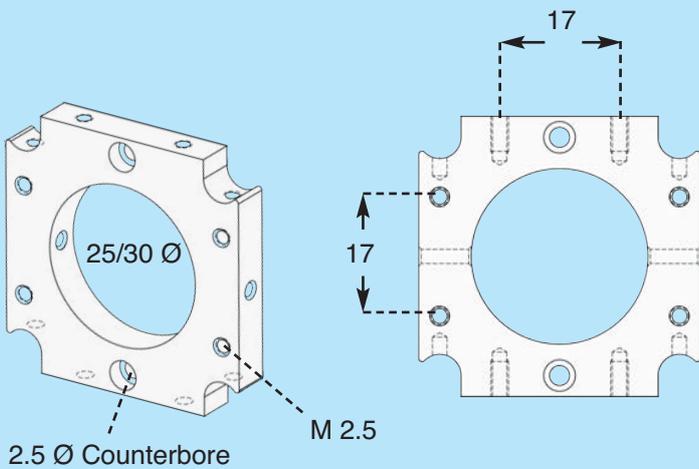
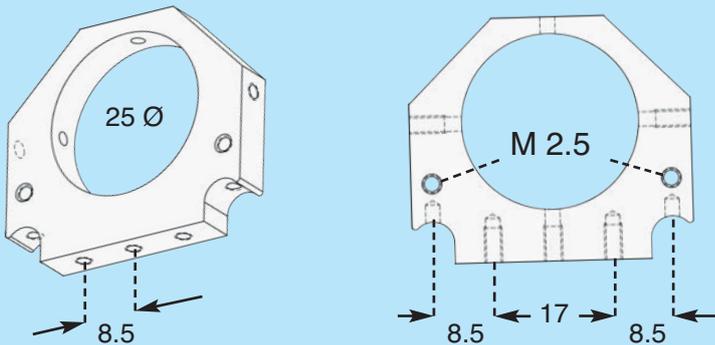
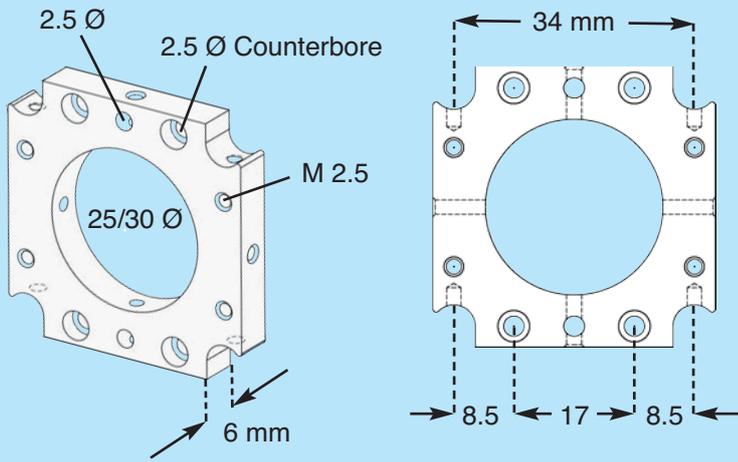
Only a few screws are needed.



## 3D Construction

With Optoform, you deal with cubic or swivel modules that can be interconnected at any orientation in 3D space.





### 40-100 Standard Mount 25

Basic building block for optical setups with 25 mm mounting bore to secure 25 mm mounted optics, and accessories. There are four 2.5 Ø mm counter-bores and four M2.5 tapped bores. May be mounted on support rods via M2.5 screws. Mounting plates may be secured together face to face, or at right angles via 40-104.

### 40-100S Standard Mount 30

Identical to 40-100 but with 30 mm center bore to secure 30 mm mounted optics.

### 40-102 Compact Mount 25

Compact mount intended to secure on two rods to support 25 mm mounted optics, and accessories. There are two M2.5 tapped bores at their base, 17 mm apart, that allows mounting to other mounts at right angles via M2.5 screws.

### 40-104 Right Angle Mount 25

Allows direct mating of two adjacent mounts at right angles via two M2.5 mounting screws. It takes two pairs of 40-104 and 40-100 to construct a cube. A better alternative would be to utilize rods (see cover page).

### 40-104S Right Angle Mount 30

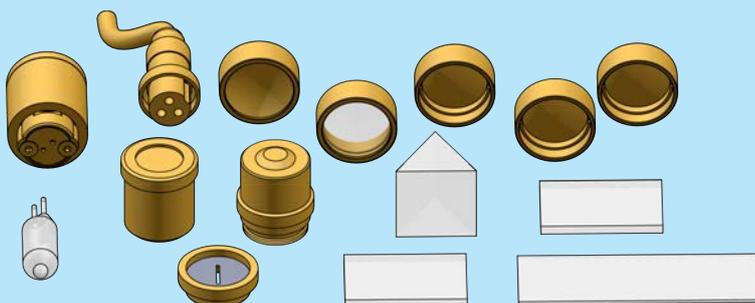
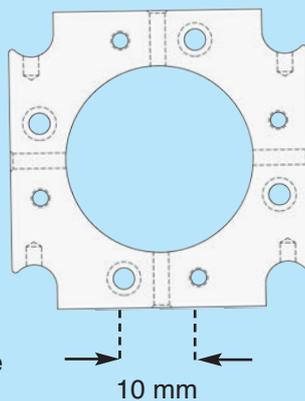
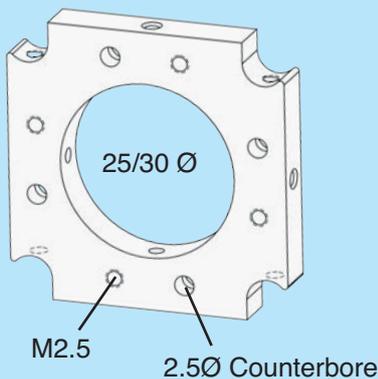
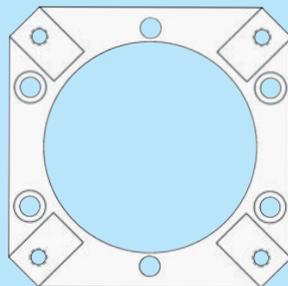
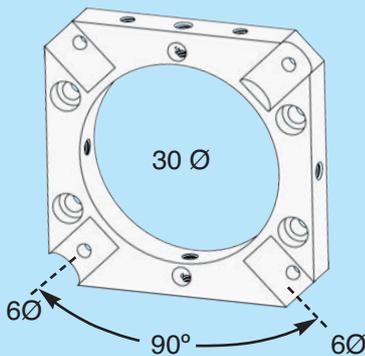
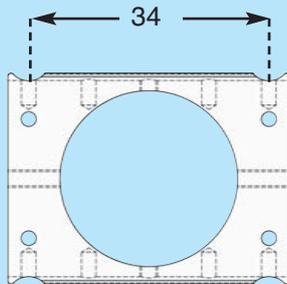
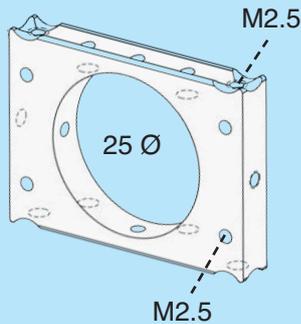
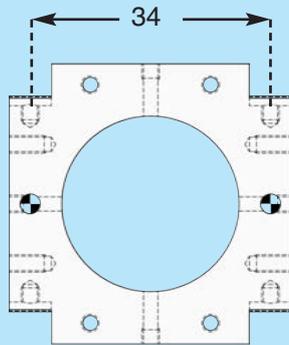
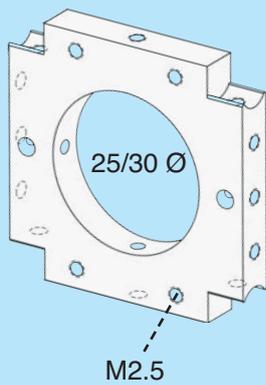
Identical to 40-104 but with 30 mm center bore to secure 30 mm mounted optics.

### 40-106 Mating Plate 25

Identical to 40-100 but with opposite counter-bores, and tapped bore placement to allow securing the two mounts together. By utilizing 40-100, and 40-106 on mating ends of subassemblies, they can be attached, or detached while maintaining their own function, such as a Halogen lamp assembly, or beamsplitter housing.

### 40-106S Mating Plate 30

Identical to 40-106 but with 30 mm center bore to secure 30 mm mounted optics.



Basic Optics set 20-914

### 40-108 Intermediate Mount 25

It fits in between rod lengths without causing misalignment to an assembly. For example, by adding two 006-40 rods to 40-108, its length will match with rods 006-108. It creates optical paths in between two rods.

### 40-108S Intermediate Mount 30

Identical to 40-108S but with 30 mm central bore to secure 30 mm mounted optics, and accessories.

### 40-110 Sliding Mount 25

Can be inserted in between two rods to shift the position of optical axis along the rods, i.e., where the position of eyepieces in a binocular application needs distance adjustment. It may also be utilized to interconnect two or three rods at right angles.

### 40-118S Standard Mount 30

Accepts 6 mm rods in diagonal direction and mates to 40-100, and 40-106 to build three dimensional structures. Accepts Micromax 30 tubes, and other mounted optics.

### 40-130 Microbench Adapter 25

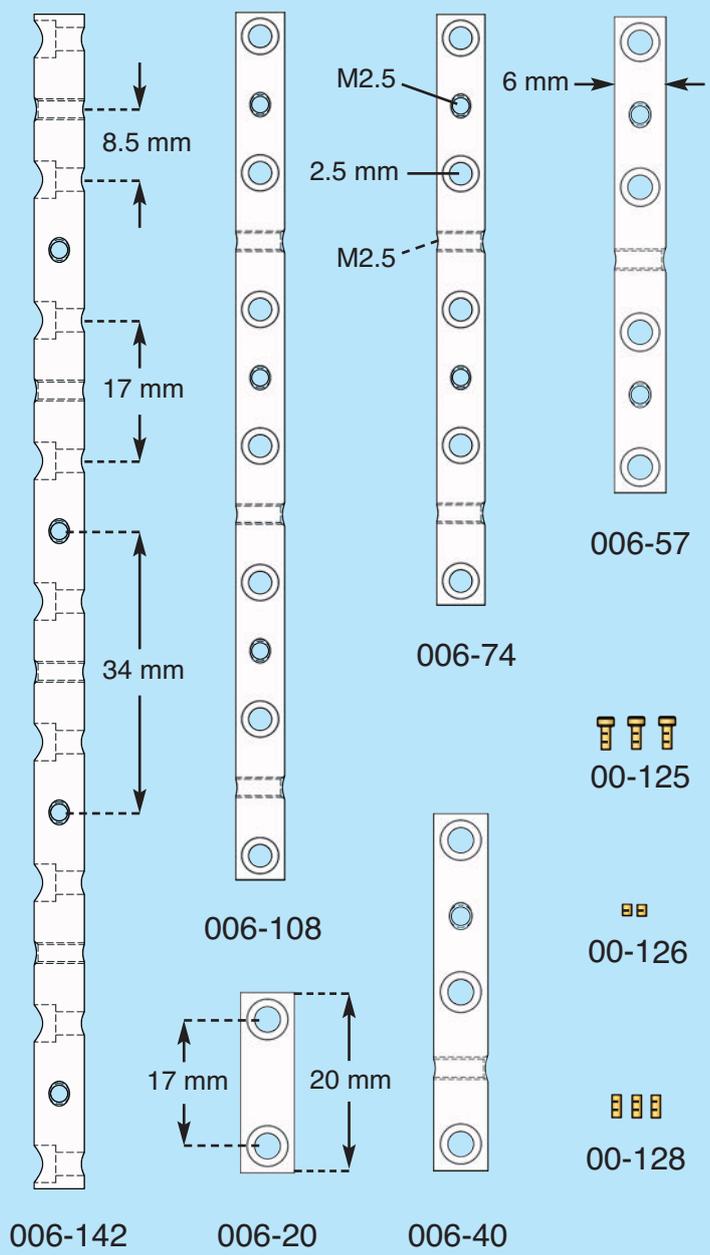
Has matching bore pattern to mount against Microbench cube 25/30, and mount 06-1041, to have full integration with Microbench mounts, and accessories.

### 40-130S Microbench Adapter 30

Identical to 40-130 but with 30 mm clear aperture.

### Optoform Basic Kit 40-706 Optoform Optics Set 20-914

These kits have a selection of optoform mounts, support rods, and accessories to provide hands on experimentation with new Optoform. Includes instructions on how to build a microscope, telescope, spectroscope, autocollimator, interferometer, and a lens projector. If you are a Microbench user, you could integrate your 25, and 30 mm optics, mirror mounts, and accessories with this kit.

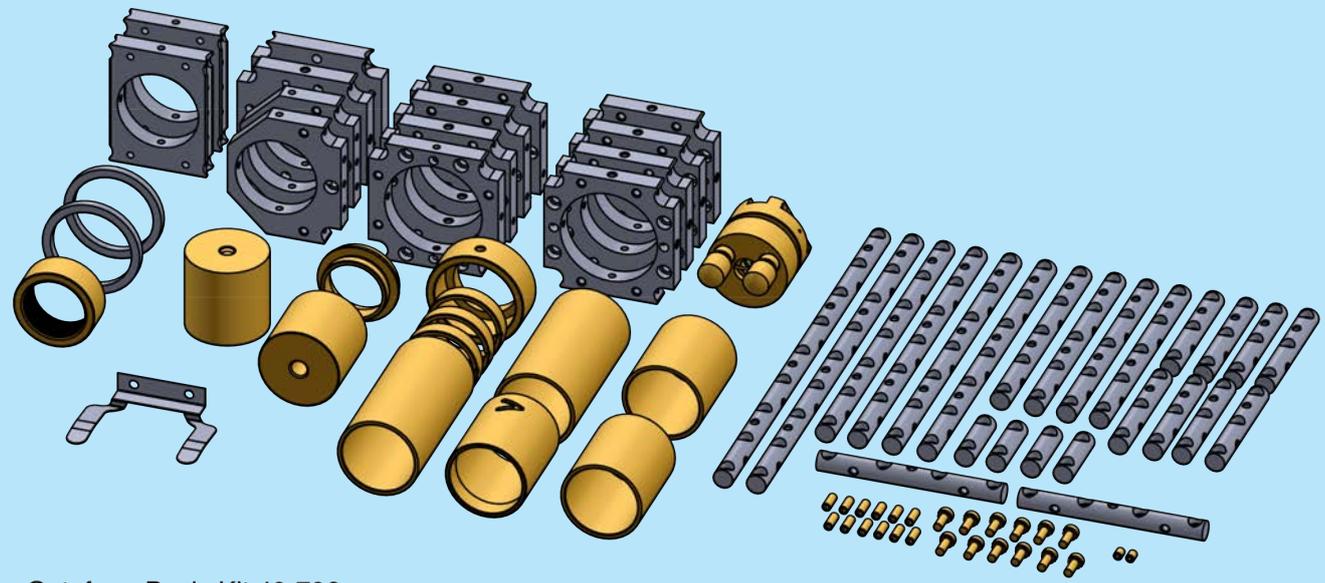


## Support Rods

Aluminium Alloy	Stainless S
006-12, L= 12 mm	Special Order
006-20, L= 20 mm	
006-40, L= 40 mm	
006-57, L= 57 mm	
006-74, L = 74 mm	006-74S
006-108, L = 108 mm	006-108S
006-125, L = 125 mm	006-125S
006-142, L = 142 mm	006-142S

## Mounting Hardware

- 00-116** M2.5x10 Thumb screws, pack of 10
- 00-120** M2.5x10 Low profile, 25 pcs
- 00-125** M2.5x6 Socket screws, 100 pcs
- 00-126** M2.5x3 Set screws, pack of 100
- 00-128** M2.5x6 Set screws, pack of 100
- 00-128** M2.5x6 Set screws, pack of 100
- 00-228** M2.5 Nut pack of 25
- 00-248** Ball driver set 1.27, 1.5, 2 mm

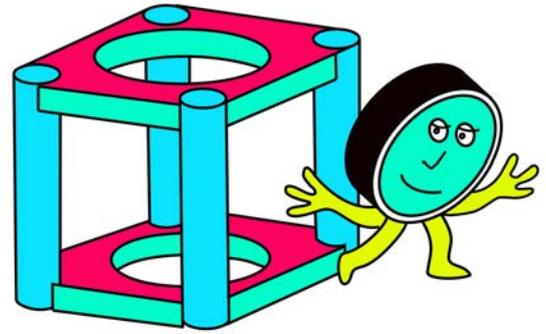


Optoform Basic Kit 40-706



Out of the cage system:

You can now use larger optics

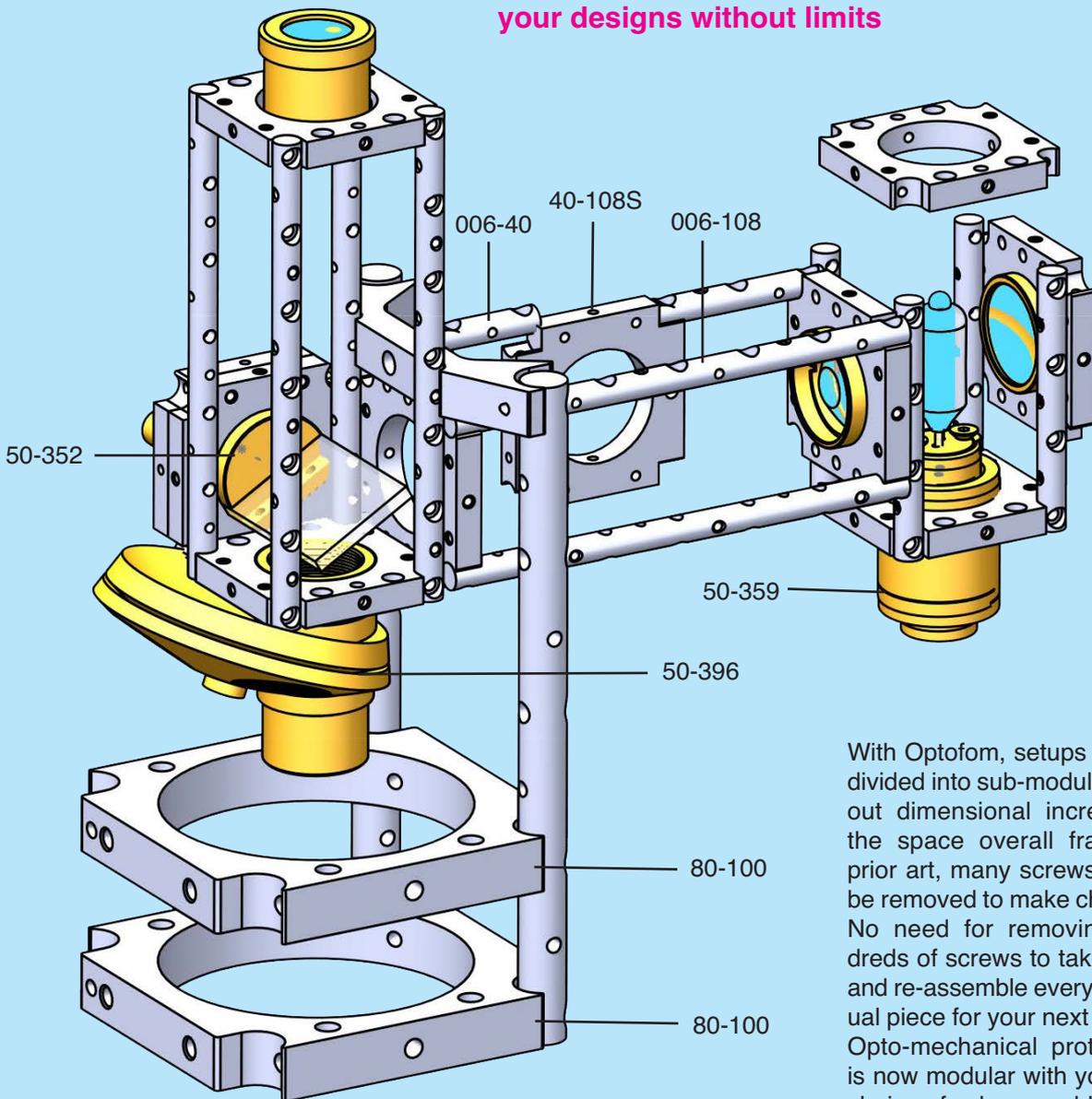


Other Cage Systems

New Optoform

Placing support rods on the outside corners of Optoform mounts allows 25/30 mm mounted optics to be easily inserted, and taken out without obstruction. Up to 40 mm optics may now be fitted in between the rods.

Take apart, and re-arrange your designs without limits



With Optoform, setups may be divided into sub-modules without dimensional increase of the space overall frame. In prior art, many screws had to be removed to make changes. No need for removing hundreds of screws to take apart, and re-assemble every individual piece for your next project. Opto-mechanical prototyping is now modular with your own choice of sub-assemblies.