

**NEW  
PRODUCT**



## MODULAR OPTICAL ENCLOSURE

System 400

System 600

System 750

**Announcing the launch of a modular optical enclosure system, designed and manufactured in the UK by Applied Photonics Ltd.**



The System 600 modular optical enclosure

Our precision-engineered modular optical enclosures have been designed by optical engineers for optical engineers. Essentially “**an optics bench in a box**”, these enclosures have numerous applications and are ideal for building prototype optical systems for laboratory or field use. Three standard sizes of enclosure are available although specials can be manufactured to order. The modular design allows the enclosures to be connected together to form larger enclosures if needed.

### Practical and versatile design

We have designed these enclosures to be practical, versatile and user-friendly. Our design philosophy has been to produce a product which meets the needs of the optical specialist who does not want to be constrained to using a conventional laboratory optical bench when designing and building optical systems. We have used these enclosures extensively for both laboratory and field use of our prototype laser spectroscopy instruments where they have proven to be of immense practical value. The enclosures are ideal for:

- Prototyping of optical systems and instruments
- Permanent or temporary experimental configurations for research laboratories
- Transportable systems for deployment in the field
- High-power laser systems where enclosure of the beam is necessary for safety reasons
- Experimental configurations used in teaching laboratories



The combination of a heavy-duty optical breadboard base, removable side panels, detachable internal support frame components and a gas-spring assisted hinged lid provides the optical engineer with a versatile and modular enclosure system.



Two System 600 enclosures fastened together using the optional adaptor plate and I-beam support spines to provide an enclosure of length 1200 mm and width 400 mm. Other attachment combinations are also possible.

### Precision-engineered for performance and reliability

The side panels, lid and internal support frame of the enclosures are manufactured using high-strength aluminium alloy. The optical breadboard base is manufactured from 15 mm thick tool-plate quality, high-strength aluminium alloy and has an array of M6 tapped blind holes 10 mm deep on 25 mm centres covering the full area of the base. The 5 mm thick side panels and lid are powder coated with a textured silver finish. The internal support frame and breadboard base are hard anodised with a matt black finish. With the lid closed, the enclosure offers a high-degree of light tightness which can be improved further with the addition of an optional flexible lid seal.

### Modularity without compromising performance

An adaptor kit is available which may be used to fasten two enclosures together, either end-to-end or side-to-side. The adaptor kit includes two light-weight aluminium alloy I-beams which attach to the undersides of the optical breadboard bases to maintain a high degree of rigidity for the entire enclosure system.



Customised System 400 enclosure - an example of what is possible; a prototype laser spark analyser instrument designed and manufactured by Applied Photonics Ltd.

### Customisation to suit your application

The options for customisation are virtually limitless. We can manufacture customised components to your own designs including side panels with cut-outs for umbilical ports, electrical connections or whatever your application requires - simply send us a sketch diagram of your requirements and we will email you a CAD drawing for your approval prior to manufacturing the component. Please get in touch with us to discuss your specific requirements.

### SPECIFICATIONS

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|--|---|--|
|  | <b>Internal dimensions (w x d x h):</b> | System 400: 400 x 300 x 175 mm (~13 kg)  |
|  |   | System 600: 600 x 400 x 175 mm (~23 kg)  |
|  |   | System 750: 750 x 500 x 175 mm (~33 kg)  |
|  | <b>Optical breadboard:</b>              | APP tool-plate quality aluminium alloy base-plate with an array of M6 tapped blind holes on 25 mm centres<br>Surface roughness better than 0.64 µm<br>Thickness tolerance ±0.1 mm<br>Flatness deviation better than 0.2 mm per metre<br>Hard anodised, matt black finish |
|  | <b>Internal support frame:</b>          | High strength 6082 aluminium alloy<br>Hard anodised, matt black finish   |
|  | <b>Lid and side panels:</b>             | 5 mm 5083 aluminium alloy plate<br>Polyester powder coated, textured silver finish   |
|  | <b>Optional extras:</b>                 | Lifting handles<br>Adaptor kit (adaptor plate, I-beam support spines and all necessary fixings)<br>Electrical interlock switch for enclosure lid<br>Flexible lid seal<br>Flexible umbilical and panel adaptors<br>Custom-designed components to client's specification   |