Magnetic Bases

Magnetic bases reduce experimental set-up time by allowing free positioning and instant clamp-down of optical components. They are the ideal accessories for all laboratories with ferromagnetic work surfaces such as Newport optical tables and breadboards.

Newport magnetic bases use strong, stable magnets in a switchable magnetic circuit. The circuit routes the magnetic flux either through the ferromagnetic work surface (producing the strong holding force) or contained entirely in the base—allowing quick repositioning.

Newport offers an extensive selection of bases with features to satisfy every requirement. For component positioning almost as convenient as with magnetic bases, see Newport’s Model BUP-2 Universal Base and Models BK-3 and BK-5 Kinematic Bases. These provide a patented, single-bolt tie-down anywhere on an optical table.

Low-Profile, Heavy Duty Bases

Newport’s Models 150 and 200 are premier magnetic bases that combine all the most desirable features: a high holding force that does not degrade with time, a low profile, generous mounting provisions, continuously variable holding force with easy-to-reach adjustments, and a non-magnetic mounting surface.

These bases incorporate an exclusive, stable magnetic circuit design which linearly translates the magnetic elements. Unlike most designs which are unstable between on and off, the holding force of these bases may be continuously varied. An inset adjustment screw which varies the holding force is conveniently accessible from either side of the base.

Kinematic Magnetic Base

Newport’s unique Model 110 Kinematic Magnetic Base is a space-efficient base that adds an inset kinematic interface to a generous array of tapped mounting holes. Components may be attached directly to the base, or the unique kinematic top plate lets you remove components and replace them with repeatable precision. Model 110 may also be attached to tables on its side.

The kinematic top plate is equipped with spring-steel clamping hooks which hold the kinematic plates together. Alternatively, two bolts may be used to clamp the plates together. This provides secure clamp-down of cantilevered or rod-mounted loads. The locking bolts are accessible even when a standard 1.5 in. (38 mm) diameter rod is attached. Extra kinematic top plates may be purchased.
Compact Magnetic Base

The Model MB-3 Magnetic Base features an aluminum mounting plate which provides two significant advantages compared to other economy bases: a generous array of tapped mounting holes, plus decoupling from the base’s magnetic field.

Key Features (MB-3)
- Inexpensive, full-featured base
- Non-magnetic mounting surface

Key Feature (MB-1)
- Low-profile, lower holding force

Utility Magnetic Base Plate

MB-1 Magnetic Base Plate quickly positions small components mounted via a single 1/4-20 (M6) bolt, such as VPH or MPH Series Post Holders.

Key Feature (MB-1)
- Single 1/4-20 (M6) clearance hole for mounting post holders

Standard Magnetic Base

The MB-2 Magnetic Base provides a single 1/4-20 (M6) tapped hole ideal for mounting VPH or MPH Series Post Holders as well as other components where a single bolt will suffice.

Key Features (MB-2)
- High holding force

Mini Magnetic Base

The Model MMB Mini Magnetic Base is ideal for closely-spaced setups of small optical components. It provides an impressive holding force, a non-magnetic mounting surface and a single tapped hole provides for attachment of components.

Key Features (MMB)
- Smallest footprint
- Ideal for compact optical setups
- Non-magnetic mounting plate
Ordering Information

<table>
<thead>
<tr>
<th>Model (Metric)</th>
<th>Description</th>
<th>Holding Forces* (lb (N))</th>
<th>Price</th>
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<tbody>
<tr>
<td>200 (M-200)</td>
<td>Low-profile, Heavy-Duty Magnetic Base</td>
<td>300 (1334)</td>
<td>$385</td>
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<tr>
<td>150 (M-150)</td>
<td>Low-Profile, Heavy-Duty Magnetic Base</td>
<td>200 (890)</td>
<td>$299</td>
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<td>110 (M-110)</td>
<td>Kinematic Magnetic Base</td>
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<td>$149</td>
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<td>MB-3 (M-MB-3)</td>
<td>Compact Magnetic Base</td>
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<td>MB-2 (M-MB-2)</td>
<td>Standard Magnetic Base</td>
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<td>MMB (M-MMB)</td>
<td>Mini Magnetic Base</td>
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<td>$59</td>
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<td>MB-1</td>
<td>Utility Magnetic Base Plate</td>
<td>4 (18)</td>
<td>$40</td>
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<td>BK-1-T (M-BK-1-T)</td>
<td>Extra Kinematic Top Plate for Model 110</td>
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<td>$58</td>
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</tbody>
</table>

*Typical holding forces when used on unpainted optical table worksurfaces

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**Thread Dimension [in. (mm)]**

<table>
<thead>
<tr>
<th>Model (Metric)</th>
<th>Thread Dimension [in. (mm)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 (M-110)</td>
<td>1/4-20 (M6) 0.500 (12.5) 1.000 (25.0)</td>
</tr>
</tbody>
</table>
Model MB-1

Model MMB

Model MB-2

Model MB-3

See our website for CAD files.