

VERE**Innovative Products for the Optical Laboratory**

Toll Free in USA

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Home

Mini Optical Breadboards

Corner Tables

BB Carrying Cases

Optical Tables

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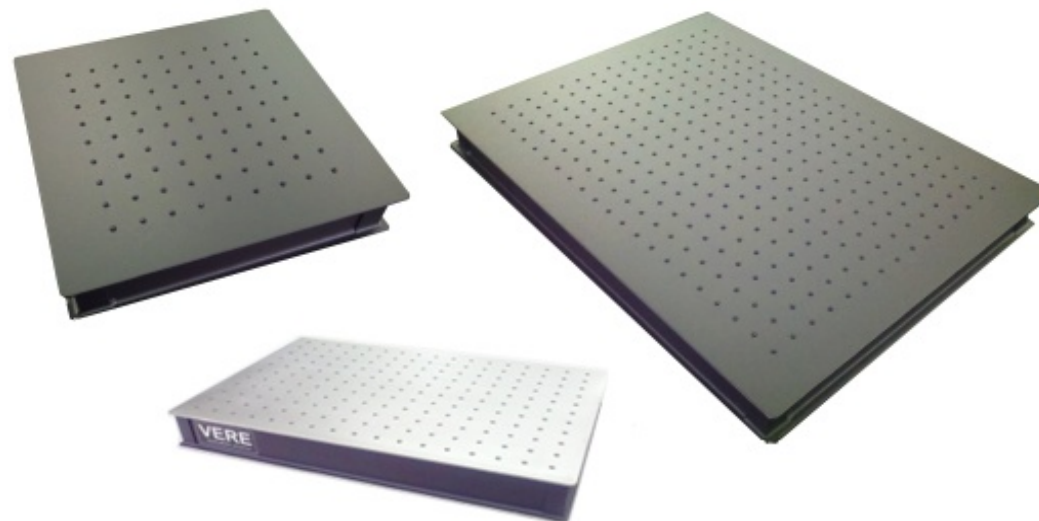
Optical Breadboards

Our breadboards are designed by optical researchers with experience in both academic and industrial laboratories. The design stresses functionality and performance at the lowest possible cost to the customer. Advanced materials and designs are used to provide increased vibration damping and decreased weights when compared to conventional breadboards and tables.

The skins, core and final coating are manufactured separately and then assembled into the final unit permitting a wide variety of skins, cores and coatings to be used based on specific applications. Computer aided design stations are directly linked with computer controlled manufacturing centers to provide high dimensional accuracy and fast error free production.

Custom products and special designs can be quickly created saving you, our customer both money and lead-time.

Our Cost Saving 2" Grid can save up to 15% of the purchase price.



General Specifications - Breadboard Products

Available Skins: Top & bottom skins are the same material unless noted otherwise*

- (FMP) Ferromagnetic Steel: Black Polyurethane Coating 0.125in (3mm)
- (ALP) Aluminum: Black Polyurethane Coating 0.190in (5mm)
- (ALN) Aluminum: Natural with Matte finish (no coating) 0.190in (5mm)
- (ALK) Aluminum: Black Anodized 0.190in (5mm)
- (ALX) Aluminum: Clear Anodized 0.190in (5mm)
- (LW) **"Ultra" Light Weight 0.236in (6mm)**
- (LWI) **"Ultra" Light Weight (w/ threaded inserts) 0.157in (4mm)**
- (TI) Titanium with threaded inserts: Natural with Matte Finish 0.050in (1.3mm)
- (SS44) Stainless Steel 400series: 0.125in (3mm): Black Polyurethane Coated or Natural with Matte
- (SS4r) 400 series, SS Top, Ferromagnetic Bottom 0.125in (3mm)*
- (INV) Invar: Natural with Matte Finish 0.125in (3mm)
- (CFI) Carbon Fiber (Graphite) with threaded inserts: Natural with Matte Finish 0.1in (2.5mm)

Core: Our Lightweight, High Dampening, Honeycomb Style (standard)

- System Eliminates Resonances
- Cell size: 3/8 inch cell
- Vertically bonded
- Waterproof
- Acid resistant
- Optional Core Materials -- Aluminum Honeycomb or Stainless Steel Honeycomb

Tapped Holes: Lead screw tapped

- 1/4-20 (English), most common

- (PCP) Polycarbonate - Black Polyurethane Coated - Nylon Thumb Screws Required - Call for information

Finish: **Top / Sides / Bottom**

- **Standard:** Black anti-reflective polyurethane impervious to most chemicals. Absorbs more than 90% of light incident upon it. Absorbs more than 95% of the energy in near perpendicular incidence and scatters grazing reflections to less than 5%.
- **Optional:** Anodized or Natural with matte finish (Material Dependent)
- **Optional:** Cleanroom Class 100 finish

Borders and Corners around grid:

- Standard Border - 1st row 2" from edge (50mm)
- Optional Borders - .5" (12.5mm) or 1" (25mm)
- Rounded corners are standard with our product

Technical Specifications:

- **Max. Compressive load:** >55lbs/in², >3.9N/cm²
- **Max. Static load before failure:** **P/n:** 12362E1 supported at end >11,000lbs, >5000N
- Max. Dynamic Deflection Coefficient: 0.3×10^{-3}
- Max. Relative Motion (in.) - IRDmax: 1.3×10^{-9}
- **Deflection:** **VERE Part # 12362E1** (**Supported at 24"**) 32µin/lb, 1.5µ/N
- **Deflection:** **VERE Part# 48968E1** (**Supported on legs**) 2µin/lb, 0.1µm/N

- M6 (Metric) holes
- 8/32 available
- 10/32 available

Top Grid Patterns:

- **Standard:** 1" (Center to Center)
- **Cost Saving:** 2" (Center to Center)
- **Metric Standard:** 25mm (Center to Center)
- **Metric Cost Saving:** 50mm (Center to Center)
- **Optional:** No grid

Support Mounting Holes (Bottom Skin):

- **Standard:** (4) ----- 2" (50.8 mm) inward from edges
- **Size and type:** ---- Matches top grid holes. (E=1/4-20) (M= M6)
- **NIL / VIL / VIH Leg Mounting:** --- Location is unit dependent
- **Tables Stand Mounting:** Most units use the "Standard" mounting holes

Dimensional tolerances:

- **Length, width:** +0.05 -0.125in (3.2mm)
- **Thickness:** 0.1in (2.5mm)
- **Hole positions wrt other holes:** 0.004in (0.1mm)
- **Hole wrt edges:** 0.1in (2.5mm)
- **Flatness (top surface):** 0.007" over 1 ft distance for unit sizes 48" x 72" and under. Over 48" x 72", .010" over 1' with .030" over the total length.

Laser Ports/Through holes



Any size or shape hole can be placed through the board for bringing laser beams to the top surface or for mounting instruments flush. The honeycomb core is sealed around the through holes, allowing a clean environment for your application.

Custom hole patterns

We can build your board to your specifications. Additional Holes, Grids, Bolt Hole Circles and Uniform Patterns are also available.

Extra core thickness

Our core comes standard in .50, 1, 2, 4, 6, 8 and 12 inches thick. Any thickness of table can be made by laminating multiple cores. Please consult the factory for more options.

Custom sizes and shapes



The size is limited only to your imagination. Custom sizes are available for the same price as the next larger standard size.

Email a drawing of your custom shape for a quote.

Movable Optical Breadboards

Wheeled Carts and other support systems with casters are available for Classroom or Lab applications. Your experiment can be moved on site as needed, then pushed into the storage closet until the next need arises. Available for most Optical Breadboards.

Vertically Mounted Breadboards

Double Sided Breadboards

A grid can be placed on the Top and Bottom of the Breadboard. The Bottom Grid can be same as Top, or can vary with a Custom Pattern or Tapped Hole size. Border on the Bottom can be changed also.

Cleanroom Class 100 -- Coating Option

Many of our products can be made to be Clean Room Class 100 compatible. Please call with your application specifications.



Can be offered with Right Angle Brackets for Table top use or [Self Supporting with Vibration Isolation Canisters.](#)

VERE's Light Weight Optical Breadboards



- Weighs less than a standard Aluminum unit.
- Ideal for situations where portability and mobility are a concern.
- Available in most sizes.



Only **3.6 lb's/ft²** (2" core, 1" grid)

Vibration Bladders

A very effective way of isolating a breadboard or small table from another table is by use of an air bladder. The air bladder is inflated and placed on a bench or other table and the breadboard (BB) placed on top. For years, it has been common to use an inner tube from a bicycle or car, and it provides isolation as good as or better than any other passive method. We offer a similar setup composed of an air bladder matched to the board size and an air pump.



(2)VBB's shown in photo

Part number: Bladder only

VBB-S 12" bladder

VBB-L 24" bladder

Part number: Bladder with air pump

VBB-PS 12" bladder for 18-28" BB's

VBB-PL 24" bladder for 30"+ BB's

Vibration Isolation



We offer two types of Vibration Isolation Legs. The standard air spring has a load range of 50 Lb's up to 400Lb's per leg. The heavy duty air springs load range is 150 Lb's up to 1200Lb's per leg. [Click here for more info.](#) (Not for smaller units).

Tilt platform



Allows the breadboard to tilt up to a 45 degree angle

Part number: **CTP-100**

Breadboard/Table Supports

We offer [Table Stands](#) as well as [Non-isolating table legs.](#)

Click here for an Instruction Manual for this product.

Breadboard leveling option: Part# BLO

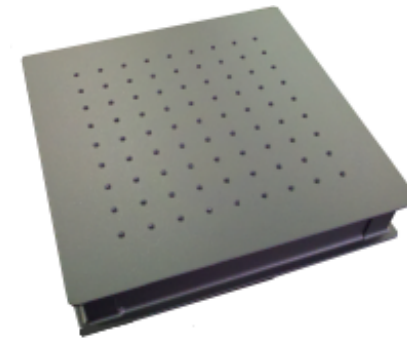
Allows critical leveling adjustment of breadboard. Each foot acts independent of the others allowing overall adjustment for balancing the Height of the breadboard.

Please specify when purchasing the breadboard. Thread size is 1/4-28, fine thread.



Dowel Pins / Locator Pins

During assembly, VERE can install these just about wherever you may need. Sizes start from less than .100" in diameter, height above the surface will also need specified.



VIC/MP - Mounting Plate with Isolation Canisters

There are situations that you need to add vibration isolation to a new or existing breadboard setup. We offer our [Vibration Canisters](#) for such a use. They can be loosely put under your breadboard, or fixed to a mounting base as we show here.

The size and load capacity will be dependent on your Optical Breadboard usage. Call our Sales Department with your requirements today.



Support Posts



Our support posts are 1.25" round steel posts with a mounting flange at the bottom. The top has a 1/4-20 tapped hole. Attach the support post to your breadboard with a 1/4-20 threaded stud and then mount the flange to a table.

Leveling Support Posts

Our leveling support posts are an ideal solution when stacking breadboards or using a breadboard on an irregular table top surface. Height adjustable with a flexible foot.

Part number:

- **SP-24** = 24" Height
- **SP-12** = 12" Height
- **SP-6** = 6" Height
- **SP-4** = 4" Height
- **SP-X** = *Special Height available*

SP-4-E = 4" Extenders, no mounting flange with 1/4-20 threaded hole at each end



(set of 4 required)


VERE - Available Breadboards / Price Guide / Weight Calculator

- Contains data for over 2,500 items
- [Metric Sizes - Click here](#)

Unit of Measurement is 'Inch'

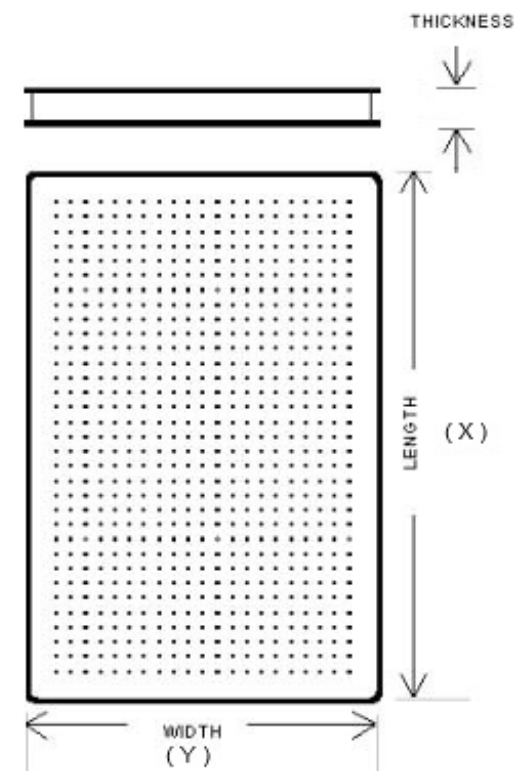
Width	Length	Skin Materials - Select	*Core Thickness (approx.)
24" ▾	48" ▾	Ferromagnetic- Black Coated ▾	2" (Most economical) ▾

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Features include:

- *Less weight to carry around your lab. Cheaper to ship. ***
- *Extended "Standard" Product line - Find that "Just Right" size*
- *Rounded Corners, Anti-reflective Finishes, 1/4-20 or M6 Holes available*
- *Ferromagnetic, Stainless Steels, Aluminum, Light Weight, Titanium and other "Top / Bottom" skin materials available.*

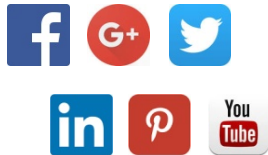


* Overall Thickness will depend on Top/Bottom skins used

** Depending upon Location, Shipping Methods and Packaging Materials

- Our Optical Breadboards are an ideal choice for a Cost Effective, Vibration Isolated Mounting Surface having a Versatile Grid of Mounting Holes

Call VERE today if you have a Competitor's Price Quotation on a new Optical Breadboard or Optical Table. Ask about our "Beat the Price" promotion.



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