

VERE***Innovative Products for the Optical Laboratory***

Toll Free in USA

1-800-568-8373

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Supports / Accessories

"Ultra" Light Weight Tables

Corner Tables

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Product overview:

Our breadboards and tables are designed by optical researchers with experience in both academic and industrial laboratories. The design stresses functionality and performance at the lowest possible cost. 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.



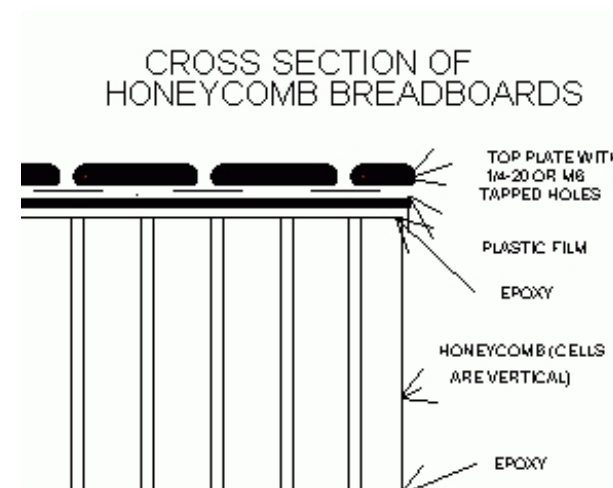
Honeycomb Core:

Most table manufacturers use a metal honeycomb core, which conducts vibrations and has multiple resonant frequencies, and then install tuned vibration dampers to try to suppress the resonance's. These dampers are size specific and add significant weight to the table. The nonmetallic honeycomb core in VERE's tables is designed to absorb vibrations. Our tables have better vibration performance than metal honeycomb tables without the need for damping, or the extra weight.

Our standard honeycomb core is available standard in 1/2, 1, 2, 4, 8, 12, 16 and 20 inch thickness' to offer the optimum choice in vibration damping, strength and weight.

Core thickness' of 2" or 4" are recommended for boards under 4 feet long or longer boards which are evenly supported. 8" or thicker cores should be used for 6 - 8 foot and larger tables and where static or dynamic compliance is critical.

Despite our low price, our honeycomb core features a very small cell size (3/8 inch). The small cell size puts more of the core in contact with the metal surface. For those applications where the core must be Aluminum or Stainless Steel, please consult our Sales Department for special pricing.



Lightweight Design:

A high strength-to-weight core combined with careful board design gives us one of the lightest boards on the market. Our standard breadboard weight is at just **12 lb. (5.4kg)** per square foot. Boards as large as 2'x4' can be shipped via UPS for additional savings!

At only **15 lb. (6.8kg) per square foot**, our tables (8.3in thick) save on your installation costs as well. A 4'x8'x8.3" table can easily be uncrated and fully installed onto our VIL legs by 6 average people in under one hour with just hand tools.

No movers or special equipment required. For critical light weight applications, we offer **Titanium, at 2.2Lb's** per square foot (with 2" core) and our **"ULTRA" Light Weight** material at 3.6 LB's per square foot with a 2" core.

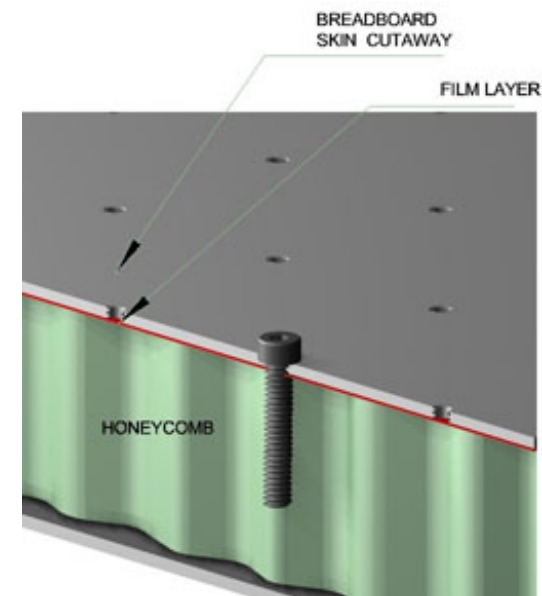


Sealed Holes, No Oil, No Chips:

All machining, on the skins, core and sides, is done prior to the final assembly. The components are then cleaned, the holes sealed with a polymeric film (applied just over the holes) and the skins laminated to the core. This produces a product completely free of oil and chips. The film punctures when screws are inserted allowing sizes up to the full depth of the board (or maximum 3") to be inserted into the board.

Some brands use a continuous plastic film or formed plastic wells, where the core is

bonded to the plastic and not to the metal skin. This type of bond can creep with time or even delaminate. In our boards, greater than 50 % of the core is directly bonded to the metal skins.



Choice of Skins:

Unless specified otherwise, the standard top and bottom plate are Ferromagnetic steel. Other skin materials such as Stainless Steel, Polycarbonate, Invar, Aluminum and Titanium. We can supply your "Non-Magnetic" needs.

Using identical top & bottom skins on our standard breadboards and tables avoids the problem of unmatched coefficients of thermal expansion. It is important to maintain matched thermal expansion coefficients as unmatched thermal coefficients will cause the board to bow even under uniform temperature changes.



Laser Safety:

There are 2 ways to get rid of unwanted laser reflections: absorb them or scatter them. In order to help provide protection against laser reflections and provide an attractive appearance, our boards are coated with a lightly textured flat black polyurethane coating. This coating is impervious to almost all chemicals, highly durable and absorbs >90% of the light incident upon it. The texture is less than 0.001" thick yet it helps to scatter an incident laser beam, preventing unwanted reflections and the potential eye damage from those reflections.



General Specifications - Optical Table / 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)
- **(PCP) Polycarbonate - Black Polyurethane - 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:** Black 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, 1.5µN
- **Deflection:** **VERE Part# 48968E1 (Supported on legs)** 2µin/lb, 0.1µm/N

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
- 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.

Optical Tables for Oversize dimensions

We now have the capacity to manufacture a table up to (100" x 108") or (48" x 240") in one piece.

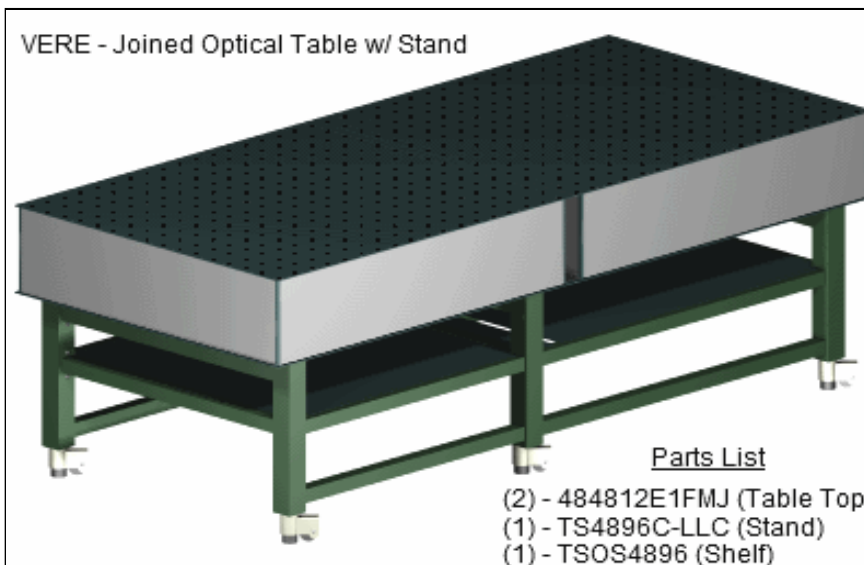
Any other size requirements can be easily accomplished by structurally joining two or more tables. The table top could be shipped as (2) sections - each weighing about 1/2 of the total amount shown above.

The length of each would be also 1/2 of the amount shown above. Ideal for those tight hallway corners.



Using our "Joiner Strip Kit", the unit would be re-assembled and perform as a continuous grid unit, the same as a single full size unit would.

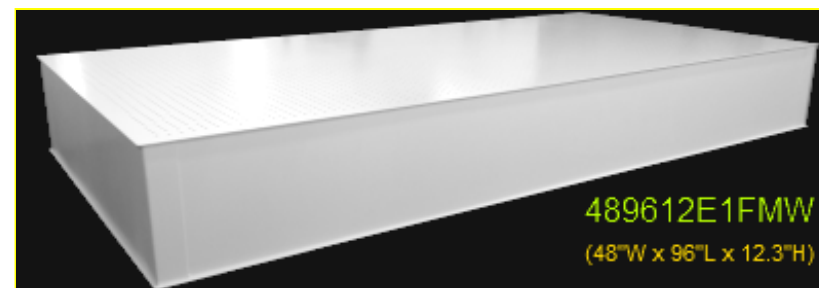
Our system offers any size or shape you require with a structurally sound seam and without interference with the grid pattern. [Click here for more details](#)



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 and concerns.



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 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.

Custom hole patterns

We can build your unit 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, 10, 12, 16, 20, 24, 28 and 32 inches thick. Any thickness of table can be made by laminating multiple cores. Please keep in mind that the Static Deflection is an inverse square of the thickness. Depending on your situation, this may be a substantial improvement in performance.

ITW (Increased Table Weighting)

We can add weight to your table during its construction. Some customers who are involved with Holography, for example, require increasing the weight of the Standard Optical Table. Our Price / Weight Calculator (below) will show our standard product weights for each of our top / bottom skin variations. From there, chat with our engineering team at 1-724-335-5530.

“Cobalt Free” solutions

Call our Sales Department with your requirements today!

Installation Services

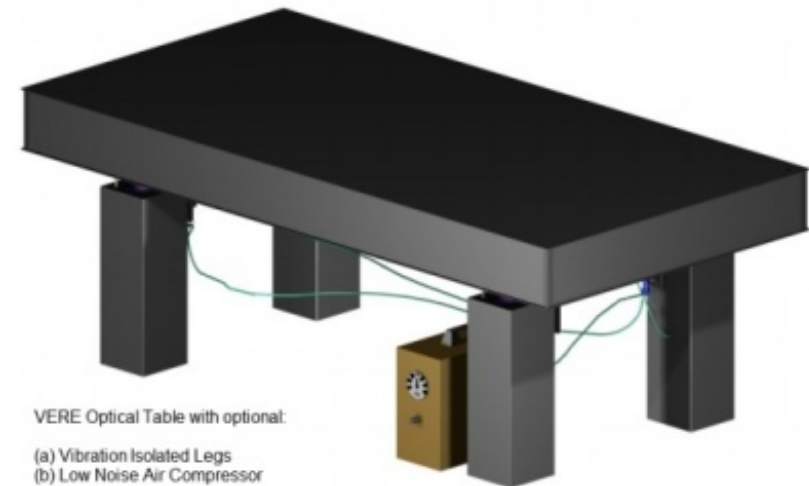
Depending on circumstances, our “Installation Team” can deliver your new Optical Tables, Enclosures and accessories to your laboratory, coordinate with your staff, have it assembled and ready for operation the same day!



In many of the installs, we utilize our [Optical Table Hoist and Transport System](#), a great tool to have if your facility is moving Optical Tables from Lab to Lab often.

Vibration Isolation Legs

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.](#)



Non-Isolating Table Legs

An ideal cost effective solution when Vibration Isolation support is not needed. Constructed of 8" steel tube and built to the fixed height of your lab needs. [Click here for more information](#)

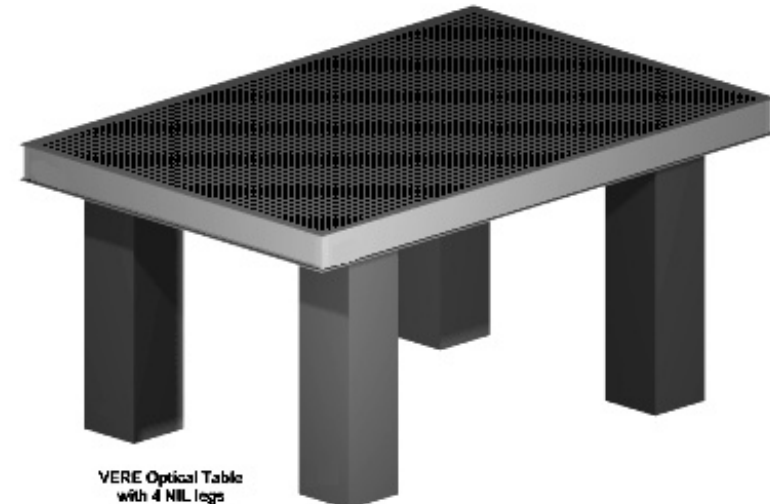


Table Stands and Workstation Stands*

Does a Table Stand provide more flexibility for you lab needs? Individual legs are a great way of supporting the table top, but they do not allow the convenience of an under table shelf, rack mount, or the ability to push the table from here to there. Non- Isolated and Vibration Isolated versions available. [Click here for more information](#)

**Our Workstation series allow the placement of a chair under the Table Top area.*



Corner style - Optical Tables with Stands

At VERE, we try to accommodate each unique application that appears on our Sales Desk. Some of these are minor options, some are a bit more interesting, That is where we design products such as our Corner Table with Stand. Lab user try to use every resource possible, including the “real estate” inside the room. A corner optical table, with or without isolation can help optimize that lab area. Great place to put a Microscope, Laser Source, etc. [Click here for more information](#)



Seismic Restraint Support Systems

VERE has developed a new generation of Optical Table Top Support Systems which is for our customers with geographical locations that may be more prone to Earthquakes and other types of intermittent bouncing or aggressive shaking. Many variations are possible including: Active Isolation, Passive Isolation, and Non-Isolating variants. Under normal conditions, your testing can continue, but when the unknown occurs, you will know that the Optical Table is secured to the floor.

Since all situations are unique, call and ask to talk to our Sales Staff with your concerns.

Under Table Laser Shelf

The Under Table Laser Shelf is 18” wide x 60” long suspended under the optical table with a cradle support. Fits between legs or support stand posts. Add a laser port to the optical table for beam steering. Call for details.

Non- Optical Applications

VERE supplies a series of Isolation Tables that achieve a very tight Flatness Specification for the Top Surface. These tables are used typically in a Manufacturing atmosphere where there is no need for a grid of holes, but have great Flatness .

Over Table Shelf (self supporting)

The OTSA is ideal for instruments and other items needed for the experiment, Totally isolated from the Optical Table, no need to worry about shaking the table while making adjustments. No need to run long cables from another control table. Long cables can attract electrical noise, be unsightly, and create unsafe conditions to walk around, i.e. tripping hazards. [More info here](#)



Custom Table / Breadboard Showcase

[Click here to see some of our specialized applications](#)

VERE - Available Optical Table Tops / Price Guide / Weight Calculator

- Contains data for over 1,500 items

- **Metric Sizes** - [Click here](#)

Unit of Measurement is 'Inch'

Width

Length

Skin Materials - Select

*Core Thickness (approx.)


48" ▾

96" ▾

Ferromagnetic- Black Coated ▾

8" ▾

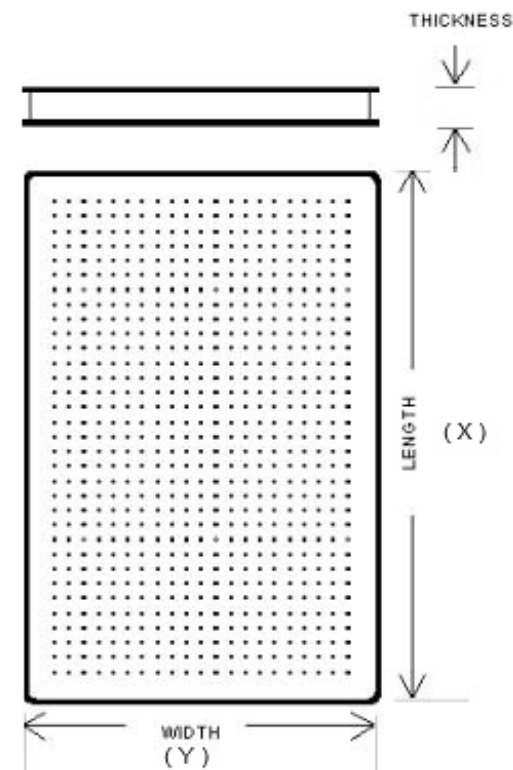
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Features Include:

- **Less weight to move into your lab.** (Movers not needed for many models**)
- **Cheaper to ship.** (Depending upon Location, Shipping Methods and Packaging Materials)
- **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, "Ultra" Light Weight, Titanium and other "Top / Bottom" skin materials available.**
- **Optional Support Systems available with Vibration Isolation.**

* Overall Thickness will depend on Top/Bottom skins used

** Be sure to consult with your Plant Safety Department for guidance.

Please click here to continue to [next catalog section >](#)

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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