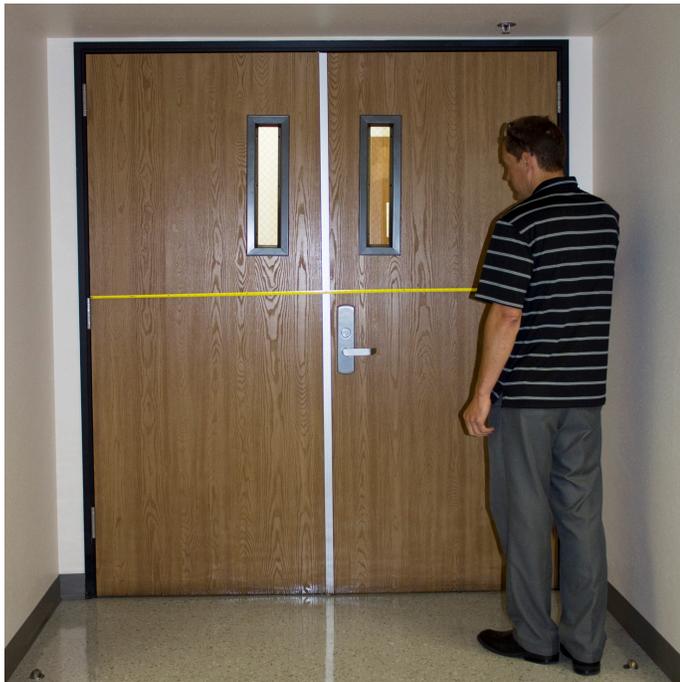


# Pre-Installation Checklist for Optical Table Systems and Workstations

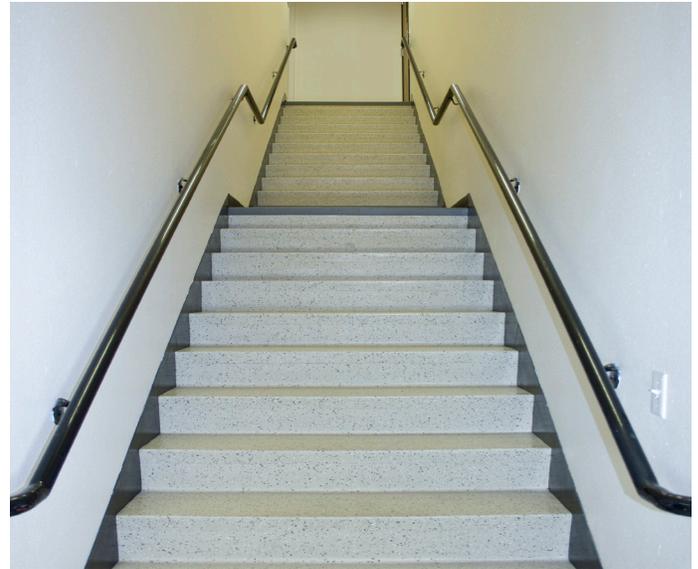


## Lab Access – Hallways, Stairs, Doors

You should plan the route that will be used to transport the optical table to your lab. Depending on the size of your optical table, you may have difficulty moving through hallways, doorways and around corners or up stairs. Remind those moving the table top that an allowance should be made for the crate. Adding 4" to each dimension is approximate but call Newport for exact crate dimensions.



Measure doorways to ensure your optical table can fit



Be aware of obstacles such as stairs

## Elevators

Elevators may be needed to move your optical table. Be sure that the load capacity and the size of the elevator are adequate for your optical table. Make sure the table can fit in the elevator. Tables may be moved in the vertical orientation to fit in elevators, through doorways and around corners.



Check size and load capacity of your elevator



Be sure you can maneuver around corners when transporting your optical table to your lab

## □ LAB SPACE

The appropriate space in the lab should be prepared in order to avoid having to store the optical table system. Select the best location for your vibration control system based on utility access and avoid noisy areas such as air ducts, doorways, non load bearing walls and walls with adjoining hallways. Riggers and/or installers sometimes need to use overhead gantries to install optical tables. If permanent overhead shelves are present, obstructions may occur. Consult with your facilities department or a qualified rigging service before scheduling installation.

## □ AIR SUPPLY

Pneumatic isolator systems require a constant supply of compressed air for proper operation. The required pressure is determined by dividing your total load, including table top by the total isolator diaphragm area plus 10-15 psi. The total pressure required should not exceed 90 psi.

### For S-2000 Series Stabilizer

$$\text{required pressure} = \frac{\text{total load (lbs)}}{4 \text{ (number of isolators)} \times 25.9\text{in}^2} + 10 \text{ psig}$$

For example, the table weight of a 4' x 8' x 8" thick table plus payload on top of the table is 2850 pounds (see figure 1 for table weights). The table will be mounted on four S-2000A pneumatic isolators.

The required pressure is:

$$\frac{2850 \text{ lbs}}{4 \times 25.9 \text{ in}^2} + 10 \text{ psig}$$
$$\text{required pressure} = 37.5 \text{ psi}$$

Note that the maximum operating pressure for the system is 95 psig (6.7 kg/cm<sup>2</sup>).

### For Vision IsoStation

$$\text{required pressure} = \frac{\text{total load (lbs)}}{4 \text{ (number of isolators)} \times \text{diaphragm area}} + 10 \text{ psig}$$

$$\text{Diaphragm area: I-125 isolator} = 1.6 \text{ in}^2$$
$$\text{I-325 isolator} = 4.6 \text{ in}^2$$

For example the VIS3660-SG2-325-A, the breadboard weight of the 36" x 60" x 2" thick breadboard plus the payload on top of the breadboard is 950 lbs. The VIS3660-SG2-325-A has I-325 isolators. The required pressure is:

$$\text{required pressure} = \frac{950 \text{ lbs}}{4 \times 4.6 \text{ in}^2} + 10 \text{ psig}$$
$$\text{required pressure} = 62 \text{ psi}$$

Note that the maximum operating pressure for the system is 90 psig (6.3 kg/cm<sup>2</sup>).

### For OTS and Integrity Series

$$\text{required pressure} = \frac{\text{total load (lbs)}}{9.4 \text{ in}^2 \times \text{(number of isolators)}} + 10 \text{ psig}$$

For example, the table weight of a 4' x 6' x 8" thick table plus the payload on top of the table is 1850 pounds. The table will be mounted on an Integrity or OTS frame (see figure 1 for table weights). The required pressure is:

$$\frac{1850 \text{ lbs}}{4 \times 9.4 \text{ in}^2} + 10 \text{ psig}$$
$$\text{required pressure} = 59 \text{ psi}$$

Note that the maximum operating pressure for the system is 90 psig (6.3 kg/cm<sup>2</sup>).



Compressed air lines installed in lab

Suitable sources of air include in-house compressed air supplies, portable, quiet air compressors such as Newport's ACWS or ACGP, bottled nitrogen. Do not use carbon dioxide. Air should be filtered to remove water, oil and particulate, Newport offers an ARF air regulator filter.



Portable, quiet air compressor and ARF air filter regulator



bottled nitrogen

## STORAGE

Optical table tops should be stored horizontally to maintain flatness and minimize the risk of damage or injury. It is best to leave the optical table in its crate during storage and we recommend not uncrating the table only after it has reached your lab. Do not store your optical table outdoors.



Horizontally stored optical table

Do not store vertically

## FORKLIFT

A forklift may be required to remove the optical table from the delivery truck. The load capacity of the forklift must be adequate. The graph on back page can be used to estimate crated and uncrated table weights.



Forklift with crated table

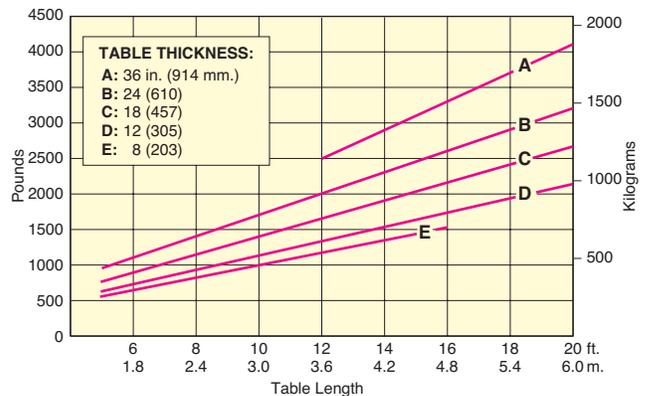


Figure 1: Approximate net weights ( $\pm 10\%$ ) for 4 ft (1.2 m) wide steel tables. For 5 ft (1.5 m) wide models add 20%, for 3 ft (0.9 m) models, subtract 25%. Shipping weights can be estimated by adding 100–200 lbs (45–90 kg) for crate weight.

## WHEN TABLE IS DELIVERED TO YOUR DOCK

CAREFULLY INSPECT ALL PACKAGES AND CRATE FOR ANY SIGNS OF MISHANDLING before accepting the shipment from the carrier.

The following is a list of conditions that should be clearly noted on the bill of lading as damage or possible damage. If any of these conditions are noted at the time of delivery the product must be inspected immediately

- Holes in the crate or packaging
- Visible damage to the part
- Deep scratches or dents on the crate or packaging
- Missing pieces of the crate or packaging including banding
- Activated shock watches and tilt sensors
- Moisture or moisture stains



Loading dock

Position of the crate at delivery must be flat with the cleat side touching the ground. It could cause personal injury and damage to the product if the part is delivered or stored on its side

**Bill of Lading – be sure freight bill is signed and dated by the driver**

- Compare all documents and labels for accuracy and make sure your company is listed as the consignee on all packages and bill of lading.
- Verify the piece count and compare to bill of lading before signing. Always sign for freight exactly how it is received.
- Note on the bill of lading any variation to the packaging and the piece count.

**In the event of product mis-handling during shipment**

- Note damage exception on the bill of lading
- Take photographs of the damage including the packaging if possible.

- Damage should be reported within 24 hours of delivery to Newport Corporation.
- Contact Newport Corporation customer service or your regional sales manager.
- Save all packaging if carrier inspection\* is required

\*The freight carrier will contact the customer within 48 hours to arrange for the inspection.



Shipping crate with a hole in the side caused by a forklift

**RIGGERS**

Large machinery movers (“riggers”) can be hired to install optical table systems. Newport can deliver your table directly to a rigger. If you need assistance in locating a rigger, please contact your Newport Corporation Sales representative.

**See our installation and setup videos on Newport’s YouTube channel**

