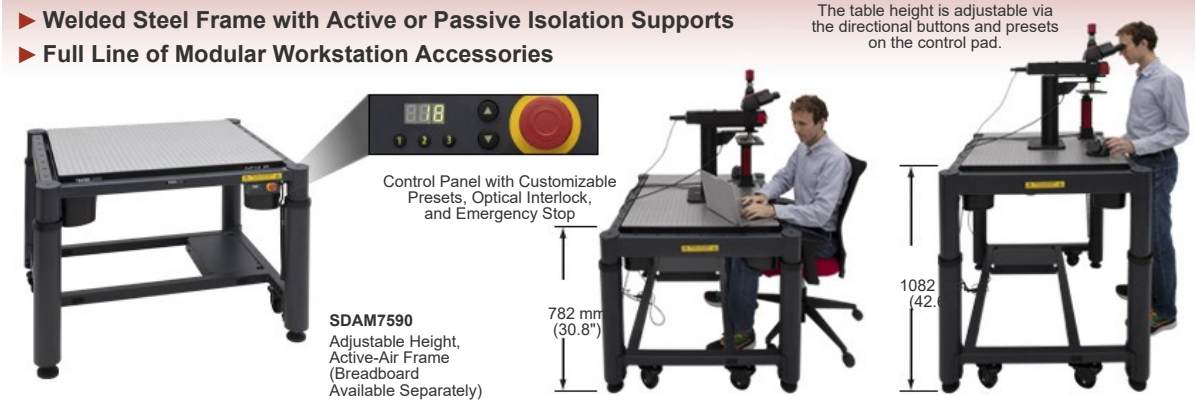
SDAM7590 - May 2, 2025

Item #SDAM7590 was discontinued on May 2, 2025. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

MOTORIZED ADJUSTABLE HEIGHT SCIENCEDESK™ WORKSTATIONS

- **Working Surface Height Adjustable from 782 mm to 1082 mm**
- **Compatible with 2.5' x 3' (750 mm x 900 mm) Breadboards**
- **Welded Steel Frame with Active or Passive Isolation Supports**
- **Full Line of Modular Workstation Accessories**



US Patent 11,266,231

Hide Overview

OVERVIEW

Features

- Smooth Height Adjustment Between Sitting/Standing and Different Users
- Patented Ergonomic Workstation for the Modern Lab or Production Environment
- Integrated Safety Features Including Optical Interlock and Emergency Stop Button
- Two Isolation Options:
  - Active-Air (<0.001 µm Resolution Achievable; 500 kg Working Load)
  - Passive (<0.1 µm Resolution Achievable; 260 kg Working Load)
- Compatible with 2.5' x 3' (750 mm x 900 mm) Breadboards:
  - 1/4"-20 Taps, M6 x 1.0 Taps, or Untapped
  - Unsealed or Sealed Mounting Holes
  - Magnetic or Non-Magnetic
- Welded Steel Frame (No Assembly Required) is Easy to Relocate with Included Casters
- Range of Accessories Available (See Below and the *Accessory Options* Tab for Examples)

ScienceDesk Selection Guide
Fixed Height
2' x 3' (600 mm x 900 mm)
2.5' x 3' (750 mm x 900 mm)
2.5' x 4' (750 mm x 1200 mm)
3' x 4' (900 mm x 1200 mm)
Corner, 3' x 3' (900 mm x 900 mm)
Adjustable Height
2.5' x 3' (750 mm x 900 mm)

Application Examples

- Confocal Microscopy
- High-Resolution Optical Microscopy
- Micro-Injection / Micro-Manipulation
- Optical Lithography
- Electrophysiology
- Cell Injection
- Scanning Probe Microscopy
- Semiconductor Inspection, Testing, and Research
- Nanopositioning Systems
- Holography

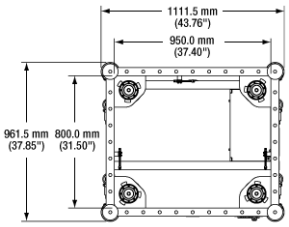
Motorized ScienceDesk Overview

Thorlabs' patented SDAM7590 and SDPM7590 Height Adjustable Ergonomic ScienceDesk™ Workstations feature motorized work surface height adjustment in addition to our active-air or passive isolation methods. With the modernization of the workplace, hot desking (shared workspace) has become more prevalent. These adjustable height workstations are designed for research and production environments where hot desking between multiple users or switching between sit/stand configurations is desired; the motorized adjustment ensures an ergonomic work surface height for any user. A control panel on the front of the adjustable height workstation makes raising and lowering the work surface easy with customizable presets and an emergency stop button. Additionally, an optical beam to the left of the control panel acts as a safety interlock, stopping motion when broken by a person or object.

These adjustable height workstations are compatible with 2.5' x 3' (750 mm x 900 mm), 60 mm or 58 mm thick honeycomb breadboards and a modular system of accessories, making them ideal for use in photonics and imaging applications. A complete workstation includes a frame, breadboard, and optional accessories (all sold separately). Information on the available breadboards and accessories compatible with this workstation can be found below along with a simplified guide for customizing your own ScienceDesk adjustable height micropscope workstation.

The work surface of the ScienceDesk is mounted on active or passive vibration-isolating supports that are recessed within the frame rails to protect the tabletop from incidental contact. These steel frame rails also facilitate the strategic placement of shelves and other accessories around a system so that supporting equipment can be in close proximity to the isolated surface without being on it. See the *Accessory Options* tab or the image to the right for sample ScienceDesk configurations.

The workstation is available with passive or active isolation supports for applications requiring resolutions of <0.1 µm or <0.001 µm, respectively. The frame options provide the user with a tabletop that is isolated from the detrimental effects that vibrations in the lab may cause. For more details on the different support options please see the *Isolators* tab.



Click for Details
These 1111.5 mm wide by 961.5 mm deep ScienceDesks are designed for use with 750 mm x 900 mm breadboards. The breadboard dimensions are what designate compatible accessories (e.g. an overhead shelf for 900 mm wide ScienceDesks will be compatible with the above table).

Breadboard

Our Nexus® Optical Breadboards feature all-steel construction with a honeycomb core, excellent thermal stability, and broadband damping optimized for each table. They provide a durable, rigid, 60 mm thick working surface that will quickly damp vibrations created on the tabletop. They are available with the standard 1/4"-20 (M6) hole pattern on 1" (25 mm) centers, with sealed or unsealed holes, and the option of 304L non-magnetic steel.

Also offered are our intrinsically damped breadboards that feature a steel honeycomb core and working surface with unplasticized polyvinyl chloride (uPVC) side panels. These 58 mm thick tabletops are approximately 25% lighter than our Nexus breadboards and are available for applications that require minimal vibration damping on the tabletop.

See the *Specs* tab for a complete comparison of the different breadboard options.

Accessories

Accessories are the key to creating an ergonomic workspace. ScienceDesk accessories are designed to provide the flexibility to place a breadboard, shelf, or storage bins at any position above, below, or to the side of the isolated system. In addition to shelving and storage, ScienceDesks can be equipped with brackets and holders to support computer equipment, casters for mobility, and a wrist rest for comfort. Thirty-two accessory mounting points along the upper rails provide numerous configuration options to help simplify the customization of your workstation.

Customize Your 2.5' x 3' (750 mm x 900 mm) ScienceDesk Workstation

Step 1: [a] Pick a Support Frame
Active
Passive

a. See the selection guide to the above right for alternate size options

Step 2: [a] Choose a Breadboard
Imperial or Metric Threads (Non-Magnetic Option Available)
Imperial or Metric Threads with Sealed Holes
No Mounting Holes

a. See the *Specs* tab for full specifications.

Step 3: Choose Accessories[a]								
								
Shelving	Computer Accessories	Mounting Posts	Storage	19" Rack Chassis	Lighting	Power Strips	Wrist Rest	Vibration Isolation

a. All accessories shown on this page are compatible with the frame size presented on this page.

Hide Specs

SPECS

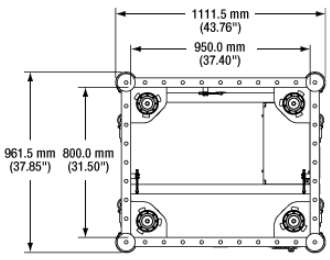
ScienceDesk™ Workstation Frame Specifications			
Frame Item #		**SDAM7590**	**SDPM7590**
Isolation		Active-Air	Passive
Compatible Breadboard Size		750 mm x 900 mm (2.5' x 3')	
Outer Frame Dimensions (Depth x Width)		962 mm x 1112 mm (37.9" x 43.8")	
Height Adjustment Range[a]		782 mm to 1082 mm (30.8" to 42.6")	
Vertical Travel Range		300 mm (11.8")	
Leveling Feet Height Adjustment Range		±15 mm (±0.6")	
Load Capacity (Max)		500 kg (1100 lbs)	260 kg (572 lbs)
Frame Weight		120 kg (264 lbs)	107 kg (235 lbs)
Maximum Isolator Air Pressure		551 kPa (80 psi)	496 kPa (72 psi)
Vertical Isolation	**Resonant Frequency[b]**	1.5 Hz	3.5 Hz
	Transmissibility at Resonance[b]	13 dB	24 dB
	Transmissibility at 10 Hz[b]	97% Damping of Vibrations (-29 dB)	85% Damping of Vibrations (-16.5 dB)
	Resonant Frequency[b]	1.4 Hz	
	Transmissibility at		

Horizontal Isolation	**Resonance**[b]	21 dB	N/A
	Transmissibility at 10 Hz[b]	97% Damping of Vibrations (-27 dB)	
Self-Leveling Repeatability		±0.5 mm (0.02")	
Power Supply Voltage		100 to 240 VAC	
Frequency		50/60 Hz	
Power Usage		250 W	
Mains Power Classification		Class 1, Transient Overvoltage Category II, Pollution Degree (2)	

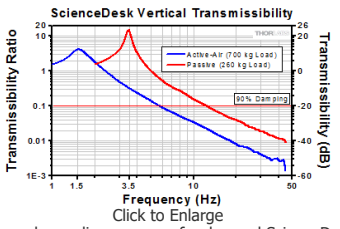
a. Height determined using a 60 mm thick breadboard.
b. These specifications were measured at the maximum load capacity for the isolator type. See the compliance curve to the bottom right.

ScienceDesk™ Workstation Breadboard Specifications						
Imperial Item #		**B3036F**	**B3036T**	**B3036FN**	**B3036Y**	**B3036FX**
Metric Item #		**B7590A**	**B7590L**	**B7590AN**	**B7590Z**	**B7590AX**
Dimensions		Imperial: 2.5' x 3' Metric: 750 mm x 900 mm				
Unpacked Weight	**Imperial**	71 kg	77 kg	73 kg	72 kg	51.1 kg
	Metric	69 kg	75 kg	71 kg	70 kg	49.6 kg
Damping		Nexus® Optimized Broadband Damping				Intrinsically Damped
Compliance Curve (Click to View)[a]		Imperial Metric			Imperial Metric	Not Available[b]
Tapped Holes		Imperial: 1/4"-20 Metric: M6 x 1.0			Untapped	Imperial: 1/4"-20 Metric: M6 x 1.0
Sealed Holes		No	Yes	No	N/A	No
Max Screw Depth		55 mm (13.5 mm for Outer Border Holes)			N/A	54 mm (16.0 mm for Outer Border Holes)
Thickness		60 mm (2.4")				58 mm (2.28")[c]
Ferromagnetism		Magnetic	Magnetic	Non-Magnetic	Magnetic	Magnetic
Top Plate		4003 Grade Stainless Steel		304L Grade Stainless Steel	4003 Grade Stainless Steel	4003 Grade Stainless Steel
Bottom Plate						
Top Skin		5 mm (0.20")				5 mm (0.20")
Bottom Skin		5 mm (0.20")				3 mm (0.12")
Flatness		±0.1 mm (±0.004") Over Any 1 m^2				±0.15 mm (±0.006") Over Any 1 m^2
Core Design		High-Density Plated Steel Honeycomb, 0.26 mm Thick				
Side Panels		Rigid Steel Box Section				Unplasticized Polyvinyl Chloride (uPVC)
Distance from Edge to First Holes		0.5" (12.5 mm) on all Sides				

a. The compliance curves here are typical, and slight variations may occur between individual tables. Each Nexus optimized damping breadboard is individually tested before shipment and includes a certificate with the individual test data and compliance curve.
b. We do not currently have a measured compliance curve for this intrinsically damped breadboard. Click here to see an example comparison between the compliance curves for our 600 mm x 900 mm Nexus optimized damping breadboards versus our 600 mm x 900 mm intrinsically damped breadboards.
c. The total work surface height of the workstation will be 2 mm less than those using a Nexus Optimized Damping Breadboard. This can be corrected by using the ScienceDesk's leveling feet, which have an adjustment range of ±15 mm.



Click for Details
These 1111.5 mm wide by 961.5 mm deep ScienceDesks are designed for use with 750 mm x 900 mm breadboards. The breadboard dimensions are what designate compatible accessories (e.g. an overhead shelf for 900 mm wide ScienceDesks will be compatible with the above table).

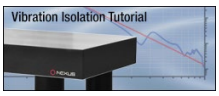


Click to Enlarge
Measured compliance curves for damped ScienceDesks. Resonant frequencies (1.5 Hz and 3.5 Hz) are indicated on the plot for both active and passive frames.

Hide Isolators

ISOLATORS

ScienceDesk™ Isolators



Thorlabs' ScienceDesk frames have isolator mounting platforms in each of the interior four corners of the top rail for rectangular desks or three of the five corners for corner desks. These platforms may be fitted with active-air (self-leveling), standard passive, heavy-duty passive, or rigid (non-isolating) supports for optical breadboards depending on the model chosen.

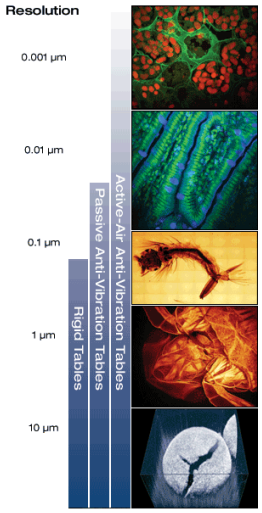


Figure 53A Right side of image from top to bottom: Pisum Seed (Two-Channel Fluorescence Image), Mouse Intestine (Two-Photon Fluorescence Image), Mosquito Larva (Developmental Adaptive Optic Laser Scanning Microscopy), Peach Worm Head (Confocal Fluorescence Image), Cracked Drug Bead Coating (OCT Image).

Active-Air: This is the highest level of isolation available in the ScienceDesk line of workstations. Ideal for confocal microscopy, high-resolution optical microscopy, scanning probe microscopy, electrophysiology, holography, optical lithography, high-power optical microscopy, or other application requiring nanometer resolution.

Passive: The standard version has been optimized for typical imaging applications that require micron resolution, while a heavy-duty version is available for applications that require a large load to be placed on the isolated breadboard. The level of isolation provided by our passive isolators provides an ideal environment for optical, OCT, confocal, and other imaging systems without the need for a constant supply of compressed air.

Rigid (Non-Isolating): Commonly used in laboratory environments for applications that are not overly sensitive to vibrations due to the lack of pneumatic isolators. Note that rigid supports are not available on ScienceDesk frames with motorized height adjustment.

Active-Air Supports

- Pneumatic Dual-Chamber Air Spring Damps Vertical Vibrations
- Trifilar Suspension System Damps Horizontal Vibrations
- Self-Leveling Valves with High Repeatability

Active-Air Isolator Max Load Capacity		
Frame Height	**Fixed**	**Adjustable**
Rectangular Desks	700 kg (1540 lbs)	500 kg (1100 lbs)
Corner Desks	525 kg (1160 lbs)	-

Our ScienceDesks equipped with active isolators provide the highest degree of vibration isolation. Vertical damping is achieved by the use of a dual-chamber, damped pneumatic spring. The table is supported by the air pressure in these chambers. A piston, in contact with the bottom of the optical breadboard, is sealed to the upper chamber with a rolling rubber diaphragm, allowing virtually friction-free motion between piston and chamber. Floor or breadboard motion forces air to flow from one chamber to the other through a laminar flow damper. This restriction of airflow damps oscillatory motion between the floor and table, dramatically reducing settling time.

The volume ratio of the chambers has been optimized to minimize the resonant frequency of the table frame while maximizing the damping performance. Damping of horizontal vibrations is accomplished by supporting the pneumatic vertical isolator on a trifilar suspension system. This innovative pendulum design uses gravity to provide the restoring force after horizontal disturbances. Horizontal oscillations at the system's resonant frequency are damped by linking the base of the vertical isolator to the outer cylinder with an oil-free, vibration-absorbing damper. To allow for changes in load distribution, the active vibration isolation optical breadboard supports have a self-leveling system based on precision 3-way valves that do not compromise vertical isolation when the system is at rest. Because these valves are actuated by breadboard movement, the system returns to within ±0.5 mm (0.02") of its original level position after disturbances. These isolators require a constant supply of air, such as that provided by our compressor. Removing the air supply will disable the active isolation system, causing the optical table to rest securely on top of the legs.

ScienceDesks with active, self-leveling isolators not only provide the highest level of isolation but they are ideal for applications where the load placed on the optical breadboard is constantly changing. In addition, the active ScienceDesk frame is often chosen when the surrounding environment is less than ideal since the active isolators provide a higher level of isolation from floor vibrations.

Passive Supports

- Pneumatic Spring

Standard Passive Isolator Max Load Capacity		
Frame Height	**Fixed**	**Adjustable**
Rectangular Desks	260 kg (570 lbs)	260 kg (570 lbs)

Heavy-Duty Passive Isolator Max Load Capacity	
Frame Height	**Fixed**
Rectangular Desks	700 kg (1540 lbs)
Corner Desks	525 kg (1160 lbs)

The passive isolators on a ScienceDesk consist of an air chamber with a rolling-rubber sidewall. The air chamber is connected by tubing to a Schrader valve so that once the air chamber is inflated, the source of compressed air or the pump used to pressurize the chamber can be removed. The optical breadboard is supported by the air pressure in the chamber, which can be adjusted to compensate for a change in the load supported by the system. The volume and stiffness of the reinforced rubber air chamber has been optimized to minimize the resonant frequency of the optical table supports while maximizing the damping performance. The optical breadboard is supported by rigid supports when the passive isolators are not inflated.

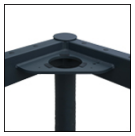
ScienceDesks with passive isolators are the most frequently chosen ScienceDesk for imaging applications. The level of isolation provided by the passive isolators provides an ideal environment for optical, OCT, confocal, and other imaging systems without the need for a constant supply of regulated compressed air. The compact frame supports a family of accessories that allow for the creation of an ergonomic workstation for imaging applications. For instance, a Swept Source OCT Imaging System contains the optical scan head as well as a computer, monitor, swept source laser, and a control box. With the ScienceDesk, all of the supporting electronics can be easily situated around the isolated optical breadboard without transmitting the vibrations created by the cooling fans.

Rigid Supports

- Non-Skid, Rubberized Optical Breadboard Contact Pad

Rigid Isolator Max Load Capacity	
Frame Height	**Fixed**
Rectangular Desks	700 kg

Rigid supports are non-isolating optical breadboard supports. They consist of a steel mounting tray



welded into each corner of the frame. Each tray has 3 contact pads made from a rubberized material. The non-slip rubberized material prevents the position of the optical breadboard from drifting within the optical breadboard well of the ScienceDesk frame. The mounting trays are tested at the factory to ensure they are level. ScienceDesk frames with rigid supports are offered by Thorlabs for use in applications that are not sensitive to vibrations but that can still benefit from the ergonomic design and flexibility of the ScienceDesk system. For instance, applications like microscope slide preparation and low-resolution semiconductor inspection might not require an isolated work surface, but the researcher or technician still needs to perform delicate tasks for prolonged periods of time in an environment that can support the preparation and inspection tools required for the application.

	(1540 lbs)
Corner Desks	525 kg (1160 lbs)

Hide Motorized Adjustment

MOTORIZED ADJUSTMENT

Height Adjustment

The SDAM7590 and SDPM7590 ScienceDesk Frames feature motorized supports that are capable of raising the table surface to any height between its lowest position at 782 mm and its maximum height at 1082 mm. Three set positions can be programmed using the preset 1, 2, and 3 buttons below the display. The height is adjustable at a velocity of 4.0 mm per second by holding the up or down arrow buttons or presets on the control panel.

Click for Details
Control Panel for Motorized Science Desks

Safety

To ensure user safety and prevent any damage that could occur due to operation of the adjustment motors, Thorlabs' motorized ScienceDesks incorporate a variety of general safety features, as well as an emergency stop button and opto-reflective sensor.

General Features

To adjust the height of the table, the directional arrow buttons on the control panel must be continuosly pressed, and, upon release, all height adjustment will cease. There is a delay of a few hundred milliseconds of continuous button pressing before any movement of the table occurs. This is to prevent inadvertent activation due to unintentional button pressing. When in motion, the velocity of the table is limited to 4.0 mm/s, providing operators time to notice any hazards or damage that could occur due to table operation and respond accordingly.

Emergency Stop Button

The control panel features an emergency stop button (see photo to the right) to quickly cut power to the motors when pressed. Resetting the emergency Stop button and continuing the adjustment of the table height can be done by turning the button clockwise until it encounters resistance. Once resistance is encountered, continue turning the button clockwise until it pops out.

Opto-Reflective Sensor

The underside of the frame incorporates an opto-reflective sensor. While the beam path of the sensor is unbroken, the frame is free to be adjusted; however, when the beam is blocked, the the sensor will act as a switch and cut power to the motors driving the legs. To continue adjusting the ScienceDesk, the operator must remove the obstruction and reset the emergency stop button.

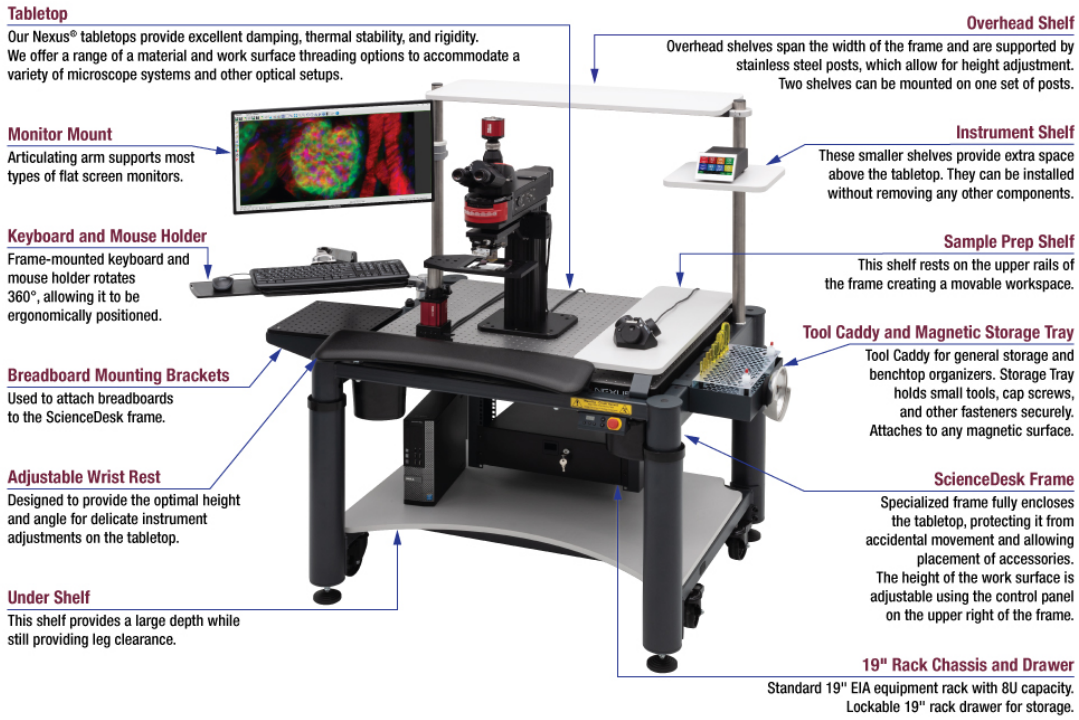
Hide Accessory Options

ACCESSORY OPTIONS

Build Your ScienceDesk Workstation Below

Using the components on this page you can construct a fully modular and ergonomical workstation to fit any need in the lab or production environment. A sample configuration is shown below with an SDAM7950 Adjustable Height, Active-Air ScienceDesk Frame and 1/4"-20 tapped breadboard. More frame, breadboard, shelving, and accessory options are available below.

Click on the various ScienceDesk elements in the photo below for more information on each item.



We also offer these accessories and more below:

- Overhead Shelves with 12° Tilt: Overhead shelves with a 12º downward tilt for easy viewing and storage of equipment in the lab.
- Overhead Storage Tray with Rack: Steel tray for included tool caddy and a front-located steel rack for included linbins.
- Post-Mounted Components Tray: A 300 mm x 300 mm tray for holding small parts.
- Post-Mounted Breadboard Brackets: Bracket for attaching up to 300 mm x 300 mm or 12" x 12" breadboards to a mounting post.
- Side Shelves: Provides extra space for mounting upper rail accessories.
- Lab Bench: Free-standing benches that can be placed near the ScienceDesk frame.
- 12-Outlet Power Strips: Available with US-, EU-, or UK-style plugs. Fits to the rear rail of the desk or underneath the overhead shelf.
- LED Strip Light:: Fits underneath the overhead shelf.
- Cable Tray: Ideal for keeping electrical and fiber optic cables tidy.
- Elbow Rest: Enables operators to perform delicate tasks with higher accuracy and lower fatigue.

Hide ScienceDesk Frames

ScienceDesk Frames


SDAM7590

- Motorized Height Adjustment from 782 mm to 1082 mm
- Two Support Options:
  - Active, Self-Leveling Vibration Isolation (Item # SDAM7590)
  - Passive Isolation (Item # SDPM7590)
- Welded Steel Frame (No Assembly Required)
- Easy to Relocate with Included Casters
- High Max Load Capacity:
  - 500 kg (1100 lbs) (Item # SDAM7590)
  - 260 kg (572 lbs) (Item # SDPM7590)


Click for Details
Height Adjustment Control Panel


Click to Enlarge
[APPLIST]
[APPLIST]
Adjustable height ScienceDesks are ideal for production environments with vibration damping and variable height requirements.

These height-adjustable frames provide a compact, portable, and ergonomic workstation solution for optical breadboards. A control panel (see photo to the upper right and the *Motorized Adjustment* tab for details) on the front allows for the raising and lowering of the work surface, with customizable presets and an emergency stop button. The breadboard rests within the frame bars, which also protect the worksurface from incidental contact and provide compatibility with a number of additional accessories such as monitor mounts, keyboard holders, and shelving. The welded steel frame provides high rigidity and requires no assembly. Included casters provide easy mobility throughout the lab while a large array of shelving, storage, lighting, and computer accessories create an ergonomic, modular workspace ideal for any application. The height of the frames can also be adjusted by ±15 mm (±0.6") using the included leveling feet.

Support Options

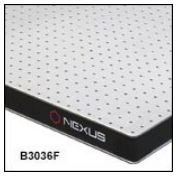
These ScienceDesk Workstations are available with active or passive supports depending on the amount of vibration isolation needed. Our active supports deliver our highest level of vibration isolation making them suitable for applications requiring nanometer resolution. In addition, they will adjust the pressure in each isolator to keep the optical table surface level, even when the distribution of weight on the tabletop is changed. Active supports will require a constant source of pressurized air, such as that provided by our compressor. For less demanding applications that require sub-micron resolution, such as OCT and confocal imaging, we offer passive isolation supports. Passive isolation supports do not require a constant source of compressed air and can be inflated with a simple air pump, but please follow the installation instructions outlined in the user guide so that the isolators are neither overinflated nor underinflated.

For more information on the different isolation types, please see the *Isolators* tab above.

Part Number	Description	Price	Availability
SDAM7590	Motorized Adjustable Height ScienceDesk Frame for 2.5' x 3' (750 mm x 900 mm) Breadboards, Active Isolators, Height: 30.12" (765 mm)	$8,025.00	Lead Time
SDPM7590	Motorized Adjustable Height ScienceDesk Frame for 2.5' x 3' (750 mm x 900 mm) Breadboards, Passive Isolators, Height: 30.12" (765 mm)	$7,155.63	Today

Hide Breadboards

Breadboards



- Thickness: 60 mm (2.4") with Nexus Damping or 58 mm (2.28") with Intrinsic Damping
- Size: 2.5' x 3' (Imperial) or 750 mm x 900 mm (Metric)
- Every Nexus Breadboard is Individually Optimized, Tested, and Shipped with Test Data Certificate
- 1/4"-20 Holes on 1" Centers (Imperial) or M6 x 1.0 Holes on 25.0 mm Centers (Metric)
- 1/2" (12.5 mm) Hole Border for Maximum Usable Area
- Versions Available with Sealed Holes or Untapped
- 304L Non-Magnetic Steel Option

Table 351A Workstation Breadboard Specifications[a]

Imperial Item #		B3036F	B3036T	B3036FN	B3036Y	B3036FX
Metric Item #		**B7590A**	**B7590L**	**B7590AN**	**B7590Z**	**B7590AX**
Dimensions		Imperial: 2.5' x 3' Metric: 750 mm x 900 mm				
Unpacked Weight	**Imperial**	71 kg	77 kg	73 kg	72 kg	51.1 kg
	Metric	69 kg	75 kg	71 kg	70 kg	49.6 kg
Damping		Nexus Optimized Broadband Damping				Intrinsically Damped
Compliance Curve (Click to View)[b]		Imperial Metric			Imperial Metric	Not Available[c]
Tapped Holes		Imperial: 1/4"-20 Metric: M6 x 1.0			Untapped	Imperial: 1/4"-20 Metric: M6 x 1.0
Sealed Holes		No	Yes	No	N/A	No
Ferromagnetism		Magnetic		Non-Magnetic	Magnetic	
Thickness		60 mm (2.4")				58 mm (2.28")[d]

a. See the *Specs* tab for complete specifications.
b. The compliance curves here are typical, and slight variations may occur between individual tables. Each Nexus optimized damping breadboard is individually tested before shipment and includes a certificate with the individual test data and compliance curve.
c. We do not currently have a measured compliance curve for this intrinsically damped breadboard. Click here to see an example comparison between the compliance curves for our 600 mm x 900 mm Nexus optimized damping breadboards versus our 600 mm x 900 mm intrinsically damped breadboards.
d. The total work surface height of the workstation will be 2 mm less than those using a Nexus Optimized Damping Breadboard. This can be corrected by using the ScienceDesk's leveling feet, which have an adjustment range of ±15 mm.

Thorlabs' 2.5' x 3' (750 mm x 900 mm) Breadboards for our ScienceDesk Workstations feature steel construction and excellent thermal stability. Two options are available based on the amount of vibration damping required on the tabletop: our Nexus breadboards with opimized vibration damping and our intrinsically damped breadboards with minimal vibration damping. See Table 351A for more information on the different options.

Nexus Breadboards

Nexus Breadboards are the ideal choice for minimizing vibrations created on the work surface. They are designed to have broadband damping optimized for their size and feature all-steel contruction. They are available with 1/4"-20 (M6 x 1.0) mounting holes on 1" (25.0 mm) centers with a 0.5" (12.5 mm) border at the edges, no mounting holes, or with sealed mounting holes for liquid spill management. A 1/4"-20 (M6 x 1.0) tapped breadboard that is constructed from 304L non-magnetic steel is also available. Every Nexus breadboard is individually optimized, tested, and shipped with a test data certificate.

Intrinsically Damped Breadboards

Our intrinsically damped breadboards are available for applications requiring minimal vibration damping on the tabletop. They have a steel top plate, bottom plate, and honeycomb core with side panels that are created from unplasticized polyvinyl chloride (uPVC). The breadboard has 1/4"-20 (M6 x 1.0) mounting holes on 1" (25.0 mm) centers with a 0.5" (12.5 mm) border at the edge.

Custom options are available with a typical lead time of 6 - 8 weeks. Please contact Tech Support for more information.

Part Number	Description	Price	Availability
B7590A	Nexus Breadboard, 750 mm x 900 mm x 60 mm, M6 x 1.0 Mounting Holes	$1,640.47	Today
B7590L	Nexus Breadboard, 750 mm x 900 mm x 60 mm, Sealed M6 x 1.0 Mounting Holes	$1,723.01	Today
B7590AN	Nexus Breadboard, 750 mm x 900 mm x 60 mm, M6 x 1.0 Mounting Holes, 304L Non-Magnetic Steel	$2,787.00	Lead Time
B7590AX	Optical Breadboard, 750 mm x 900 mm x 58 mm, M6 x 1.0 Mounting Holes	$1,135.95	Lead Time
B3036Y	Nexus Breadboard, 30" x 36" x 2.4", Untapped Top Skin	$1,412.21	Today
B7590Z	Nexus Breadboard, 750 mm x 900 mm x 60 mm, Untapped Top Skin	$1,412.21	Today
B3036F	Nexus Breadboard, 30" x 36" x 2.4", 1/4"-20 Mounting Holes	$1,640.47	Today
B3036T	Nexus Breadboard, 30" x 36" x 2.4", Sealed 1/4"-20 Mounting Holes	$1,723.01	Lead Time
B3036FN	Nexus Breadboard, 30" x 36" x 2.4", 1/4"-20 Mounting Holes, 304L Non-Magnetic Steel	$2,787.00	Lead Time
B3036FX	Optical Breadboard, 30" x 36" x 2.28", 1/4"-20 Mounting Holes	$1,135.95	Today

Hide Overhead Shelves

Overhead Shelves

- Strong, Melamine-Faced MDF Construction

- Shelves for 900 mm Wide ScienceDesk Workstations
- Hinged Clamps for Easy Fitting
- 300 mm (11.81") Shelf Depth
- Maximum Load Capacity: 50 kg (110 lbs)

These Overhead Shelves span the width of the ScienceDesk and are used to place supporting equipment in close proximity above the work surface. Slide the shelf along the post to the desired height above the work surface and then secure it using the included hinged clamps. Up to two shelves can be mounted onto a single set of supporting posts, as seen in Figure 521A.


Click for Details
Figure 521A Two Overhead Shelves can be Placed on a Single Pair of Posts


Click to Enlarge
Figure 521B Hinged Clamps Allow for Quick Attachment to Mounting Posts

Dimensions		
Item #	**Shelf**	**Post**
PSY221	300 mm x 956 mm (11.81" x 37.64") Depth x Width	750 mm (29.5") Tall
PSY223		-

The shelves span the width of a 900 mm wide ScienceDesk frame and are supported by two 750 mm (29.5") tall posts that mount to the holes in the frame's side bars. Two 750 mm tall posts are included with the PSY221; if additional shelves are needed we also offer the PSY223, which does not include mounting posts. The additional shelf is ideal if you wish to use our 1000 mm (39.4") mounting posts (sold separately below) instead of the 750 mm (29.5") tall posts provided with the PSY221. Two overhead shelves can be mounted onto a single set of mounting posts.

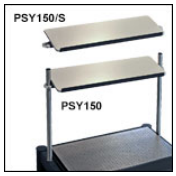
Each overhead shelf comes with two hinged clamps for attaching to mounting posts, as shown in Figure 521B. To install a shelf, secure the clamps at the desired height on the posts. The shelf can then be lowered onto the clamps and attached using the provided M6 cap screws. At this point the shelf can be repositioned or leveled as required. For more details on installation, please see the manual, which is available by clicking on the red Docs icon ( ) below.

Our PSY240 and PSY240E LED light strips or the HDPS12 power outlets can be mounted underneath the shelf using the M6-tapped holes provided.

Part Number	Description	Price	Availability
PSY221	**300 mm Deep Overhead Shelf with 750 mm Posts for 900 mm Wide ScienceDesks**	**$461.41**	**Today**
PSY223	**Additional Shelf: 300 mm Deep Overhead Shelf for 900 mm Wide ScienceDesks**	**$242.77**	**Today**

Hide Overhead Shelves with a 12° Tilt

Overhead Shelves with a 12° Tilt



- Strong, Melamine-Faced MDF Construction
- Tilted Shelves for 900 mm Wide Workstations
- 12º Tilt from Horizontal Allows for Easy Viewing and Storage of Equipment
- 2 mm Thick Steel Support Bar Securely Holds Equipment on the Shelf
- Hinged Clamps for Easy Fitting
- 300 mm (11.81") Shelf Depth
- Maximum Load Capacity: 50 kg (110 lbs)*

Click for Details
Figure 499A Tilted Overhead Shelf Holding Various Equipment at a 12° Downward Angle for Easy Viewing


Click to Enlarge
Figure 499B Hinged Clamps Allow for Quick Attachment to Mounting Posts

Dimensions		
Item #	**Shelf**	**Post**
PSY150	300 mm x 956 mm (11.81" x 37.64") Depth x Width	750 mm (29.5") Tall
PSY150/S		-

These Overhead Shelves have a 12º downward tilt allowing for easy viewing, operation, and storage of equipment and accessories in the lab, as shown in Figure 499A. Each shelf has a 2 mm thick steel support bar on the front edge that extends 22.0 mm (0.87") above its surface to securely hold equipment and prevent it from sliding off of the shelf.

The shelves span the width of a 900 mm wide ScienceDesk frame and are supported by two 750 mm (29.5") tall posts that mount to the holes in the frame's side bars. Two 750 mm tall posts are included with the PSY150; if additional shelves are needed we also offer the PSY150/S, which does not include mounting posts. The additional shelf is ideal if you wish to use our 1000 mm (39.4") mounting posts (sold separately below) instead of the 750 mm (29.5") tall posts provided with the PSY150. Two overhead shelves can be mounted onto a single set of mounting posts.

Each overhead shelf comes with two hinged clamps for attaching to mounting posts, as shown in Figure 499B. To install a shelf, secure the clamps at the desired height on the posts. The shelf can then be lowered onto the clamps and attached using the provided M6 cap screws. At this point the shelf can be repositioned or leveled as required. For more details on installation, please see the manual, which is available by clicking on the red Docs icon ( ) below.

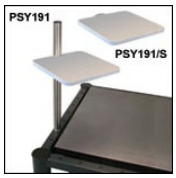
The PSY240 and PSY240E LED light strips or the HDPS12 power outlets detailed below can be mounted underneath the shelf using the M6-tapped holes provided.

*__Please Note:__ The maximum load capacity specification refers to the downward force on the shelf and does not directly correspond to the maximum load of the support bar.

Part Number	Description	Price	Availability
PSY150	**300 mm Deep 12° Overhead Shelf with 750 mm Posts for 900 mm Wide ScienceDesks**	**$544.03**	**Today**
PSY150/S	**Additional 300 mm Deep 12° Overhead Shelf for 900 mm Wide ScienceDesks**	**$414.38**	**Today**

Hide Instrument Shelves

Instrument Shelves



- Strong, Melamine-Faced MDF Construction
- 300 mm x 278 mm (11.8" x 10.9") and 300 mm x 500 mm (11.8" x 19.7") Shelf Sizes
- Maximum Load Capacity: 20 kg (44 lbs)
- PSY191 and PSY192 Include 750 mm (29.5") Post
- PSY191/S and PSY192/S can be Installed Without Removing Post


Click to Enlarge

These Instrument Shelves are smaller in size than the overhead shelves above and can be used to hold a variety of items above the table. The post of the instrument shelf assembly mounts to the upper rails of the ScienceDesk frame. More than one shelf can be mounted to the same post. All shelves can also be mounted directly to our standard Ø1.5" posts.

Figure 324A Split-Clamp Design Allows Shelves to Be Installed on the Post Without Removing Existing Shelves

The split-clamp design (see Figure 324A) allows the shelves to be installed anywhere on the post without removing the existing shelves. Additional shelves are sold separately but do not include support posts. Additionally, a PSY322 Hinged Locking Clamp is available, which will hold the vertical position of the shelf on the post while allowing for free rotational movement around the axis of the post.

Part Number	Description	Price	Availability
PSY191	300 mm x 278 mm Instrument Shelf with 750 mm High Post	$230.07	Today
PSY191/S	Customer Inspired! Additional Instrument Shelf: 300 mm x 278 mm	$149.98	Today
PSY192	Customer Inspired! 500 mm x 300 mm Instrument Shelf with 750 mm High Post	$242.77	Today
PSY192/S	Customer Inspired! Additional Instrument Shelf: 500 mm x 300 mm	$162.69	Today

Hide Components Tray, Ø1.5" Post Mounted

Components Tray, Ø1.5" Post Mounted

- Strong, Steel Tray
- Tray: 300 mm x 300 mm (11.81" x 11.81")
- 12.7 mm (0.50") High Lip Along All Four Edges Retains Equipment
- Maximum Load Capacity: 20 kg (44 lbs)
- PSY320 Includes a 750 mm (29.5") Tall Post
- Hinged Clamp Design Allows for Installation Without Removing Existing Shelves
- Removable Rubber Pad Included


Click to Enlarge
Figure 516A Hinged Clamps Allow for Quick Attachment to Mounting Posts

The PSY320 and PSY320/S Component Trays can be used to hold a variety of items, such as screws, hex keys, or other tools, near the working surface. A 12.7 mm (0.50") high lip on the four edges prevents parts from falling off of the tray, while the 300 mm x 300 mm (11.81" x 11.81") surface provides adequate space to hold needed tools. Each tray comes with a hinged clamp, shown in Figure 516A, to attach it to mounting posts. These clamps allow the tray to be installed anywhere on the post without removing the existing shelves. The trays also include a PSY322 Hinged Locking Clamp, which will hold the vertical position on the post while allowing for free rotational movement around the axis of the post.

A 750 mm (29.5") tall post is included with the PSY320 tray to attach directly to the ScienceDesk frame. If additional trays are needed we offer the PSY320/S, which do not include mounting posts. These additional trays are also ideal if you wish to use our 1000 mm (39.4") tall mounting posts (sold separately) instead of the 750 mm (29.5") tall posts provided with the PSY320. Each components tray can also be mounted directly to our standard Ø1.5" posts.

Part Number	Description	Price	Availability
PSY320	Ø1.5" Post Mounted Components Tray, 750 mm Tall Post Included	$331.76	Today
PSY320/S	Additional Ø1.5" Post Mounted Components Tray	$255.49	Today

Hide Breadboard Bracket, Ø1.5" Post Mounted

Breadboard Bracket, Ø1.5" Post Mounted

- Strong, Steel Construction
- Supports Solid Aluminum Breadboards up to 300 mm x 300 mm (12" x 12")
- Maximum Load Capacity: 20 kg (44 lbs)
- PSY321 Includes a 750 mm (29.5") Tall Post
- Hinged Clamp Design Allows for Installation Without Removing Existing Shelves


Click to Enlarge
Figure 517A Hinged Clamps Allow for Quick Attachment to Mounting Posts


Click to Enlarge
Figure 517B PSY321 Bracket Used to Attach a 12" x 12" Breadboard to a Ø1.5" post

The PSY321 and PSY321/S Breadboard Brackets are designed to securely mount breadboards onto a Ø1.5" mounting post. Each bracket will support any aluminum breadboard up to 300 mm x 300 mm or 12" x 12" in size, and has a maximum load capacity of 20 kg (44 lbs). A hinged clamp, shown in Figure 517A, is included to attach the tray to the mounting posts. Its design allows the bracket to be installed anywhere on the post without removing the existing shelves. Additionally, a PSY322 Hinged Locking Clamp is included, which will hold the vertical position on the post while allowing for free rotational movement around the axis of the post.

A 750 mm (29.5") tall post is included with the PSY321 bracket to attach directly to the ScienceDesk frame. If additional brackets are needed we offer the PSY321/S, which do not include mounting posts. These additional brackets are also ideal if you wish to use our 1000 mm (39.4") tall mounting posts (sold separately) instead of the 750 mm (29.5") tall posts provided with the PSY321. Each bracket can also be mounted directly to our standard Ø1.5" posts.

The breadboard is mounted to the bracket using six 1/4"-20 (M6) cap screws (not included). For more details on installation, please see the manual, which is available by clicking on the red
Docs icon ( ) below.

Part Number	Description	Price	Availability
PSY321	Ø1.5" Post-Mounted Breadboard Bracket, 750 mm Tall Post Included	$268.20	Today
PSY321/S	Additional Ø1.5" Post Mounted Breadboard Bracket	$189.39	Today

Hide Computer Shelf

Computer Shelf

- Strong, Melamine-Faced, MDF Construction
- Designed to Hold a Computer Tower
- 260 mm x 450 mm (10.2" x 17.7")
- Maximum Load Capacity: 20 kg (44 lbs)

This Computer Shelf can be ergonomically positioned on the surrounding frame of the ScienceDesk and is ideally suited for supporting a computer. It can be mounted to the upper or lower rails of the ScienceDesk frame and provides a shelf size of 260 mm x 450 mm (10.2" x 17.7").

Click to Enlarge
Figure 323A Computer shelf shown holding a tower and mounted on the upper rail of the ScienceDesk Frame with our monitor mount and keyboard arm.

Part Number	Description	Price	Availability
PSY180	260 mm x 450 mm Computer Shelf	$73.37	Lead Time

Hide Side Shelves

Side Shelves

- 600 mm (23.6") Wide Side Shelves
- Compatible with 750 mm Deep ScienceDesks
- Three Shelf Depths Avaiable:
  - PSY350: 750 mm (29.5")
  - PSY352: 600 mm (23.6")
  - PSY353: 400 mm (15.8")
- Mounts on Either Side of the Frame on the Upper Rail
- Does Not Interfere with the Mounting of Other Upper Rail Accessories
- Maximum Load Capacity: 50 kg (110 lbs)

Click to Enlarge
Figure 525A PSY353 Side Shelf Mounted on a ScienceDesk

These Side Shelves can be mounted to either side of the upper side rails of the ScienceDesk, providing a shelf width of 600 mm (23.6"). The shelves are compatible with any ScienceDesks that has a 750 mm depth.

Part Number	Description	Price	Availability
PSY350	750 mm x 600 mm Side Shelf	$227.52	Today
PSY352	600 mm x 600 mm Side Shelf	$221.16	Today
PSY353	400 mm x 600 mm Side Shelf	$214.81	Today

Hide Breadboard Mounting Brackets

Breadboard Mounting Brackets

- PSY360 Supports Breadboards up to 300 mm x 600 mm (12" x 24")
- PSY361 Supports Breadboards up to 600 mm x 900 mm (24" x 36")
- Maximum Load Capacity: 50 kg (110 lbs)
- Strong, All-Steel Construction
- Can be Leveled via Adjustment Screw

Click for Details
Figure 476A PSY360 Bracket Mounting an MB1224 Breadboard and Attached to a ScienceDesk

These Brackets allow our solid aluminum breadboards to be fixed to the side or rear rails of the ScienceDesk, in a similar way to the side shelves mentioned above. They are available in two sizes; the PSY360 supports breadboards up to 300 mm x 600 mm (12" x 24"), while the PSY361 can be used with breadboards up to 600 mm x 900 mm (24" x 36"). The breadboard can be leveled by adjusting a screw in the rear face of each bracket, using an 4 mm or 9/64" hex key (click Figure 476A). Two brackets are supplied that attach to the underside of the breadboard using standard M6 or 1/4"-20 bolts (not supplied).

Part Number	Description	Price	Availability
PSY360	Breadboard Mounting Brackets, 300 mm Long, 2 Pieces	$143.64	Today
PSY361	Breadboard Mounting Brackets, 600 mm Long, 2 Pieces	$162.69	Today

Hide Under Table Shelves

Under Table Shelves

- Strong, Melamine-Faced MDF Construction
- Compatible with 900 mm Wide ScienceDesks
- Two Shelf Depths Avaiable:
  - PSY310: 580 mm (22.8")
  - PSY311: 730 mm (28.7")
- Maximum Load Capacity: 100 kg (220 lbs)

Dimensions			
Item #	Width	Depth at Edge	Depth at Center
PSY310	1050 mm (41.3")	580 mm (22.8")	424 mm (16.7")
PSY311		730 mm (28.7")	574 mm (22.6")

These large Under Shelves span the rear width of the ScienceDesk frame and provide a large shelf depth, while still giving leg clearance. The surface provides extensive storage both at the rear and sides of the ScienceDesk and allows heavy items, such as controllers and power supplies, to be stored away from the work surface. For more details on installation, please see the manual, which is available by clicking on the red Docs icon ( ) below.

If an under shelf is attached to the ScienceDesk, the PSY180 Computer Shelf can be used only on the upper rails.

Part Number	Description	Price	Availability
PSY310	580 mm x 1050 mm Large Under Shelf for 900 mm Wide ScienceDesks	$259.29	Lead Time
PSY311	730 mm x 1050 mm Large Under Shelf for 900 mm Wide ScienceDesks	$273.29	Lead Time

Hide Sample Preparation Shelf

Sample Preparation Shelf

- 750 mm (29.5") Shelf Depth
- Compatible with 750 mm Deep ScienceDesks
- Not in Contact with Tabletop
- Maximum Load Capacity: 15 kg (33 lbs)

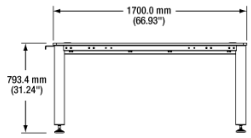
The Preparation Shelf rests on the upper rails of the ScienceDesk, creating usable workspace next to an imaging sytem without disturbing the isolated tabletop. The shelf can be easily repositioned by sliding it along the frame.

Part Number	Description	Price	Availability
PSY250	750 mm Sample Preparation / Staging Shelf	$103.91	Today

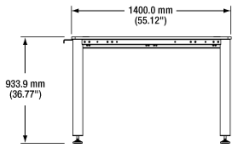
Hide Lab Benches

Lab Benches

- Two Options Available:
  - PSY501: 793 mm Tall, 1700 mm x 600 mm Work Surface
  - PSY502: 934 mm Tall, 1400 mm x 600 mm Work Surface
- Rear Ø17.5 mm Through Holes for Post-Mounted ScienceDesk Accessories
- M6 x 1.0 Taps Along Front and Rear of Frame for Power Strips, Light Strips, or Cable Trays
- Load Capacity: 350 kg (770 lbs)
- Leveling Feet Height Adjustment: ±25.0 mm
- Two Cable Ports For Routing and Organizing Cables
- Steel Frame with Melamine-Faced MDF Tabletop
- Optional Casters Allow for Easy Relocation Throughout the Lab
- Optional Brackets for Rack Chassis Compatibility



Click for Details
PSY501 Bench Mechanical Drawing



Click for Details
PSY502 Bench Mechanical Drawing

Thorlabs' Free-Standing Lab Benches provide additional preparation or storage space in the lab. They are available in two different sizes and heights (refer to the drawings to the right for details). The different heights fall within the height adjustment range (782 mm to 1082 mm) of the ScienceDesk frames sold above. Each table features a steel support frame that can support loads up to 350 kg and has leveling feet for height adjustments up to ±25.0 mm. Two ports with removable covers are provided for managing cables.

ScienceDesk Accessory Compatibility
Any post-mounted ScienceDesk accessory, including shelving, storage, or monitor and keyboard mounts, can be attached to the bench using the rear-located Ø17.5 mm through holes. The bench also includes four M6 x 1.0 tapped mounting holes along the front and rear of the supporting frame. These mounting holes allow various ScienceDesk accessories, such as power strips, light strips, or cable trays, to be attached to the edge of the bench.

PSY140 casters can be mounted to the bottom rails of the bench to convert it into a mobile workstation. A TFR19 19" rack chassis can also be attached to the desk using PSY177 brackets.

Part Number	Description	Price	Availability
PSY501	Lab Bench for ScienceDesk Workstations, 1700 mm x 600 mm, 793 mm Tall, Free-Standing	$1,283.79	Today
PSY502	Lab Bench for Optical Table Workstations, 1400 mm x 600 mm, 934 mm Tall, Free-Standing	$1,283.79	Today
PSY140	Casters, Set of Four	$162.69	Today
PSY177	Rack Chassis Brackets for PSY501/PSY502 Lab Bench and TFR19 Rack Chassis	$90.89	Today

Hide Monitor & Tablet Mounts

Monitor & Tablet Mounts

- PSY121 Monitor Mount:
  - Compatible with 75 mm x 75 mm (2.95" x 2.95") and 100 mm x 100 mm (3.94" x 3.94") VESA Patterns
  - 10 kg (22 lbs) Max Load Capacity
  - Mounts to a Ø1.5" Post (Not Included)
- PSY122 Tablet Adapter:
  - Attaches to PSY121 Monitor Mount (Sold Separately)
  - Spring-Loaded Clamp Fits Tablets or Phones from 5.5" to 8.7" (140 to 220 mm) Wide and ≤0.67" (17 mm) Thick

Click to Enlarge
Figure 325A PSY122 Tablet Adapter Attached to PSY121 Monitor Mount and Ø1.5" Post

Click to Enlarge
Figure 325B Monitor Mount Attached to a PSY161 Post and Mounted on a ScienceDesk

40° Adjustment Cone with Lockable Ball Joint

The PSY121 Flat Screen Monitor Support Bracket is compatible with 75 mm x 75 mm and 100 mm x 100 mm VESA mounting patterns. These mounting patterns are typically used on small to medium LCD monitor displays. The monitor mount features an articulated arm that allow flexible positioning and has a load capacity of 10 kg (22 lbs).

The PSY122 Tablet Mounting Adapter attaches directly to the PSY121 Monitor Mount (sold separately) and is compatible with tablets from 5.5" to 8.7" (140 to 220 mm) wide and ≤0.67" (17 mm) thick. The tablet is held by a spring-loaded clamp with a yellow strap on each end, designed to aid in pulling the clamp arms apart. The locknut on the back of the holder can be loosened to change the angle of the holder. For Ø1/2" post mounting, we also offer the PSX123 Tablet Mount.

A Ø1.5" post (Item # PSY161 or PSY162) is required to secure the PSY121 mount. Alternatively, a post from an Overhead Shelf/Instrument Shelf or one of our Ø1.5" lab posts could also be used.

Part Number	Description	Price	Availability
PSY121	Flat Screen Monitor Support Bracket with Articulating Arm	$194.47	Lead Time
PSY122	Customer Inspired! Tablet Mounting Adapter for PSY121 Bracket (Sold Separately)	$204.31	Today

Hide Keyboard and Mouse Holder

Keyboard and Mouse Holder

- Articulating Arm Keyboard and Mouse Holder
- Includes Wrist Rest
- Attaches to ScienceDesk Frame

This Articulating Arm Keyboard and Mouse Holder is the ideal solution to secure most keyboards and mouse pads to the ScienceDesk frame. The arm attaches to the side rails of the frame and provides 360° of horizontal positioning and vertical adjustment. It is an ergonomic, space-saving alternative to storing the keyboard and mouse on the table itself.

Click to Enlarge
Figure 326A PSY132 Keyboard Holder Mounted on a ScienceDesk

Part Number	Description	Price	Availability
PSY132	Articulated Arm with Keyboard and Mouse Holder	$517.32	Today

Hide Ø1.5" Stainless Steel Post for ScienceDesk Frames

Ø1.5" Stainless Steel Post for ScienceDesk Frames

- Length: 750 mm (29.5") and 1000 mm (39.4")
- Ideal for Post-Mounted Accessories
- M16 Bolt Attaches to Outside Rails of ScienceDesk

These Posts are available in lengths of 750 mm or 1000 mm (29.5" and 39.4") and are ideal for accessories that require a 1.5" diameter post, such as the monitor mount. Note that 750 mm long posts are included with the Overhead and Instrument Shelves.

Part Number	Description	Price	Availability
PSY161	Ø1.5" (38 mm) x 750 mm Post for ScienceDesk and Optical Table Frames	$123.30	Today
PSY162	Customer Inspired! Ø1.5" (38 mm) x 1000 mm Post for ScienceDesk and Optical Table Frames	$162.69	Today

Hide Locking Clamp for Ø1.5" Posts

Locking Clamp for Ø1.5" Posts

- Retain the Position of Ø1.5" Post Mounted Accessories
- Hinged Clamp Design Allows for Installation Without Removing Existing Shelves

Thorlabs PSY322 Hinged Locking Clamps are the ideal solution for preventing the unwanted movement of accessories along the axis of the post. Locking the clamp in place (5 mm hex key included) directly under a post-mounted accessory, as shown in Figure 518A, prevents the accessory from sliding down the post when it is loosened for adjustments. This also allows mounted shelving or brackets to be freely rotated around the axis of the post to a needed position at any time.

Click to Enlarge
Figure 518A Locking Clamp Positioned Under Our PSY321 Breadboard Mounting Bracket, Holding it in Place and Allowing for Free Rotation of the Bracket

Part Number	Description	Price	Availability
PSY322	Hinged Locking Clamp for Ø1.5" Posts	$67.69	Lead Time

Hide Overhead Storage Tray with Rack

Overhead Storage Tray with Rack

- Strong, Welded-Steel Construction

Video 491A Assembly of the Overhead Storage Tray with Rack is fast and

- Hinged Clamp Attaches Quickly to Mounting Posts
- Compatible with 900 mm Wide ScienceDesk Workstations
- Four Plastic Storage Bins Included
  - 190 mm Deep x 105 mm Wide x 75 mm High (7.48" Deep x 4.13" Wide x 2.95" High)
  - Front Lip Height: 34 mm (1.34")
- Maximum Load Capacity: 50 kg (110 lbs)

These Storage Trays consist of a steel tray and a front-located steel rack. The top tray includes a removable tool caddy that can be placed along the top tray for flexible storage and organization of tools, components, and accessories. The front-facing rack contains two rows of slots for flexible positioning of the four included plastic storage bins, as shown in Figure 491B. See Video 491A for assembly steps.

The PSY155/S spans the width of a 900 mm wide ScienceDesk Frame and can be mounted to either the 750 mm tall or 1000 mm tall posts for ScienceDesk frames (sold separately). Two overhead trays can be mounted onto a single set of mounting posts. The storage tray can also be mounted directly to our standard Ø1.5" posts.

Each storage tray comes with two hinged clamps for attaching to mounting posts, as shown in Figure 491C. To install the tray, secure the clamps at the desired height on the posts. The tray can then be lowered onto the clamps and attached using the provided M6 cap screws. At this point the tray can be repositioned or leveled as required. For more details on installation, please see Video 491A or the manual, which is available by clicking on the red Docs icon ( ) below.

can be done by one person. Posts for ScienceDesk frames are available separately.

Click to Enlarge
Figure 491C Hinged Clamps Allow for Quick Attachment to Mounting Posts

Click to Enlarge
Figure 491B Overhead Storage Trays are Ideal for Organizing a Broad Range of Lab Equipment (Not Included)

The bottom of the tray also contains five M6 taps spaced for compatibility with our PSY240 and PSY240E LED light strips and HDPS12 power outlets available below.

Dimensions		
Item #	**Storage Tray[a]**	**Storage Bins**
PSY155/S	80.2 mm x 950 mm x 128.2 mm (3.16" x 37.40" x 29.39") Depth x Width x Height	190 mm x 105 mm x 75 mm (7.48" x 4.13" x 2.95") Depth x Width x Height Front Lip Height: 34 mm (1.34")

- Posts for mounting the storage tray must be purchased separately. The included mounting clamps are compatible with our posts for ScienceDesk frames as well as our standard Ø1.5" posts.

Part Number	Description	Price	Availability
PSY155/S	Additional Overhead Storage Tray with Rack for 900 mm Wide ScienceDesks	$382.59	Today

Hide Tool Caddy

Tool Caddy

- Size: 340 mm x 168 mm x 77 mm (13.39" x 6.61" x 3.03") (L x W x H)
- Rubber Mat in Bottom to Protect Tools and Components
- Divider Kit Included
- Accepts BT17 (BT17/M) Benchtop Organizer

This versatile Tool/Parts Caddy is ideal for general storage. It measures 340 mm x 168 mm x 77 mm (13.39" x 6.61" x 3.03") and simply hooks over the rails of the ScienceDesk as shown in Figure 481A. The caddy is made from 1.2 mm (0.05") thick steel with a grey powder-coated paint finish and is supplied complete with a rubber base mat for protecting tools and components.

Click to Enlarge
Figure 481A PSY157 Tool Caddy with Included Dividers

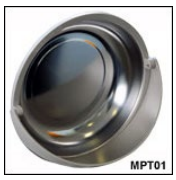
Click to Enlarge
Figure 481B PSY157 with BT17 Benchtop Organizer (Sold Separately)

A divider kit is also provided to allow the user to build smaller storage bins. As shown in Figure 481A, it is comprised of two plastic pieces that span the length of the caddy and two that span the width. The dividers can be moved and interlocked to build different arrangements. They can also be cut into smaller lengths to build custom bin sizes. The caddy can also house our BT17(/M) benchtop organizer, as seen in Figure 481B.

Part Number	Description	Price	Availability
PSY157	Tool Caddy for ScienceDesk	$116.63	Today

Hide Magnetic Storage Tray

Magnetic Storage Tray



- 6" (152.0 mm) Diameter, 1.2" (31.0 mm) Deep Bowl with Pivoting Plastic Cowl
- Contents Retained Magnetically
- Durable Stainless Steel Construction
- Protective Rubber Cover on Magnet Prevents Marring of Mounting Surface

This Magnetic Storage Tray is ideal for storing small tools, cap screws, and other fasteners securely. The tray can be magnetically held horizontally or vertically to any ferrous surface such as an optical table or breadboard. When attached to a vertical surface, a plastic cowl holds non-magnetic or loose items as shown in Figure 472B. The cowl pivots and clips in place at the upper and lower ends of travel to prevent accidental movement.

Click to Enlarge
Figure 472A Rear View of the MPT01 Storage Tray, Showing the Ø3.25" (Ø82.5 mm) Magnet

Click to Enlarge
Figure 472B MPT01 Storage Tray is Ideal for Holding Tools and Devices

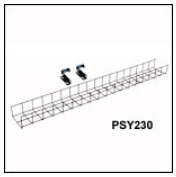
A rubber cover on the Ø3.25" (Ø82.5 mm) magnet protects the mounting surface from damage. The magnet serves two purposes; it attaches the tray to the ferrous

surface and holds magnetic parts within the tray.

Part Number	Description	Price	Availability
MPT01	Magnetic Storage Tray	$26.69	Lead Time

Hide Cable Tray

Cable Tray



- Attach to the Upper Rear Rail of a ScienceDesk (Shown in Figure 482A)
- Ideal for Keeping Electrical Cables and Fiber Optic Patch Cables Out of the Way
- Maximum Load Capacity (Evenly Distributed): 5 kg (11 lbs)
- Length: 900 mm (35.44")


Click to Enlarge
Figure 482A PSY230 Shown Fitted to the Rear Rail of a ScienceDesk

This Cable Tray is designed to be attached to the rear rail of the ScienceDesk, using the two brackets supplied. It is easily installed by hooking the brackets over the rail and locating the cable tray into the slots in the brackets. The tray is made from 3 mm (1/8") thick steel wire with a powder-coated plastic finish. Measuring 900 mm (35.44") long, 60.6 mm (2.39") high and 109.4 mm (4.31") deep, they are ideal for keeping electrical cables and fiber optic patch cables tidy.

Part Number	Description	Price	Availability
PSY230	ScienceDesk Cable Tray, 900 mm Long	$105.82	Today

Hide 19" Rack Chassis

19" Rack Chassis

- Standard 19" EIA Equipment Rack
- Fits to the Side Rails of the ScienceDesk (Shown in Figure 478A)
- 360 mm (14.17") High, 8U Capacity
- Heavy-Duty, 3" Wide Vertical Channels
- Maximum Load Capacity: 60 kg (132 lbs)


Click to Enlarge
Figure 478A 19" Rack Chassis Shown with a Mounted RBD201 DC Controller

This heavy-duty Instrumentation Rack is manufactured from industrial-grade steel, U-channels, and angle extrusions. It can support up to 60 kg (132 lbs) when the weight is distributed evenly throughout the height of the rack. Each side of the rack attaches to a support bar, which in turn fixes to the upper side rails using two M8 bolts (supplied). The chassis can be mounted centrally as shown in Figure 478A, or to the left or right of center.

Once the chassis is fitted, the ScienceDesk can be used with our range of 19" Rack Hardware and other industry-standard 19" lab equipment.

Part Number	Description	Price	Availability
PSY175	19" Rack Chassis for 3' (900 mm) Wide ScienceDesks	$357.18	Today

Hide 19" Rack Drawer

19" Rack Drawer

- Available in 3 Heights: 2U, 3U, and 4U
- Full Extension Ball-Bearing Drawer Slides
- Black-Powder-Coated Finish
- Rubber Lined Bottom to Protect Components and Devices
- Sold Complete with Divider Kit (Item # RAU001)
- Lockable for Added Security


Click to Enlarge
Figure 471A Open RAU400 Drawer Unit Showing Included RAU001 Divider Kit

This versatile Drawer Assembly is ideal for general storage. It fits the 19" rack chassis detailed above and is available in 3 heights: 2U, 3U, and 4U. The drawer is made from 1.2 mm (0.05") thick steel with a black-powder-coated paint finish. It moves on smooth roller bearing runners and features a coupling on the drawer slide, allowing for removal of the drawer from the housing. Each drawer is lockable and comes with two keys, four 12-24 screws with nuts for securing the drawer to the rack chassis, a rubber base mat, and an RAU001 divider kit. Additional RAU001 divider kits are available separately.

The RAU001 drawer divider kit is provided to allow the user to build smaller storage bins. As shown in Figure 471A, it is comprised of two plastic pieces that span the depth of the drawer and two that span the width. The dividers can be moved and interlocked to build different arrangements; they can also be cut into smaller lengths to build custom bin sizes.

Part Number	Description	Price	Availability
RAU200	19" Rack 2U Drawer with RAU001 Divider Kit, Lock, and Keys	$214.81	Today
RAU300	19" Rack 3U Drawer with RAU001 Divider Kit, Lock, and Keys	$221.16	Today
RAU400	19" Rack 4U Drawer with RAU001 Divider Kit, Lock, and Keys	$227.52	Today
RAU001	19" Rack Drawer Divider Kit	$41.53	Today

Hide LED Light Strip

LED Light Strip

- 850 mm (33.46") Long
- PSY240E Come with a 4.3 m Extension Cable
- ON/OFF Switch
- Sturdy Aluminum Base Resists Warping
- Frosted Plastic Cover Ensures Even Spread of Light
- Shipped with 3 Spring Clips, 3 M6 Screws, and a Power Supply
  - The PSY240E Also Ships with 3 T-Nuts and a 4.3 m Extension Cord

Item #	PSY240	PSY240E
Brightness	1530 Lumens	
# of LEDs	51	
Power[a]	15.3 W	
Voltage	12 VDC (Power Supply Included)	
Dimensions	850 mm x 17.4 mm x 8.2 mm[b] (33.46" x 0.69" x 0.32")	

- Power usage per LED is 0.3 W.
- A 4.3 m extension cable is included with the PSY240E.

These rigid LED Light Strips are 850 mm (33.46") long, and are held in place by three spring clips. They are easily fitted underneath a rack or a shelf, such as our ScienceDesk overhead shelves or Overhead Trays with Racks. The strip lights can also be mounted over a bench for general laboratory use. The PSY240E comes with three T-Nuts and a 4.3 m extension cable for use with our Laminar Flow Enclosures. The three M6 screws shipped with the PSY240E are 6 mm long, making it our only light strip compatible with the Laminar Flow Enclosures.

Part Number	Description	Price	Availability
PSY240	**850 mm (33.46") LED Light Strip**	**$123.30**	**Today**
PSY240E	**850 mm (33.46") LED Light Strip with 4.3 m Extension**	**$155.05**	**Lead Time**

Hide 12-Outlet Power Strips

12-Outlet Power Strips

- 12-Outlet, Surge-Protected Power Strip
- Three Outlet Types: US, EU, or UK
- Electrically Grounded Outlets

These 12-outlet Power Strips are available with US-, EU-, and UK-style outlets. Each is designed for indoor use and is housed within an impact-resistant, sturdy metal case. The units are turned on and off with a rocker switch. The power strips are fitted with clearance holes for standard M6 bolts (supplied) and are shipped complete with two brackets for mounting to the rear rail of our ScienceDesks. They can also be mounted underneath the overhead shelf described above, using the M6 tapped holes provided in the shelf.

Item #	HDPS12-US	HDPS12-EU	HDPS12-UK
Electrical			
Voltage Rating	125 VAC	220 to 250 VAC	250 VAC
Current Rating	15 A	16 A	13 A
Frequency	50/60 Hz		
Power Rating	1800 W	3520 W	3250 W
Full Surge Protection	3 kA for 1 µs	5 kA for 1 µs	3 kA for 1 µs
EMI / RFI Filtering	Yes		
CE Approved	Yes		
Physical			
Cord Length	3 m (9.8')		
Cord Gauge	1.5 mm^2		
Number of Outlets	12		
Body Material	Aluminum		
Dimensions (L x W x H)	27.87" x 1.77" x 1.77" (708 x 45 x 45 mm)	31.57" x 1.83" x 2.17" (802 x 46.5 x 55 mm)	31.61" x 1.77" x 1.77" (803 x 45 x 45 mm)

Attention:
The power strips are designed for indoor use only. These devices should not be installed in wet or damp areas exposed to moisture. They are not recommended for use with aquariums. We do not recommend plugging one HDPS12 into another HDPS12 or similar surge-protecting device.

Figure 477A The HDPS12-US Installed on The Rear Rail of One of Our ScienceDesks.

Part Number	Description	Price	Availability
HDPS12-EU	**12-Outlet, Surge-Protected Power Strip, EU Plugs**	**$93.11**	**Lead Time**
HDPS12-UK	**12-Outlet, Surge-Protected Power Strip, UK Plugs**	**$75.64**	**Lead Time**
HDPS12-US	**12-Outlet, Surge-Protected Power Strip, US Plugs**	**$76.91**	**Today**

Hide Wrist Rest, 800 mm (31.50") Long

Wrist Rest, 800 mm (31.50") Long

- Keeps Arms Elevated Above Tabletop
- Length: 800 mm (31.50")
- Padded for Comfort
- Adjustable Height

The PSY100 Wrist Rest is designed to provide the optimum height and angle for adjusting nanopositioning stages or other equipment. It enables operators to perform delicate instrument adjustments with higher accuracy and lower fatigue. The padded portion of the wrist rest is molded foam to provide extra comfort for the user.

The wrist rest is adjustable and mounts to the upper rails of the ScienceDesk workstation using two included M16 bolts. For more details on installation, please see the manual, which is available by clicking on the red Docs icon ( ) below. The wrist rest comes complete with mounting studs and locking bolts.

Part Number	Description	Price	Availability
PSY100	Adjustable Height Wrist Rest	$194.47	Today

Hide Elbow Rest, 300 mm (11.81") Long

Elbow Rest, 300 mm (11.81") Long

- Keeps Arms Elevated Above Tabletop
- Length: 300 mm (11.81")
- Padded for Comfort
- Slides Over the Rails of the ScienceDesk Frame

The TWR300 Elbow Rest enables operators to perform delicate instrument adjustments with higher accuracy and lower fatigue. The elbow rest consists of foam that is molded around a steel insert for added comfort. The steel insert maintains the ergonomic shape and increases the durability of the part.

The elbow rest slips onto the upper rails of the ScienceDesk frame, and can be easily slid across the length of the rail. It requires no additional hardware for mounting and is sold in sets of two.

Part Number	Description	Price	Availability
TWR300	Elbow Rest, Qty. 2	$116.94	Today

Hide Air Compressor for Active ScienceDesks

Air Compressor for Active ScienceDesks

- Deliver Pressure up to 8 Bar (120 PSI)
- Air Tank Size: 3.5 Liters (0.92 U.S. Gallons)
- Compact Footprint
- Integrated Pressure Regulator and Filter
- Low-Noise Operation: 50 dB(A) at 1 m
- Compatible with Our Active Optical Table Supports, Active Isolation Support Frames, and Active ScienceDesk™ Tables

Item #	PTA522	PTA523	PTA524
Connector Style	US	UK	EU
Input Voltage (Frequency)	115 V (50 - 60 Hz)	230 V (50 - 60 Hz)	
Rated Input Current	1.9 A	1.05 A	
Rated Power	140 W	130 W	
Free Air Delivery	20 L/minute (0.71 cfm)	17 L/minute (0.53 cfm)	
Air Tank Pressure (Min/Max)	6 bar (90 psi) / 8 bar (120 psi)		
Air Tank Capacity	3.5 L (0.92 US gal.)		
Air Tank Fill Time from Empty	110 seconds (@ 50 Hz)		
Sound Pressure Level	50 dB(A) at 1 m		
Gross Weight	17 kg (37 lbs)		
Unit Dimensions	410 mm x 360 mm x 360 mm (16" x 14" x 14")		
Oil Type	ROLOIL-SINCOM/32E		

The PTA52x Air Compressors can generate up to 8 bars of air pressure while providing low noise operation (50 dB(A) at 1 m away). Each unit is self-contained and compact. The low duty cycle of the compressors helps minimize vibrations. They are ideal sources of compressed air for active vibration isolation systems, such as our active optical table supports, active isolation support frames, or our active ScienceDesk™ tables.

The PTA52x air compressors accept standard 6 mm outer diameter tubing and include: an air outlet pressure regulator with gauge, a filter, a pressure tank with gauge, and a safety valve. Furthermore, they are equipped with an automatic drainage system that removes condensate from the unit, reducing the maintenance needed by avoiding the need for regular manual draining. They are shipped with a bottle of compressor oil (Item # PTA1006) and a power cord for the appropriate territory.

Note

The air compressor is only intended to operate at a duty cycle of less than 50% (or less than 15 minutes of every 30 minute cycle). To prevent exceeding a 50% duty cycle, check air connections for leaks regularly.

Part Number	Description	Price	Availability
PTA523	Air Compressor, 230 VAC Power Supply with UK Plug	$1,063.03	Today
PTA524	Air Compressor, 230 VAC Power Supply with EU Plug	$1,063.03	Today

PTA1006	500 mL Bottle of Compressor Oil	$58.46	Lead Time
PTA522	Air Compressor, 115 VAC Power Supply with US Plug	$1,063.03	Today

Hide Air Filter/Regulator

Air Filter/Regulator

- Removes Moisture and Particles Down to 5 µm
- Compatible with Our Active Optical Table Supports, Active Isolation Support Frames, and Active ScienceDesk™ Tables

Item #	PTA013
Filter Efficiency	5 µm Particles
Max Inlet Air Pressure	10.34 bar (150 psi)
Outlet Air Pressure	0.34 to 6.89 bar (5 to 100 psi)

Water and particles commonly found in compressed air can be damaging to a vibration isolation system. While this issue is minimized by the integrated filter on our PTA52x Air Compressors, other sources of compressed air may not yield consistent quality. This compact filter/regulator is recommended for use with all Thorlabs active isolation breadboard support frames when not using a Thorlabs air compressor. It regulates the air pressure supplied to the isolators while removing moisture and particles down to 5 µm. The fittings are compatible with the 6 mm diameter plastic tubing supplied with the active isolator frames. Each filter/regulator is shipped with a wall mounting bracket and two 1/4" to 6 mm outer diameter tubing adapters.

Part Number	Description	Price	Availability
PTA013	Air Filter / Regulator	$94.71	Today