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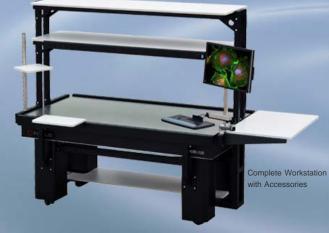
TF1525A6 - April 23, 2015

Item # TF1525A6 was removed from our e-commerce site on April 23, 2015. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

OPTICAL TABLE WORKSTATION: 1.5 m X 2.5 m X 600 mm (4.8' X 8' X 23.6")

- For 1.5 m x 2.5 m x 310 mm (4.8' x 8' x 12.2") Optical Tables
 Active Vertical and Horizontal Isolation
- Active vertical and Horizontal Isolation
- Integrated Casters for Easy Movement





Hide Overview

OVERVIEW

Build Your 1.5 m x 2.5 m (4.8' x 8') Active-Air Optical Table Workstation using the components on this page. Click on the various elements in the photo below for more information on each item.

Overhead Shelving System



Hide Frame

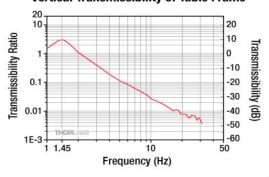
FRAME

Nexus Table Frame with Active Isolators	TF1525A6	
Vertical Resonant Frequency ^a	1.4 Hz	
Horizontal Resonant Frequency ^a	1.15 Hz	
Vertical Transmissibility at Resonance ^a	10 dB	
Horizontal Transmissibility at Resonance	12 dB	
Vertical Transmissibility @ 10 Hz	-31.2 dB	
Horizontal Transmissibility @ 10 Hz	-28.7 dB	
Self-Leveling Repeatability	±0.5 mm (0.02")	
Maximum Isolator Air Pressure	551 kPa (80 psi)	
Height	600 mm (23.6")	
Isolator Max Load Capacity ^b	5500 lbs (2500 kg)	
Workstation Max Load Capacity ^c	On Casters: 3,000 kg (6600 lbs) On Leveling Feet: 4000 kg (8800 lbs)	
Leveling Feet Height Adjustment Range	+18 mm (0.7")	
Optical Table Working Surface Size	1.5 m x 2.5 m (4.8' x 8')	
Outer Frame Dimensions (Depth x Width)	1.469 m x 2.43 m (57.83" x 95.67")	
Frame Weight (Mass)	473.0 lbs (215.0 kg)	

The specifications were measured under a 600 kg load (24% of maximum). See the transmissibility curve opposite.

• The max load of the isolators, including the optical table and any equipment on the table top.

• The total max load of the frame assembly, including optical table, shelves, and all equipment.



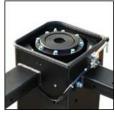


Hide Isolators

ISOLATOR

Nexus[™] Optical Table Frame Isolators

Thorlabs' Optical Table Workstation has Active isolator supports fitted in each of the interior four corners.



Active Supports

- Max Load Capacity: 5500 lbs (2500 kg)
- Pneumatic Dual-Chamber Air Spring Damps Vertical Vibrations
- Trifilar Suspension System Damps Horizontal Vibrations
- Self-Leveling Valves with High Repeatability

These workstations are equipped with active isolators, which provide the highest degree of vibration isolation available. 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 tabletop, is sealed to the upper chamber with a rolling rubber diaphragm, allowing virtually friction-free motion between piston and chamber. Floor or tabletop 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 tabletop supports have a self-leveling system based on a precision 3-Way valves that do not compromise vertical isolation when the system is at rest. Because these valves are actuated by tabletop movement, the system returns to its original level position within ±0.5 mm (0.02 in.) after disturbances. These isolators require a constant supply of air. When the air supply is removed, the optical tabletop rests securely on top of the legs with the isolation system disabled.

These optical table frames not only provide the highest level of isolation, but by incorporating self-leveling valves, they are also ideal for applications where the load placed on the optical tabletop is constantly changing. Typical applications include holography, optical lithography, and high-power optical microscopy. In addition, the active isolation is often chosen when the surrounding environment is less than ideal since the active isolators provide a higher level of isolation from floor vibrations.

Hide Assembly

ASSEMBLY

Assembly of the Nexus Optical Table Workstation

Hide Frame Accessories

FRAME ACCESSORIES

Features

- · Durable Laminate Finish on Shelving
- Accessories for Computer Systems
- Easy to Assemble and Reconfigure
- Post Mounted Accessories are Cross-Compatible with Industry-Standard Ø1.5" Posts and Clamps
- Attach to Lean Bars, Directly to the Frame, or to the Overhead Shelves

Vibration Isolation Tutorial

- Introduction
- Sources of Vibration
- Theory of Optical Table Vibrations
- Optical Table Design
- Theory of Vibration IsolationIsolator Design
- · isolator Design
- Conclusion

When a lean bar is fitted to the front, rear or side of the workstation, our selection of shelving and Ø1.5" post mounted accessories can be used. These Accessories are the key to creating an ergonomic workspace with your Nexus table frame. In order to create a functional, efficient, and comfortable workspace, the supporting equipment must be placed strategically around the system so that it is in the field of view of the user and can be used or manipulated without excessive bending, twisting, or reaching. The following accessories are designed to provide the flexibility to place a working surface or instrument shelf at any position above, below, or to the side of an application. In addition to shelving, the Nexus frames can be equipped with brackets and holders to support computer equipment, and a wrist rest and/or keyboard holder for comfort. The accessory mounting points all along the lean bars make it easy to customize your workstation.

Other accessories, which can be mounted directly to the frame or overhead shelves, are also available. This includes breadboard brackets for the overhead shelves, cable managements trays, power strips, and a 19" rack chassis.

Shelves

The photos below illustrate the shelving options that are compatible with the Nexus table frame. Please see the accessory web page for further details and pricing.









Additional Accessories

The photos below illustrate the additional accessories that are compatible with the Nexus table frame. Please see the accessory web page for further details and pricing.

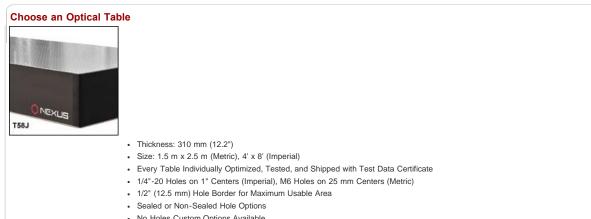


Hide Add the Table Frame You Selected to Your Cart

Add the Table Frame You Selected to Your Cart TF1525A6 (Under Table Shelf Included) Active-Air, Anti-Vibration Frame 97% Damping of Vibrations @ 10 Hz · Isolators Require an External Source of Compressed Air · Easy to Relocate with Integrated Casters Under Table Shelf Included: Max Load Capacity 100 kg (220 lbs) Welded Steel Isolator Pairs (Minimal Assembly Required) · Isolator Load Capacity: 5500 lbs (2500 kg) Including Optical Table These frames provide a compact, portable, and ergonomic workstation solution for optical tables. The active supports deliver our highest level of vibration isolation available, making these frames suitable for applications with sub-micron resolution. The isolators require a constant source of pressurized air, such as that provided by our compressor. In addition, this isolation system will adjust the pressure in each isolator to keep the optical table surface level, even when the distribution of weight on the optical tabletop is changed. Casters and a removable under table shelf are included. Description Part Number Price Availability TF1525A6 1.5 m x 2.5 m (4.8' x 8') Table Frame, 600 mm (23.6") High \$3,825.00 Lead Time

Thorlabs.com - Optical Table Workstation: 1.5 m x 2.5 m x 600 mm (4.8' x 8' x 23.6")

Hide Choose an Optical Table



· No Holes Custom Options Available

Thorlabs' extensive NexusTM optical tables product line features all-steel construction, excellent thermal stability, and damping optimized for each table size. The 5 mm thick stainless steel top and bottom skins have a precision-machined matte finish. These tables have either 1/4"-20 taps on 1" centers (Imperial) or M6 taps on 25 mm centers (Metric), with a 1/2" (12.5 mm) border at the edge of the table for maximum usable area. These tabletops are manufactured from magnetic steel with sealed or non-sealed holes as standard. No holes options are available as a custom order upon request.

Part Number	Description	Price	Availability
T58J	Nexus Optical Table, 4.8' x 8' x 12.2", 1/4"-20 Mounting Holes	\$6,316.67	Lead Time
T58W	Nexus Optical Table, 4.8' x 8' x 12.2", Sealed 1/4"-20 Mounting Holes	\$7,287.75	Today
T1525D	Nexus Optical Table, 1.5 m x 2.5 m x 310 mm, M6 x 1.0 Mounting Holes	\$6,317.24	2 Weeks
T1525Q	Nexus Optical Table, 1.5 m x 2.5 m x 310 mm, Sealed M6 x 1.0 Mounting Holes	\$7,287.75	2 Weeks

Hide Do You Want Front or Rear Lean Bars?

Do You Want Front or Rear Lean Bars?



- · Protect the Work Area from Accidental Knocks
- · Allow Accessories in Our ScienceDesk Range to be Used
- Span the Entire Length of the Optical Table
- Fit to the Front or Rear of the Workstation
- · Supplied Individually

The TFB25 Lean Bar fits to either the front or rear of the frame to form a barrier that shields the vibration-isolated tabletop and protects it from accidental contact. They also allow shelves and post-mounted accessories in the ScienceDesk range to be used. Individually sold, each lean bar ships as three pieces that need to be assembled by the end user. The lean bar bolts to two supports arms, which in turn are bolted to the table frame, one to each of the facing isolators. All necessary mounting hardware is supplied.

If you are also interested in having your workstation equipped with side lean bars, please see the presentation immediately below this one.

Part Number	Description	Price	Availability
TFB25	2.5 m (8') Long Nexus Table Frame Lean Bar, Qty. 1	\$360.00	Today

Hide Do You Want Side Lean Bars?

Do You Want Side Lean Bars?

	Protect the Work Area from Accidental Knocks
A TA LEAD	Allow Accessories in Our ScienceDesk Range to be Used
·	Span the Width of the Optical Table
	Fit to the Overhead Shelf Support Frame
TFB15	Supplied in Pairs to Fit One End of the Workstation

The TFB15 Side Lean Bars span the entire width of the optical table on the right or left side. They are sold as a package of two to fit one end of the table. These bars bolt to the support struts of the overhead shelf described below and shield the vibration-isolated tabletop from accidental contact.

Please Note: An overhead shelf unit is required to fit the side lean bars. Please see the presentation directly below for more information and to order an overhead shelf.

Description	Price	Availability
exus Table Frame Side Lean Bars, 1.5 m (4.8') Wide, Set of 2 for One End of the Frame	\$180.00	Lead Time
e)		

Hide Do You Want an Overhead Shelf?

Do You Want an Overhead Shelf? Image: Trsss Image: Trss </

If additional shelf space is required, this overhead shelf system, with two shelves, is an ideal solution. The shelves span across the length of the optical table and are a great space saver in the lab. The vertical supports feature a range of mounting points to allow height adjustment, and through holes are included in each corner of the frame for easy cable management. The shelves can be replaced with MB series breadboards when using the mounting brackets detailed below.

Part Number	Description	Price	Availability
TFS251	Nexus Table Frame Overhead Shelf, 2.5 m (8') Long	\$2,000.00	Today

Hide Do You Want Breadboard Mounting Brackets?

Do You Want Breadboard Mounting Brackets?



- Supports MB Series Breadboards 300 mm to 600 mm (12" to 24") Wide
 Fits Over The Overhead Shelf Support Frame (Shown in Photo to the Right)
- Strong, All-Steel Construction



Click to Enlarge MB Breadboard fitted to the overhead shelf frame and viewed from the underside.

These brackets allow any of our MB series of breadboards with a width from 300 mm to 600 mm (12" to 24")
to be fixed to the frame of the overhead shelf mentioned above. Four 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
TFA1	Breadboard Mounting Brackets (Set of Four)	\$40.00	Today

Hide Do You Want a 24-Outlet Power Strip?

Do You Want a 24-Outlet Power Strip?



- · 24-Outlet, Surge-Protected Power Strip
- Three Outlet Types: USA, EU, or UK
- · Electrically Grounded Outlets • Built-In Circuit Breakers
- These 24-outlet, power strips are available with US-, UK-, or EU-style outlets. Each is designed for indoor use and is housed within an impact-resistant, sturdy metal case with built-in circuit breaker. They can be mounted to the underside of the shelf as shown below, or to the side edge. The USA power strip is mounted using the supplied mounting clips. The EU and UK power strips are fitted with clearance holes for

standard M6 bolts. The units are turned on and off with a rocker switch.

Item #	HDPS24	HDPS24-EU	HDPS24-UK		
Electrical	Electrical				
Voltage Rating	120 VAC	230 VAC 240 VAC			
Current Rating	15 A	16 A	13 A		
Frequency	60 Hz	50 Hz	60 Hz		
Power Rating	1800 W	2576 W	2184 W		
Full Surge Protection	450 J	1.75 kA for 8/20 µs			
EMI / RFI Filtering		Yes			
CE Approved	No	Yes			
UL Listed (C and US)	Surge Protective Device 6G99	No			
Physical	·				
Cord Length	6 Feet (1.82 m)	3 m (9.8')		
Cord Gauge	14 AWG	1.5 n	nm ²		
Number of Outlets	24				
Body Material		Aluminum			
Dimensions (L x W x H)	72" x 2" x 1.75" (1829 x 51 x 44 mm)	1717 x 67.5 x 58.0 mm (67.6" x 2.66" x 2.28")			

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 HDPS24 into another HDPS24 or similar surge-protecting device.



The HDPS24 24-Outlet Power Strip shown installed under and on the front of the overhead shelf of a table frame.

Part Number	Description	Price	Availability
HDPS24	24-Outlet, Surge-Protected Power Strip, US Plugs	\$150.00	Today
HDPS24-EU	24-Outlet, Surge-Protected Power Strip, EU Plugs	\$170.00	Today
HDPS24-UK	24-Outlet, Surge-Protected Power Strip, UK Plugs	\$160.00	2 Weeks

Hide Do You Want an LED Light Strip?

o You Want an LED Light Strip?				
 850 mm (33.46") or 1828.5 mm (71.99") Long 	Item #	PSY240	TFA2	
ON/OFF Switch	Brightness	1530 Lumens	3600 Lumens	
	# of LEDs	51	120	
Warping Frosted Plastic Cover Ensures 	Power ^a	15.3 W	36 W	
		12 \/DC /Device	ver Supply Included)	
Even Spread of Light	Voltage	12 VDC (Powe	r Supply Included)	

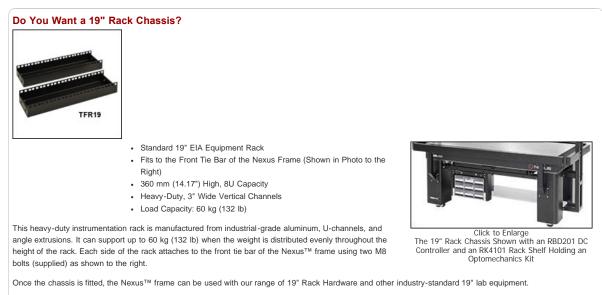
(33.46") or 1828.5 mm (71.99"). They are held in place by three spring

clips that are easily fitted to a rack or a shelf, such as our Free-

Standing Overhead Shelf or our Nexus Table Frame Overhead Shelves. The strip lights can also be mounted over a bench for general laboratory use.

Part Number	Description	Price	Availability
PSY240	850 mm (33.46") LED Light Strip	\$95.00	Lead Time
TFA2	1828.5 mm (71.99") LED Light Strip	\$100.00	Today

Hide Do You Want a 19" Rack Chassis?



Part Number	Description	Price	Availability
TFR19	19" Rack Chassis for Optical Table Workstations	\$200.00	Today

Hide Do You Want a 19" Rack Drawer?

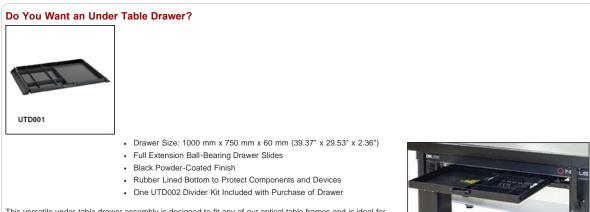


This versatile drawer assembly is ideal for general storage. It fits the TFR19 19" rack chassis detailed above and is available in 3 heights: 2U, 3U, and 4U. The drawer is made from 1.2 mm (0.05") thick steel with a black-powder-coated paint finish. It moves on smooth roller bearing runners and features 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 to the right, 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	\$165.00	Today
RAU300	19" Rack 3U Drawer with RAU001 Divider Kit, Lock, and Keys	\$170.00	Today
RAU400	19" Rack 4U Drawer with RAU001 Divider Kit, Lock, and Keys	\$175.00	Today
RAU001	19" Rack Drawer Divider Kit	\$25.00	2 Weeks

Hide Do You Want an Under Table Drawer?



This versatile under table drawer assembly is designed to fit any of our optical table frames and is ideal for general storage. The drawer measures 1000 mm x 750 mm x 60 mm (39.37" x 29.53" x 2.36") and bolts to the upper side of the front and rear tie bars of the Nexus frame as shown to the right. 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. The drawer features a central bulkhead which splits the area in half.



Click to Enlarge UTD001 Drawer Unit Shown with a Nexus Frame

The unit is supplied with eight screws for attaching the drawer to the table frame using a 13 mm or adjustible wrench. The drawer unit can be attached directly to our 1 m (3') deep optical table frame and contains adjustable support rails to accomodate larger 1.2 m (4') or 1.5 m (4.8') deep optical tables frames. For more details on installation, please see the manual, which is available by clicking on the red Docs icon () below. The drawer is supplied complete with a rubber base mat for protecting components and devices and a UTD002 divider kit; Additional UTD002 divider kits are available separately.

The UTD002 drawer divider kit is provided to allow the user to build smaller storage bins. As shown to the right, it is comprised of two plastic pieces that span the depth of the drawer and two that span half 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
UTD001	Under Table Drawer with UTD002 Divider Kit for Optical Table Workstations	\$475.00	Today
UTD002	Additional Drawer Divider Kit for UTD001	\$93.00	Today

Hide Do You Want A Cable Tray?



These cable trays are designed to be attached either underneath or to the edge of the overhead shelf frame, using the M6 bolts supplied. They are made from 3 mm (1/8") thick steel wire with a powder-coated plastic finish. Measuring 92.0 mm (3.62") high by 109.4 mm (4.31") deep, they are offered in four lengths: 1.0 m (3.29'), 1.25 m (4.1'), 2.0 m (6.56'), and 2.5 m (8.2'). The two shorter trays are supplied with two mounting brackets, while both the longer racks are shipped with three brackets.

Please note that an overhead shelf unit (described above) must be fitted to the table frame in order to install these trays.

Part Number	Description	Price	Availability
TFC100	Nexus Cable Tray, 1.0 m (3.29') Long	\$98.00	Today
TFC125	Nexus Cable Tray, 1.25 m (4.1') Long	\$134.00	2 Weeks
TFC200	Nexus Cable Tray, 2.0 m (6.56') Long	\$142.00	Today
TFC250	Nexus Cable Tray, 2.5 m (8.2') Long	\$153.00	Today

Hide Do You Want an Air Compressor?

Do You Want an Air Compressor?



· Delivery Pressure up to 8 Bar (116 PSI)

- · Air Tank Size 3.5 Liters
- Two Voltage Options: 230 V @ 50 Hz or 115 V @ 60 Hz
- Integral Pressure Regulator and Filter
- Low Noise Operation: 30 dB at 1 m

The PTA512, PTA513, and PTA514 are high-performance air compressors designed for applications demanding the highest quality air supply. They are self contained, lightweight, and compact, with minimal vibrations due to the very low noise emitted (30 dB at 1 m) from the compressor. The oil-lubricated pump unit is fitted with piston rings, thereby eliminating oil carryover to the air supply. These compressors deliver 50% more air than other silent compressors.

They accept standard 6 mm outer diameter tubing, include an air regulator, filter, receiver tank with pressure gauge, safety valve, drain, and line pressure gauge. They are shipped with a power cord for the appropriate territory. For detailed specifications, please see our product presentation.

Part Number	Description	Price	Availability
PTA512	Air Compressor, 115 V, 60 Hz, US Power Plug	\$600.00	Today
PTA513	Air Compressor, 230 V, 50 Hz, UK Power Plug	\$600.00	Today
PTA514	Air Compressor, 230 V, 50 Hz, EU Power Plug	\$600.00	Today
PTA1006	500 mL Bottle of Compressor Oil	\$45.00	Today

Visit the Optical Table Workstation: 1.5 m x 2.5 m x 600 mm (4.8' x 8' x 23.6") page for pricing and availability information: http://www.thorlabs.com/newgrouppage9.cfm?objectgroup_id=7600