

SmartTable® Family of Products

SMARTER IS BETTER.



Your application is reaching out into a new realm of precision and accuracy, and your vibration control platform should, too. Newport's SmartTable family of products transforms the traditional passive optical table into a smart platform that detects and damps vibrations on its own. Uniquely combining Newport's patented iQ damping technology, user friendly design and extensive manufacturing experience, SmartTable family of products serve as corner stones for your high resolution imaging, spectroscopy, optical characterization and other advanced applications.

PRODUCT SERIES

SmartTable® Tabletop



Compatible with different table support options from Newport, SmartTable optical table top gives users the maximum flexibility in building their optical tables. Paired with the most popular option of the S-2000A pneumatic isolators, the platform delivers superior vibration damping and isolation performance.

SmartTable® OTS Table System



SmartTable OTS table systems include the SmartTable tabletop as well as a new, innovative frame system that enables easier set up, better mobility and more versatile accessory options. Ideal for labs that are looking for turn-key solutions and easier ways to organize the lab space.

SmartTable® ADD Bolt-on Damping System

ADD bolt-on damper system is the first and only active bolt-on vibration dampers that feature iQ damping technology. User can simply bolt to the existing table or structure to improve its stability. It is compact, portable and highly effective. With the 3 channel ST-300 controller, user can mix and match horizontal and vertical dampers to address more complex vibration issues.



DAMPING LEVELS AND PERFORMANCE

| | Upgradeable | SmartTable® | SmartTable HD |
|-------------------|--|---|---|
| Broadband Damping | Constrained layer core, damped working surface and damped composite side panel | Constrained layer core, damped working surface and damped composite side panel | Constrained layer core, damped working surface and damped composite side panel |
| Tuned Damping | Precision tuned damping | | Precision tuned damping |
| Active Damping | | iQ active damping technology® | iQ active damping technology® |
| Applications | Electrophysiology, optogenetics, Raman spectroscopy and general optical characterization | Live cell imaging, precision nanostructure fabrication, high resolution spectroscopy and other below micron level applications. | Super-resolution imaging, AFM, and other advanced applications that require the best performance platforms. |

SmartTable Upgradeable (ST-UT2, OTS-UT2)

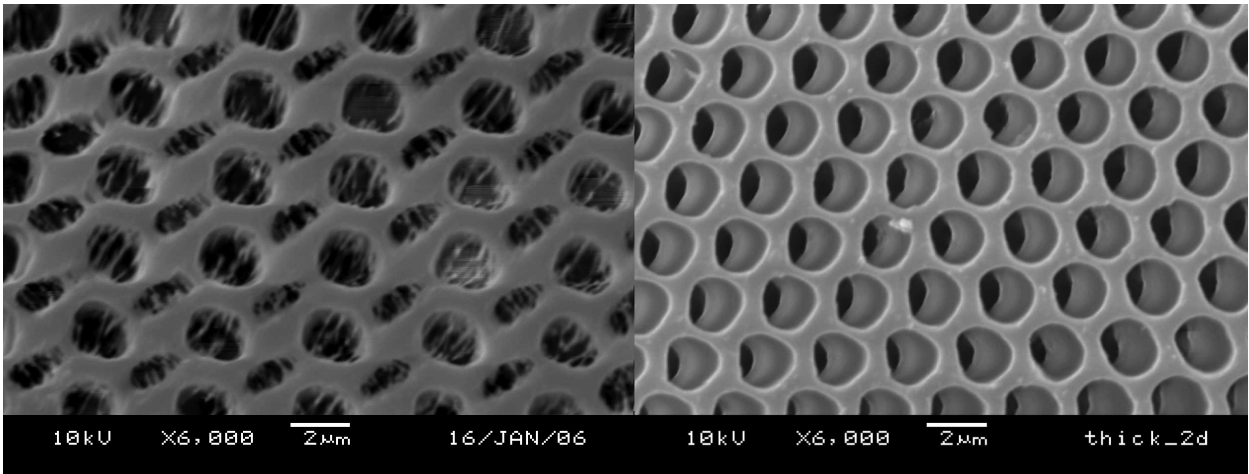
The most popular solutions for general microscopy and spectroscopy, the SmartTable Upgradeable features 2 or more Newport’s advanced precision tuned dampers (US patents 8857585). Users could choose to upgrade in the field to SmartTable HD with additional active damper kits.

SmartTable (ST, OTS-ST)

SmartTable utilizes active dampers that collect and feedback information to the controller to damp vibrations real time on your tabletop. It significantly improves image resolutions and system stability for demanding applications. With more than 4 U.S. patents filed for this technology, SmartTable is the proven solution for many advanced imaging and spectroscopy applications.

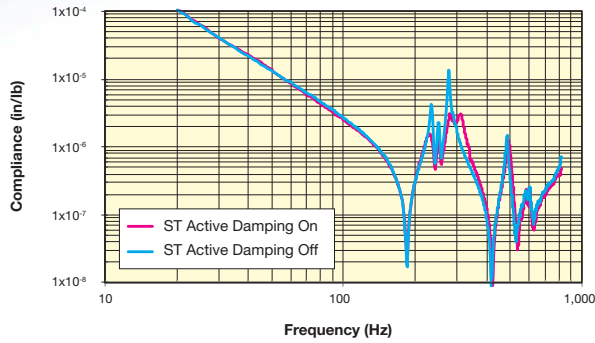
SmartTable HD (SST, OTS-SST)

Uniquely combining the passive precision tuned damping with the active damping technology, SmartTable HD is the highest performance table in the industry. Ideal for today’s cutting edge research applications that require the quietest work surface.

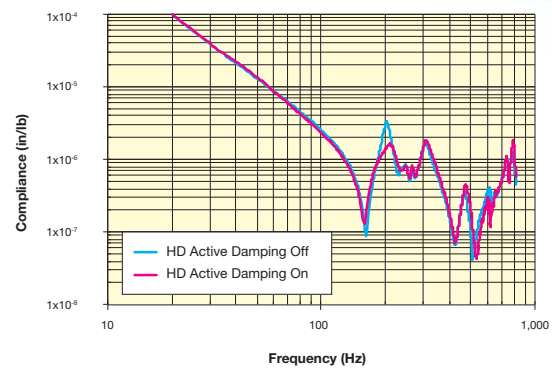


The Nanostructures shown in the images above were built on and imaged with a SmartTable. The image on the left was built with SmartTable damping disabled. The image on the right was built with SmartTable damping enabled. Source for images: Steven E. Kooi, Ph.D. Research Engineer, Institute for Solder Nanotechnologies, MIT

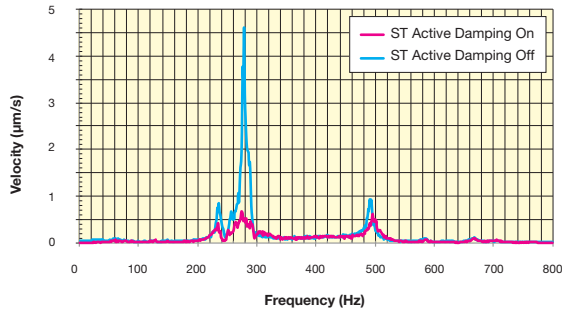
ST Series SmartTable (12 inches thick)



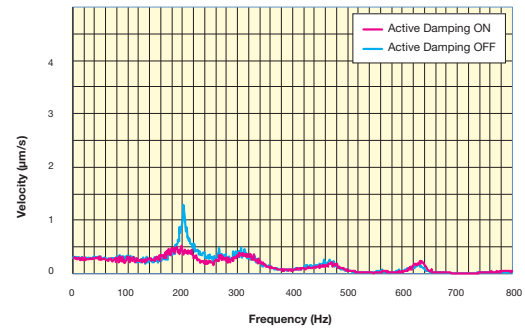
HD Series SmartTable (12 inches thick)



ST Series SmartTable (12 inches thick)



HD Series SmartTable (12 inches thick)

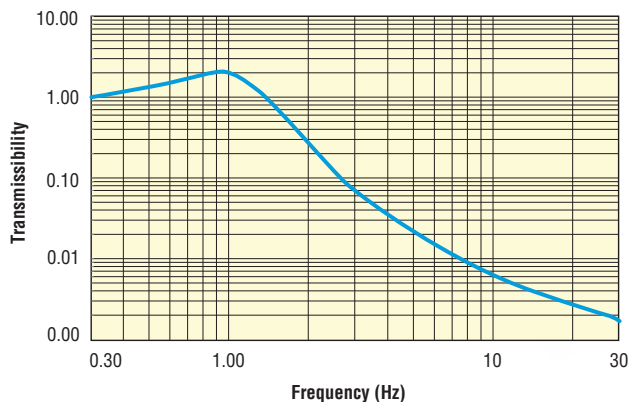


| | |
|-----------------------------|---|
| Working Surface | 400 series ferromagnetic stainless steel 3/16 in. (4.8 mm) thick with integrated damping layer |
| Working Surface Height | 8" (203 mm) thick tables: 36" (914 mm) ; 12" (305 mm) thick tables 40" (1016 mm) |
| Surface Flatness [in. (mm)] | ±0.004 in. (± 0.1 mm), over 2 ft. (600 mm) square, over 2 ft. (600 mm) square |
| Core Design | Trussed Honeycomb, Vertically Bonded Closed Cell Construction, 0.010 in. Steel sheet materials, 0.030 in. triple core interface |
| Mounting Holes | 1/4-20 holes on 1 in. grid (M6-1.0 holes on 25 mm grid), 0.5 in. borders (12.5 mm borders) |
| Hole/Core Sealing | Easy clean conical cup 0.75 in. (19 mm) deep, Non-corrosive high impact reinforced composite material |

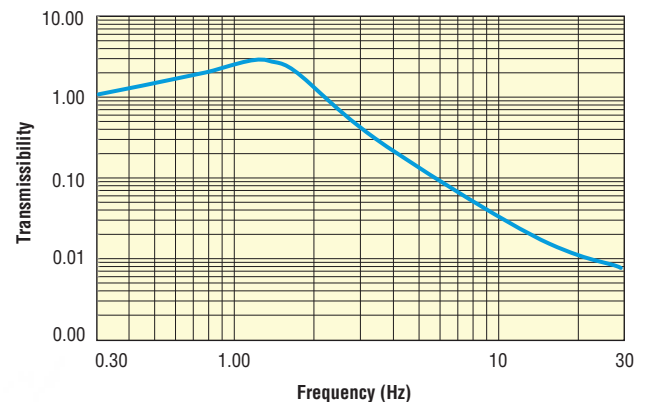
ISOLATION SPECIFICATIONS FOR SMARTTABLE OTS

| Model | Vertical Isolation* | | | Horizontal Isolation* | | | Amplification at Resonance | | Load per Isolator[lb (kg)] | Self Centering |
|---------------|---------------------|--------|---------|-----------------------|--------|---------|----------------------------|----------|----------------------------|----------------|
| | Res(Hz) | 5Hz(%) | 10Hz(%) | Res(Hz) | 5Hz(%) | 10Hz(%) | Vert(dB) | Horz(dB) | | |
| OTS Isolators | 1.5 | 88 | 98 | 1 | 88 | 98 | 9 | 6 | 800 (365) | Yes |

Horizontal Isolation



Vertical Isolation



*Vertical and Horizontal Isolation was measured with a load of 3,200 lbs.

SMARTTABLE® FAMILY OF PRODUCTS

Introducing ST-300 SmartTable Controller

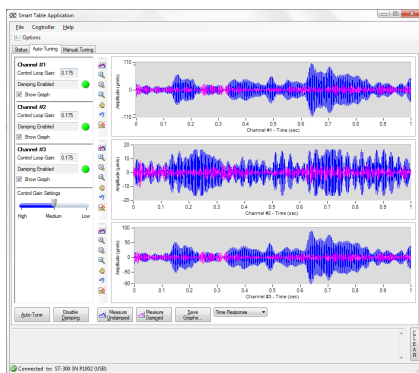


- Better damping performance than the previous generation
- Added 3rd channel providing horizontal damping for large doublers and complex structures
- Higher processing power and quicker reaction to vibrations
- Damping indicator bars on front panel - easy visualization of vibration environment
- All new software interface enabling real time vibration data streaming, recording and table compliance test

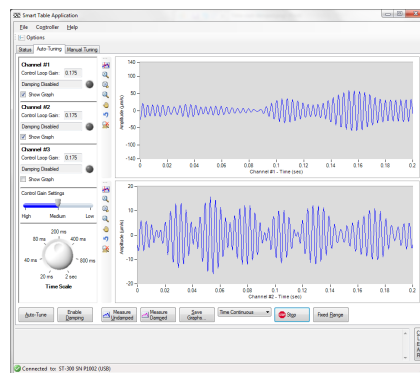
More powerful than ever, yet more compact. With interactive display bars that show real time damping actions, the ST-300 monitors and records vibration data 24/7. It's the elegant combination of innovative technology and supreme user experience, providing the quietest platform for your application. Included with SmartTable and SmartTable HD performance levels.

ST-300 SMARTTABLE CONTROLLER SPECIFICATIONS

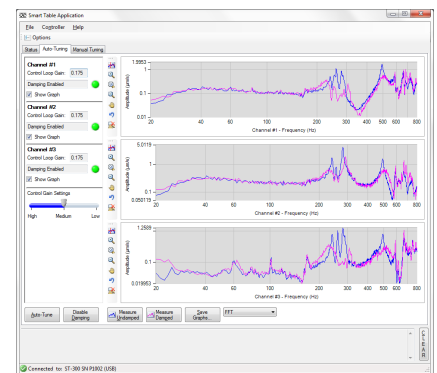
| | |
|--------------------|---|
| Computer Interface | USB 2.0 |
| Bandwidth | 10-820 Hz for monitoring vibration, 80-550 Hz for IQ dampers, 40-200 Hz for IQD Dampers |
| Software Drivers | SmartTable application and USB drivers. This application communicates with the SmartTable Controller through the USB communication interface. The application is designed to allow the user to remotely control all the features supported by the controller. |
| Power Requirements | 100-240 VAC; 1.5A, 50/60Hz |
| Dimensions | 7.5W x 6.67L x 3.19H (190.5W x 169.3L x 80.9H) [in. (mm)] |



Time Response with Damping on and off



Time Continuous Data Recording



FFT Response with Damping on and off



Scan QR code or search
"Newport ST-300" on
YouTube to learn more.



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Newport Corporation, Irvine, California and Franklin, Massachusetts; Evry and Beaune-la-Rolande, France and Wuxi, China have all been certified compliant with ISO 9001 by the British Standards Institution. Santa Clara, California is DNV certified.

