

COMMON SPEC

h-HA-L&h-HS-L : high damping system

"-L" indicates 'with support frame'

HA-L & HS-L : basic type

Without "-L" indicates 'bread board only'.

SPEC	TYPE	h-HA-107L ~ h-HA-2012L
		HA-107L ~ HA-2012L
Isolation Type - h-type		Vibration absorbing rubber (Please inform us the loading weight.) ※The mount can be rigid type.
	Isolation Type - basic type	Vibration absorbing rubber (Please inform us the loading weight.) ※The mount can be rigid type.
Damping method		High damping system
Damping method		Mass Damping
Top and Bottom Plate Material		top: ferromagnetic stainless steel 5t bottom: ※nonmagnetic stainless can be available as needed.
Honeycomb material		①h-HA-L & HA-L...Aluminum ②h-HS-L & HS-L...Steel
		※nonmagnetic stainless can be available as needed
Mounting Surface		Tap M6-25mmXY surface: Paintless (※ Black paint available for extra cost.)

SPEC FOR EACH SIZE

Blue is for steel honeycomb bench. Dimension (mm)

SPEC	TYPE	h-HA-107L	h-HA-129L	h-HA-1510L	h-HA-1512L	h-HA-189L
		h-HS-107L	h-HS-129L	h-HS-1510L	h-HS-1512L	h-HS-189L
		HA-107L	HA-129L	HA-1510L	HA-1512L	HA-189L
		HS-107L	HS-129L	HS-1510L	HS-1512L	HS-189L
Bench size		1000 x 700 x 100T	1200 x 900 x 100T	1500 x 1000 x 150T	1500 x 1200 x 150T	1800 x 900 x 150T
Outside dimension		1000 x 700 x 750H	1200 x 900 x 750H	1500 x 1000 x 800H	1500 x 1200 x 800H	1800 x 900 x 800H
G/W	h-HA	154kg	198kg	291kg	353kg	334kg
G/W	h-HS	162kg	222kg	339kg	412kg	386kg
G/W	HA	117kg	155kg	225kg	255kg	240kg
G/W	HS	125kg	172kg	270kg	310kg	285kg

SPEC	TYPE	h-HA-1812L	h-HA-2010L	h-HA-2012L	h-HA-2412L	h-HA-2615L
		h-HS-1812L	h-HS-2010L	h-HS-2012L	h-HS-2412L	h-HS-2615L
		HA-1812L	HA-2010L	HA-2012L	HA-2412L	HA-2615L
		HS-1812L	HS-2010L	HS-2012L	HS-2412L	HS-2615L
Bench size		1800 x 1200 x 150T	2000 x 1000 x 150T	2000 x 1200 x 150T	2400 x 1200 x 250T	2600 x 1500 x 250T
Outside dimension		1800 x 1200 x 800H	2000 x 1000 x 800H	2000 x 1200 x 800H	2400 x 1200 x 800H	2600 x 1500 x 800H
G/W	h-HA	394kg	376kg	420kg	564kg	665kg
G/W	h-HS	465kg	441kg	498kg	732kg	906kg
G/W	HA	290kg	275kg	310kg	420kg	510kg
G/W	HS	355kg	335kg	385kg	590kg	755kg

SPEC	TYPE	FB-36	FB-46	FB-56	FB-66	FB-76	FB-86
Bench material		Top: Magnetic stainless steel 5t Bottom: Stainless steel 4.5t					
Honeycomb core		Aluminum					
Mounting Plate		Hole tap M-6-25mmXY, no painted (※ Black paint available for extra cost.)					
Bench size		300 x 600 x 50t	400 x 600 x 50t	500 x 600 x 50t	600 x 600 x 50t	700 x 600 x 50t	800 x 600 x 50t

※Catalogue is subject to change without notice.

***Other Products**

- Three dimension vibration isolation - TDI series
- Acoustic enclosure - AEK
- Active vibration isolation series - TS, AVI
- Desktop type of Vibration isolation - DT

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High Damping
Nano
Table

h-HA-L

HIGH DAMPING ALUMINUM HONEYCOMB OPTICAL TABLE

h-HS-L

HIGH DAMPING STEEL HONEYCOMB OPTICAL TABLE

HA-L

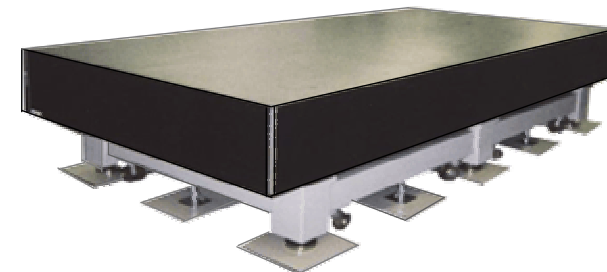
ALUMINUM HONEYCOMB OPTICAL TABLE

HS-L

STEEL HONEYCOMB OPTICAL TABLE

FB

BREAD BOARD



HERZ CO., LTD.

Introduction

It has been twenty years since honeycomb benches took the place of heavy molding boards for optical applications. Instrument weights have increased with the need for precision. So rigid honeycomb benches have become the standard. We have developed our aluminum honeycomb benches to be as light and rigid as possible. We offer a number of different table options, so you can choose the table that is best suited for your application.

Features

- Aluminum honeycomb, Steel honeycomb and nonmagnetic materials are available upon request. Custom materials and sizes are also available.
- Tables can be built to a specified resonant frequency upon request.
- A bag tap structure is used to prevent liquid spills or small parts falling into the tapped holes from penetrating the honeycomb bench.
- High damping material is used for the interior of the benches.
- An outlet box is mounted on the side of the table to allow for easy cable management.
- We are the only company which produces the aluminum honeycomb flat bench and aluminum honeycomb bread board.



Combining of the Flat Bench (Aluminum honeycomb & Steel honeycomb) and the mount

You can choose any combination depending on your application or the load limit of the floor.

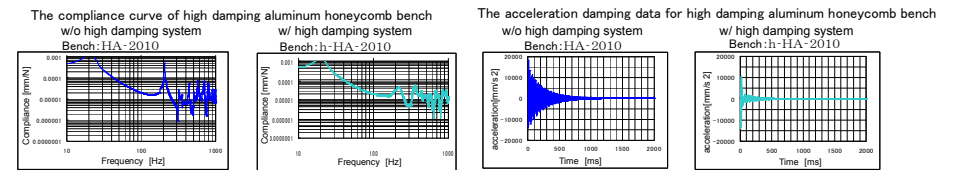
<p>Low strength floor When using the existing table as a mount Aluminum honeycomb bench (lightweight, high rigidity)</p>	<p>High strength floor When using the existing table as a mount Steel honeycomb bench (high rigidity)</p>
<p>Low strength floor For an instrument which needs high levels of vibration isolation system High damping Aluminum honeycomb bench + High damping mount or Basic mount (lightweight /high rigidity + high function)</p>	<p>High strength floor For an instrument which needs high levels of vibration isolation system High damping Steel honeycomb bench + High damping mount or Basic mount (lightweight /high rigidity + high function)</p>

Damping Technology

h-HA & h-Hs are the high damping honeycomb bench systems. This high damping system offers vibration isolation by air diaphragm and damping. The damping technology significantly reduces vibration displacement.

Measurement example for damping effect • • Honeycomb Bench

Here is an example of Aluminum honeycomb bench, A: Before use of high damping system and B: After use of high damping system. They show damping for frequency against the given force. Horizontal axes is for time.



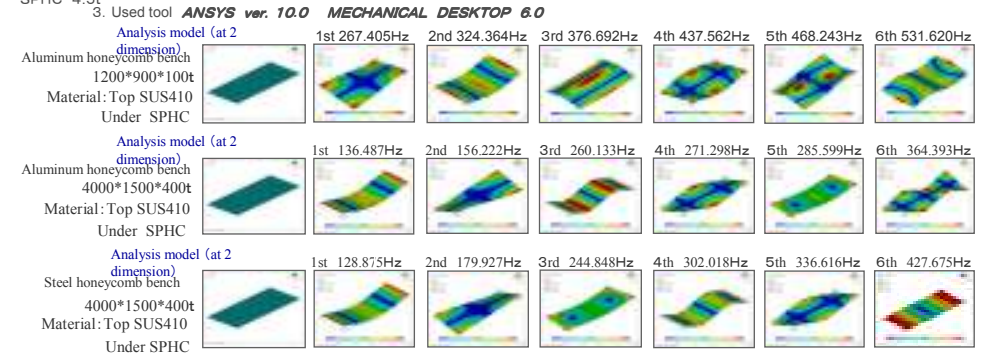
Analysis Technology

When developing the honeycomb benches, each model is analyzed using modal analysis, frequency response analysis, and static analysis in order to maximize the benches' rigidity and improve its response to vibrations. We conduct this analysis to make sure your precision instrument has the most stable support system possible.

The analysis (We have data for all models of the standard honeycomb bench in the catalogue.)

We can get more accurate data on direction of deformation and vibration frequency to make a survey of honeycomb benches and to analyze from the data. Moreover we can discern the largest displacement using frequency response analysis.

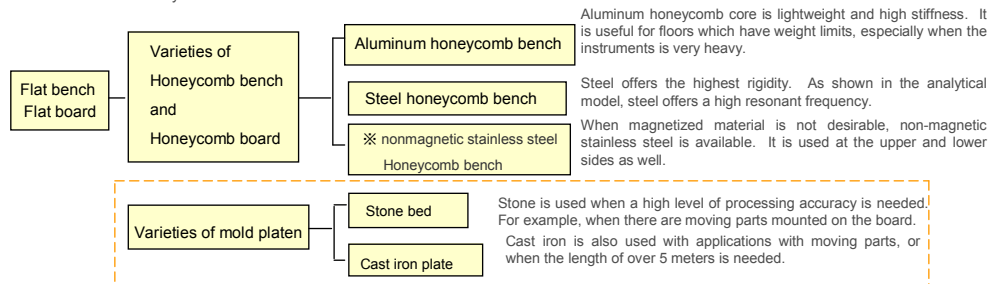
- Brief summary We analyze the standard honeycomb bench by modal analysis to get the sixth character frequency and the mode shape for data accumulation.
- Analysis condition ①elastic suspension for finite element model ②element size 25mm angle ③materials: top surface SUS410 5t under surface SPHC 4.5t



Selecting a Honeycomb Bench in the Nanotechnology age

Choosing the right flat bench and flat board for your application

We have various honeycomb benches and honeycomb boards for your experiment or application. Herz classifies the honeycomb benches and boards as follows.



Frame

The frame to support the honeycomb bench and mounted instrument with a high level of rigidity. The frame has a high damping system in the legs to meet the demands of the nanotechnology age.