

ATAB

Optical antivibration tables



Fig. 1. Photo of ATAB 1228 optical table

BASIC INFORMATION:

The primary goal of a well designed optical table is to eliminate relative motion between components of test system located on the surface of the optical table because such motion can generate measurement errors.

AT is a series of optical tables manufactured by Inframet and optimized for use with Inframet test systems. The tables are built from two main blocks: 1) a support frame, 2) table plate. The support frame is made as a steel frame combined with rubber isolation absorbers. The table plate is made as thick (150 mm) mostly fibreboard slab in external steel frame. The table plate is characterized by excellent thermal stability and vibration damping properties. Special version of AT table with internal liquid tanks to enhance vibration damping properties can be delivered in case of systems extremely sensitive to vibrations (holographic systems, interferometric systems, space imagers of extremely high resolution). Typical sizes of AT tables are up to 150 cm times 300 cm. Bigger sizes are optionally possible.

The tests have shown that even in heavy industry buildings AT tables reduce vibrations to level not noticeable by even vibration sensitive test systems (like ORI test stations for testing optical objectives) and make measurement results not sensitive to acoustic vibrations in air, vibrations generated by moving mechanical parts in test system (like MRW 8 rotary wheel) or to vibrations transmitted from the building to the optical table through the table support.

CODING: A code that consists of a number and a letter is used to describe properties of AT tables. The number gives information about size of table in tens of centimeters: ATAB612 means table of size 60x120cm. The letter – information if additional liquid tanks are used to improve vibration damping: letter S – standard design with no internal liquid tanks, L – liquid tanks are added.

SPECIFICATIONS

Dimensions	vary from 0.5x0.5m to over 2x3m
Blocks	1) support frame, 2) table plate
Support frame design	steel frame combined with rubber isolation absorbers
Table plate design	thick (up 150 mm) fibreboard slab in external steel frame
Flatness	not more than 0.3mm at 1 m length
Transmissibility at 10Hz	average: 28dB (31db at L version)
Non magnetic athermalized design	Yes
Working temperature range	optimal: 5°C ÷ +35°C maximal : -5°C ÷ +45°C
Working humidity range	up to 90% (non-condensing)
Mass	depends on model
Optimal load	< 220 kg for table on four leg frame; <330 kg for table on six leg frame

Version: 3.1

CONTACT: Tel: +48 604061817

Fax: +48 22 3987244

Email: info@inframet.com

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