

TEST EQUIPMENT

A Guide to Mechanical Testing Machines and Seismometers

CATALOG No. E4294



Mitutoyo

Mitutoyo Testing and Measuring Machines

Supporting Future Technology

Hardness Testing Machines

A full line-up of machines for measuring the hardness of all kinds of engineering materials from the softest sponges, rubbers, and plastics to the hardest metals.

Automatic Micro-Hardness Testing System / Automatic Vicker's Hardness Testing System

AAV series

A fully-automatic hardness measurement can be implemented with Mitutoyo's advanced image processing technology. This could be the optimal system for applications that require multi-point measurements.



Micro-Surface Characteristics Evaluation System

MZT

An optimal testing system for evaluating the hardness, wringing force or resistance to abrasion of thin films and coatings, etc.



Portable Hardness Tester for sponge, rubber and plastics

HH-300 series

Durometer-type hardness testers are the most widely used for measuring the hardness of soft materials.



Portable Metal Hardness Testing Machines

HH-400, HH-100 series

Portable-type hardness testers that are convenient for field hardness measurements.



One-touch hardness measurement without being restricted by the measuring direction
HH-411

Micro-Hardness Testing Machines

HM, MVK series

This series is suited to hardness measurements on small mechanical and electrical parts. It features extremely fine spatial discrimination, which makes possible hardness measurement of the separate constituents in composite materials.



Vickers Hardness Testing Machine

HV, AVK series

Hardness testing machines suitable for hardness evaluation of heat-affected sections of metallic components such as welded pipes, etc.



Rockwell Hardness Testing Machine

HR, ARK, ATK, AR series

Available for measuring the hardness of various metals including heat-treated steel parts.



Fully Automatic In-Line Hardness Testing System

Do not hesitate to contact us regarding customized testing machines including the Fully Automatic In-Line 100% Hardness Measurement System.



Note: Besides the above-listed products we offer a selection of Brinell and Shore hardness testing machines as well.

Seismic Observation Equipment

A line-up of seismometry equipment that enables observation and analysis of the seismic mechanism, aids prevention of secondary disasters and helps evaluate the anti-seismic performance of buildings and ground works.

Seismometry Equipment

Provides not only a control capability over the related devices but also a measurement capability of seismic effects on buildings and ground works when an earthquake occurs.



Seismic / Eruption Observation Equipment

The optimal equipment for measuring underground, submarine, and surface inclinations and strains can be selected to meet various purposes in the field of researching the earthquake generation mechanism or forecasting and preventing possible disasters from volcanic eruptions.



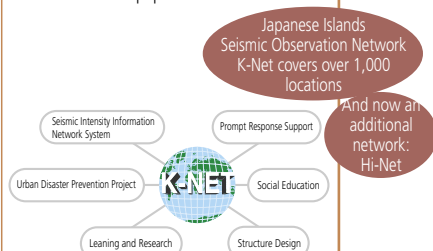
Secondary Disaster Prevention Equipment

Display seismometers, control seismometers and measuring seismometers are all designed to assist preventive measures against secondary disasters. Of the above-listed products, control seismometers are used to promptly and accurately detect seismic vibration so that the protected equipment or facilities can be properly shut down. The display and measuring seismometers provide the accurate earthquake magnitude measurement that is essential for implementing appropriate evacuation and recovery actions.



Observation System / Network

Do not hesitate to contact Mitutoyo for advice on building a seismic observation network or a stand-alone system integrated with related peripheral measurement equipment.



Mitutoyo

Vibration Testing Machines

A full line-up of testing machines for evaluating the anti-vibration performance of almost any product or component, ranging from an integrated circuit to an artificial satellite, that is subject to vibration in its working environment.

Small-Size Powered Vibration Testing Machine

MES series

Suitable for transportability testing and anti-earthquake performance evaluation of practically any product from electronic components to small electrical appliances.



Remarks:

A wide range of product line-up including 2-axis, 3-axis vibration testing machines, vibration testing machine for larger acceleration complex environment testing unit, vibration testing machine for inspecting pickups, and seismic simulation testing machine, and so on.

Low-Noise Design Vibration Testing Machine

UME200

Highly suited to stress-screening testing or rattle testing of electric/electronic components and mounted circuit boards and functional tests on vibration pickups, etc. Convenient to use directly on a desk top.



Medium- to Large-Sized Powered Vibration Testing Machine

EDS series

Suitable for a wide range of uses in the fields of transportability testing of products, such as electrical appliances, and anti-earthquake evaluation testing of large-sized samples including aerospace-related equipment and building structures, etc.



The **EDS135** powered vibration testing machine generates the world's largest vibration test force - 35 tons.

Power-Hydraulic Vibration Testing Machine

EHSS series

Specifically designed for transportability testing and seismic simulation tests, etc.



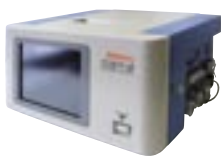
Balance Testing Machines

Testing machines for measuring and correcting a poor balance condition in small- to large-size rotating objects including motors, fans, crankshafts, rollers used in rolling mills and power station turbines.

Field Balancer

DEP series

The ideal machine for when a component such as a large roller or large outdoor air-conditioning unit fan is required to be tested for unbalance under operating conditions.



Horizontal Balance Testing Machines

AH, FH series

Suitable for measuring and correcting an out of balance condition in rotating objects ranging from a motor's armature fan to various kinds of shaft.



Vertical Balance Testing Machines

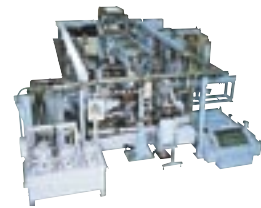
FV series

Intended for measuring and correcting poor balance in rotating objects ranging from flywheels and thin-bladed fans to rotor discs.



Horizontal-Only Machine Vertical-Only Machine

Contact us for details on fully automatic balance testing machines suitable for installation in automobile crankshaft and torque converter production lines.



Vibration Measurement Equipment

A full range of vibration measurement equipment for evaluating the in-production-line vibration level of products that unavoidably generate vibration, diagnosing various other kinds of vibration generation and monitoring the continuous vibration found in power stations and similar facilities.

Handy Vibrometer

AHV series

This is a portable vibrometer with the vibration pickup integrated in the main unit. Applicable to measurement of a wide range of mechanical vibrations.



Universal Vibrometer

AVT series

In this portable vibrometer the vibration pickup is separated from the main unit. This allows the pickup to be directly mounted on an object so that measurements are free of any shake effect.



Ground noise meter

AVT-100 series

The AVT-100 series employs a servo-type acceleration pickup, an optimal design for measurements at locations subject to low-frequency vibration. This equipment is especially suitable for surveying sites intended for the installation of precision equipment.



Vibration Monitoring System

This system is specifically designed for applications such as the around-the-clock vibration monitoring required in facilities such as power stations and other types of power plant.



Hardness Testing Machine

AAV series
 KZT
 HM-300 series
 HM-400, HM-100 series
 HM, HVE series
 HV, AVK series
 HR, ARK, ATK, AR series
 Full-Automatic In-Line Hardness Testing System

Seismic Observation Equipment

Seismometry Equipment
 Seismic / Eruption Observation Equipment
 Secondary Disaster Prevention Equipment
 Observation System / Network

Vibration Testing Machines

HES series
 UNE200
 EOS series
 EHSS series

Balance Testing Machines

DEP series
 AH, FH series
 FY series
 Horizontal-Only Machine
 Vertical-Only Machine

Vibration Measurement Equipment

AJH series
 AVT series
 AVT-100 series
 Vibration Monitoring System

- Coordinate Measuring Machines
- Vision Measuring Systems
- Form Measurement
- Optical Measuring
- Sensor Systems
- Test Equipment and Seismometer
- Digital Scale and DRO Systems
- Small Tool Instruments and Data Management

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