

JISC

JAPAN INSTRUMENTATION SYSTEM Co.,Ltd.

日本計測システム株式会社

日本試験機工業会々員

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PRODUCT GUIDE



SPRING TESTER

AUTOMATIC COMPRESSION AND TENSION SPRING TESTER – PRO Series

Our Best-Selling Spring Tester – High Precision and Advanced Functionality
A comprehensive lineup of 14 models, covering a wide range from a minimum load display of 0.01 mN (0.001 gf) up to a maximum capacity of 200 kN (20 tons). Choose from Basic, Special, and High-Grade models to best suit your application.

All models comply with “JIS B 7738” Class 0.5 (the highest grade) for compression and tension testing of coil springs.

For testing machines with a capacity of 1 kN or more, we strongly recommend using the optional safety cover

AUTOMATIC SPRING TESTER - TABLE TOP

PRO-10N~D1KN / PRO-1N (Compression only)



AUTOMATIC SPRING TESTER - TWIN COLUMN

PRO-1KN~200KN



AUTOMATIC TORSION SPRING TESTER – PRO-T / PRO-TT Series

The PRO-TT Series features a torque cell system that significantly reduces measurement errors caused by arm length, enabling high-precision testing of even the smallest torsion springs.

AUTOMATIC TORSION SPRING TESTER

PRO-T-50N / 100N / 500N
PRO-TT-01NM / 1NM



ON-SITE AUTOMATIC SPRING TESTER – JOB Series

This automatic spring tester was developed in response to customer feedback requesting a cost-effective and precise solution for use directly on the production line.

Its compact design allows easy installation in spring manufacturing environments, enabling on-site testing that enhances efficiency and supports quality control.

ON-SITE AUTOMATIC SPRING TESTER COMPRESSION TYPE / TENSION TYPE

JOB-C10N~1KN
JOB-T10N~1KN



ON-SITE AUTOMATIC SPRING TESTER CT-TYPE

JOB-CT50N~1KN

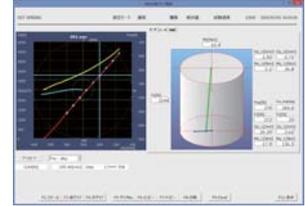


SUSPENSION SPRING TESTER – SST Series

The SST Series is a specialized testing system for suspension springs, evolved from our automatic spring tester and Side Force Unit (SFU Series). It enables easy measurement of center of gravity, side force, and rotational moment during design or production.

Ideal for managing spring characteristics such as side force and balance in automotive suspension applications.

The SST-D model features laser sensors to capture coil deformation during compression, with 3D shape data also recordable.



Standard included software

SUSPENSION SPRING TESTER

SST-20KN / 50KN

SST-D WITH OUTER DIAMETER MEASUREMENT

SST-D20KN / 50KN



Laser distance meter in operation

SIDE FORCE SPRING TESTER – SFT Series

The SFT Series builds on the capabilities of the PRO Series spring testers, adding measurement of side forces in both X and Y directions, as well as the center of gravity and moment on the upper and lower spring surfaces. (PC software included as standard)

Side force and center of gravity during compression can be visually monitored in real time through intuitive graphical displays.

SIDE FORCE SPRING TESTER/ VALVE SPRING TESTER

SFT-1KN / 5KN
SFT-V1KN / V5KN



SPRING SORTING MACHINE – ACE Series

ACE-F Series – Fully Automatic Spring Sorting with High Accuracy

With ultra-high resolution (1/100,000), fast and stable A/D conversion, and cylinder-driven operation, it enables high-speed, high-precision sorting. In single-step testing, up to 50 springs per minute can be sorted—up to 24,000 units in 8 hours of continuous operation.

The tester also supports 1- to 3-step testing using ball screws and LM guides.

Part feeders and loading units are available as options.

SPRING SORTING MACHINE

ACE-P10N / 50N/ 100N / 500N/1KN

HI-SPEED SPRING SORTING MACHINE

ACE-F100N / 500N / 1KN



QUALITY CONTROL PC SOFTWARE – BQC-02

Enhances part number management for spring testers and displays real-time quality control data such as X-bar R charts, histograms, Cp, and Cpk values.

Measurement results are automatically saved for complete history tracking. With internal network setup, you can monitor on-site quality remotely from the office.



LOAD TESTER

AUTOMATIC LOAD TESTER - MAX Series

The progress of each test can be monitored via graphical display, and the entire sequence—from evaluation to statistical processing—can be performed directly on the tester. Once test conditions are set, they are stored in the machine's memory, eliminating the need for reconfiguration during repeat tests and allowing for easy test startup.

By connecting to a PC, data processing capabilities can be further expanded to accommodate even complex testing requirements. A high-resolution Premium (P) Grade model with micron-level length resolution is also available.

※For testing machines with a capacity of 1 kN or more, we strongly recommend using the optional safety cover

AUTOMATIC LOAD TESTER - TABLETOP (10 N~1 kN Loadcell Interchangeable)

MAX-1KN



AUTOMATIC LOAD TESTER - TWIN COLUMN

MAX-5KN~20KN



AUTOMATIC LOAD TESTER - FLOOR-STANDING TWIN COLUMN

MAX-50KN~200KN



XY TABLE

By equipping the MAX series with an XY stage and setting coordinate points, continuous automatic measurement becomes possible. Coordinate data can be recorded for each part number, allowing for easy retesting simply by recalling the saved data.

※A PC connection with the dedicated software is required to use the XY stage.

XY Table compatible with MAX-1KN

XY-1010-P
XY-2010
XY-4520



MULTI-PURPOSE LOAD TESTER - HIT Series

The HIT Series Multi-Purpose Load Tester are versatile systems developed from our many years of expertise in load measurement technology. With interchangeable load cells, they can accommodate a wide range of testing needs—from micro-load tests such as metal film and contact probes, to medium-load applications like adhesive strength and foam materials. By selecting a long stroke model, the HIT series can also handle material strength and property testing of plastics and elastomers. For testing machines with a capacity of 1 kN or more, we strongly recommend the use of the optional safety cover.

MULTI-PURPOSE LOAD TESTER - TABLETOP

HIT-B / M / L



MULTI - PURPOSE LOAD TESTER - TWIN COLUMN

HIT-5KN~20KN



STRENGTH TESTER - JSL Series

The JSL Series is a tester equipped with a mechanism specialized for strength measurement. It features a peak-hold circuit that captures instantaneous breaking loads with precision. Designed for ease of use, it includes a mechanical limit switch for easily identifying limit positions, along with a simple and intuitive control system.



STRENGTH TESTER - TABLETOP

JSL-1KN

STRENGTH TESTER - TWIN COLUMN

JSL-5KN~20KN / 50KN~200KN

COMBINATION SENSORY TESTER - CFT

This testing machine is designed to measure both load and torque in a single unit, developed specifically for automotive combination switches. Equipped with an XY stage and rotational axis (Y/Z-axis rotation), it allows precise positioning and easy repeat testing by storing measurement coordinates. With dedicated software, you can flexibly control all 7 axes and combine torque, push, and strength tests. Optional features include resistance meter connection, camera-based alignment, and a motorized stage for $\pm 90^\circ$ Z-axis angle adjustment.

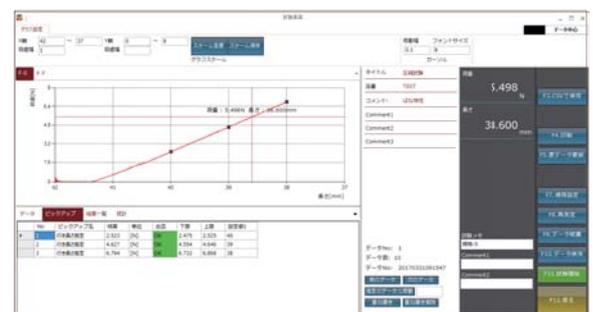


COMBINATION SENSORY TESTER

CFT-5NM (Compression: 50 N Torque: 5 N·m Break test: 500 N)

ALL-IN-ONE TESTING SOFTWARE - AXR

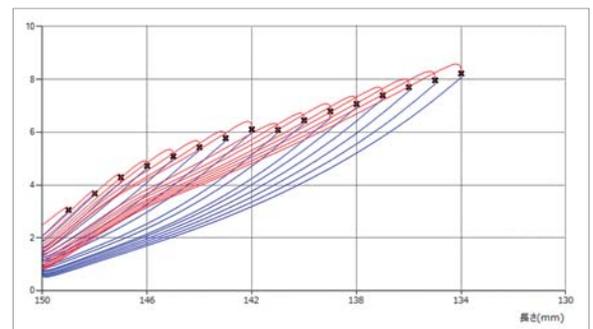
AXR – Versatile PC Software with Clean, Highly Visible Interface. AXR offers a clean, easy-to-read display and smooth real-time graphing※1. Its intuitive layout makes test condition setup simple and efficient. With the Sequence Mode※2, you can create complex, highly flexible test scenarios. This software supports a wide range of measurement needs with ease.



- ※1 Features may vary depending on the connected testing machine.
- ※2 Sequence Mode is available in AXR-PLUS. Some functions may not be supported depending on the connected machine.
- ※3 If your PC does not support the required language settings, some characters may not display properly.

[Sequence Mode]

Sequence Mode allows you to freely customize test operations. It is ideal for performing complex, multi-step tests beyond standard material or destructive testing. By specifying each action step-by-step, you can create highly flexible test conditions tailored to your needs.



[Graph from Sequence Mode reciprocating test (150 mm to 134 mm, 1 mm intervals)]

TORQUE TESTER

AUTOMATIC TORQUE TESTER - MAX-T Series

This is the torque testing model of the MAX Series.

Once test conditions are set, they are stored in the machine, allowing for quick test restarts without reconfiguration.

The torque cells are interchangeable, up to five units registerable.

Connecting to a PC further enhances data processing capabilities, enabling support for more complex testing.

AUTOMATIC TORQUE TESTER - MAX-T TYPE

(20 N-m to 200 N-m Torque Cell Interchangeable)

Rotating Table Type:

The sample itself is rotated during measurement.

MAX-T-N / P

AUTOMATIC TORQUE TESTER - MAX-TU TYPE

(10 N-m to 20 N-m, Torque Cell Interchangeable)

Top-Rotation Type: Top-mounted torque cell rotates during measurement ※Optional setup

MAX-TU-N / P



SAFETY COVER

Optional Safety Covers Available for All Models: Table top, Twin Column and Floor-Standing Types

We recommend installing safety covers to protect against scattered test samples during measurement.

※ A remote control panel is required if the entire machine is enclosed with a safety cover. Please contact us when considering a safety cover.

※ For tester with a capacity of 1 kN or more, the optional safety cover is especially recommended.

Automatic Compression & Tension Spring Tester Tabletop Type – PRO Series With optional safety cover.

PRO, JOB etc..



Automatic Load Tester MAX Series With optional safety cover and remote control panel.

MAX, MAX-T etc..



Automatic Compression & Tension Spring Tester – Twin Column Type / PRO Series With optional safety cover.

PRO etc..



SCREW TIGHTENING TESTER

SCREW TIGHTENING TESTER– NST Series

The NST Series conforms to JIS B 1084 and ISO 16047, and is capable of measuring key parameters such as tightening axial force, torque, thread torque, rotation angle, and bolt elongation—all in a single setup.

It also supports prevailing torque tests specified in JIS B 1056 and JASO F 106-96, as well as MIL-N-25027 characteristic testing.

Advanced data acquisition provides comprehensive graphs, including Torque–Angle–Axial Force and Elongation–Torque–Axial Force, enabling accurate calculation of important values such as torque coefficients and friction coefficients.

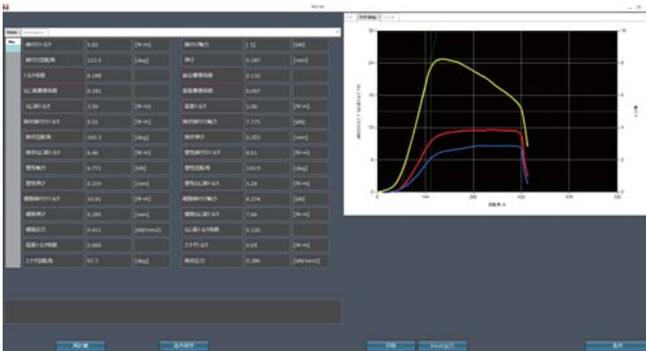
With easy PC connectivity, you can save test conditions and export results to Excel for use in inspection reports. Real-time waveform display and direct printing streamline post-test operations.

The high-end NST-3000NM model also enables torshear bolt testing and supports two-stage tightening (preliminary and final tightening) for specialized applications.

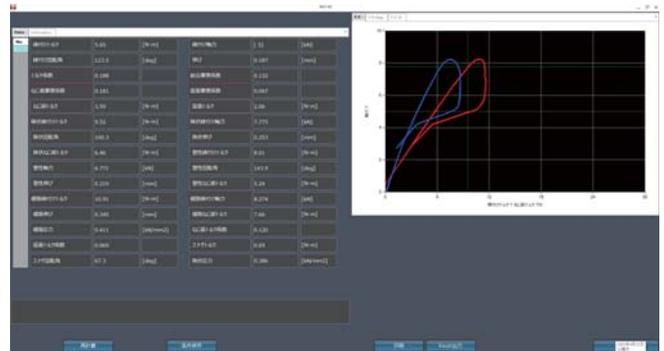


SCREW TIGHTENING TESTER
NST-100NM / 500NM / 1000NM / 1500NM / 3000NM

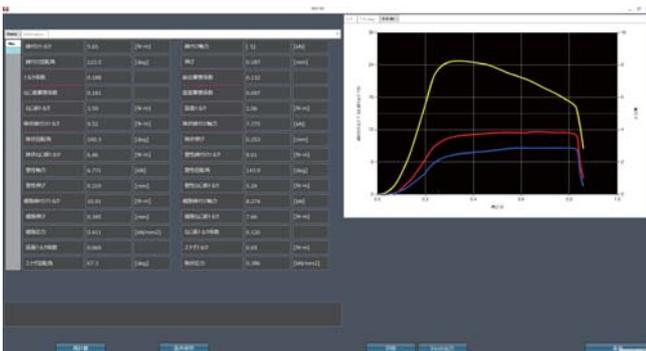
Example Graph from NST Series



Rotation Angle – Torque / Axial Force
Auxiliary lines can be added to show snug torque angle and yield point directly on the graph.



Torque – Axial Force
The relationship between tightening torque, thread torque, and axial force can be easily observed.



Elongation – Torque / Axial Force
This graph is suitable for evaluating the relationship between elongation and corresponding torque and axial force values.



Prevailing Torque Test
Displays graphs for any 3 selected cycles (forward/return) from 5 cycles test (up to 15 tcycles max).

COMPACT MEASURING INSTRUMENTS

AUTOMATIC SERVO STAND

Equipped with a ball screw, LM guide, and servo motor, this high-performance model allows not only speed and measurement range settings, but also control of hold time, intervals, and more. It delivers precise and versatile testing at an affordable price. Compatible with the HF Series and AN/NK Series (optional fixtures required).

AUTOMATIC VERTICAL SERVO STAND

JSV-H1000



AUTOMATIC HORIZONTAL SERVO STAND

JSH-H1000



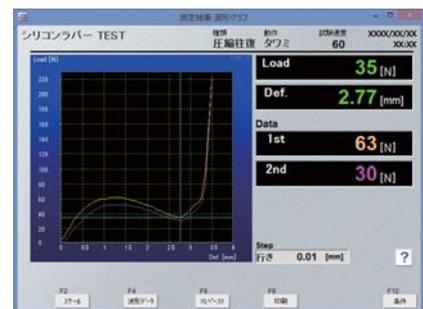
GRAPH CHART SOFTWARE – SOP-EG1

Easy-to-Use PC Software for Automatic Servo Stands

Enables real-time waveform display with simple setup.

Features include test condition management, PEAK load trend graphs from continuous testing, and user-friendly hint functions.

※ Standard accessory with automatic servo stands.



TORQUE CHECKER – IT Series

A precision torque measurement device designed for setting and verifying torque on electric screwdrivers and other torque-critical tools.

Features include a rechargeable battery, integrated pass/fail judgment function, and internal memory for storing inspection results such as daily startup checks.

TORQUE CHECKER

IT-5 / 20



HANDY FORCE GAUGE – HF Series

The HF Series is a compact and easy-to-use force measurement device. Despite its small size, it supports both compression and tension force measurements, and can be expanded into specialized testing equipment—such as switch contact tests, connector tests, and destructive testing—through various available options.

HANDY FORCE GAUGE

HF-10N~1000N



EXTERNAL LOADCELL FORCE GAUGE – HF-E Series

Equipped with an external load cell, the HF-E Series allows flexible selection of capacity and sensor shape to match specific testing requirements. It offers high precision and usability with the same advanced functions as the HF Series.

EXTERNAL LOADCELL FORCE GAUGE

HF-E



SPINDLE DRAWBAR FORCE GAUGE – HPG-BT Series

Measures drawbar clamping force in machining center spindles. Essential for ensuring proper tool retention and stable cutting performance.

SPINDLE DRAWBAR FORCE GAUGE

HPG-BT30 / 40 / 50



HANDY ANALOG FORCE GAUGE – AN / NK Series

Compact, high-precision analog force gauges offering excellent operability and portability. Easily switch between peak hold and continuous load indication with one touch.
※Standard version displays in Newtons only; export models include both Newton and kilogram scales.

HANDY ANALOG FORCE GAUGE

AN-10~500 (10 N~500 N)

HANDY ANALOG FORCE GAUGE (EXPORT MODEL)

NK-10~500 (10 N~500 N)



OTHER TESTER

AUTOMATIC URETHANE FOAM TESTER – UFT Series

The UFT Series is designed specifically for performing various urethane foam tests. Its 3-point load cell structure offers excellent resistance to off-center loading and ensures high-precision force detection. Test specimens can be measured directly on the large 1000 × 700 mm table without repositioning. The built-in software allows flexible configuration of test conditions such as percentage, number of cycles, and time. Complies with hardness and deflection testing standards under constant load specified by major automotive manufacturers.



AUTOMATIC URETHANE FOAM TESTER

UFT-2KN-N / 5KN-N

TEXTURE TESTER – TEX Series

The TEX Series quantifies the previously subjective concept of "texture," enabling objective evaluation. It supports a wide range of applications—from measuring the texture related to taste in food product development, to checking the safety of swallowing (deglutition) for foods intended for children or the elderly, as well as quality control and inspection in food production processes. Using Texture Profile Analysis (TPA), it also allows easy setting and measurement to verify compliance with standards for foods designed for individuals with swallowing difficulties. For tests requiring temperature control, a Peltier cooler-equipped model with a preset temperature table is available.



TEXTURE TESTER

TEX-100N / 200N

PELTIER COOLER - EQUIPPED TEXTURE TESTER

TEX-P100N / P200N

CARE FOOD TESTER – CF-200N

Designed for texture evaluation of dysphagia diets, the CF-200N enables precise classification based on the 2021 Japanese Dysphagia Diet (JDD2021) standards. It quickly assesses UDF and Smile Care Food categories such as "easy to chew," "mashable with gums," "mashable with tongue," and "no chewing required," supporting standardized testing for safe food preparation in clinical and care settings.



CARE FOOD TESTER

CF-200N

ATTACHMENT

ATTACHMENT LIST

We offer a range of standard fixtures designed specifically for our testing machines. If our standard fixtures don't meet your requirements, we can design and create custom solutions to your specifications.



GENERAL-PURPOSE CHUCK

GP Series (Capacity ~ 5kN)

A fixture designed to hold standard specimens for tensile testing



WEDGE GRIP

GW / GV Series (Capacity ~ 100 kN)

A fixture that self-tightens under tensile load while allowing easy specimen installation and removal.



FILM GRIP

GF Series (Capacity ~ 2 kN)

An ideal fixture for tensile and peel tests of film-like or tape-like specimens.



GARTER SPRING CHUCK

GG Series (Capacity ~ 50 N)

A chuck specifically designed for garter spring testing.



SMALL CHUCK

GS Series (Capacity ~ 1 kN)

A tensile testing fixture designed for small specimens.



ROUND PIN CHUCK

GB-K Series (Capacity ~ 100 N)

Ideal for compression tests using shafts. Clamps shafts from 0 to 3.2 mm in diameter.



PANTOGRAPH CHUCK

GPP Series (Capacity ~ 2 kN)

Specialized grip that self-tightens under tensile load, making it ideal for securing thin or narrow specimens.



FLAT VICE

GF-1K1 (Capacity ~ 1 kN)

A holding fixture compatible with both tensile and compression testing applications.



DOUBLE-SIDE VICE

BD Series (Capacity ~ 200 N) ※Upper use up to 100N

A vice that clamps and fixes the test specimen from both sides.



BOTTLE-OPEN JIG

TOP-BO-01
(Compatible Diameter $\phi 11 \sim \phi 165$)

A fixture that allows easy setup of specimens for measuring bottle opening (uncapping) torque.



X-Y TABLE

XY-52 (Capacity ~ 500 N)

Fixture for position adjustment, such as centering the test specimen



COMPRESSION ANVILS

CU / CL / CC Series

Upper and lower anvils used in compression tests.

CALIBRATION AND INSPECTION SERVICE

In order to ensure the reliable quality of our customers' products, our service engineers, who are qualified to perform calibration, will respond promptly and accurately. Please feel free to contact us.



JCSS CALIBRATION

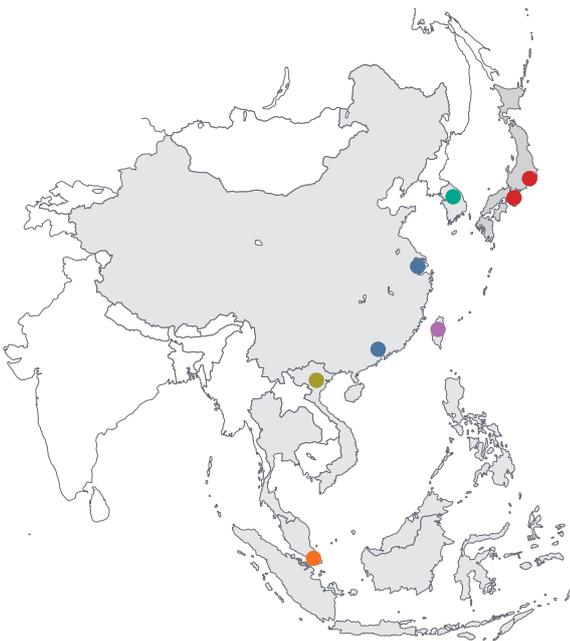
Proof of reliability recognized globally

To ensure the accuracy of values measured by testers, regular calibration is essential. Using calibrated equipment enhances the reliability of measurement results.

Our JCSS Calibration Department is accredited under JIS Q 17025 (ISO/IEC 17025) and operates in accordance with ISO/IEC 17011.

This certification under the JCSS scheme is recognized not only in Japan but also internationally—providing trusted proof of quality worldwide.

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