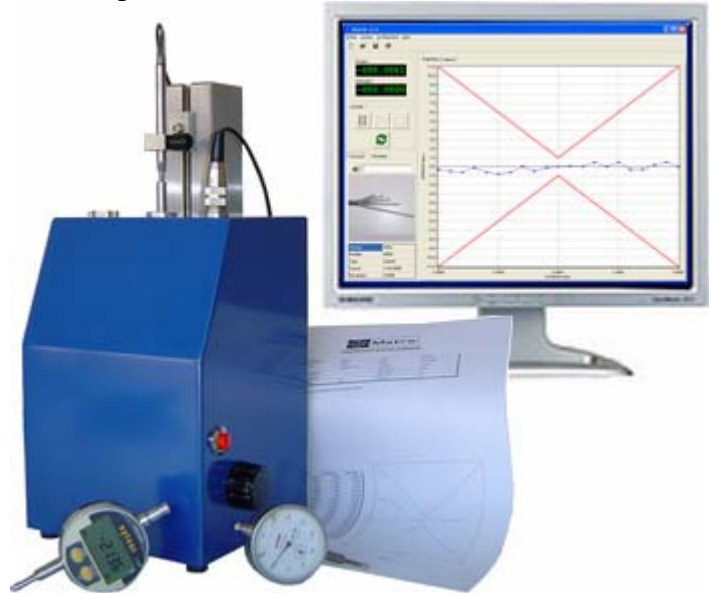


MultiCAL

Fully automatic inspection bench

Features

- ❑ Easy and fast inspection of inductive probes and comparators
- ❑ Fully automated measuring run for digital devices.
- ❑ Semi-automatic inspection for analogue indicators
- ❑ Built in standard NFE 11050 -NFE 11056 XPE11053 - ISO 464
- ❑ Compatible with Mitutoyo, Opto RS232, and all indicators fitted with RS232 output
- ❑ Up to 25.4 mm range (1 inch)
- ❑ Maximum error $\pm(0.2 + L/100)$ μm at 20°C
- ❑ Comply with Abbe principle
- ❑ High accuracy glass-scale measuring system with built in error compensation.
- ❑ Electronic hand wheel for manual control
- ❑ Create and printout your inspection certificate.



In addition it is possible to test, correct linearity and match Metro inductive probes with display units.

Description

The inspection bench MultiCAL allows checking probes and comparators up to 25.4mm (1 inch) stroke. The measuring system use an high accuracy glass-scale with built in error compensation (maximum error $\pm(0.2 + L/100)$ μm at 20°C.)

A motorized drive running under software control allows a mechanical positioning at $\pm 0.3 \mu\text{m}$. The inspection bench MultiCAL complies with Abbe comparator principle for highest measuring accuracy.

Test piece mounting via a vertical guide. Height can be adjusted quickly.

The inspection bench MultiCAL needs to be connected to a PC (not included) using only an RS232 link.

Metro WinCAL software included in the package control the inspection bench. Thanks to WinCAL, you can create command files to describe what the bench has to do to perform your inspection. Command files driving the inspection according to NFE 11050 - NFE 11056 - XPE 11053 - ISO 464 standard are included.

By the same way, it is possible to create your own inspection certificate. Further more, that data can be saved as a CSV file.

Usage

Inductive probes, digital comparators, electronic displays are inspected automatically. Linearization of Metro inductive probes is also performed automatically.

Dial indicators are inspected semi-automatically.

The pointer of the analogue indicator is positioned just before each measuring point automatically under software control. After that, inspection begins simply by adjusting the pointer position with the jog-dial. Because of this function, measurement time is reduced and user fatigue is practically eliminated. Additionally all functions necessary for inspection are combined in the control box so that the operator need not rely on excessive eye movement to adjust the pointer

It need less that 2 minutes to perform the inspection of a 10 mm comparator.

Automatic measurement requires the indicator's connection cable.

- ❑ Mitutoyo (Digimatic) comparators are connected with Mitutoyo cables.
- ❑ All other comparators need a specific connection cable. The comparator that can be measured via RS-232C is the one equipped with the function to receive the "send data" request command form from the main unit and can output the counter value to the main unit.

Characteristics

| | |
|-----------------------------|--|
| Product code | |
| Measuring range | 26mm |
| Measuring system | Glass linear-scale |
| Resolution | 0.05µm |
| Measuring system accuracy | ±(0.2 + L/100) µm |
| Positioning accuracy | ±0.3µm in automatic mode |
| Manual positioning | jog-dial (resolution 0.5µm) |
| Displacement | Motorized (resolution 0.5µm) |
| Connections | DIN 5 pins for Metro inductive probes DIGIMATIC for digital indicators ORBIT for numerical probes RS232 to PC |
| Supply | 230V AC |
| Dimensions | 193x165x370 |
| Mass | 12.2 Kg |
| Storage temperature | -10°C to 50°C |
| Operating temperature range | 20°C ±3°C |

System

| Configuration | Minimum environment | Suggested environment |
|--------------------|------------------------------|-----------------------------|
| Computer type | IBM-PC compatible | |
| Operating System | Windows 98/ME/NT4/2000 or XP | |
| Microprocessor | Pentium II 233 MHz | Pentium III 600 MHz or more |
| Memory | 64 Mo | 128 Mo or more |
| Hard Disk Drive | 10 Mo free space | 1 Go free space |
| Disk Drive | CD-ROM Disk Drive | |
| Connection | 1 free serial port (RS232) | |
| Display Definition | 1024x768 | |