



***INSIZE CO., LTD.***

[www.insize.com](http://www.insize.com)

V.2 08.2026

**INSIZE** - Founded in 1995, is a dedicated supplier of measuring instruments. To enable us to serve the world-wide market, we are setting up an INSIZE distribution network on a global basis. INSIZE headquarter is located in China. We have branch companies in Canada, USA, Mexico, Brazil, India, Bangladesh, Pakistan, Vietnam, Thailand, Malaysia, Indonesia, Turkey, Taiwan, China, Italy, Czech Republic, France, UK, Romania, Slovenia, Poland, Australia and distributors in over 120 countries. We ensure that wherever you are, our INSIZE products have service and support that are within hands reach. Our dedication to Quality, Innovation, Service and Value has created a worldwide demand for the INSIZE products.



is our standard quality, made in China



is our premium quality, made in Europe





To become the world's leading supplier of  
industrial measurement solutions,  
providing measurement products and services for  
industrial production,  
addressing measurement challenges,  
continuously innovating, and contributing to social  
development.



# ***Customized Services***







## 1 Data Output And Software



## 2 Smart Measurement



## 3 Automatic Inspection



## 4 Automatic Tool Compensation System



## 5 Measuring Tools



## 6 Levels



**7** *On-Machine Measurement*



**8** *Linear Probes And Scales*



**9** *Roundness, Profile And Roughness Testers*



**10** *3D Measurement*



**11** *Profile Projectors, Quick Measurement Systems, Vision Measuring Systems*



**12** *Cutting Tools Inspection*

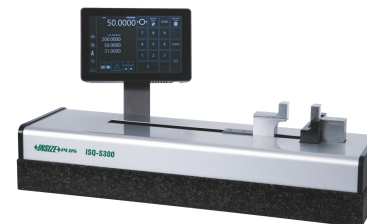




**13** *Microscopes, Magnifiers*



**14** *Videoscopes*



**15** *Other Dimension Measuring Instruments*



**16** *Hardness Testers*



**17** *Metallography Preparation And Analysis*



**18** *Flaw Detectors*



## 19 Testing Machines, Force Gauges, Tension Meters



## 20 Torque Testers, Torque Wrenches



## 21 Component Analysis



## 22 Coating And Paint Testing



## 23 Other Instruments



# Data Output And Software

## Wireless Data Transmission



## Wired Data Transmission



## Measurement Data Management and Analysis Software



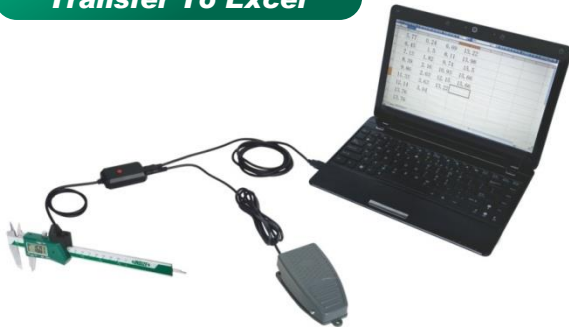
## Inspection Table



# **Data Transmission And Management** **— Improve productivity**

Supports multiple measurement tools for real-time data collection. One-click transfer of measurement data to Excel, measurement software or mobile APP after measurement. This process is efficient and accurate, and facilitates data management and sharing to improve productivity.

**Transfer To Excel**



**Transfer To Data Management Software**

**Transfer To Phone APP**



# Advantages of Data Transmission (P1)

## Traditional Measurement



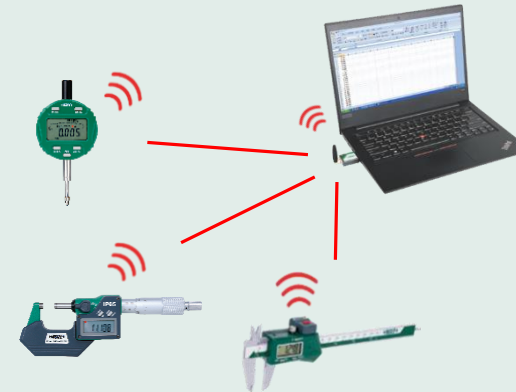
Traditional measurement is manual recording is inefficient, you need to measure and record at the same time; sometimes you need two operators for operation, one to measure and the other to record.

Traditional measurements are made by manually recording data to a paper file or manually entering it into a computer, which inevitably results in recording errors.

Traditional measurements use paper forms, which are difficult to save , circulate and trace at a later stage.

# VS

## Communication Transfer Data



Data can be transmitted directly to a computer /phone through wired or wireless data transmission, improving efficiency.

The direct transmission of measurement data to the computer, eliminating human error and ensuring that the data is true.

Compared to paper forms, electronic forms of data transmission are more convenient for storage, transferring between each other and later reference.

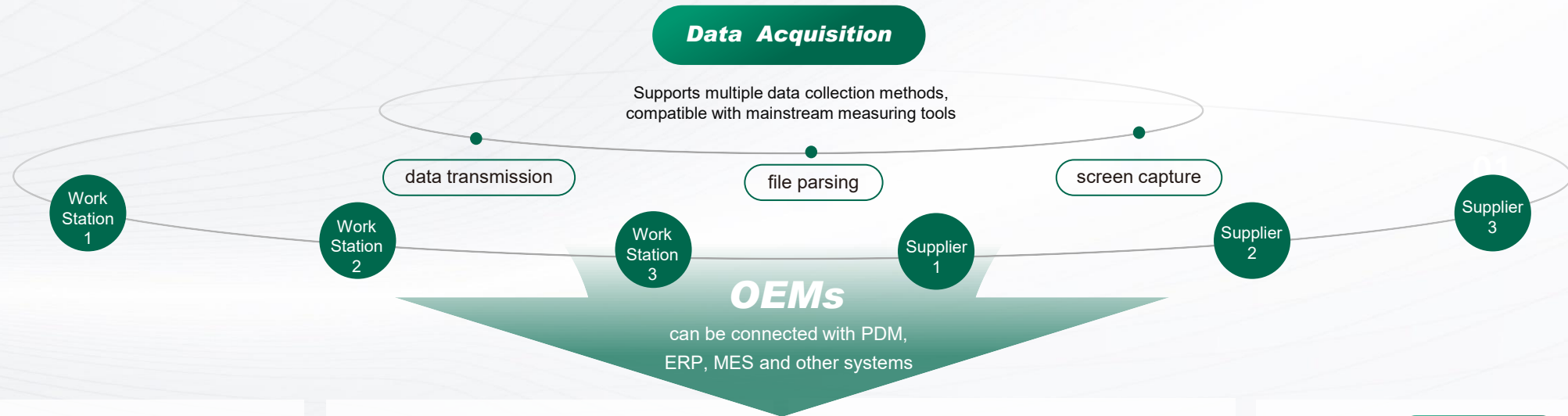
Timeliness

Validity

Paperless



# Advantages of Data Management (P2)



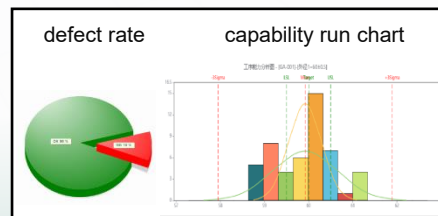
## Data Management

Manages measurement data for easy traceability and review.

|                |     |        |                |                |               |                     |
|----------------|-----|--------|----------------|----------------|---------------|---------------------|
| Structure Tree | Seq | Planag | List Item Code | List Item Name | Creation User | Creation Time       |
| INSIZE         | 1   | Slieve | 001            | Drawing A      | Administrator | 2022-06-07 10:45:24 |
| ITL            | 2   | Slieve | 002            | Drawing B      | Administrator | 2022-06-07 14:50:44 |
| Workpiece A    | 3   | Slieve | 003            | Drawing C      | Administrator | 2022-06-07 14:50:46 |
| MEIDA          | 4   | Slieve | 004            | Drawing A      | Administrator | 2022-06-07 14:50:52 |
| Workpiece A    | 5   | Slieve | 005            | Drawing B      | Administrator | 2022-06-07 14:50:55 |
| Workpiece C    | 6   | Slieve | 006            | Drawing B      | Administrator | 2022-06-07 14:51:28 |
| ME             | 7   | Slieve | 007            | Drawing B      | Administrator | 2022-06-07 14:50:25 |

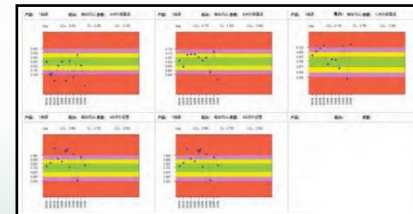
## SPC analysis

Analyzes measurement data to identify production inefficiencies and optimize workflows.



## Panel

Real-time monitoring of process quality to address risks promptly.



## Reports

Provides inspection reports upon production completion, enhancing quality credibility.

OEMs can conduct random inspections to verify if results align with those from suppliers and ensure full production traceability.

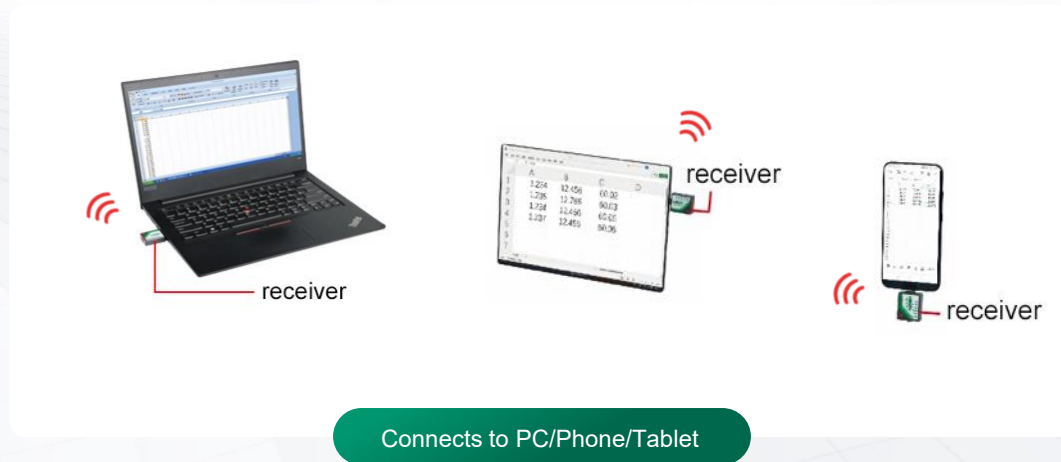
# 1

## ***Wireless Data Transmission***



# Wireless Data Transmission System External Transmitter

- Measuring tool connects to a transmitter to send data , and receiver received data
- Trigger the transmit button of transmitter to wirelessly transfer measurement data to a computer /phone
- Transmission distance : 15m (unobstructed, no electromagnetic interference)
- Customizable AES128 data encryption to enhance data security



**01**  
Transmitter  
Connecting to indicator



**02**  
Transmitter  
Connecting to micrometer



**03**  
Transmitter  
Connecting to caliper



15M

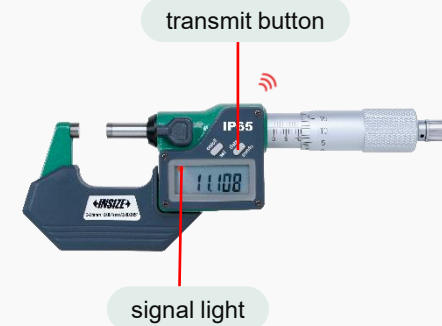
15M

15M



# Wireless Data Transmission System Built-in Wireless

- The built-in wireless measuring tool sends data, and receiver received data
- Transmission distance 10m(unobstructed, no electromagnetic interference)
- Trigger the transmit button of measuring tool to wirelessly transfer data to the PC/phone



# Receiver

- The receiver connects to the transmitter or built-in wireless measuring tool, receiving data wirelessly.



## Single Channel Receiver (Keyboard Signals)

can be connected to 1 transmitter

- For computers and mobile phone with Windows, Android, and iOS system
- Recognized as HID keyboard device, the transmitted data is recognized by computers or mobile phones as keyboard input data and press enter key, such as 12.34 ✓
- No need to install drivers and softwares.
- Data can be transmitted to excel, word, txt etc.
- For any softwares which can receive keyboard signal.



## Multichannel Receiver (Keyboard Signals)

can be connected to 6 transmitters



## Multichannel Receiver (virtual com port)

can be connected to 16 transmitters, each has an unique identification code

- For computers with windows system.
- Outputs serial port signals, to be used with software.

The data entry jump direction can be switched according to needs, either downwards or to the right.  
Custom output formats can also be tailored.

# Excel Directional Input Software (7315-2 Receiver Included)

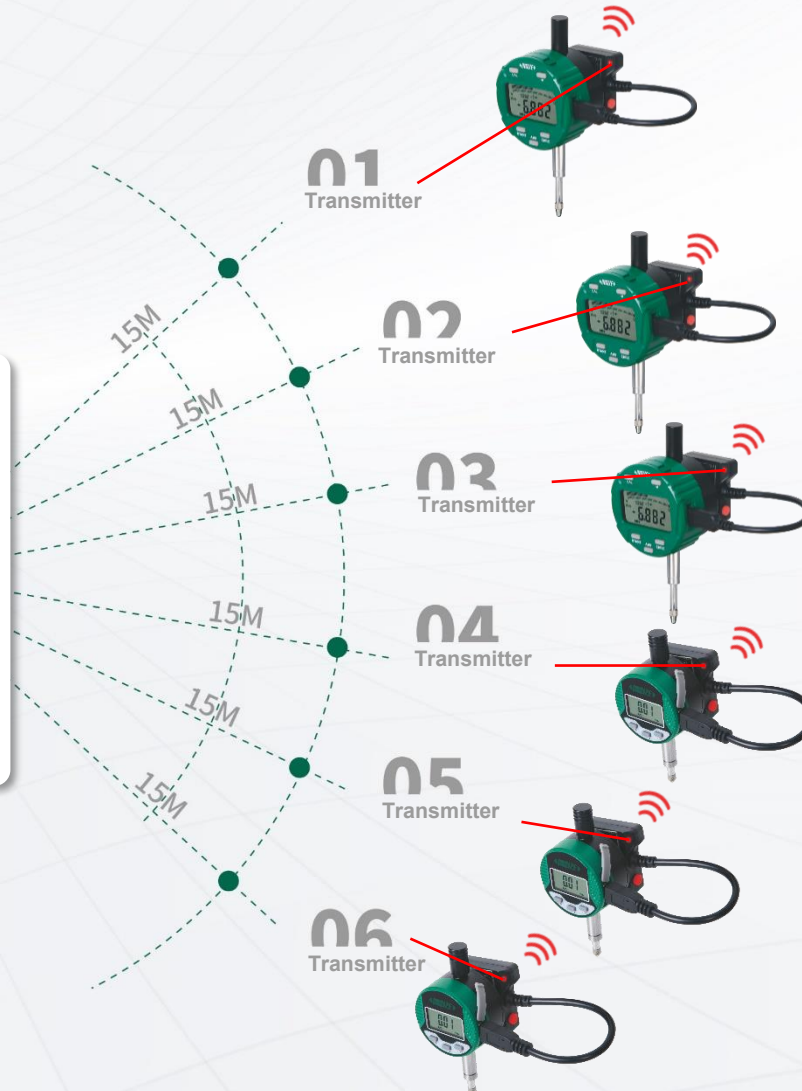
- The readings of measuring tools can be transmitted to the designated area of excel, which facilitates data management and improves efficiency.

| Projects          | External diameter1                     | Height2                | External diameter3     | Internal diameter4     | Internal diameter5     |
|-------------------|----------------------------------------|------------------------|------------------------|------------------------|------------------------|
| Specifications    | 60±0.5                                 | 45±0.5                 | 21±0.05                | 30±0.06                | 15±0.1                 |
| Measuring tool    | Built-in Wireless Transmission Caliper | Caliper                | Micrometer             | Bore gauge             | Bore Plug Gauge        |
| Transmission Type | Wireless Data Transmission             |                        |                        |                        |                        |
| 1                 | 60.19                                  | 45.20                  | 20.967                 | 30.012                 | 14.996                 |
| 2                 | 60.49                                  | 45.24                  | 20.945                 | 30.235                 | 14.996                 |
| 3                 | 60.13                                  | 45.32                  | 20.956                 | 30.145                 | 15                     |
| 4                 | 60.45                                  | 45.22                  | 20.945                 | 30.233                 | 14.996                 |
| 5                 | 60.45                                  | 45.21                  | 20.975                 | 30.141                 | 15                     |
| 6                 | 60.44                                  | 45.08                  | 20.847                 | 30.000                 | 14.993                 |
| 7                 | 60.44                                  | 45.03                  | 20.955                 | 30.056                 | 14.993                 |
| 8                 | Channel1 to be written                 | Channel2 to be written | Channel3 to be written | Channel4 to be written | Channel5 to be written |
| 9                 |                                        |                        |                        |                        |                        |

| Projects          | External diameter1         | External diameter3     | Height2                | Internal diameter4 | Internal diameter5     |
|-------------------|----------------------------|------------------------|------------------------|--------------------|------------------------|
| Specifications    | 60±0.5                     | 21±0.05                | 45±0.5                 | 30±0.06            | 15±0.1                 |
| Measuring tool    | Micrometer                 | Micrometer             | Caliper                | Bore Plug Gauge    | Bore Plug Gauge        |
| Transmission Type | Wireless Data Transmission |                        |                        |                    |                        |
| 1                 | 60.19                      | 20.967                 | 45.20                  | 30.012             | 14.996                 |
| 2                 | 60.49                      | 20.945                 | 45.24                  | 30.235             | 14.996                 |
| 3                 | 60.13                      | 20.956                 | 45.32                  | 30.145             | 15                     |
| 4                 | 60.45                      | 20.945                 | 45.22                  | 30.233             | 14.996                 |
| 5                 | 60.45                      | 20.975                 | 45.21                  | 30.141             | 15                     |
| 6                 | 60.44                      | 20.847                 | 45.08                  | 30.000             | 14.993                 |
| 7                 | 60.44                      | 20.955                 | 45.03                  | 30.056             | 14.993                 |
| 8                 | 60.34                      | Channel1 to be written | Channel2 to be written | 30.036             | Channel3 to be written |
| 9                 |                            |                        |                        |                    |                        |

# Wireless Data Transmission System of Digital Indicators (Remote control) 7213

- Digital indicator connects to a transmitter to send data, and receiver received data
- Trigger the transmit button of receiver to transfer data from multiple digital indicators to computer/phone



|   | channel 1 | channel 2 | channel 3 | channel 4 | channel 5 | channel 6 |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
|   | A         | B         | C         | D         | E         | F         |
| 1 | 24.35     | 0.4045    | 57.72     | 1.949     | 0.4075    | 0.03568   |
| 2 | 24.45     | 0.5045    | 57.82     | 2.049     | 0.5075    | 0.13568   |
| 3 | 26.35     | 0.4045    | 57.72     | 1.949     | 0.4075    | 0.00078   |
| 4 | 27.35     | 0.4045    | 57.72     | 1.7575    | 0.4075    | 0.0762    |
| 5 | 28.35     | 0.4045    | 57.72     | 1.7575    | 0.4075    | 0.0762    |
| 6 | 29.35     | 0.4045    | 57.72     | 1.7575    | 0.4075    | 0.07618   |
| 7 | 30.35     | 0.4045    | 57.72     | 1.7575    | 0.4075    | 0.55334   |
| 8 | 31.35     | 0.4045    | 57.72     | 1.7575    | 0.4075    | 0.61198   |
| 9 | 24.35     | 0.4045    | 57.72     | 1.7575    | 0.4075    | 0.6172    |

The button on receiver is pressed once, the readings of all digital indicators are transmitted



# Wireless Data Transmission VS. Competitor Brands Advantages

## High Compatibility

1

Our receivers feature multiple interfaces (USB, Type C, Micro USB, and Lightning), compatible with various system terminals such as computers, tablets, or phones running Windows, Android, or iOS.

## Diverse Communication Protocols

3

Supports both emulated keyboard signals and serial port signals to accommodate varied industrial scenarios.

## Persistent Binding Mechanism

5

Single-pairing ensures continuous data transmission—no re-pairing required when replacing terminals, instruments, or batteries.

## Data Format

7

Supports multiple data formats: e.g., Value + Enter, Value + TAB, ID number + Value + Enter, etc.

## Deep Customization

9

Provides bespoke data transmission solutions tailored to client specifications.

## Comprehensive Coverage

2

Three product categories: built-in wireless transmitters, external wireless transmitters, and all-in-one transmitters. our wireless data transmission capability comprehensively covers commonly used measuring tools and instruments.

## User-Friendly Operation

4

Simplified device pairing, unpairing, and data transfer processes for effortless setup.

## Ultra-Low Power Consumption

6

Operates for over 400,000 transmissions on a single CR2032 battery.

## Data Security

8

Optional AES128 encryption for critical data protection.

## Advanced Analytics Capabilities

10

Mature supporting software collects, aggregates, and analyzes measurement data, enabling streamlined, intelligent, and visualized data management.

# 2

## ***Wired Data Transmission***

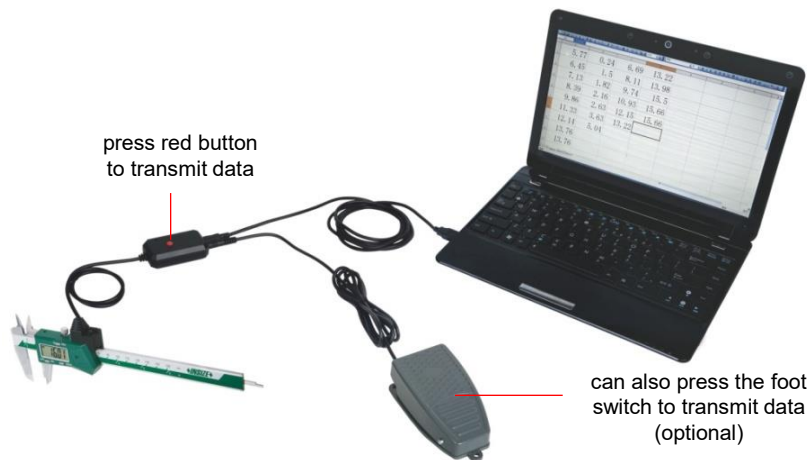


# Wired Data Transmission 7302、7305

- Measuring tool connects to the data output cable, and trigger the transmit button to wired transfer data to a computer/tablet

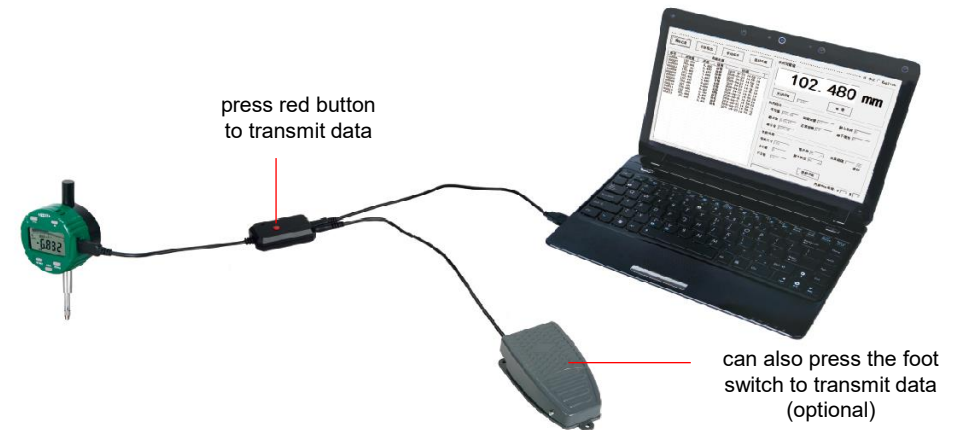
## 7302 series Data Output Cables (Keyboard Format)

- Recognized as HID keyboard device by computer, no need to install drivers and softwares.
- Data can be transmitted to Excel, Word, txt and other files (press transmit button, which is recognized by the computer as keyboard input data and press enter key, such as 12.34 ↵).
- For any softwares which can receive keyboard signal.
- Cursor movement direction after data input can be switched (down/right).
- Supports output of ID numbers if needed, e.g., 2023032265 12.34.



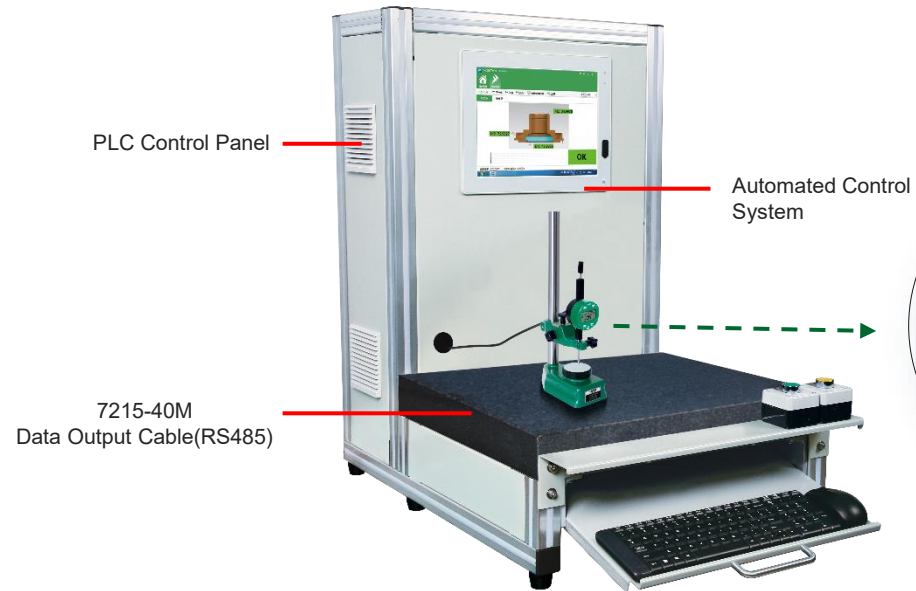
## 7305 series Data Output Cables (Text Format, Virtual Com Port)

- Output serial signals to transfer data to serial communication software.
- Supports output of ID numbers if needed.
- The optional 7210\_2 multiplex interface boxes can transmit data to the designated area in Excel, facilitating data management and boosting work efficiency.



# 485 Data Output Cables 7215

- Connect the measuring instrument to the data cable, and connect the data cable to the PLC to enable automated control of the measurement data.



Application

Modbus-RTU Protocol

- Configurable baud rates (9600, 19200, 38400)
- Can set communication address



# Wired Data Transmission VS. Competitor Brands Advantages

1

## Adapted Terminals

- Adaptable to multiple acquisition terminals
  - a. Computers or tablets with Windows, Android or iOS systems
  - b. PLC

2

## Communication types

- Multiple data communication types to meet various production application scenarios:
  - a. (Simulated keyboard signal) Directly transfer data to Excel reports or customer measurement software, MES, or ERP systems
  - b. (Output serial port signal ) Interface with serial communication software, or transfer measurement data from multiple gauges to the designated area of Excel for easier data management
  - c. (485) Can be connected to a PLC to enable automated control of measurement data

3

## Data Format

- Supports multiple data formats: e.g., Value + Enter, Value + TAB, ID number + Value + Enter, etc.

# 3

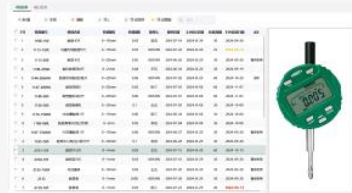
## ***Measurement Data Management and Analysis Software***



# Measurement Data Management and Analysis Software (Basic Version)-- 7349

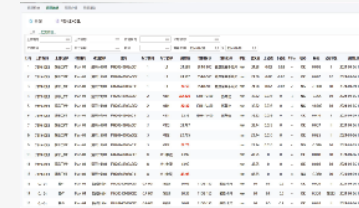
## Measuring tools Management

Manage basic information and calibration dates of measuring tools.



## Data Management

Query measurement data (red display for out-of-tolerance) and result status (OK/NG, Rework, UpMax/LowMin).



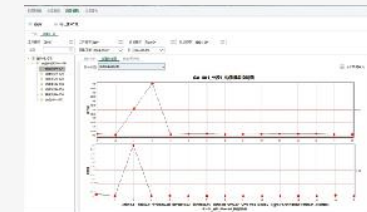
## Management of inspection plan

- Workpiece definition
- Control plan
- Drawing analysis
- Data interaction



## SPC analysis

SPC Analysis: average, min value, max value, range, Cp, Cpk, variation, sigma, counts of OK/NG.  
Quality Analysis Control Charts: Pie chart, X chart, Xbar-R chart, Xbar-S chart, I-MR chart and Run chart.



Can be connected with PDM, ERP, MES and other systems

## Data acquisition

- Support multiple data acquisition methods:
- Manual input: data input with keyboard
  - Data transfer: data collection with data output cable



## Quality report

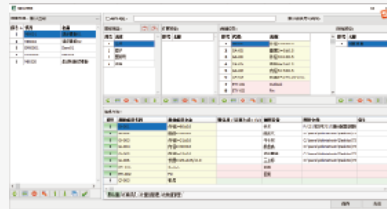
Generate quality reports with control plan information, SPC parameters, and measurement data, can export Excel.

| NO. | ITEM       | UNIT | REQUIREMENT | MEASUREMENT | STATUS | REMARK |
|-----|------------|------|-------------|-------------|--------|--------|
| 1   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 2   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 3   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 4   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 5   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 6   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 7   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 8   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 9   | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |
| 10  | PHOSPHORUS | 0.01 | 0.01        | 0.01        | OK     |        |

# Measurement Data Management and Analysis Software -- 7317

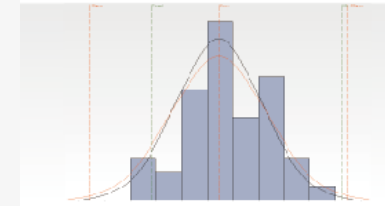
## Make inspection plan

Define the dimensions, tolerances, control range and other parameters of workpieces



## SPC Analysis

Measurement data analysis helps identify engineering limitations and optimize workflows.



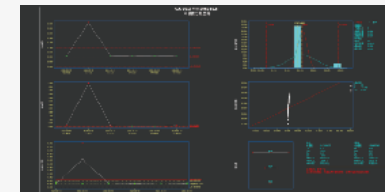
## Inspection plan management

Follow company workflow  
Test item management

| 序号 | 检测项目 | 规格   | 单位 | 公差    | 检测方法 | 检测频率 | 检测位置 | 检测人员 | 检测日期       | 检测结果 |
|----|------|------|----|-------|------|------|------|------|------------|------|
| 1  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 顶部   | 张三   | 2023-10-27 | 合格   |
| 2  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 底部   | 张三   | 2023-10-27 | 合格   |
| 3  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 侧面   | 张三   | 2023-10-27 | 合格   |
| 4  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 内部   | 张三   | 2023-10-27 | 合格   |
| 5  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 外部   | 张三   | 2023-10-27 | 合格   |
| 6  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 内部   | 张三   | 2023-10-27 | 合格   |
| 7  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 外部   | 张三   | 2023-10-27 | 合格   |
| 8  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 内部   | 张三   | 2023-10-27 | 合格   |
| 9  | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 外部   | 张三   | 2023-10-27 | 合格   |
| 10 | 尺寸测量 | 10.0 | mm | ±0.05 | 卡尺   | 100% | 内部   | 张三   | 2023-10-27 | 合格   |

## Real Time Monitoring

Quality control personnel can monitor real-time quality status for each process and address risks promptly.



## Data acquisition

Supports multiple data acquisition methods:

- Manual input
- Data transmission
- File parsing
- Screen capture



**Can Be Connected With PDM, ERP, MES And Other Systems**

## Reports

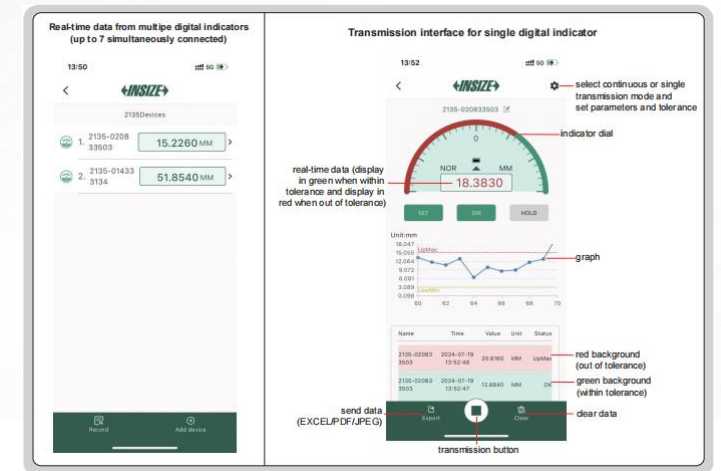
Quality reports increase quality credibility, reduce acceptance workload, and ensure traceable quality control.





# Data Management APP

- Measuring tools connects to the mobile APP by Bluetooth for real-time data collection
- Displays synchronized data with automatic judgment (red display for out-of-tolerance)
- Data trend charts help quickly identify abnormal fluctuations
- Export data as PDF, JPEG, or Excel files
- Transmission distance: 10 meters



# 4

## ***Inspection Table***



# Inspection Table

- Customers can choose the suitable inspection table based on different measurement applications.



7906-06C



7901



7911



7923

# SPC Inspection Station Case

1. Customer needs to quickly measure the inner and outer diameters of automotive differentials.
2. Measuring tools were selected for quick on-site measurements and to minimize human errors: 4653 precision Bore plug gauge, 2186 quick dial snap gauge, and 4659 ring type inner/outer diameter plug gauge.
3. The 7315 wireless data transmission system was selected, and transmit data to the 7317 software.



Ring Outer Diameter Plug Gauge 4659-D250g6  
(For measuring  $\varnothing 250g6-0.015/-0.044$ )

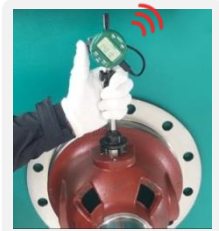


transmitter

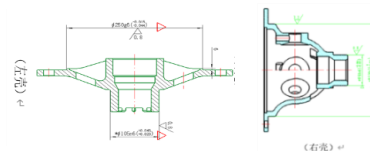
receiver



Dial snap Gage 2186-125/275  
(For measuring  $\varnothing 105n6+0.045/+0.023/ \varnothing 270h7 0/-0.052$ )



Bore Plug Gage 4653-B34J8  
(For measuring  $\varnothing 34J8+0.024/-0.015$ )



Using the 7315 wireless transmission system, measurement data is directly transferred to the 7317 software.



# 2 *Smart Measurement*



**SPC Measurement Station**



# SPC Measurement Station CMW-□□□



graphical guide for  
measurement in software

operation button

- Flexible instrument configuration: selection of air gauges, inductive probes (LVDT), and measuring tools (e.g., digital calipers, micrometers, digital Indicators) and Go/No-Go gauges based on specific requirements
- Visual software guidance: graphical interface functionality that provides step-by-step instructions and highlights the specific location of each dimension to be measured
- Light indicator guidance: signal lights to guide the operator to the specific gauge or instrument required for each measurement step
- Data analysis & reporting: software equipped with modules for real-time data processing and professional report generation

## Optional measuring tools and instruments



air gauges



inductance probes

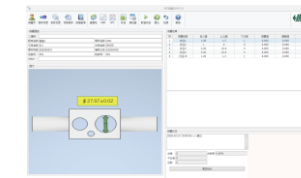


measuring tools

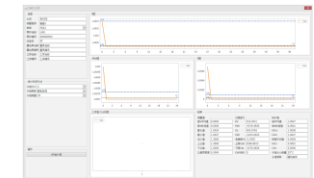


Go/No-Go gauges

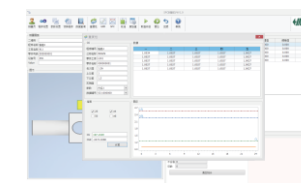
## SPC measurement software system (customizable)



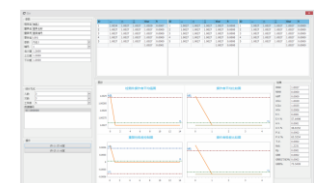
measurement interface



SPC analysis



CG analysis



GRR analysis

# 3

## ***Automatic Inspection***



***Robotic Arm-integrated  
Measuring System***



***Automatic Inspection System***



***Semi-auto Measurement Stations***



***Workpiece Torsion Fatigue  
Testing Machine***



***Automatic Vision  
Inspection Machine***



# Robotic Arm-integrated Measuring System (P1)



Automatic Measurement System  
RBT-CMM01



Automatic Scanner Measuring  
System RBT-LSM01



Automatic Quick Measurement  
System RBT-VIM40

**CUSTOM-  
MADE**



Workshop CMM Automatic  
Measurement System RBT-CMM02



Automatic Quick Measurement  
System RBT-QM01



Automatic Vision Measuring  
System RBT-ISO01



# Robotic Arm-integrated Measuring System (P2)



Automatic Profile Measurement  
System RBT-SPM01



Automatic Roundness  
Measurement System RBT-RCT01



Automatic Roughness  
Measuring System RBT-ISR01

**CUSTOM-  
MADE**



Automatic Laser Diameter  
Measuring System RBT-LDM01



Automatic Hardness Test  
System RBT-HDT01



Automatic XRF Plating Thickness  
Measurement System RBT-XRF01

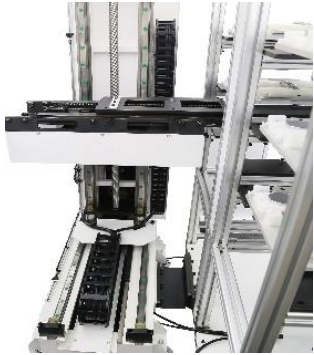
# **Automatic Inspection System ATU-MHV35 (P1)**

- Automatic inspection system: delivers unmanned inspection and automatic data collection, fundamentally cutting labor costs, maximizing equipment utilization, enhancing efficiency, ensuring quality, and ultimately achieving visual management of production progress and quality status

**CUSTOM-  
MADE**



# **Automatic Inspection System ATU-MHV35 (P2)**



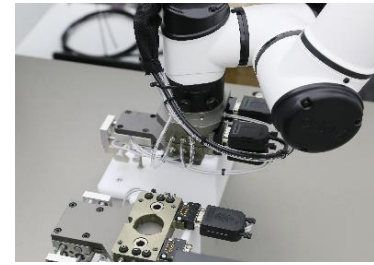
The palletizing elevator automatically takes the workpiece pallets from vertical storage system



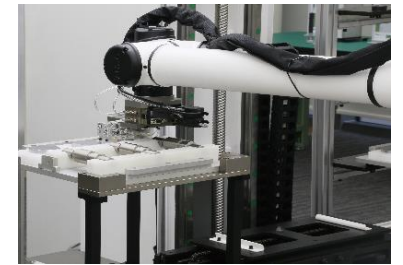
The palletizing elevator automatically conveys the workpiece pallets to the vision positioning station



The vision positioning station automatically verifies the workpiece placement position



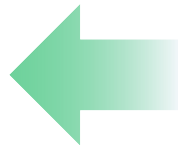
The robot automatically changes grippers



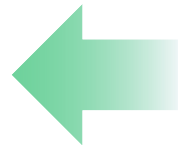
The robot automatically grips the workpiece on the vision positioning station



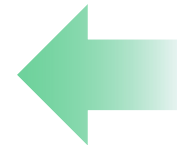
The robot automatically places the workpiece into OK or NG positions on the servo stacking/unloading



The robot automatically places the workpiece on the hardness tester station for automatic measurement



The robot automatically places the workpiece on the CMM station for automatic measurement



The robot automatically places the workpiece on the CNC vision measuring station for automatic measurement

# Semi-auto Measurement Stations

Semi-auto Measurement Station ATU-01A

CUSTOMIZED ACCORDING  
TO WORKPIECES



Measurement device



inductive probe



Workpiece fixing device

- Repeatability: 3 $\mu$ m
- Measurement cycle time: 8s

Semi-auto Rotary Measurement Station ATU-01B

CUSTOMIZED ACCORDING  
TO WORKPIECES



Measurement device



inductive probe



Workpiece fixture and rotating plate

- Repeatability: 10 $\mu$ m
- Measurement cycle time: 46s



# Workpiece Torsion Fatigue Testing Machine ITU-A102

CUSTOMIZED ACCORDING  
TO WORKPIECES



built-in dynamic torque sensor  
IST-TA10



workpiece fixture

## Main unit

- Servo control mode: torque, angle and speed
- Range of test torque: 20%-100%FS
- Range of torsion angle: 0-9999°
- Max. Test RPM: 100rpm

## Dynamic torque sensor

- Torque capacity: 10N.M
- Accuracy: 0.1%fs
- Hysteresis: 0.5%f.S.

# ***Automatic Vision Inspection Machine AVIM***

- For testing fasteners, mobile phone parts, plastical products, electronic components and special-shaped hardware, etc.



**AUTOMATIC INSPECTION OF LARGE  
QUANTITIES OF WORKPIECES**

**AUTOMATIC  
SORTING**

**SIZES MEASUREMENT AND  
DETECTION OF SURFACE DEFECTS**

**CUSTOM-  
MADE**

# 4

## ***Automatic Tool Compensation System***

↔IN SIZE↔

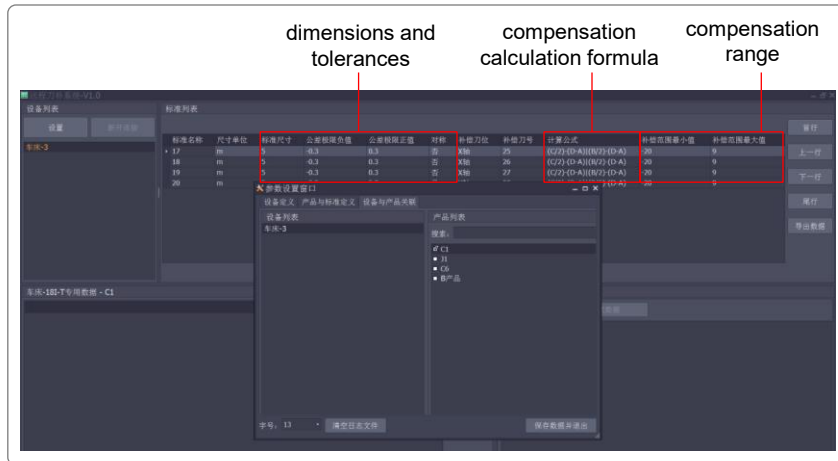
***Automatic Tool Compensation System***



# Automatic Tool Compensation System ATU-03A

- Improve production efficiency, reduce human misjudgment, lower product reject rate and maintain stable controllable machining quality
- Auto-measure workpieces, transmit measured data to the CNC, auto-calculate compensation values and update CNC tool compensation

CUSTOMIZED ACCORDING  
TO REQUIREMENTS



Tool compensation software (included)

- Measuring range\*: workpiece length: 100mm  
workpiece diameter: 1~30mm
- Accuracy (at 25°C):  $\pm(0.5+10\%D)\mu\text{m}$ , D is measuring diameter in mm
- Repeatability (at 25°C):  $(0.3+5\%D)\mu\text{m}$ , D is measuring diameter in mm
- CNC system type\*: FANUC, Siemens etc.

\* can be customized according to customer workpieces and CNC systems



**Calipers****Depth Measuring Tools****Height Measuring Tools****Comparison Measuring Tools****Micrometers****Bore Diameter And Circumference Measuring Tools****ARC Radius Measuring Tools****Keyway And Chamfer Measuring Tools**

## Indicators And Dial Indicator Stands



## Indicating Measuring Tools



## Standards And Gauge Blocks



## Angle, Straightness, Flatness Measuring Tools



## Concentricity And Runout Testers



## Simple Measuring Tools



## Set-up Tools



# Calipers



**Digital Calipers**



**Vernier Calipers**



**Dial Calipers**



**Caliper/Height Gauge Checkers**



**Caliper End Grinding Machines**



**Depth Base Attachments**



**Accessory Sets For Digital Calipers**



**Groove Points For Digital Calipers**



**Universal Calipers**



**Digital Calipers With Interchangeable Points**



**Special Purpose Calipers**

# Digital Calipers



Digital Calipers (Standard Type) 1108



IP67 Waterproof Digital Calipers 1195



Wireless Digital Calipers 1113



Digital Calipers 1114



Left Hand Digital Calipers 1130



Digital Calipers With Ceramic Tipped Jaws 1193



Digital Calipers With Carbide Tipped Jaws 1110



Mini Digital Calipers 1111



Plastic Digital Caliper 1139

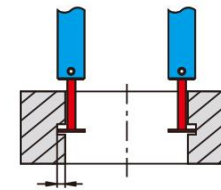
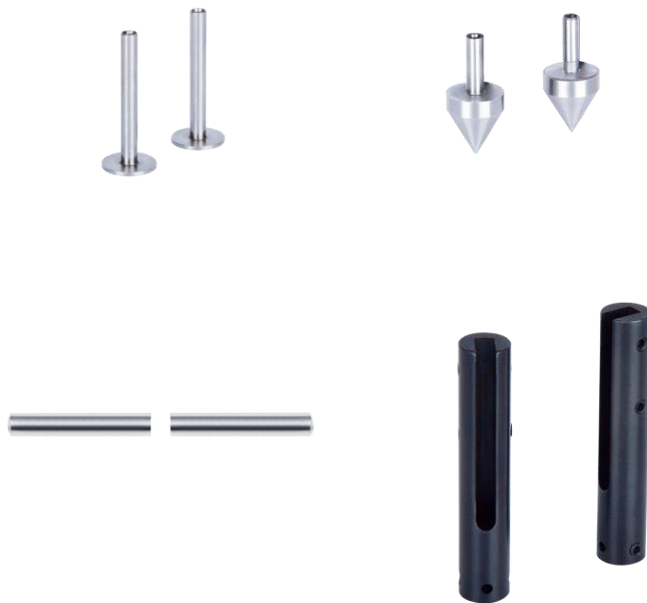


Digital Calipers 1106

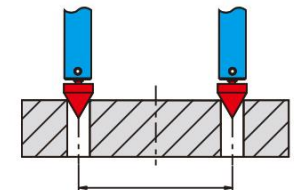


# Accessory Set For Digital Calipers 6144

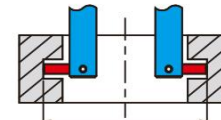
- Suitable for 0-150mm and 0-200mm digital calipers (thickness of lower jaws<3.7mm)
- Suitable for 0-300mm digital calipers (thickness of lower jaws<4.0mm)



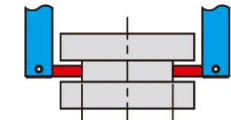
measuring internal  
groove diameter



measuring center  
distance



spherical points for groove diameter  
(inside hole) measurement



flat points for external  
groove diameter measurement

# Universal Calipers 1125

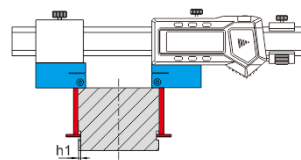
Working with stands



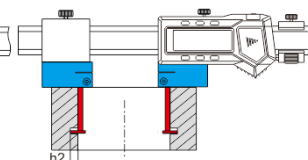
Working with measuring jaws



Half Disk Points



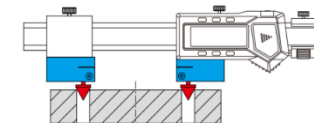
measuring external  
groove diameter with  
flat measuring face



measuring internal  
groove diameter with  
spherical measuring face



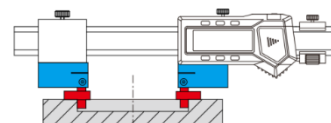
Conical Points



measuring center  
distance



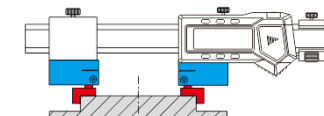
Round Shoulder Points



measure inside  
diameter of shallow hole



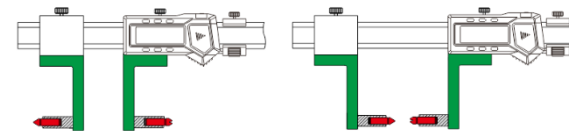
Flat Shoulder Points



measure outside  
diameter of low boss



Point Sleeve



working with multifunctional points,  
ball points and screw thread points

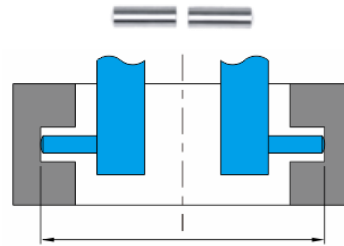
- Range: 0-1000mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.05\text{mm}/\pm 0.07\text{mm}$

# Digital Calipers With Interchangeable Points

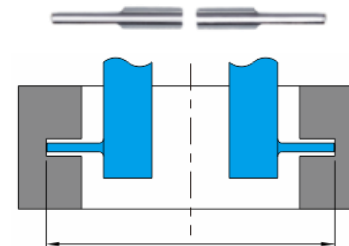
1526



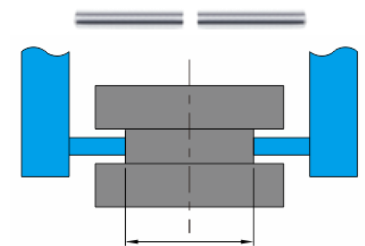
- Range: 0-200mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.03\text{mm}$



spherical points for groove  
(inside hole) measurement



spherical blade points for  
narrow groove (inside hole)  
measurement



flat points for external  
groove measurement

1124



- Range: 0-300mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.04\text{mm}$

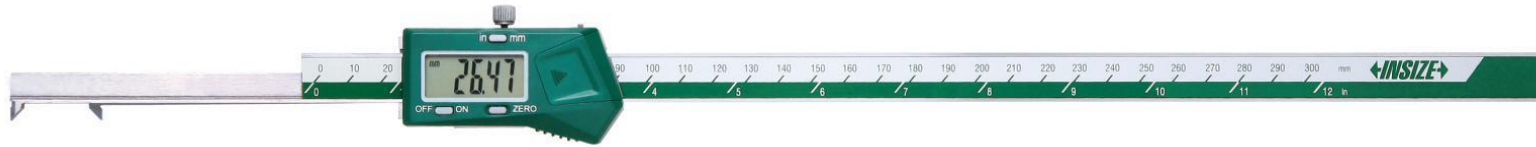
## Multifunctional Points



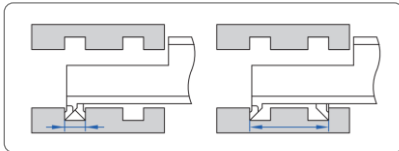
depth  
stop

# Digital Hook Calipers 1122 / 1164

Measure width and distance of grooves inside bores

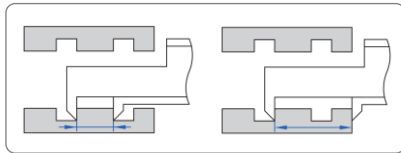


DATA  
OUTPUT



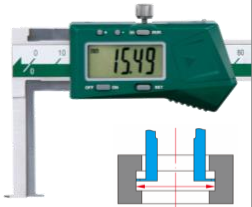
- Range: 3-300mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.03\text{mm} / \pm 0.04\text{mm}$

Measure width and distance of grooves inside bores



- Range : 0-300mm
- Resolution : 0.01mm
- Accuracy :  $\pm 0.03\text{mm} / \pm 0.04\text{mm}$

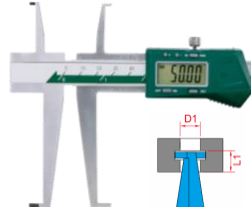
# Special Purpose Calipers



Digital Inside Groove Calipers



Digital Inside Point Calipers



Digital Inside Groove Calipers



Digital Outside Point Calipers



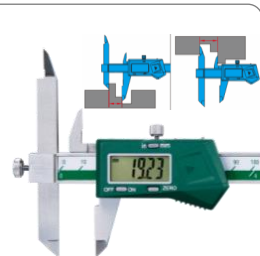
Digital Small Point Jaws



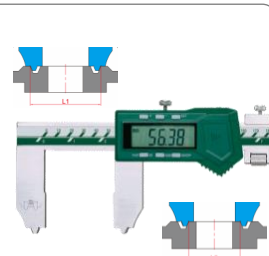
Digital Inside Knife-edge Calipers



Digital V Shape Caliper



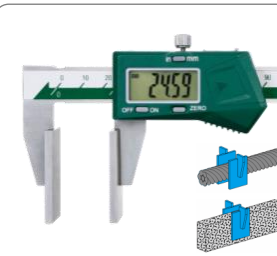
Digital Offset Calipers



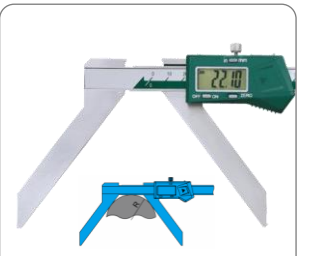
Digital Rtj Ring Groove Calipers



Digital Crimp Height Calipers



Digital Calipers With Large Measuring Faces



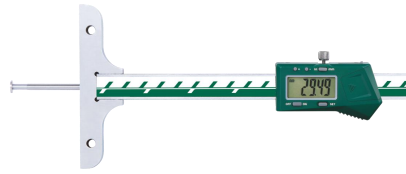
Digital Arc Radius Calipers



# Depth Measuring Tools



**Digital Depth Gauges**



**Digital Depth Gauges With Round Depth Bar**



**Dial Depth Gauges**



**Vernier Depth Gauges**



**Extension Bases**



**Mini Depth Gauges**



**Depth Gauges**



**Depth Micrometers**



**Measuring Tools Dynamometers**



**Depth Micrometer Checkers**

# Digital Depth Gauges



IP67 Waterproof Digital Depth Gauges 1149



Digital Depth Gauges (Standard Type) 1141



Digital Hook Depth Gauges 1142



Digital Double Hook Depth Gauges 1144



Digital Double Hook Depth Gauge 1540



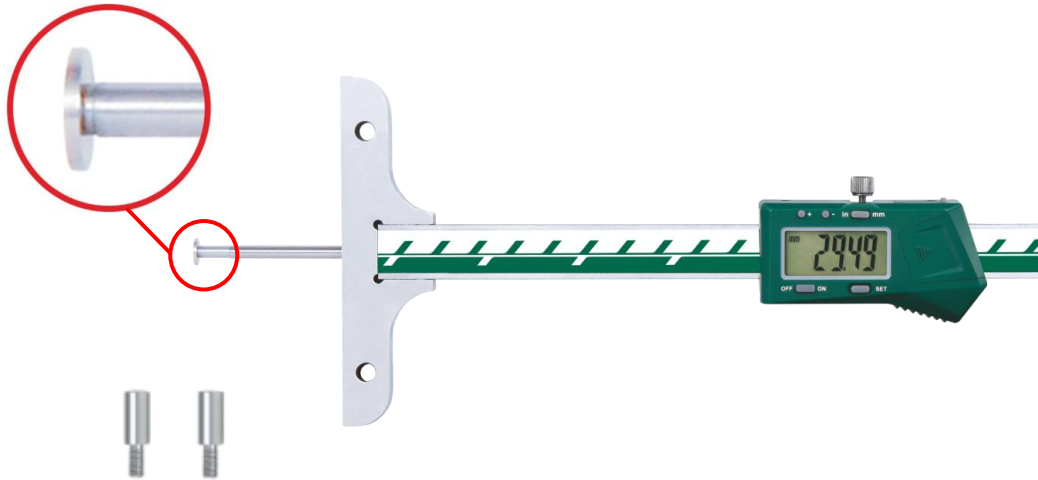
Digital Point Depth Gauges 1143



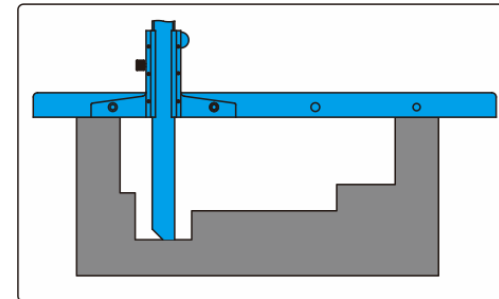
Mini Digital Depth Gauges With Round Bar 1140

# Digital Depth Gauges With Round Depth Bar 1148

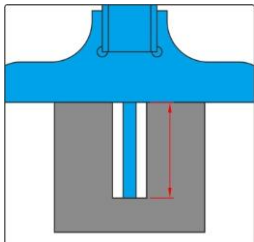
- Range: 0-100mm, 0-120mm (one-hand use), 0-200mm, 0-300mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.02\text{mm} \sim \pm 0.03\text{mm}$



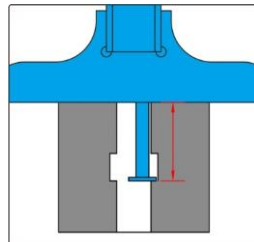
Extension base (optional)



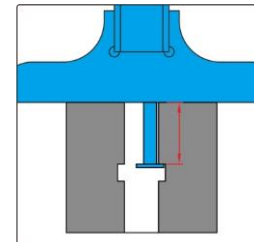
Measure depth of small holes ( $>\phi 4\text{mm}$ )



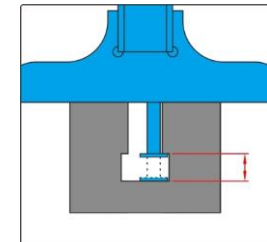
Measure depth of grooves inside bore



Measure depth of grooves inside bore



Measure width of grooves inside bore



# Height Measuring Tools



**Manual Height Gauges**



**Digital Height Gauges**



**Dial Indicator Stands**



**Height Gauges**



**Height Gauge Checkers**

# Manual Height Gauges

2D



**DHG-V410/V710**

with air cushion

- Measuring range: 0-407mm/0-711mm
- Expandable measuring range: 719mm/1023mm
- Accuracy(at 20°C): 4.5µm/6µm

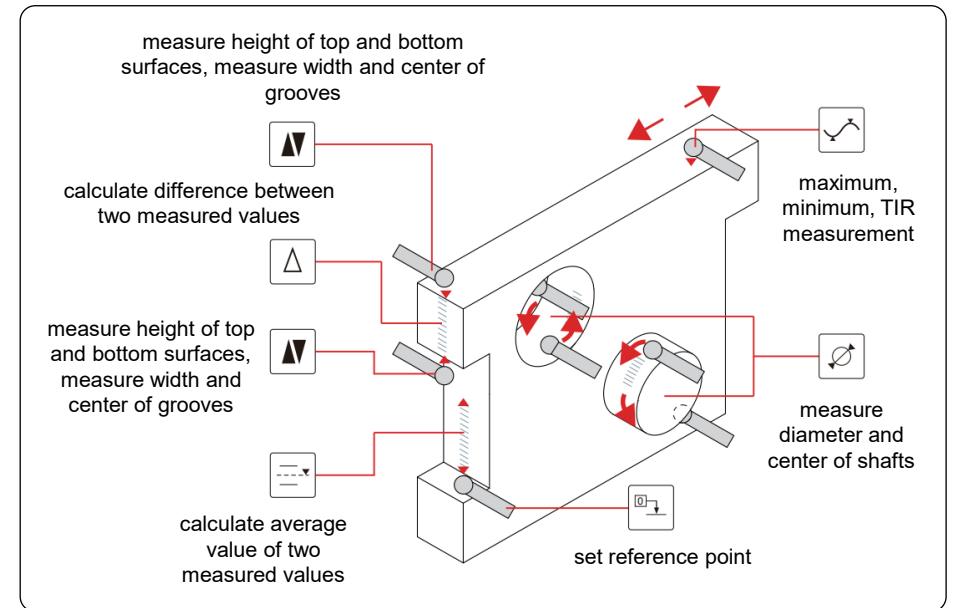
1D



**ISHH-V400/V700**

without air cushion

- Measuring range: 0-407mm/0-711mm
- Expandable measuring range: 508mm/812mm
- Accuracy(at 20°C): 5µm/6µm





# Digital Height Gauges

High Precision Digital Height Gauges 1155



- Range: 0-50mm
- Resolution: 0.5 $\mu$ m(can switch to: 1 $\mu$ m) / 0.1 $\mu$ m(can switch to: 1 $\mu$ m)
- Accuracy (20°C): 1.5 $\mu$ m/1 $\mu$ m

Digital Height Gauges 1157



- Range: 0-50mm
- Resolution: 1 $\mu$ m
- Accuracy (20°C): 3 $\mu$ m

Large Range Digital Height Gauge 1158



- Range: 0-100mm
- Resolution: 0.1 $\mu$ m (can switch to: 1 $\mu$ m)
- Accuracy (20 °C): 3 $\mu$ m

# Height Gauges



Digital Height  
Gauges 1150



Digital Height Gauges  
With Driving Wheel  
1156



Digital Height  
Gauges 1151



Dial Height  
Gauges 1351



Mini Digital Height  
Gauges 1154



Vernier Height  
Gauges 1250

# Comparison Measuring Tools



**Universal Comparison Gauges**



**Carbon Fiber Comparison Gauges**



**Horizontal Measuring Bench**



**Internal Comparison Measuring Bench**



**Universal Comparison Measuring Benches**



**Digital Comparison Gauges**



**Comparison Gauges**



**Internal/External Measuring Gauges**



**Digital Measuring Gauges (Large Range)**



**Ball Screw/Ball Nut Pitch Circle Diameter Comparators**

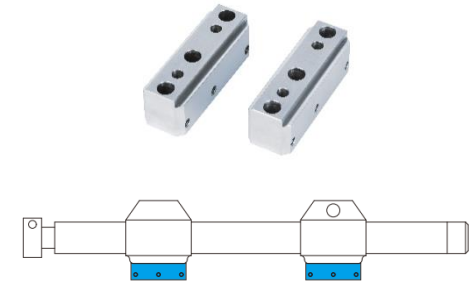


**Screw Thread Comparators**

# Universal comparison Gauge 2927 (P1)



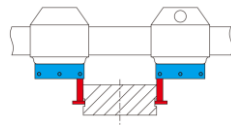
internal/external diameter measurement switch



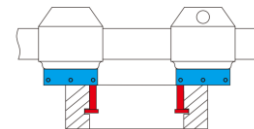
Stands (Optional, Supplied In Pair)



Half Disk Points (Optional, Supplied In Pair)



measuring external groove diameter with flat measuring face (depth ≤ 2.5mm)



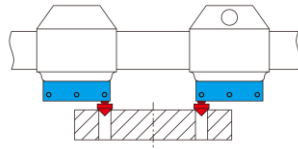
measuring internal groove diameter with spherical measuring face (depth ≤ 7.5mm)

- Range of external diameter: 0-200mm
- Range of internal diameter: 30-250mm
- Maximum measuring range: 500mm (optional extension rods)
- Repeatability: 2μm
- Accuracy: ±5μm

# Universal comparison Gauge 2927 (P2)



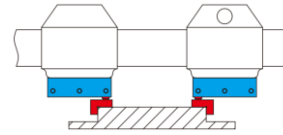
Conical Points



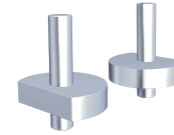
measuring center distance



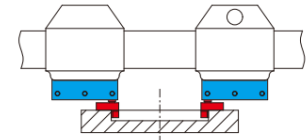
Flat Shoulder Points



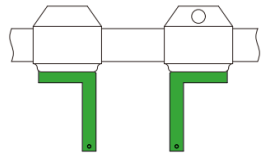
measure outside diameter of low boss



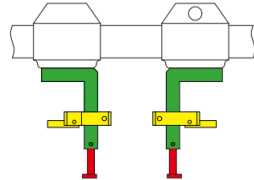
Round Shoulder Points



measure inside diameter of shallow hole



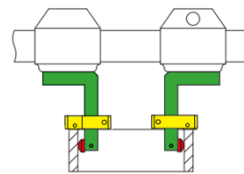
Measuring Jaws



Depth Stop



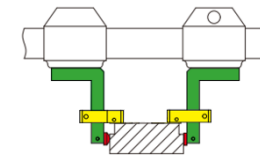
Spherical Point



measure inside diameter (2 spherical points)



Flat Point



measure outer diameter (1 spherical point, 1 flat point)



V-shaped Placement Brackets



Points



Multifunctional Points



Ball Points



External Thread Points



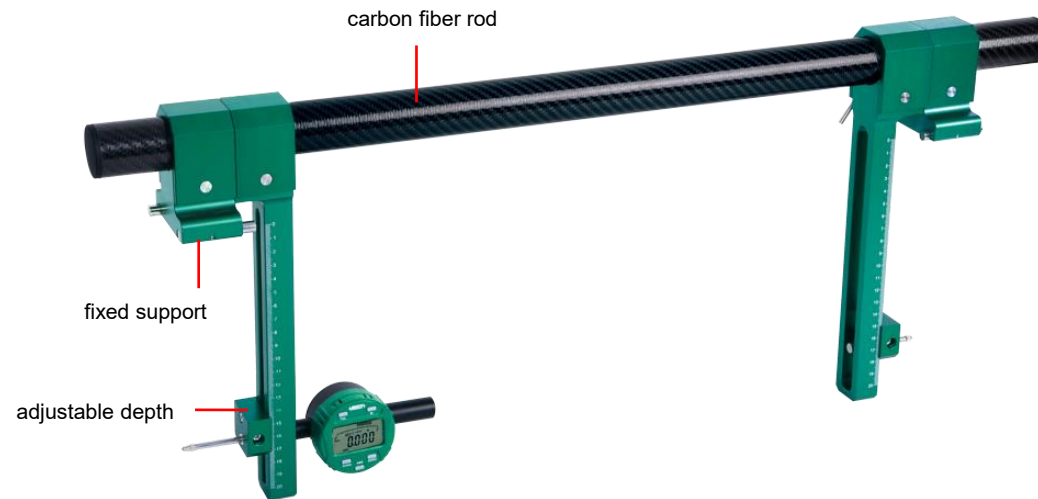
Internal Thread Points



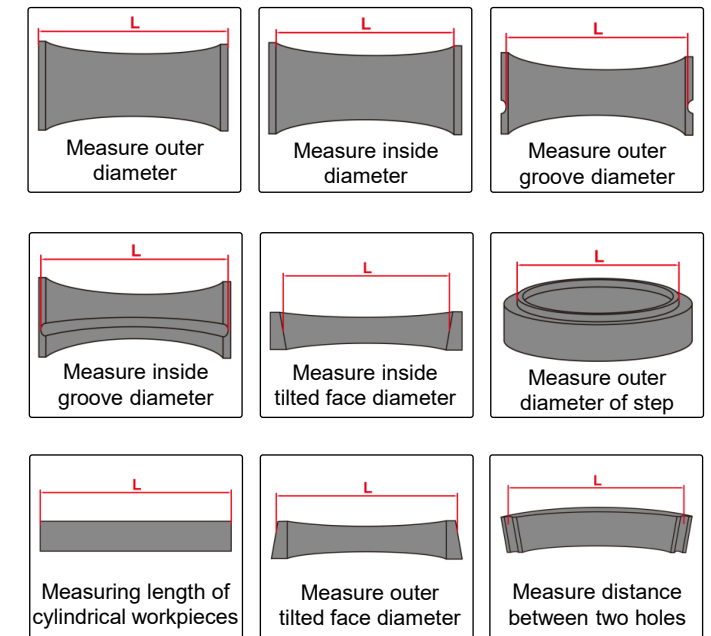
# Carbon Fiber Comparison Gauges 2931

Measure outer diameter, inside diameter, holes distance and cylindrical workpiece length

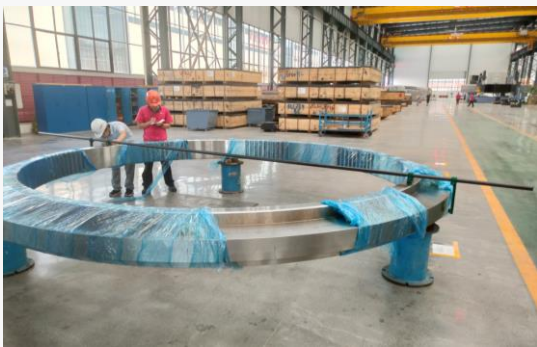
CARBON FIBER RODS, LIGHT WEIGHT, NOT EASY TO DEFORM, NO TEMPERATURE EXPAND, SUITABLE FOR THIN-WALL WORKPIECES AND LARGE-SIZE WORKPIECES



- Maximum measuring range (L): 9000mm
- Measuring depth (H): 0-300mm
- Repeatability: 5μm-120μm



# Carbon Fiber Comparison Gauges 2931--Application



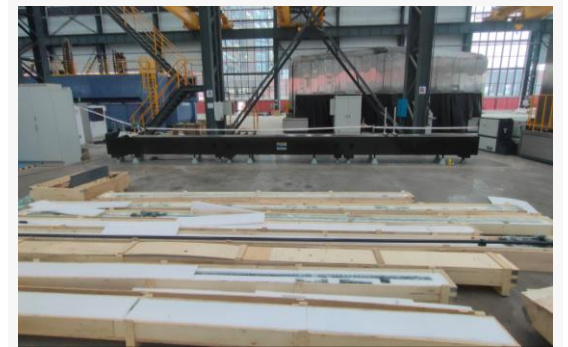
Measure outer diameter



Measure inside diameter



Set zero



Measurement of the inner and outer diameter of bearings, measuring dimensions 3m, 4m, 6m.

# Horizontal Measuring Bench 6849

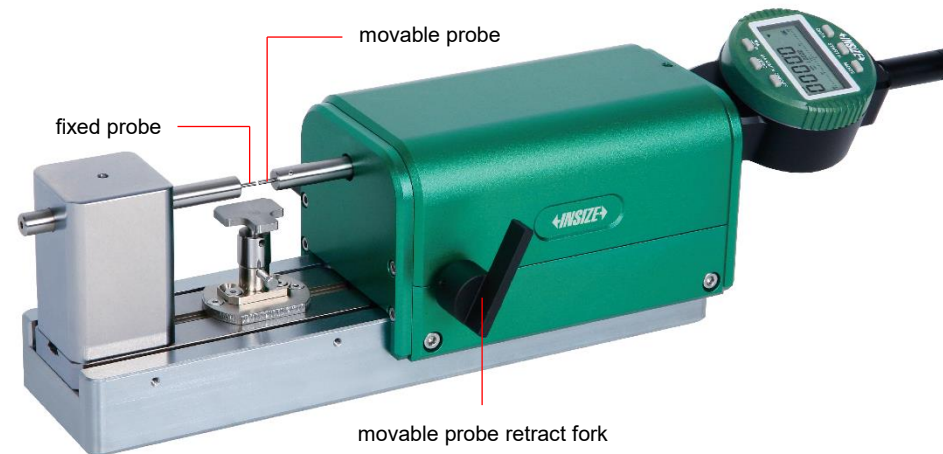
- Quickly measure outside diameters
- The platform can move horizontally and the height is adjustable
- For left and right hand operation
- Carbide probes
- Digital indicator uses linear ball bearings and can be used ten million times

MEASURING FORCE CAN BE CUSTOMIZED,  
MINIMUM MEASURING FORCE IS 2N

DATA  
OUTPUT

DIGITAL INDICATOR USES ABSOLUTE ENCODER,  
THE ORIGINAL DATA REMAINS AFTER POWER OFF

PROBE AND PLATFORM  
CAN BE CUSTOMIZED

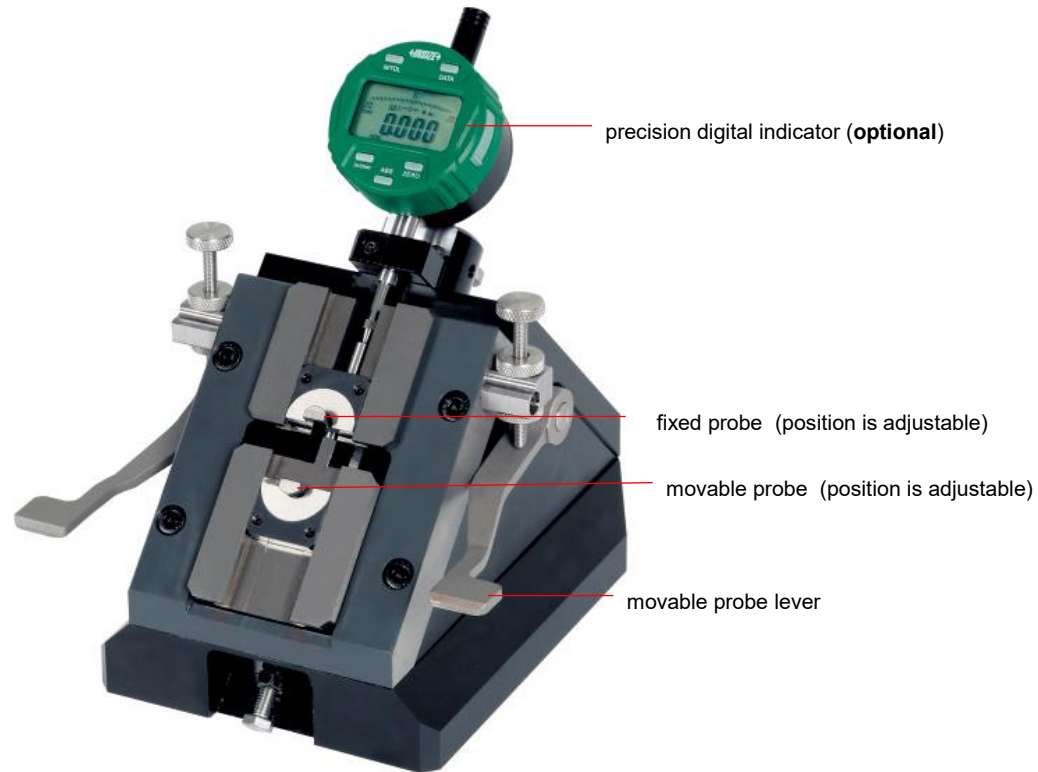


- Range: 0-50mm
- Movable probe travel: 20mm
- Resolution: 0.0002mm
- Accuracy: 5μm

# Internal Comparison Measuring Bench 6831

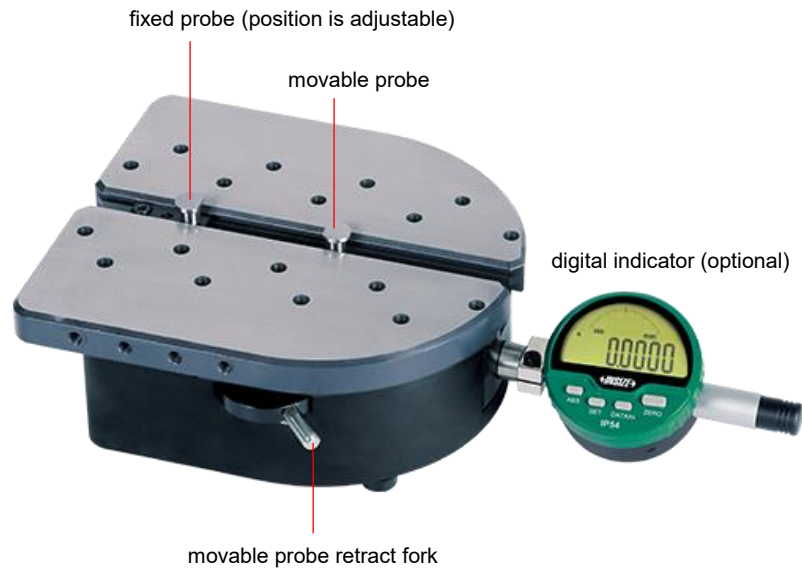
PROBE  
CAN BE CUSTOMIZED

Application



- Range (ØD): 12-80mm
- Movable probe Stroke: 5mm
- Accuracy: 5µm
- Repeatability: 2µm

# Universal comparison Measuring Bench 6848



- Range of external diameter: 0-100mm
- Range of internal diameter: 25-120mm
- Repeatability(without digital indicator) : 2μm
- Accuracy(without digital indicator): 5μm



Internal groove probes



Internal groove probes holders



Disk probes



Probe holders



Thread rollers



Probes



Multifunctional probes



Ball probes



External thread probes



Internal thread probes



Stop block



Spacer blocks



# Comparison Gauges 2252



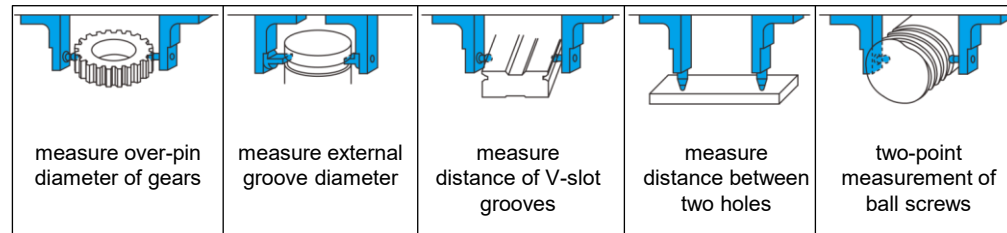
Measure external diameter



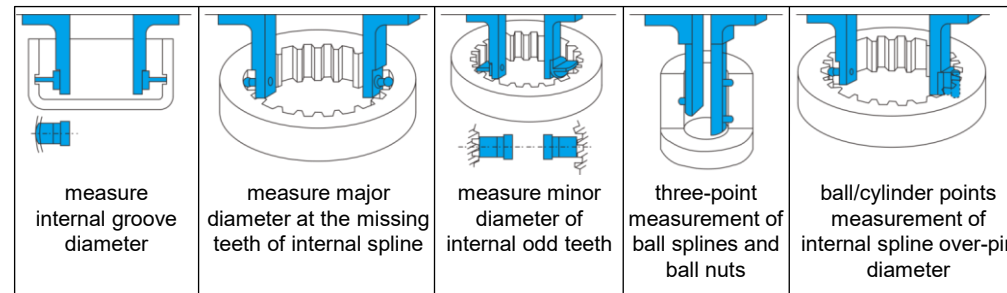
Measure internal diameter

## External diameter measurement application

**CUSTOMIZABLE MEASURING  
JAWS AND POINTS**



## Internal diameter measurement application



- Range of external diameter: 0-90mm
- Range of internal diameter: 40-150mm
- Repeatability: 2µm
- Measure external diameter, internal diameter and over-pin diameter of gears
- Accuracy: ±5µm
- Movable point stroke: 8mm
- Effective range of movable point: ±1mm

# Digital Measuring Gauges (Small Range )

DATA  
OUTPUT

Digital Internal Measuring Gauges 2932



Digital External Measuring Gauges 2934



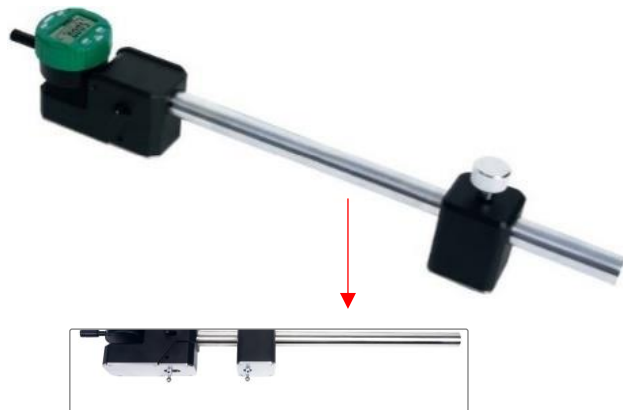
- Measuring range: External: 13-38mm  
Internal: 24-50mm
- Movable point stroke: 5mm
- Accuracy: 5μm

- Resolution: 0.001mm
- Point height is adjustable, h=2-25mm
- Repeatability: 1μm

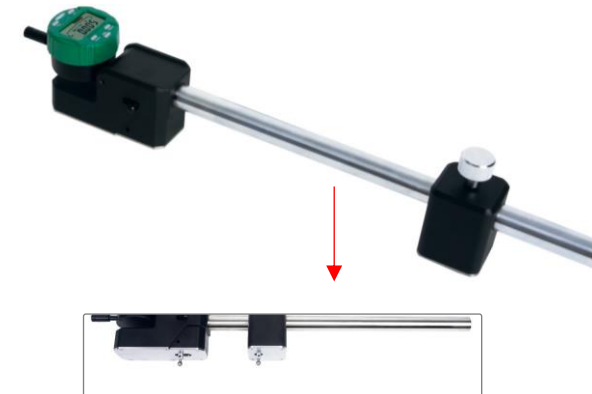
# Digital Measuring Gauges (Large Range )

DATA  
OUTPUT

Large Range Digital Internal Measuring Gauges 2933



Large Range Digital External Measuring Gauges 2935



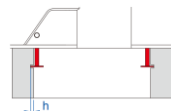
- Measuring range: External: 35-320mm  
Internal: 48-330mm
- Movable point stroke: 5mm
- Accuracy: 5 $\mu$ m

- Resolution: 0.001mm
- Point height is adjustable, h=2-25mm
- Repeatability: 1 $\mu$ m

# Digital Measuring Gauges (Optional Probe)



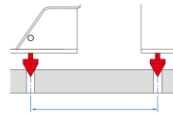
Disk Points



measuring internal groove diameter



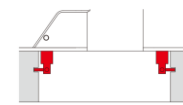
Conical Points



measuring center distance



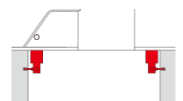
Spherical Points



spherical points for groove (inside hole) measurement



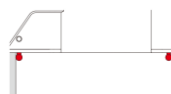
Spherical Blade Points



spherical blade points for narrow groove (inside hole) measurement



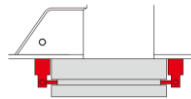
Ball Points



ball points for internal diameter measurement



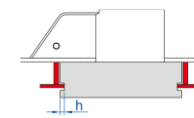
Spherical/Flat Points



flat points for external groove diameter measurement



Disk Points



measuring external groove diameter

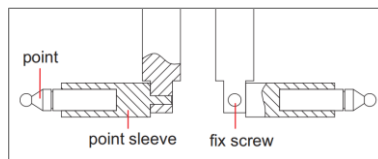


Flat Shoulder Points



measure outside diameter of low boss

installation



Point Sleeve



Screw Thread Points



Screw Thread Points



Ball Points



Multifunctional Points



# Ball Screw/Ball Nut Pitch Circle Diameter Comparators

PROBE AND CALIBRATION PLUG GAUGE  
NEED TO BE CUSTOMIZED ACCORDING TO THE WORKPIECE

DATA  
OUTPUT

Ball Screw Pitch Circle Diameter  
Comparators 2677

- Range: 6-50mm
- Contact point opening range: 6-15mm
- Effective stroke of anvil: 0.1mm
- Accuracy: 0.005mm
- Repeatability: 0.002mm
- Adjustable resolution: 0.0005mm/ 0.001mm/ 0.01mm



PROBE AND CALIBRATION RING GAUGE  
NEED TO BE CUSTOMIZED ACCORDING TO THE WORKPIECE

DATA  
OUTPUT

Ball Nut Pitch Circle Diameter  
Comparators 2678

- Range: 6-50mm
- Contact point opening range: 6-15mm
- Effective stroke of anvil: 0.1mm
- Accuracy: 0.005mm
- Repeatability: 0.002mm
- Adjustable resolution: 0.0005mm/ 0.001mm/ 0.01mm





# Micrometers (P1)



**Digital Micrometers/Snap Gauges**



**Wireless Waterproof Digital Outside Micrometers**



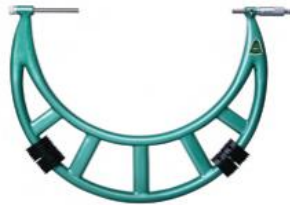
**Quick Feeding Digital Outside Micrometers**



**Digital Micrometers**



**Outside Micrometers**



**Large Outside Micrometers**



**Indicating Micrometers**



**Micrometers With Dial Indicator**



**Groove Micrometers**



**3-Wires**



**Screw Thread Micrometers**



**Gear Tooth Micrometers**

# Micrometers (P2)



**Disk Micrometers**



**Special Purpose Micrometers**



**Optical Parallels**



**Parallelism Inspect Devices For Outside Micrometers**



**Measuring Tools Dynamometers**



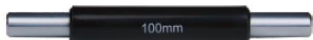
**Micrometer Measuring Force Detectors**



**Micrometer Inspection Gauge Block Sets**



**Micrometer Stands**



**Micrometer Setting Standards**



**Micrometer Lapping Machines**



**Micrometer Heads**

# Digital Micrometers/Snap Gauges

ABSOLUTE ENCODER, THE ORIGINAL DATA  
REMAINS AFTER POWER OFF

MEASUREMENT ACCURACY IS NOT  
AFFECTED BY THE USE OF SLEEVE

NON-ROTATING  
SPINDLE



High Precision Digital  
Micrometer/Snap Gauges 3359

- Resolution: 0.0001mm
- Range: 0-25mm
- Accuracy:  $\pm 0.5\mu\text{m}$
- Repeatability: 0.3 $\mu\text{m}$



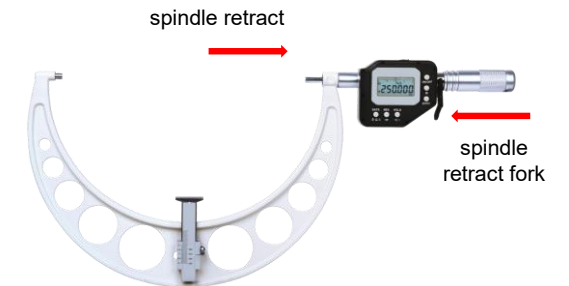
Digital Micrometers/Snap  
Gauges 3358

- Resolution: 0.001mm
- Range: 0-100mm
- Accuracy: 2 $\mu\text{m}$ /3 $\mu\text{m}$
- Repeatability: 1 $\mu\text{m}$



Digital Micrometers/Snap  
Gauges 3350

- Adjustable resolution:  
0.0002mm/0.001mm/0.01mm
- Range: 0-100mm
- Accuracy: 1.4 $\mu\text{m}$ -2 $\mu\text{m}$
- Repeatability: 0.6 $\mu\text{m}$ /1 $\mu\text{m}$



Digital Micrometers/Snap  
Gauges 3351

- Adjustable resolution:  
0.0002mm/0.001mm/0.01mm
- Range: 100-300mm
- Accuracy: 3 $\mu\text{m}$ -6 $\mu\text{m}$
- Repeatability: 1 $\mu\text{m}$

# Outside Micrometers



Waterproof Digital Outside Micrometers 3101



Digital Vertical Micrometers 3565



Outside Micrometers 3203



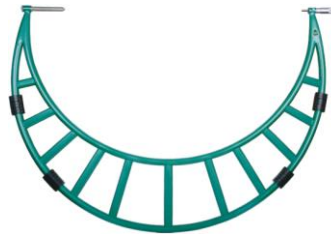
Outside Micrometer With Counter 3400



Outside Micrometers For Left or Right Handers 3236



Digital outside Micrometers with Interchangeable Anvils 3506



Outside Micrometer With Extension Anvil collar 3205



Indicating Micrometers 3332



Micrometers With Dial Indicator 3331

# Digital Indicating Micrometers

IP54  
WATERPROOF

BUILT-IN  
BLUETOOTH

ABSOLUTE ENCODER, THE ORIGINAL  
DATA REMAINS AFTER POWER OFF



Bluetooth Digital Indicating Micrometers 3507

Micrometer head  
• Range: 0-100mm  
• Accuracy: 3μm

Digital indicator  
• Range:  $\pm 0.04$ mm  
• Accuracy:  $\pm 1$ μm

ABSOLUTE ENCODER, THE ORIGINAL  
DATA REMAINS AFTER POWER OFF

IP54  
WATERPROOF



Digital Indicating Micrometers(Without Data output) 3508

Micrometer head  
• Range: 0-100mm  
• Accuracy: 3μm

Digital indicator  
• Range:  $\pm 0.04$ mm  
• Accuracy:  $\pm 1$ μm



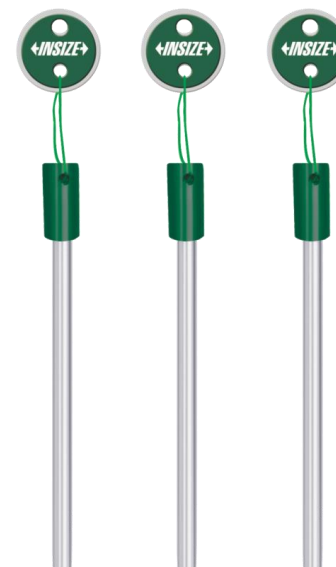
## 3-WIRES

3-wires 7382



- Pin gauge diameter:  $\varnothing 0.170\text{mm}-\varnothing 3.200\text{mm}$
- Diameter accuracy:  $\pm 0.5\mu\text{m}$
- Cylindricity:  $1\mu\text{m}$
- Hardness: HRC60

3-wires (Made Of Alloy Steel) 7394



- Diameter ( $\varnothing d$ ):  $0.170\text{mm}-3.200\text{mm}$
- Hardness:
  - HRC60:  $\varnothing d \leq 0.3\text{mm}$ , made of alloy steel
  - HRA90:  $\varnothing d > 0.3\text{mm}$ , made of carbide

- Diameter accuracy:  $\pm 0.5\mu\text{m}$
- Cylindricity:  $0.5\mu\text{m}$

CUSTOMIZABLE  
DIAMETER  $\varnothing d$

# Screw Thread Micrometers



External Screw Thread Micrometers 3680

- Graduation: 0.01mm
- Range: 0-300mm



Digital External Screw Thread Micrometers 3680

- Graduation: 0.01mm
- Range: 200-2000mm



Screw Thread Micrometers 3281

- Graduation: 0.01mm
- Range: 0-300mm



Digital Screw Thread Micrometers 3581

- Resolution: 0.001mm
- Range: 0 -300mm

# Gear Tooth Micrometers



External Gear Tooth Micrometers 3636

- Graduation: 0.01mm
- Range: 0-600mm



Gear Tooth Micrometers 3291

- Graduation: 0.01mm
- Range: 0-275mm



Digital Gear Tooth Micrometers 3591

- Resolution: 0.001mm
- Range: 0-275mm

# Disk Micrometers



Disk Micrometers 3676



Large Range Disk Micrometers 3677



Disk Micrometers 3282



Digital Non-Rotating Spindle Disk Micrometers 3594



Digital Disk Micrometers/snap Gauges 3353

# Special Purpose Micrometers



Digital Point Micrometers  
3530



Digital Crimp Height  
Micrometers 3566



Digital Spline Micrometers  
3533



Digital Disk Brake  
Micrometers 3588



Digital sheet Metal  
Micrometers 3539



Digital Interchangeable  
Anvil Micrometers 3562



Digital Large Anvil  
Micrometers 3534



Digital V-Anvil  
Micrometers 3590



Digital Universal  
Micrometers 3580



Digital Jaw Type  
Micrometers 3583



Sheet Metal  
Micrometers 3263



Hub Micrometers  
3292



Wire Micrometer  
3285



Can seam  
Micrometers 3293



# Bore Diameter And Circumference Measurement Tools (P1)



**Inside Micrometers**



**Internal Gear Tooth Micrometers**



**Inside Micrometers**



**Digital Tubular Inside Micrometers With Interchangeable Points**



**Pistol Grip Three Points Bore Gauges**



**Pistol Grip Internal Thread Micrometers**



**Snap-Open Digital Three Points Bore Gauges**



**Three Points Internal Micrometers**



**Bore Plug Gauges**



**Stand For Split Type Dial Bore Gauges**



**Gear Bore Gauges**



**Split Type Dial Bore Gauges**

# **Bore Diameter And Circumference Measurement Tools (P2)**



**Bore Gauges**



**Carbon Fiber Bore Gauges**



**Large Range Bore Gauges**



**Bore Gauge Setters**



**Internal Groove Bore Gauges**



**Rotary Bore Gauges**



**Pistol Grip Groove Bore Gauges**



**Internal Chamfer Gauges**

# **Bore Diameter And Circumference Measurement Tools (P3)**



**Telescoping Gauge Sets**



**Tape Bore Meters**



**Diameter Meters**



**Diameter Meters**



**Circumference Meters**

# Internal Gear Tooth Micrometers



Internal Gear Tooth Micrometers 3678

- Range: 25-75mm
- Graduation: 0.01mm



Internal Gear Tooth Micrometers 3638

- Range: 100-1150mm
- Micrometer head Range: 100-175mm
- Micrometer head Graduation: 0.01mm



Ball Tips For Gear Tooth Micrometers (optional)

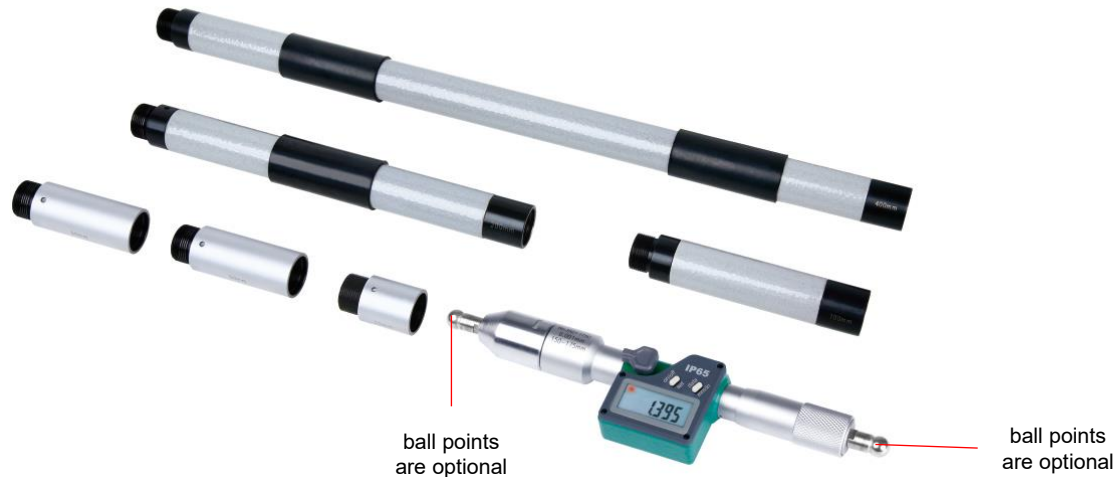
- Ball dia. (SØD): SØ1-16mm
- Accuracy:  $\pm 1\mu\text{m}/\pm 1.5\mu\text{m}$

# **Digital Tubular Inside Micrometers With Interchangeable Points 3525**

**DATA  
OUTPUT**

**IP65  
WATERPROOF**

**POINTS CAN BE  
CUSTOMIZED**



- Range: 200-2050mm
- Travel of micrometer head: 25mm
- Resolution: 0.001mm
- Accuracy:  $(3+n+L/50)\mu\text{m}$   
n=number of rods  
L=maximum measuring length (mm)



# ***Pistol Grip Three Points Bore Gauges 2124***



digital indicator is optional



Extension rod (included)



Setting ring

6-100mm: included  
100-300mm: optional

- Range: 6-300mm
- Accuracy (without digital indicator): 4 $\mu$ m-9 $\mu$ m

# ***Pistol Grip Internal Thread Micrometers 3126***



Extension rod (included)



- Range: M7-8x1~M68-75x6
- Accuracy: 8μm

# **Snap-Open Digital Three Points Bore Gauges 3129**



**IP54  
WATERPROOF**

**BUILT-IN  
BLUETOOTH**



extension rod (included)



setting ring

6-100mm: included  
100-300mm: optional

- Range: 6-300mm
- Accuracy: 4 $\mu$ m-9 $\mu$ m

# Two Points/Three Points Internal Micrometers

Digital Two Points/Three Points Internal Micrometers 3127



- Resolution: 0.001mm
- Range: 2-300mm
- Accuracy: 4 $\mu$ m-9 $\mu$ m

Two Points/Three Points Internal Micrometers 3227



- 2-12mm: graduation 0.001mm  
12-300mm: graduation 0.005mm
- Range: 2-300mm
- Accuracy: 4 $\mu$ m-9 $\mu$ m

# Bore Plug Gauges 4653



- Range: 2-130mm
- Repeatability: 0.0005mm/0.001mm



- Range: 130.1-300mm
- Repeatability: 0.002mm



Handle (retraction button)



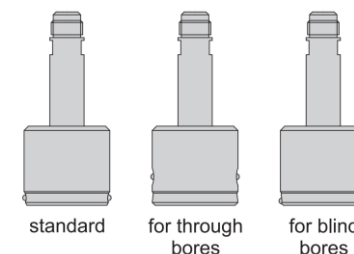
Depth stop (set measuring depth)



90° Adapter



Handle for inductive probe





# | **Bore Plug Gauges 4653--Application**



Quickly measure the internal diameter of the differential and upload the data

# Gear Bore Gauges 2428



ball points (optional)



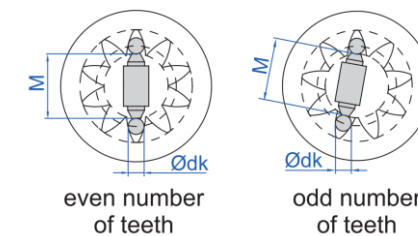
- Range: 8-510mm
- Accuracy (without dial comparator):  $2\mu\text{m}$
- Repeatability (without dial comparator):  $0.5\mu\text{m}$

Ball Points (Optional)



- Ball point diameter  $\varnothing dk$ : 1-10mm
- in pair

Method of measurement



# | Gear Bore Gauges 2428 --Application



Measure the span measurement of the internal spline gear

# Split Type Dial Bore Gauges

Split Type Dial Bore Gauges 2426

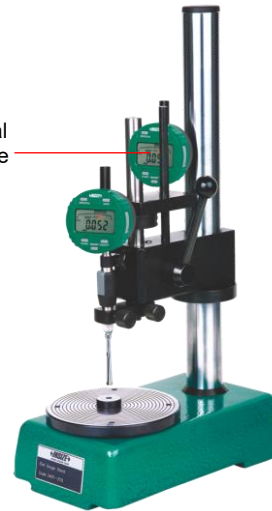


Split Type Dial Bore Gauges For Blind Holes 2427

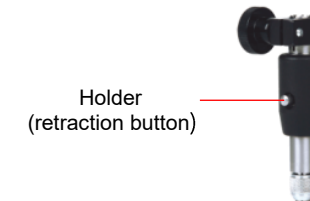


Stand For Split Type Dial Bore Gauges 2491

Can hold digital/dial indicator to read the measuring value



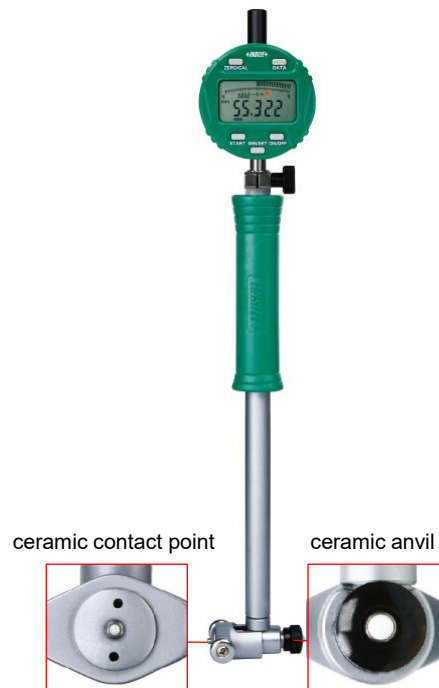
Floating holder—Suitable for automatic measurement



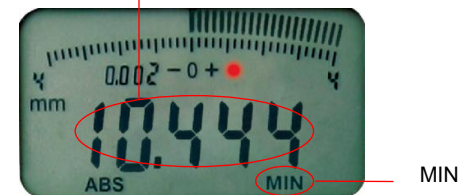
- Measuring range: 0.95-20.6mm
- Accuracy (without indicator): 3μm/4μm/4.5μm/6μm
- Repeatability (without indicator): 1μm
- Split type contact points

# Bore Gauges (P1)

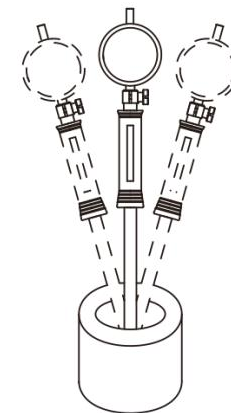
## Bore Gauges (With Digital Indicator)



read the diameter directly, after inputting the size of setting ring



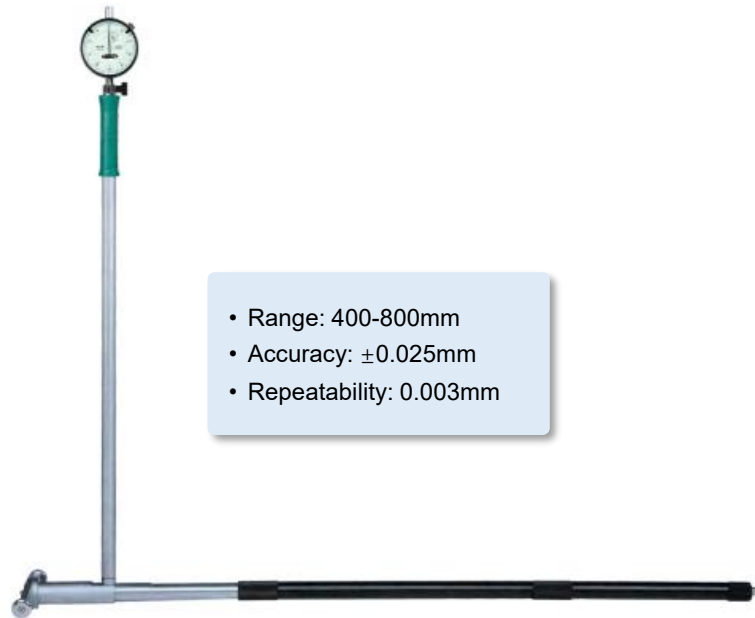
the minimum value tracking function can find the diameter automatically





# Bore Gauges (P2)

Bore Gauges (With Dial Indicator) 2828

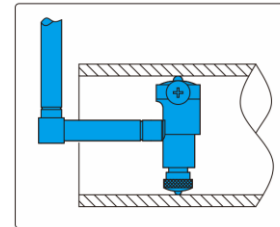


- Range: 400-800mm
- Accuracy:  $\pm 0.025\text{mm}$
- Repeatability: 0.003mm

Bore Gauges (with Dial Indicator) 2827



Application



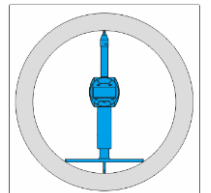
- Range: 35-450mm
- Accuracy:  $\pm 0.018\text{mm}$
- Repeatability: 0.003mm

Large Range Bore Gauges 2330



extension rods

Application



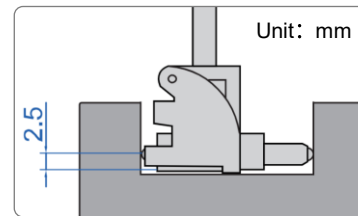
- Range: 180-1000mm
- Accuracy (without dial indicator):  $7\mu\text{m}$
- Repeatability (without dial indicator):  $2\mu\text{m}$

# Bore Gauges (P3)

## Bore Gauges For Blind Holes 2420/2220



### Application

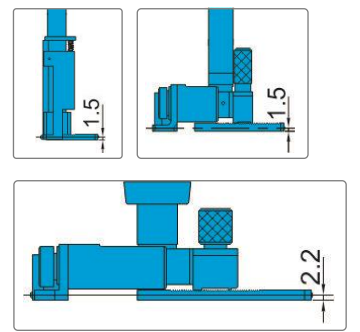


- Range: 35-60mm
- Accuracy:  $\pm 0.018\text{mm}$
- Repeatability: 0.003mm

## Bore Gauges For Blind Holes 2424



### Application



- Range: 20-600mm
- Accuracy (without dial indicator): 4 $\mu\text{m}$
- Repeatability (without dial indicator): 1 $\mu\text{m}$

# Bore Gauges (P4)

## Bore Gauges For Barrier Inside Bores 2432



### Application

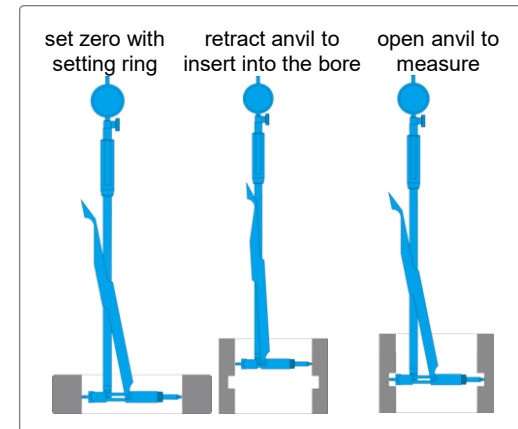


- Range: 25-500mm
- Accuracy (without dial indicator): 0.01-0.02mm

## Internal Groove Bore Gauges 2433



### Application



- Measure diameter of internal grooves (width of groove > 3mm)
- Range: 60-300mm
- Accuracy (without dial indicator): 2µm
- Repeatability (without dial indicator): 1µm

# Carbon Fiber Bore Gauges With Interchangeable Points 3526

POINTS CAN BE  
CUSTOMIZED

SPRING LOADED  
MEASURING POINT

DATA  
OUTPUT

CARBON FIBER EXTENSION RODS, LIGHT WEIGHT,  
NOT EASY TO DEFORM, LOW THERMAL EXPANSION



430mm standard setting gauge (included)  
for micrometer head zero setting



spring loaded point, and max./min. value tracking  
make it easy to find the right measuring position



- Range: 430-6430mm
- Micrometer head Range: 430-480mm
- Micrometer head Resolution: 0.001mm/0.00005"
- Micrometer head Accuracy:  $\pm 6\mu\text{m}$
- Micrometer head Repeatability:  $\pm 3\mu\text{m}$

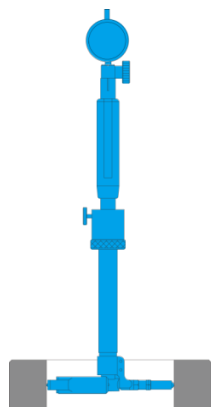
# Rotary Bore Gauges 2921



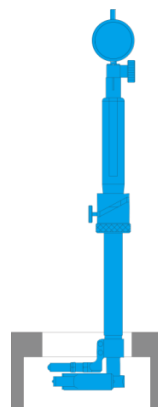
180° rotatable fixed anvil

## Application

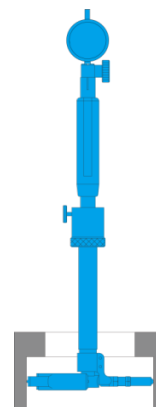
set zero with  
setting ring



retract anvil to insert  
into the bore



open anvil  
to measure



- With rotary anvil, applicable to measure bores with large inner diameter and small opening
- Range: 30-530mm
- Accuracy (without dial indicator): 2µm/3µm
- Repeatability (without dial indicator): 1µm/1.5µm

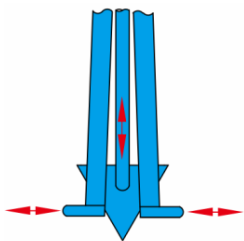


# Pistol Grip Groove Bore Gauges 2436

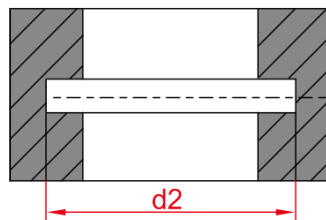
**FAST MEASURING INNER  
DIAMETER OF DEEP GROOVES**



principle of measurement



applicable  
workpieces



Depth stop (optional)



Extension rods (optional)

- Range: 6-200mm
- Repeatability: 0.01mm
- Accuracy: 2% of deviation between workpiece size and setting ring, for example, when measuring Ø21mm inner groove, use a Ø20mm setting ring for calibration, accuracy is  $(21-20) \times 2\% = 0.02\text{mm}$

## **Bore Gauge setters 7353**



Application



Horizontal use



Gauge blocks for 7353-160



- Range: 0-160mm
- Repeatability: 1.2 $\mu$ m

# Chamfer Gauges



2942

- Range: 0.5-40mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.02\text{mm}/\pm 0.04\text{mm}$



2962

- Range: 1-120mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.02\text{mm}$



2937 type A

- Range: 1-40mm
- Accuracy:  $\pm 0.02\text{mm}/\pm 0.03\text{mm}$
- Resolution: 0.01mm



2937 type B

- Range: 20-40mm
- Accuracy:  $\pm 0.02\text{mm}/\pm 0.03\text{mm}$
- Resolution: 0.01mm

# Tape Bore Meters/Circumference Meters

Tape Bore Meters 2430



- Range ØD: 14-330mm
- Graduation: 0.1mm
- Accuracy:  $\pm 0.2\text{mm}$

Circumference Meters 7116



- Range: Ø20-620mm
- Graduation: 0.05mm
- Accuracy:  $\pm 0.10\text{mm} \sim \pm 0.20\text{mm}$

Diameter Meters 7135



- Diameter range: Ø9-9300mm
- Graduation: 0.01mm- 0.05mm

# Arc Radius Measuring Tools



**Outside Diameter Variation  
Measuring Instruments**



**Outside Diameter Measuring  
Instruments**



**Digital Radius Gauges**



**Digital Radius Gauges**



**Large Range Digital Radius Gauges**



**Digital Arc Radius Calipers**

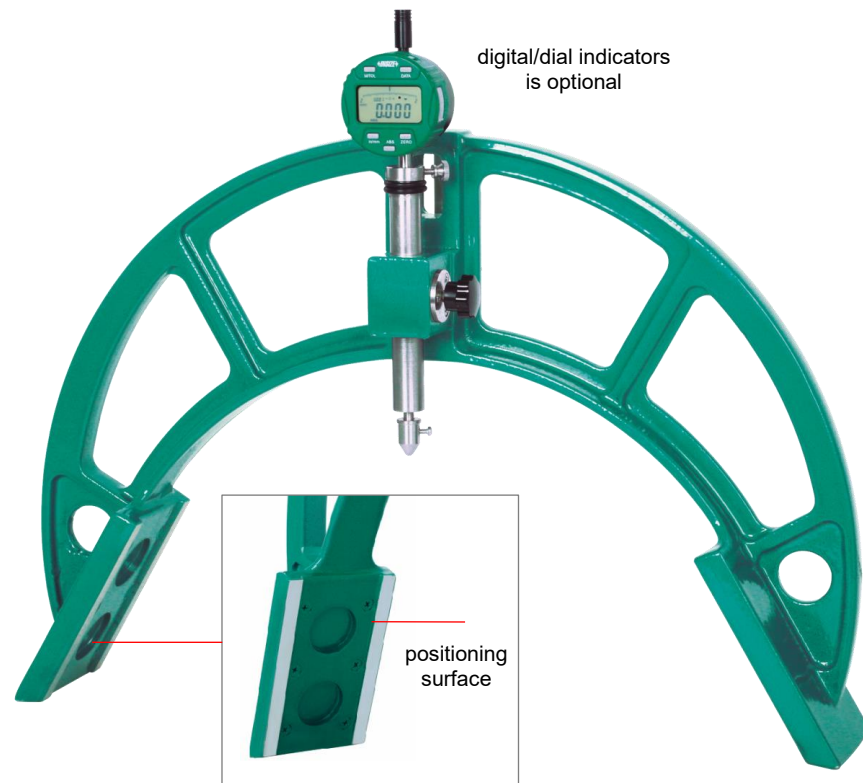


**Digital Radius Calipers**



**Radius Gauges**

# Outside Diameter Measuring Instruments 2716



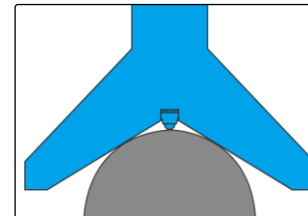
- Range (diameter): 18-2000mm
- Repeatability: 0.01mm
- The frame is made of aluminum magnesium alloy with light weight and high strength



# Digital Radius Gauges 2188



Application

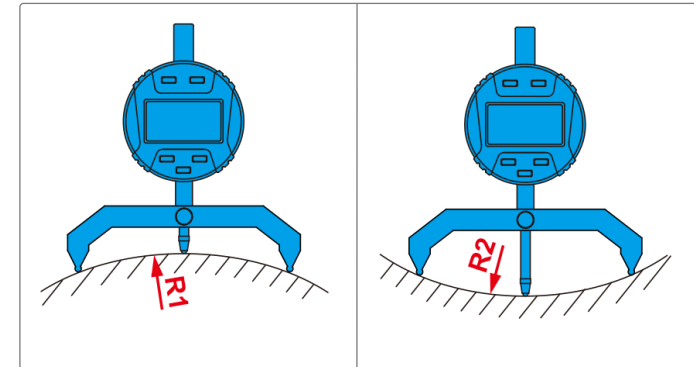


Setting standards



- Range (radius): 4-323mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.02\text{mm} \sim \pm 0.04\text{mm}$
- Measure radius of external arc, arc angle of measured surface should be larger than  $60^\circ$
- Display radius value, no need to calculate
- Stainless steel base

# Digital Radius Gauge 2511



- Range of external radius (R1): 5-910mm
- Range of internal radius (R2): 7-910mm
- Accuracy (mm):  $\pm 0.005R$
- Resolution: 0.01mm
- Measure radius of internal or external arcs
- Supplied with 5 jaws for different sizes of arc

# Digital Radius calipers 1501



1501-25



1501-10

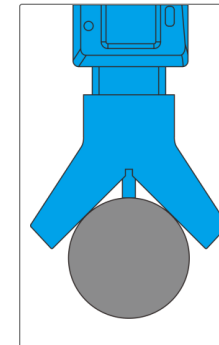
DIRECT READING,  
CALCULATION IS NOT REQUIRED

DATA  
OUTPUT

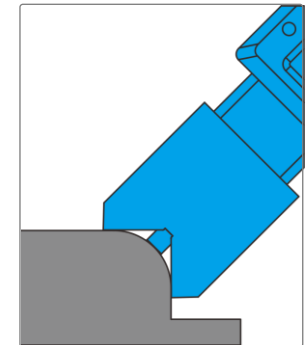
Pin gauge (included)



Application



1501-10 Can measure small workpieces  
or workpieces with steps



| Code    | Range (radius) |
|---------|----------------|
| 1501-25 | 2-25mm         |
| 1501-10 | 2-10mm         |

- Measure radius of external arc, arc angle of measured surface should be larger than 90°
- Resolution: 0.01mm
- Accuracy:  $\pm 0.05\text{mm}$

# Keyway And Chamfer Measuring Tools



**Keyway Symmetry Gauges**



**Keyway Symmetry Digital Calipers**



**Digital Keyway Depth Gauges**



**Digital Keyway Depth Gauges**



**Groove Micrometers**



**Digital Chamfer Gauges**



**Chamfer Gauges**



**Digital Chamfer Gauges**

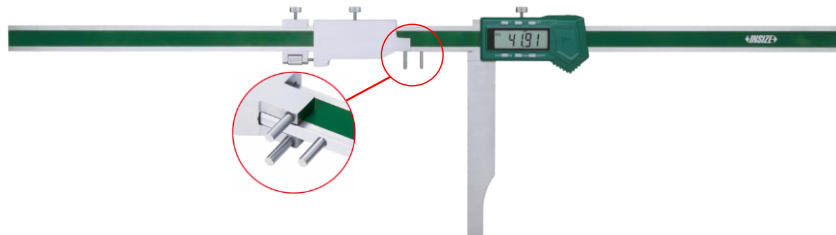


**Chamfer Height Gauges**

# Keyway Symmetry Digital Calipers 1531

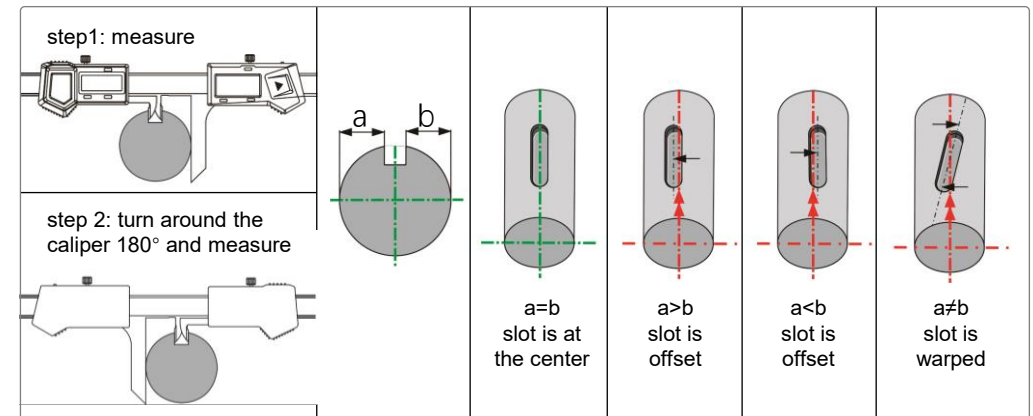


- Width of keyway: 6-45mm
- Resolution: 0.01mm
- Can measure keyway width
- Diameter of shaft: Ø10-120mm
- Accuracy:  $\pm 0.05\text{mm}$
- Used to measure the symmetry of shaft keyways



- Width of keyway: 3-250mm
- Resolution: 0.01mm
- Cannot measure keyway width
- Diameter of shaft: Ø6-350mm
- Accuracy:  $\pm 0.05\text{mm}$
- Used to measure the symmetry of shaft keyways

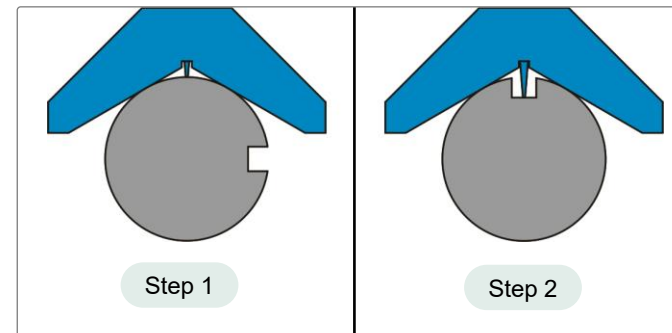
DATA  
OUTPUT



# Digital Keyway Depth Gauge 2182



DATA  
OUTPUT



- Range: 0-25.4mm
- Resolution: 0.01mm
- Accuracy:  $\pm 0.02\text{mm}$
- Measure keyway depth of cylindrical workpieces with diameter  $\varnothing 10\text{-}100\text{mm}$

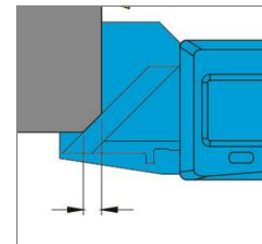


# Digital Chamfer Gauges 1180

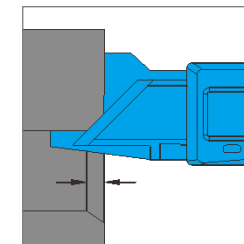


DATA  
OUTPUT

External chamfer



Internal chamfer



- Measure 15°/20°/30°/45°/60° chamfer dimension
- Resolution: 0.01mm
- Range: 0-10mm
- Accuracy:  $\pm 0.06\text{mm}$

# Digital chamfer Gauges 1537



1537-20

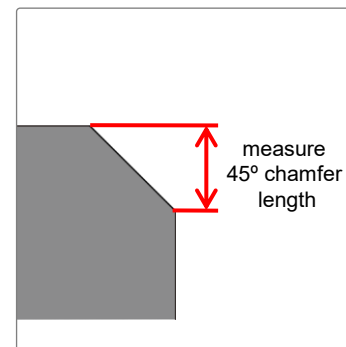
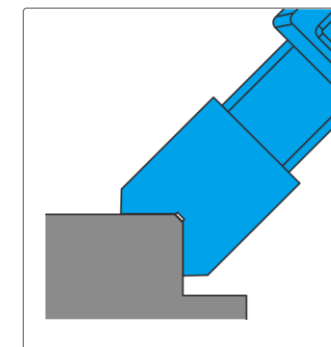


1537-8

Pin gauge (included)



Application

1537-8 Can measure small workpieces  
or workpieces with steps

Code

Range

1537-20

0-20mm

1537-8

0-8mm

- Measure 45° chamfer length
- Resolution: 0.01mm
- Accuracy:  $\pm 0.05\text{mm}$

DATA  
OUTPUT

# Indicators And Dial Indicator Stands (P1)



**Dial Test Indicators**



**Styli For Dial Test Indicators**



**Digital Indicators**



**Zeroing Foot Switches**



**High Precision Digital Indicators**



**Digital Comparators**



**Dial Indicators**



**Points**



**Lifting Levers**



**Spindle Lift Knob**



**Shaft Sleeve**



**Backs**

# **Indicators And Dial Indicator Stands (P2)**

←/N/SIZE→



***Measuring Tools Dynamometers***



***Dial Indicator Tester/Extensometer Tester***



***Dial Indicator Testers***



***Dial Test Indicator Holders***



***Magnetic Stands***



***Dial Indicator Stands (Non-magnetic)***



***Dial Indicator Stands***

# Dial Test Indicators



Precision Dial Test Indicators 2880



Dial Test Indicator 2895



Long Stylus Dial Test Indicator 2896



Vertical Type Long Stylus Dial Test Indicator 2899



Side Type Dial Test Indicator 2898



Tilted Face Type Dial Test Indicator 2399



Large Range Dial Test Indicator 2386



Large Range Vertical Type Dial Test Indicator 2480

# Digital Indicators



Digital Indicators (Standard Type) 2112



Digital Indicators (Advanced Type) 2103



Waterproof Digital Indicators 2115



Adjustable Coefficient Digital Indicators 2501



Compact Digital Indicators 2114



Back Plunger Type Digital Indicators 2118



Large Stroke Digital Indicators 2117



High Precision Digital Indicators 2133



High Precision Digital Indicators 2140



# Digital Indicators For Bore Gauges

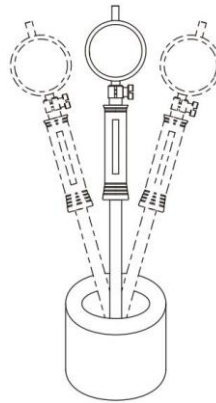
2108 (With Transmission Button and Signal Light)



read the diameter directly,  
after inputting the size of  
setting ring.



the minimum value  
tracking function can find  
the diameter automatically.



2137



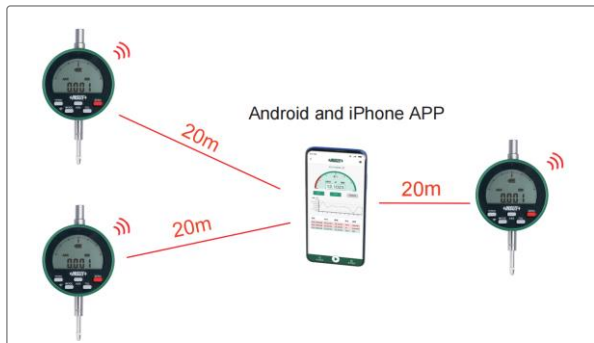
IP54  
WATERPROOF

THE ORIGINAL DATA  
REMAINS AFTER POWER OFF

- Range: 12.7mm
- Accuracy: 5μm/20μm
- Hysteresis: 2μm/10μm
- Resolution: 0.001mm/0.002mm(can switch to: 0.01mm)

# Built-In Bluetooth Digital Indicators 2510

## Application



HIGH PRECISION

BUILT-IN  
BLUETOOTH

over upper limit



within tolerance



over lower limit

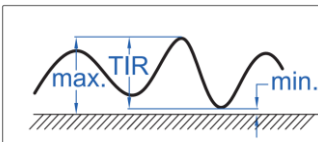


alarm when over tolerance

analog pointer



analog pointer



max./min./TIR measurement

- Range: 12.7mm
- Accuracy: 10µm/3µm
- Hysteresis: 10µm/2µm
- Resolution: 0.01mm/0.001mm
- Maximum measuring force: 1.5N

# Precision Digital Indicators

High Precision Digital indicators 2140

DATA  
OUTPUTLINEAR BALL BEARINGS  
FOR TEN MILLION TIMES USEØ28MM STEM SUITABLE FOR  
REINFORCED CLAMPINGABSOLUTE ENCODER, THE ORIGINAL  
DATA REMAINS AFTER POWER OFF

|                       | 2140                         | 2150             |
|-----------------------|------------------------------|------------------|
| Range                 | 0-6mm                        | 0-5mm            |
| Adjustable resolution | 0.2µm, 1µm, 10µm             | 0.1µm, 1µm, 10µm |
| Accuracy              | 1.6µm                        | 0.5µm            |
| Hysteresis            | 0.8µm                        | 0.3µm            |
| Other                 | Can choose Built-in wireless |                  |

Built-in Wireless Smart High Precision Digital Indicators 2150

DATA  
OUTPUT

THE MEASURING TIME PERIOD CAN BE SET (1-99S IS ADJUSTABLE),  
THE MAX./MIN./TIR/AVG. CAN BE MEASURED AUTOMATICALLY DURING  
THIS PERIOD, AND THE DATA CAN BE TRANSMITTED AUTOMATICALLY  
AFTER EACH MEASUREMENT

PRESS BUTTON OR PROBE MOVEMENT CAN START AUTOMATIC MEASUREMENT,  
THE MEASUREMENT CAN BE DELAYED (1-99S IS ADJUSTABLE)

# Dial Indicators



Dial Comparator 2881



Precision Dial Indicators 2830



High Precision Compact Dial Indicators 2890



Compact Dial Indicators 2887



Dial Indicators 2892



Large Dial Face Dial Indicator 2888



Back Plunger Dial Indicator 2893



Waterproof Dial Indicator 2894



One Revolution Dial Indicators 2882

# Contact Points



# Universal Stands



Hydraulic Universal  
Magnetic Stands 6229



Magnetic Stands  
6200



Magnetic Stand For Uneven  
Surfaces 6215



Mini Magnetic  
Stand 6211



Flex Arm Magnetic  
Stand 6207



Vacuum Stand  
6217



Universal Stand  
6214



Universal Dial Indicator  
Stands(Non-magnetic) 6225



Dial Indicator Stands (Non-  
magnetic) 6227



# Dial Indicator Stands



Dial Indicator Stands 6876



Granite Dial Indicator Stand 6866



Granite Dial Indicator Stands 6867



Dial Indicator Stands 6864



Heavy Duty Dial Indicator Stand 6869



Transfer Stands 6865

# Indicating Measuring Tools (P1)



**Internal Caliper Gauges**



**External Caliper Gauges**



**Thickness Gauges**



**Geomembrane Thickness Gauges**



**Rubber Thickness Gauges**



**Leather Thickness Gauges**



**Tube Thickness Gauges**



**Thread/Lead Screw Pitch  
Diameter Snap Gauges**



**Saw Teeth Setting Gauges**



**Bluetooth Digital Indicating Snap  
Gauges**



**Dial Snap Gauges**



**Step And Gap Gauges**

# Indicating Measuring Tools (P2)



**Mini Digital Height Gauges**



**Height Gauges**



**Crankshaft Testers**



**Digital Flushness Gauge**



**Thread Pitch Measuring Instruments**



**Buttress Thread Run-out Gauges**



**Buttress Thread Tooth Thickness Gauges**



**Thread Taper Measuring Instruments**



**Thread Height Measuring Instruments**



**Thread Height Measuring Instruments**



**Thread Crest Diameter Measuring Instruments**



**External Spline Comparator**

# Thickness Gauges



High Precision Digital  
Thickness Gauges 2879



Smart Digital Thickness  
Gauges 2850



Digital Thickness  
Gauges 2673



Digital Thickness  
Gauges 2871



Thickness  
Gauges 2364



Digital Thickness  
Gauges 2674



Digital Thickness  
Gauges 2872



Thickness  
Gauge 2361



Thickness  
Gauge 2363



Digital Roller Thickness  
Gauges 2877



Digital Rubber Thickness  
Gauges 2263



Digital Leather Thickness  
Gauges 2262

# Bluetooth Digital Indicating Snap Gauges 3509

BUILT-IN  
BLUETOOTH

IP54  
WATERPROOF

ABSOLUTE ENCODER, THE ORIGINAL  
DATA REMAINS AFTER POWER OFF



Data collection application (included) real-time display  
(continuous streaming) or single acquisition mode selectable



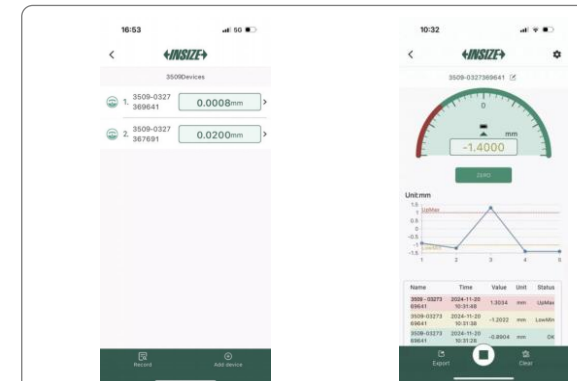
over lower tolerance  
in yellow



within tolerance  
in green



over upper  
tolerance in red



real-time display of multiple  
snap gauges (connected with  
maximum 7 snap gauges)

single snap gauge  
display interface

- Range: 0-50mm
- Resolution: 0.1μm
- Accuracy: 1μm
- Repeatability: 0.3μm



# Dial Snap Gauges 2186



digital indicatoris optional

## Application



- Range: 0-300mm
- Parallelism of measuring faces: 4µm-12µm
- Flatness of anvil: 1.5µm
- Left anvil retracting stroke: 2mm
- Measuring force: 6-8N
- Repeatability: 1µm





## | **Dial Snap Gauges 2186--Application**

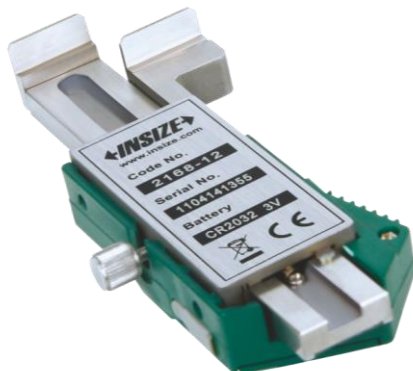


Quickly measure the outer diameter of the differential

# Step And Gap Gauges 2168

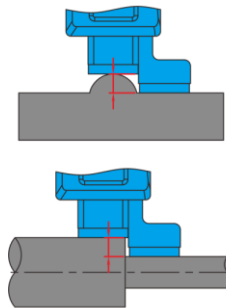


Front

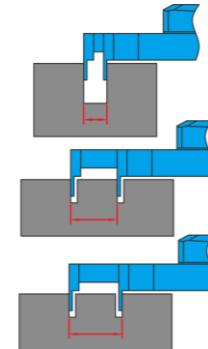


Back

Step height



Gap width



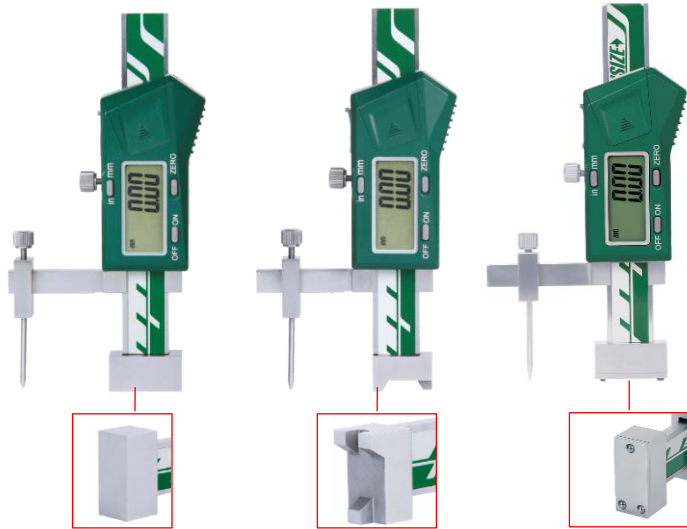
Zero setting block (included)



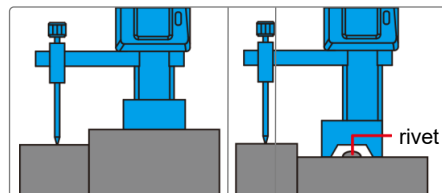
- Range: 0-12.7mm
- Accuracy:  $\pm 0.03\text{mm}$
- Resolution: 0.01mm
- Measure step height and gap width

# Digital Height Gauges

1146



Application

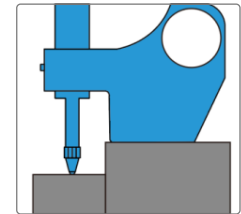


- Resolution: 0.01mm
- Range: 0~±20mm
- Accuracy: ±0.02mm
- Measure height difference of two surfaces

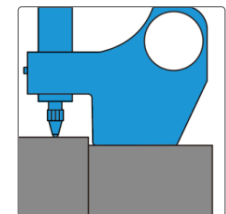
2146-4A



Measure sunked step



Measure raised step



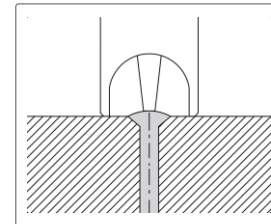
- Range (adjustable): 0-4mm (sunked), 0-12.7mm (raised)
- Digital indicator resolution: 0.01mm/0.001mm
- Accuracy: ±0.02mm/±0.005mm
- Measure height difference of two surfaces

# **Digital Flushness Gauge 2936**



**DATA  
OUTPUT**

Application



Zero-setting block (included)



- Measuring range:  $\pm 5\text{mm}$
- Accuracy:  $0.005\text{mm}$
- Resolution:  $0.001\text{mm}$
- Repeatability:  $0.002\text{mm}$
- Measuring force:  $8\text{-}12\text{N}$

# Pistol Grip Groove Width Bore Gauge 2438

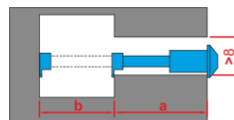
- Travel of contact point: 10mm
- Accuracy: 5 $\mu$ m

2438-BASE1



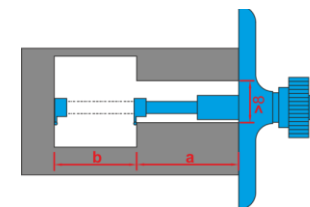
Measuring groove pitch

2438-BASE2



Measuring groove width and depth

2438-BASE3



Measuring groove width and depth

# Standards And Gauge Blocks (P1)



**Gauge Blocks**



**Caliper Inspection Gauge Block Sets**



**Micrometer Inspection  
Gauge Block Sets**



**Cylinder Gauge Blocks**



**Gauge Block Accessories**



**Gauge Block Holders**



**Caliper/Height Gauge Checkers**



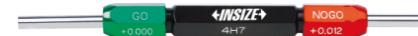
**Angle Gauge Blocks**



**Pin Gauges**



**Pin Gauges With Handle**



**Pin Gauge Handles**



**Setting Rings**



# Standards And Gauge Blocks (P2)



**Cylinder Gauges**



**Adjustable Snap Gauges**



**Plain Plug Gauges**



**Spline Ring/Plug Gauges**



**Measuring Balls**



**Threaded Hole Location Gauges**



**Thread Depth Gauges**



**Thread Ring/Plug Gauges**

# Standards And Gauge Blocks (P3)



***Electric Thread Plug Gauges***



***Semi-Automatic Thread Inspectors***



***Automatic Thread Inspection Machine***



***Handheld Thread Inspection Machines***



***External Thread Measuring Devices***

# | Setting Rings

CUSTOM-  
MADE



Setting Rings 6312

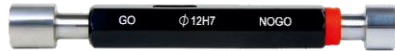


Carbide Setting Rings 6317



Ceramic Setting Rings 6319

# Plain Plug Gauges



Plain Plug Gauges 4124

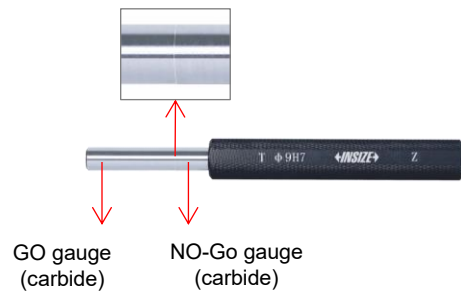


Carbide Plain Plug Gauges 4128

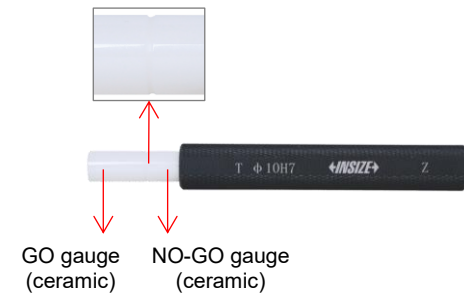


Ceramic Plain Plug Gauges 6332

CUSTOM-MADE

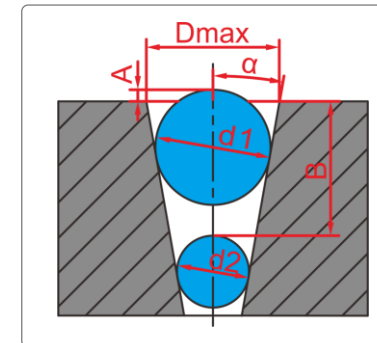


Carbide Plain Plug Gauges (Single End) 6331



Ceramic Plain Plug Gauges (Single End) 6333

# Ceramic Measuring Balls 4190



calculate angle ( $\alpha$ ) and diameter( $D_{max}$ ) according to the ball diameter( $d_1$ ,  $d_2$ ), height ( $A$ ) and depth ( $B$ )

- Diameter: 1-40mm
- Accuracy:  $\pm 2\mu\text{m}$  /  $\pm 2.5\mu\text{m}$
- Roundness:  $0.5\mu\text{m}$ - $1.5\mu\text{m}$
- Zirconia material, high strength and hardness, extremely wear resistance and corrosion resistance, good insulation, antistatic and magnetic resistance
- Mirror surface without holes

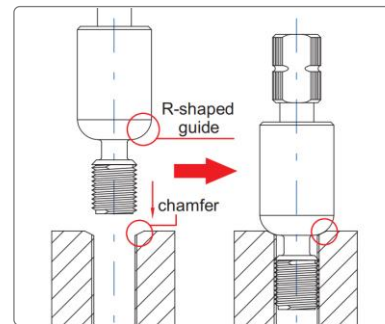
# Threaded Hole Location Gauges 4676



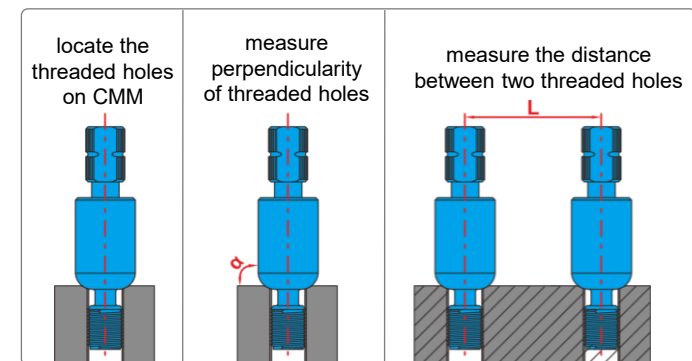
the concentricity  
between this surface  
and threaded part  
is less than 0.01mm

Size: M3–M12

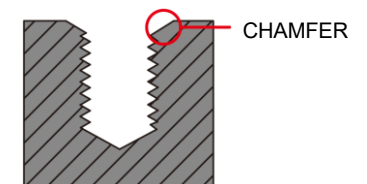
there is a R-shaped guide, which leads the gauge to  
the center of the threaded holes by fitting the R-  
shaped guide on the chamfer of the threaded holes



## Application



ATTENTION: ONLY FOR THE WORKPIECES THAT THE  
CHAMFER IS CONCENTRIC WITH THE SCREW PART

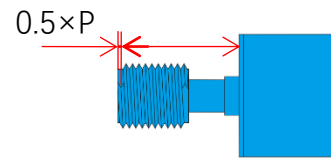




# Thread Depth Gauges

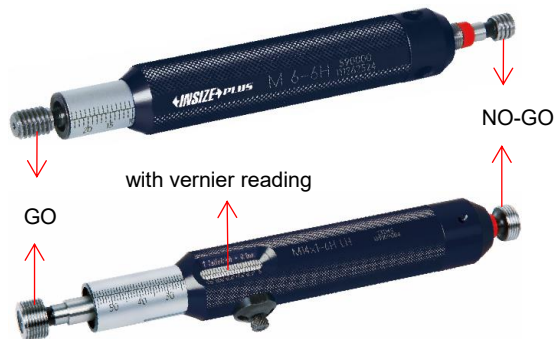


4649



the depth measurement starts at 1/2 thread pitch (P)

- Size: M2-M30
- Resolution: 0.01mm
- The GO gauge can be replaced after wear



4666



check GO and NO-GO while measuring depth of thread holes

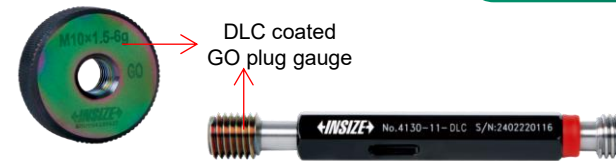
- Size: M2-M30
- Graduation: 0.5mm/0.1mm
- The GO gauge can be replaced after wear

# Thread Plug And Ring Gauges



Thread Plug And Ring Gauges

- Metric/Unified/Taper Pipe/Whitworth Parallel Pipe Thread series
- Customized available according to customer drawings



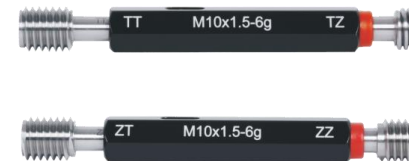
DLC Coated Thread Ring Gauges And Plug Gauges

- The DLC coating has the following advantages:
- High hardness, extremely wear resistance
  - Low friction coefficient
  - Corrosion resistance



Metric Thread Plug Gauges

- Supplied with Go and No-Go gauges together



Check Plugs For Metric Thread Ring Gauges

- Check thread ring gauges

# Electric Thread Plug Gauges 4256

- Suitable for left-hand and right-hand threads
- Fast screw-in and screw-out

CUSTOMIZED THREAD PLUG  
GAUGES ARE AVAILABLE

thread plug (optional)

speed  
selection

screw-in/screw-out

torque  
selection

handle with  
adjustable angle



handle with adjustable angle

4256-HANDLE

- Electric Driver (thread plug gauge are not included)
- Torque range: 0.3~2.9N.m
  - Number of torque settings: 21

# Automatic Thread Inspection Machine TCM



CUSTOM-  
MADE



INSIZE 中文

Torque value(N.m): 0.12 Circles(r): 0

GO gauge NO-GO gauge Thread depth normal

Forward Continuous Auto reset

Guide spd(r/min): 200 Guide torque(N.m): 0.10 OK count 308 zero

Twist spd(r/min): 300 max.torque(N.m): 0.15 NG count 12 zero

Retract spd(r/min): 500

Retract time(s): 3.0 OK circles(r): 5 ~ 8

Interval(s): 1.0 Manual mode

- Measuring range: thread: M1-M30
- Reprocessing range: thread: M1-M20

- For inspection of GO, NO-GO and depth of threads
- Can be for repair of thread defects
- Real-time display of torque, circles, OK and NG counts
- If NG thread is detected, audible and visual alarm are activated and the motor is automatically reversed to exit the thread gauge
- For different length of thread by adjusting the induction switch
- Thread gauges with DLC coating, excellent wear resistance

# Handheld Thread Inspection Machines

## HES-TP01/HES-TP02



Controller (included)



| Code     | Measuring range (internal thread) | Torque range | Max. speed |
|----------|-----------------------------------|--------------|------------|
| HES-TP01 | M4-M13                            | 0.02-0.23N.m | 5000rpm    |
| HES-TP02 | M14-M30                           | 0.15-0.90N.m | 1200rpm    |

- For inspection of left-hand and right-hand internal thread
- High precision torque+angle control
- Real-time display torque, OK counts, NG counts and pass rate
- If NG thread is detected, the alarm is activated and the corresponding NG parameter is displayed in red on the controller
- Provide programmable IO and RS485 communication port for process control and data transmission
- Thread plug gauges can be replaced with different sizes
- Thread gauges with DLC coating, excellent wear resistance

# Angle, Straightness, Flatness Measuring Tools (P1)



**Angle Meters**



**Protractors**



**Granite Squares**



**Granite Square**



**Cylinder Squares**



**Perpendicularity Testers**



**Squares**



**Straight Edges**



# **Angle, Straightness, Flatness Measuring Tools (P2)**

↔INSIZE↔



***Straight Edges***



***Optical Flats***



***Sodium Light Cabinets***



***Pipe Straightness Gauge***



***Straightness Gauge***



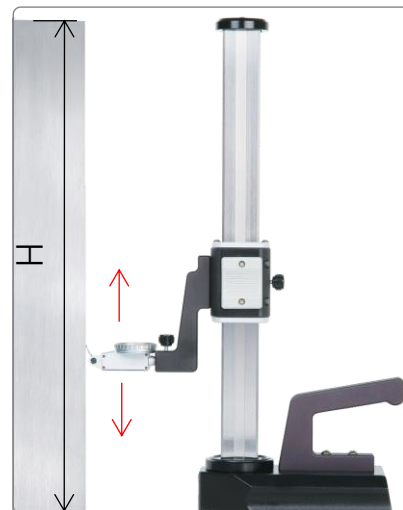
***Flatness Measurement Stands***

# **Digital Protractor 2771**



- Resolution: 1"/0.01°
- Range: 0-360°
- Accuracy: ±5'

# | Perpendicularity Testers 4770



| Code     | Range (H) | Perpendicularity ( $\alpha$ ) | Side perpendicularity ( $\beta$ ) |
|----------|-----------|-------------------------------|-----------------------------------|
| 4770-300 | 0-300mm   | 3 $\mu$ m                     | 10 $\mu$ m                        |
| 4770-600 | 0-600mm   | 5 $\mu$ m                     | 20 $\mu$ m                        |

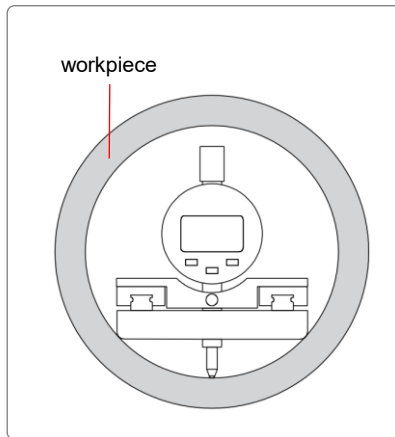
# Pipe Straightness Gauge 2226

- Measure inner wall straightness of pipes

DATA  
OUTPUT

GUIDE LENGTH (L) CAN  
BE CUSTOMIZED

## Application



- Measuring range: 400mm
- Inner diameter of measured bore: 100-250mm
- Resolution: 0.01mm
- Straightness accuracy: 0.05mm
- Guide rail length: 430mm

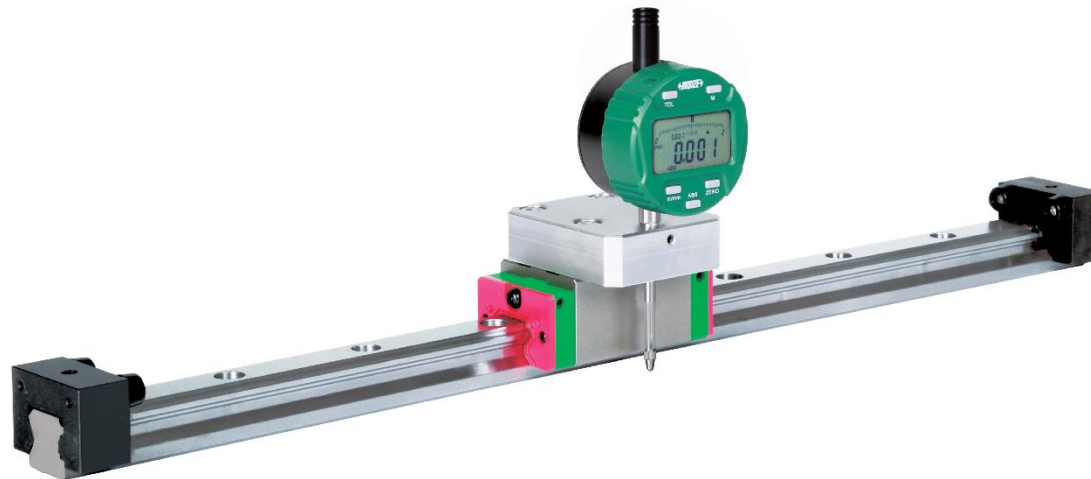
# Straightness Gauge 2225

- Measure straightness of workpieces

DATA  
OUTPUT

GUIDE LENGTH (L) CAN  
BE CUSTOMIZED

## Application



- Measuring range: 370mm
- Resolution: 0.001mm
- Straightness accuracy: 15µm
- Guide rail length: 500mm

# Flatness Measurement Stands 6852

GRANITE PLATE CAN BE CUSTOMIZED  
ACCORDING TO WORKPIECES



Application



- Digital indicator resolution: 0.001mm
- Flatness measurement accuracy: 2 $\mu$ m
- Flatness of granite plate: 2 $\mu$ m



# ***Concentricity And Runout Testers***



***Concentricity Gauges***



***Bench Centers***



***V-blocks***



***Expansion Mandrels***

# Concentricity Gauges 4786



For cylinder



For tube



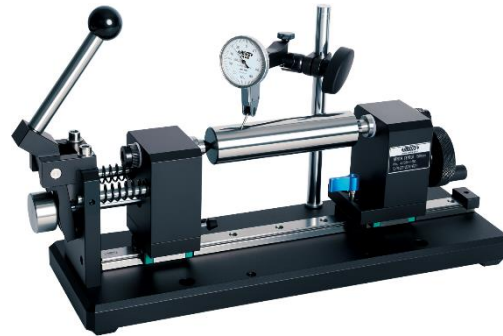
- Applicable inside diameter: Ø24-64mm
- Applicable outside diameter: Ø2-70mm
- Accuracy: 3µm
- Ø50mm setting ring and Ø55mm calibration cylinder are included
- To ensure the accuracy 3µm, the distance between measuring point and roller should be <50mm

## **Bench Centers**



4736

- Diameter range: Ø3-35mm
- Workpiece length: 15-405mm
- Accuracy: 2µm



4739

- Accuracy: 2µm



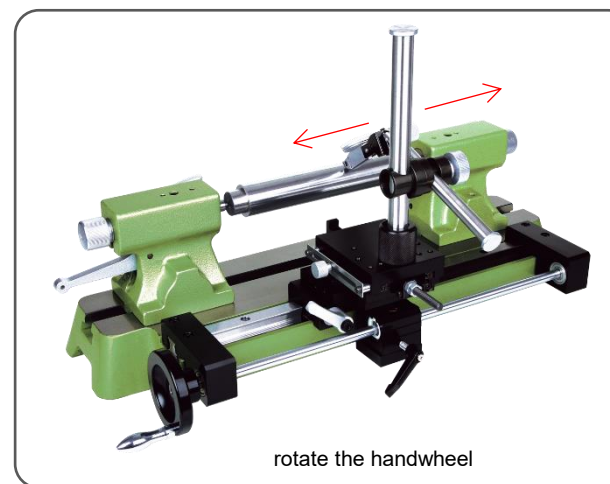
4741

- Stem hole: Ø8mm-Ø28mm
- Diameter range: Ø3-40mm

# Bench Center With Straightness Measurement 4723



Straightness measurement



- Runout accuracy: 2 $\mu$ m
- Accuracy of straightness measurement: 0.02mm
- Distance between two centers (D): 300mm

# Motorized Concentricity Gauges



Digital Motorized Concentricity  
Gauge 4763-300

- Measuring workpiece diameter range: Ø3-35mm
- Measuring workpiece length range: 15-300mm
- Accuracy:  $\leq 3\mu\text{m}$
- Repeatability:  $\leq 2\mu\text{m}$



Motorized Concentricity Gauges  
4757

- Diameter range: Ø3-25mm
- Workpiece length: 15-152mm
- Accuracy:  $2\mu\text{m}$



Motorized Bench Center  
4735

- Parallelism:  $0.010\text{mm}^*$
- Runout accuracy:  $2\mu\text{m}$
- Center height: 90mm

\*Parallelism of two centers to the guide surface

# Simple Measuring Tools (P1)



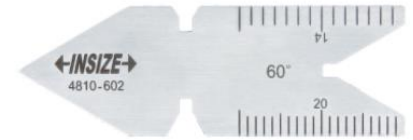
**Feeler Gauges**



**Pitch Gauges**



**Gear Tooth Pitch Gauges**



**Center Gauges**



**Thread Gauges**



**Angle Gauges**



**Radius Gauges**



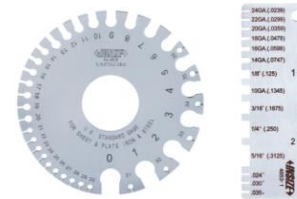
**Drill Gauges**



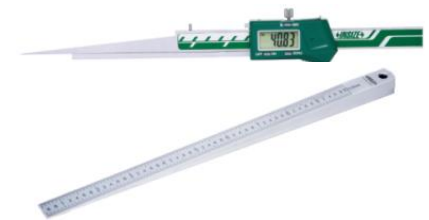
**Angle Gauges**



**Wire Gauges**



**Thickness Gauges**



**Taper Slot Gauges**



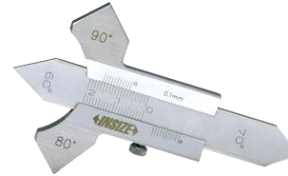
# Simple Measuring Tools (P2)



**Taper Gauges**



**Taper Bore Gauges**



**Welding Gauges**



**Fillet Welding Gauges**



**Welding Gauges**



**Pipe Welding Gauges**



**Inside/Outside Calipers**



**Dividers**



**Length Tapes**



**Measuring Tapes**



**Long Measuring Tapes**

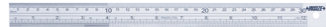


**Automatic Measuring  
Tapes Calibration Systems**

# Simple Measuring Tools (P3)



**Measuring Wheels**



**Steel Rules**



**Automatic Steel Rulers  
Calibration Systems**



**Digital Scales With Microscope**



**Combination Squares**



**Plastic Angle Squares**

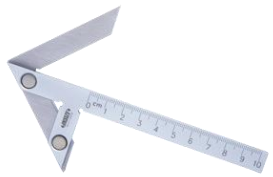


**T-bevels**



**Marking Gauges**

# Simple Measuring Tools (P4)



**Center Marking Gauges**



**Locators**



**Scribing Calipers**



**Height Scribes**



**Scribers**



**Precision Screwdriver Sets**



**LED Flashlights**



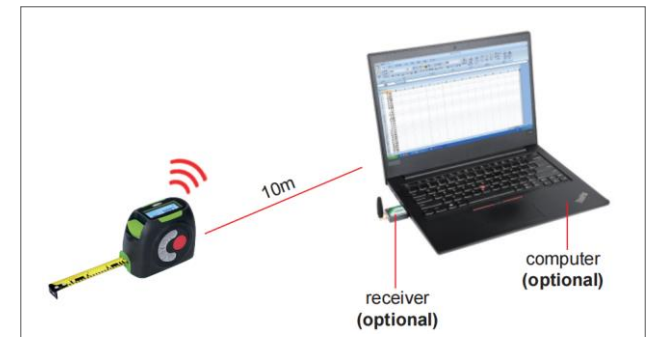
**Measuring Tool Sets**

# Digital Measuring Tapes 9570



- Range: 5m
- Digital measurement accuracy:  $\pm 1\text{mm}$
- Blade graduation: 1mm, 1/16"
- Blade graduation accuracy:  $\pm(0.5+D/5000)\text{mm}$ , D: measured distance rounded to whole metres, when  $D < 1\text{m}$ , D takes to 1m

## Wireless Connect To Computer



# Set-Up Tools (P1)



**Granite Surface Plates**



**Stands For Granite Surface Plates**



**Jack Sets For Granite Surface Plates**



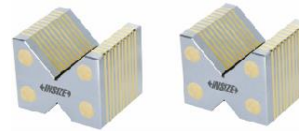
**Magnetic Rectangular Blocks**



**V-blocks**



**Magnetic V-blocks**



**Magnetic Induction V-blocks**



**Squares With V Groove**



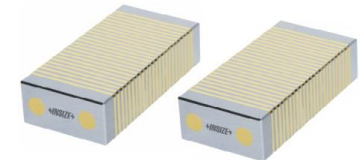
**Permanent Magnetic Chucks**



**Parallels**



**Parallel/Square Sets**



**Magnetic Induction Parallel Sets**

# Set-Up Tools (P2)



**Angle Plate Sets**



**Adjustable Angle Blocks**



**Right Angle Plates**



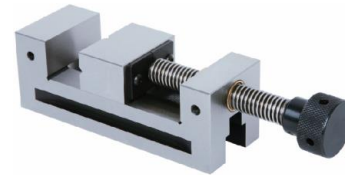
**Sine Bars**



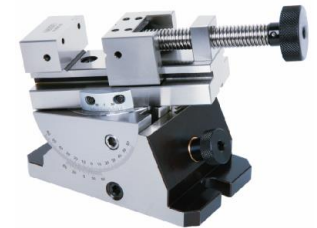
**Sine Tables**



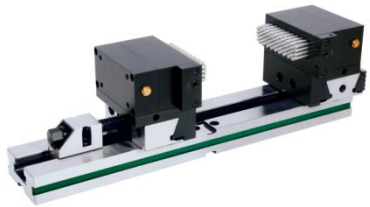
**Precision Sine Vises**



**Precision Vises**



**Precision Universal Vises**



**Anvil Vises**



**Stages**



# 6

## Levels



**Built-in Bluetooth Electronic Levels**



**Cylinder Straightness Measuring Instruments**



**Built-in Bluetooth Digital Level And Slope Meter**



**Frame Levels**



**Block Levels**



**Imaging Level**



**Level Bubbles**



**Levels**



**Cross-line Laser Levels**



**Self-Leveling Rotary Lasers**

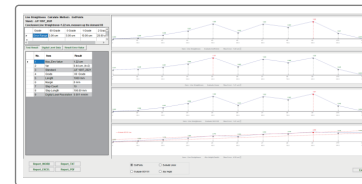


# Built-in Bluetooth Wireless Electronic Levels 4952

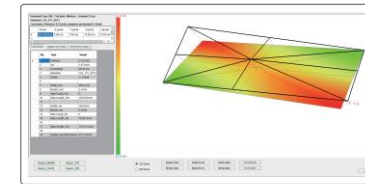


- Measures flatness, parallelism and straightness
- Built-in bluetooth, transmission distance is 30 meters (under the condition of no obstruction and no electromagnetic interference)
- The LCD can be rotated for easy observation in different directions

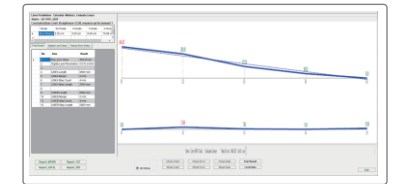
straightness measurement



flatness measurement



parallelism measurement



| Code                    | 4952-150     |               | 4952-150L    |               |
|-------------------------|--------------|---------------|--------------|---------------|
| Resolution (adjustable) | 0.01mm/m     | 0.001mm/m     | 0.01mm/m     | 0.005mm/m     |
| Range                   | ±5mm/m       | ±0.5mm/m      | ±5mm/m       | ±2.5mm/m      |
| Repeatability           | 0.01mm/m     | 0.001mm/m     | 0.01mm/m     | 0.005mm/m     |
| Response time           | <3s          | <10s          | <3s          | <5s           |
| Accuracy                | ±(0.01+2%A)* | ±(0.001+2%A)* | ±(0.01+2%A)* | ±(0.005+2%A)* |

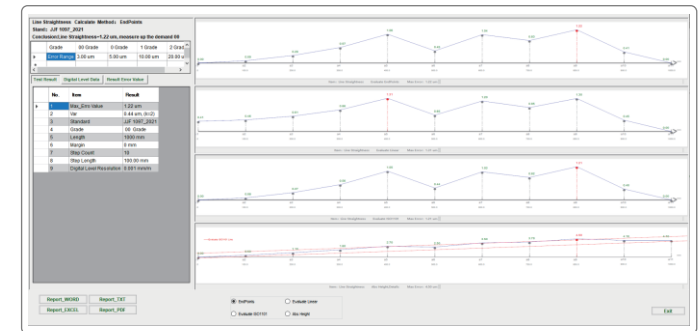
\* A is the absolute measured value, for example A=0.1mm/m, the resolution is 0.001mm/m, the accuracy is ±0.003mm/m

# Cylinder Straightness Measuring Instruments 4957



- Measure the straightness of cylinders, calibrate the horizontal installation of cylindrical equipments
- Android APP and straightness measuring software are included

straightness measuring software (included)



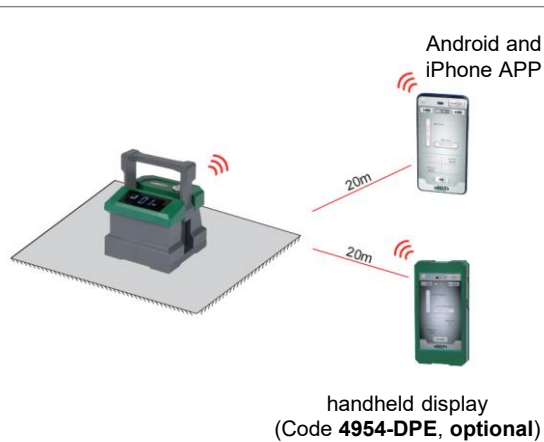
|                         |              |               |
|-------------------------|--------------|---------------|
| Resolution (adjustable) | 0.01mm/m(2") | 0.005mm/m(1") |
| Range                   | ±5mm/m       | ±2.5mm/m      |
| Repeatability           | 0.01mm/m     | 0.005mm/m     |
| Response time           | <3s          | <5s           |
| Accuracy                | ±(0.01+2%A)* | ±(0.005+2%A)* |

\*A is the absolute measured value, for example A=1mm/m, the resolution is 0.005mm/m, the accuracy is 0.025mm/m

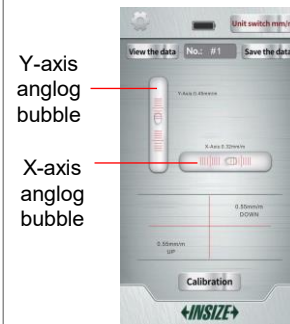
# Built-in Bluetooth Dual-axis Digital Levels 4954

- Measure the level of machine tools and other equipments
- Built-in bluetooth, transmission distance is 20 meters (under the condition of no obstruction and no electromagnetic interference)
- Can display one level, can also display two or more (up to 4 levels at a time)

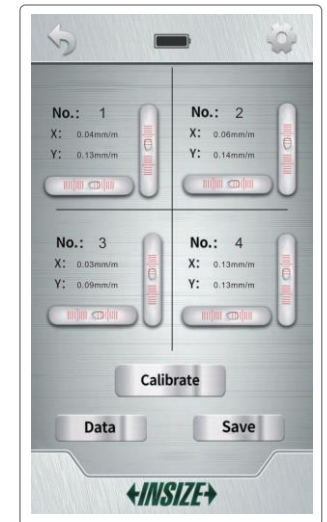
data output



display one level (display in X/Y axes simultaneously)



up to 4 levels at the same time



- Range:  $\pm 0.5\text{mm/m}$
- Resolution:  $0.01\text{mm/m}$
- Accuracy:  $\pm 0.02\text{mm}$

# Dual Axis Digital Level And Gyro Angle Meter 2199

DISPLAY FLIPS OVER WHEN  
THE BOTTOM FACES UP

AUDIBLE ALARM  
WHEN OUT OF LIMIT

BACKLIGHT



Measurement of angle between two planes in  
any direction (gyro technique)



place the angle meter at the first position, press  
"angle" button, rotate to another position (rotation  
speed < 90°/s), LCD shows the angle  $\alpha$

- Single axis/double axis level and slope meter, gyro technique can measure the angle between two planes in any direction
- Hard plastic case, with V-shaped grooves, four magnetic sides



Dual axis mode



Single axis mode

Connect to mobile phone



Connect to computer



Dual axis digital level:

- Range: single axis level:  $4 \times 90^\circ$   
dual axis level:  $\pm 40^\circ$
- Resolution:  $0.01^\circ$
- Accuracy: at  $0^\circ$  and  $20^\circ$ :  $\pm 0.05^\circ$   
at  $20^\circ$  and  $70^\circ$ :  $\pm 0.15^\circ$   
at  $70^\circ$  and  $90^\circ$ :  $\pm 0.05^\circ$

Gyro angle meter:

- Range:  $360^\circ$
- Resolution:  $0.1^\circ$
- Accuracy:  $\pm 0.5^\circ$



# Built-in Bluetooth Digital Level And Slope Meter 2198



MAGNETIC  
BOTTOM

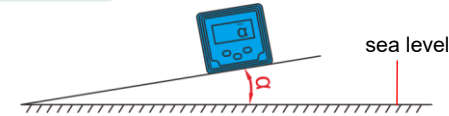
BACKLIGHT

DISPLAY FLIPS OVER WHEN  
THE BOTTOM FACES UP

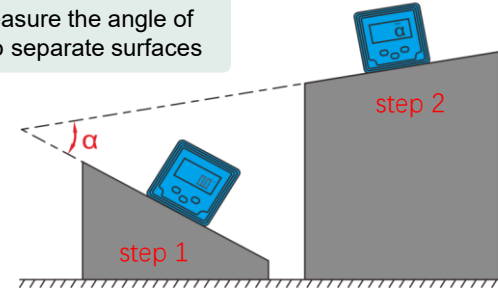
ABSOLUTE  
LEVEL



Measure slope

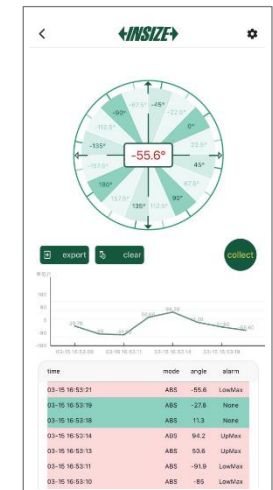


Measure the angle of  
Two separate surfaces



- The sea level is permanently set inside the chip, zero setting is not needed when battery is replaced
- Built-in bluetooth, transmission distance is 15 meters (under the condition of no obstruction and no electromagnetic interference). Android and iPhone APP are included

- Range:  $4 \times 90^\circ$
- Resolution:  $0.1^\circ (=1.745\text{mm/m})$
- Accuracy: at  $0^\circ$  and  $90^\circ$ :  $\pm 0.1^\circ$ ;  
at others:  $\pm 0.2^\circ$



Android and iPhone APP (included),  
can choose real-time display  
(continuous transmission) or single  
transmission



# Built-in Bluetooth Block Level 4953



COLOR DISPLAY  
LARGE CHARACTERS WITH BACKLIGHT

BUILT-IN  
BLUETOOTH



- Analog bubbles can show tilt trends in X-axis and Y-axis

- Range:  $\pm 0.5\text{mm/m}$
- Resolution:  $0.01\text{mm/m}$
- Accuracy:  $\pm 0.02\text{mm/m}$
- Repeatability:  $0.01\text{mm/m}$

# 7 On-Machine Measurement



**Video Measuring Instrument  
For Machine Tools**



**Centering Indicators**



**Edge Finders**



**Edge Finders For EDM**



**3D Testers**



**Trigger-type 3D Probes**



**Transmission Probes For  
CNC Machine tools**



**Vision Zero Setter**



**Zero Setters With Cable**



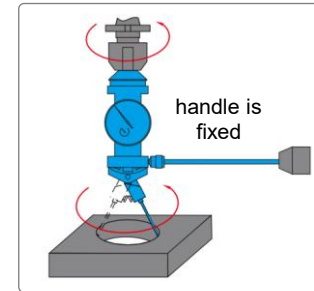
**Zero Setters**



**Vertical Milling Machine  
Perpendicularity Measuring Gauges**



# Centering Indicator 2385

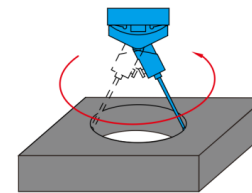


| Feeler | Measuring diameter | Accuracy |
|--------|--------------------|----------|
| P1     | Ø0-60mm            | 0.015mm  |
| P2     | Ø0-160mm           | 0.02mm   |
| P3     | Ø0-250mm           | 0.03mm   |
| P4     | Ø3.2-80mm          | 0.015mm  |
| P5     | Ø3.2-180mm         | 0.02mm   |
| P6     | Ø3.2-280mm         | 0.03mm   |
| P7     | Ø0-2.8mm           | 0.015mm  |

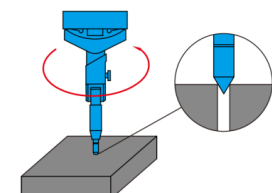
## Application



external  
feeler



internal feeler



small hole feeler

- Provides quick and accurate centering in boring and milling set-up
- Maximum speed is recommended not to exceed 800rpm

# 3D Testers

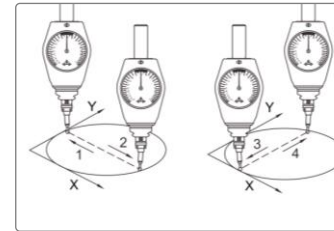
2846



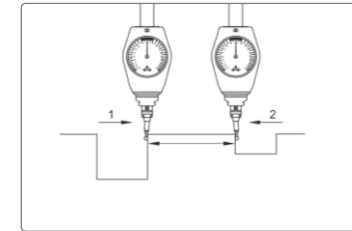
2840



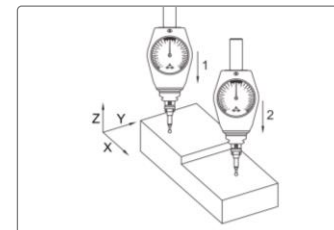
Find center of holes



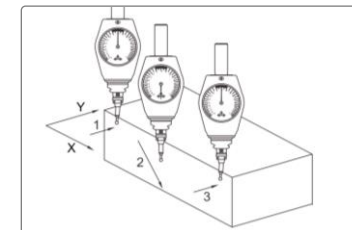
Length measurement



Depth measurement



Position workpieces



- Mainly used for milling machines and CNC machine tools
- 1. determine coordinate point on workpieces
- 2. find center of holes
- 3. adjust and position workpieces
- Can be used to measure length and depth

# **Trigger-type 3D Probe (Audible And Visual Alarm) 9410**



Application



- Arbitrary one-way repeated trigger accuracy:  $\leq 1\mu\text{m}$
- Directional trigger protection stroke: X-Y:  $\pm 12^\circ$ , Z: +5mm
- Trigger force in X-Y direction (with standard styli): 0.3-0.6N
- Trigger force in Z direction: 4N

# Infrared Transmission Probes For CNC Machine Tools 9413

Probe

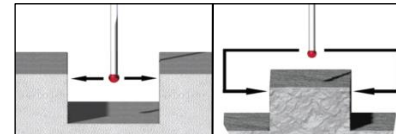


Receiver

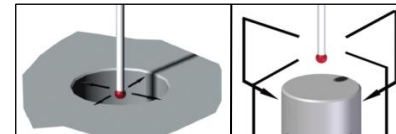


Automatic measurement software (included)

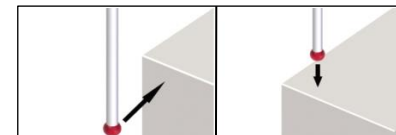
1. Stylus automatic calibration
2. Protection of stylus during probe movement (avoid collision)
3. Groove and boss measurement



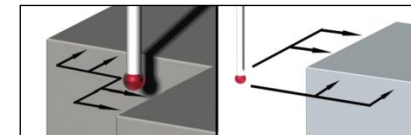
4. Bore and axis measurement



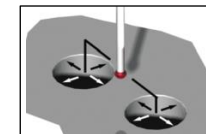
5. X or Y single-surface measurement



6. Internal and external corner measurement



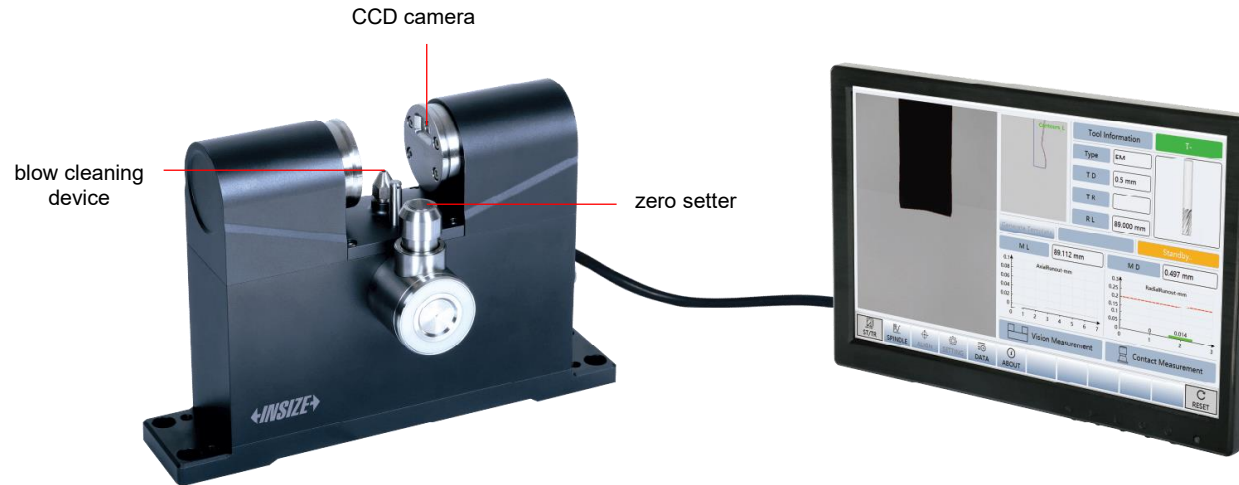
7. 4th axis measurement
8. Angle on X and Y plane measurement
9. Three points measurement of arc
10. Measure the distance between two holes



- Trigger accuracy of styli in any direction: 1μm
- Infrared transmission/reception range: 5m



# Vision Zero Setter 9417



**HIGH ROTATION  
MEASUREMENT**

**IP65  
WATERPROOF**

## Application



- For 3-axis/5-axis high-speed precision machining centers
- Zero setter for large diameter cutting tool lengths
- High-precision CCD camera to measure tool length, tool diameter, axial runout, radial runout, etc.

- Monitoring spindle thermal steady state
- Applicable CNC systems: FANUC, HAAS, OKUMA, SIMENS, LYNUC, MITSUBISHI, etc.

## Vision measurement

- Range:  $\varnothing 0.05\text{-}30\text{mm}$
- Static measurement accuracy:  $\pm 2\mu\text{m}$
- Repeatability:  $\leq 3\mu\text{m}$
- Communication protocols: OPC-UA, TCP/IP, RS232

## Zero setter

- Working air pressure: 0.4-0.8MPa
- Repeated trigger accuracy:  $\leq 2\mu\text{m}$

# Zero Setter With Cable (Five-side) 9412

- Suitable for various machining centers, CNC boring and milling machines, etc.
- Automatically set the tool length parameters before CNC machining process
- Automatic detection of tool wear or damage during CNC machining
- Automatic detection of tool wear or damage after CNC machining is completed
- The working surface adopts ceramic material and chamfering process, which can greatly improve the service life
- The plug, cable part and output signal of the host are protected, so that the zero setter can work in the splash environment for a long time

Application



- Trigger protection stroke: X-Y:  $\pm 5\text{mm}$ , Z: 8mm
- Axial reset force: 3.4N-3.6N
- Repeated trigger accuracy:  $\leq 1\mu\text{m}$
- Hardness of the zero setter: HM8.5

# 8

## Linear Probes And Scales



**Linear Probes**



**Inductance Probe Displays**



**Digital Linear Gauges**



**Capacitance Type Linear Gauges And Display Units**



**Laser Displacement Sensors**



**Linear Scales And Digital Readouts**



**Magnetic Linear Scales**



**Scales**



# Inductance Type Probes 9420

IP65  
WATERPROOF

9420-AP02



9420-BP02

| Code          | 9420-AP02                                | 9420-BP02                                |
|---------------|------------------------------------------|------------------------------------------|
| Range         | $\pm 0.9\text{mm}$                       | $\pm 1\text{mm}$                         |
| Accuracy      | $\pm (0.3 + 3 \times  L ^3) \mu\text{m}$ | $\pm (0.2 + 3 \times  L ^3) \mu\text{m}$ |
| Repeatability | $0.15\mu\text{m}$                        |                                          |

L is measuring length in mm

# Inductance Probe Displays

9427



- Channel number: 1-4
- Unit:  $\mu\text{m}$ , mm
- Range:  $\pm 1\text{mm}$ ,  $\pm 2\text{mm}$ ,  $\pm 5\text{mm}$ ,  $\pm 10\text{mm}$  (adjustable)
- Resolution:  $0.1\mu\text{m}$ ,  $1\mu\text{m}$

9428



- Channel number: 1-16 (selectable)
- Unit:  $\mu\text{m}$ , mm
- Range:  $\pm 0.5\text{mm}$ ,  $\pm 1\text{mm}$ ,  $\pm 2\text{mm}$ ,  $\pm 5\text{mm}$ ,  $\pm 10\text{mm}$  (adjustable)
- Resolution:  $0.1\mu\text{m}$

# Inductance Type Probe And Display Unit 9442-SET1

UNIDIRECTION

FIXED LEVER  
ANGLE



9427-S01B



9442-G03

Spindle runout measurement application



universal magnetic stand (optional)

Display Unit Specification

- Resolution: 0.1μm/1μm
- Channel number: 1  
(can be customized up to 4 channels)

Inductance Type Probe Specification

- Range:  $\pm 0.3\mu\text{m}$
- Overall accuracy:  $\pm 2\mu\text{m}$
- Overall repeatability: 0.3μm



# Digital Linear Gauges

7130-10



Output interface



RS232, TTL level  
RS232, 232 level



RS485



RS232, TTL level  
RS232, 232 level

7134-10L (Pneumatic Digital Linear Gauges)



- Range: 0-12.5mm
- Accuracy: 1µm/3µm
- Measuring force: ≤1.5N

- Repeatability: 0.5µm/1.5µm
- Absolute encoder, the original data remains after power off
- Digital signal output, amplifier is not required
- Dust/waterproof: IP43/IP66

# Capacitance Linear Gauges 7107

## Capacitance Linear Gauges

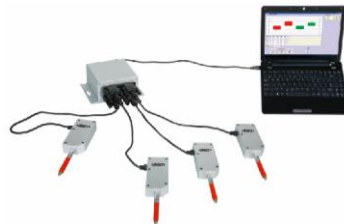


- Measuring range: 12mm
- Resolution: 0.01mm / 0.001mm
- Accuracy: 20µm / 5µm
- Hysteresis: 10µm / 2µm

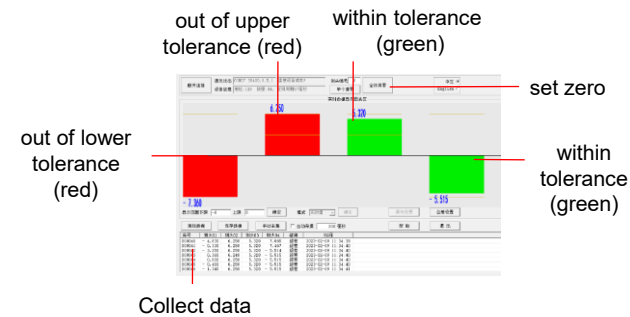
## Multichannel Interface Boxes For Capacitance Linear Gauges



Connected with 7107-11, 7107-12, 7107-11V or 7107-12V linear gauges



### Software (included)



Connected with digital indicators (data cable 7309-C01M is needed)



suitable for 2112, 2114, 2115, 2116, 2501, 2103 and 2104 series digital indicators

# Laser Displacement Sensors LDS-N Series

- High accuracy, non-contact measurement, high speed response, multiple measurement modes, environmental adaptability, programmable control, rich data output interface and easy maintenance
- Can be used in automated production lines, robotic arms, packaging equipment, printing equipment, medical equipment etc.

| Code                    | NPN+Analog current | LDS-N30    | LDS-N50    | LDS-N100    | LDS-N200    | LDS-N400                                   |
|-------------------------|--------------------|------------|------------|-------------|-------------|--------------------------------------------|
|                         | NPN+Analog voltage | LDS-N30-MC | LDS-N50-MC | LDS-N100-MC | LDS-N200-MC | LDS-N400-MC                                |
|                         | NPN+RS485          | LDS-N30-RS | LDS-N50-RS | LDS-N100-RS | LDS-N200-RS | LDS-N400-RS                                |
| Basis (center) distance |                    | 30mm       | 50mm       | 100mm       | 200mm       | 400mm                                      |
| Detection range (FS)    |                    | 25-35mm    | 35-65mm    | 65-135mm    | 120-280mm   | 200-600mm                                  |
| Full scale              |                    | 10mm       | 30mm       | 70mm        | 160mm       | 400mm                                      |
| Repeat accuracy         |                    | 5μm        | 15μm       | 35μm        | 100μm       | 200-400mm: 150μm    400-600mm: 400μm       |
| Linear accuracy         |                    | ±0.2% FS   |            |             |             | 200-400mm: ±0.2% FS    400-600mm: ±0.3% FS |



**Roundness/Cylindricity Tester**



**Roundness Measuring Machines**



**Precision Air Floating Rotary Tables**



**Surface Profile Measuring Machines**



**Roughness Measuring Machines**



**Roughness Testers**



**Surface Roughness Specimens**



**Surface Roughness Reference Specimens**



# Roundness/Cylindricity Testers

Roundness/Cylindricity Tester RCT-300



- Automatic centering and leveling
- Evaluation items: cylindricity module, roundness module, straightness module, single section flatness module, multi-section flatness module, commutator module
- Analytical ability: cylindricity function, reference benchmarks for cylindricity evaluation, reference circle for roundness evaluation, measurement band, notched measurement

Roundness Measuring Machine RCT-RA260



- Air-floating spindle
- Can measure roundness, concentricity, flatness, radial runout
- Spectrum analysis, automatic gap/burr removal, waveform analysis
- 4 roundness evaluation methods: smallest area method, least square method, smallest circumscribed circle method, largest inscribed circle method

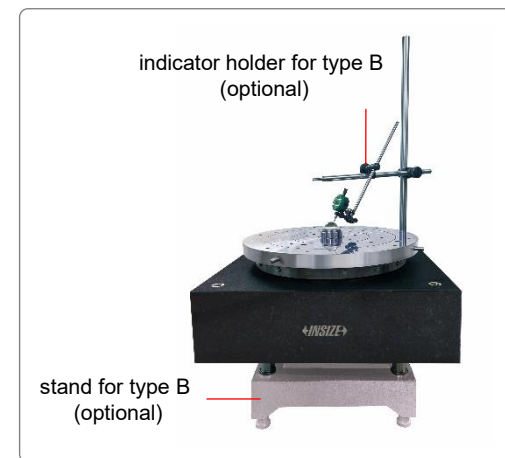
# Precision Air Floating Rotary Tables 6875

CUSTOM-MADE  
SUPPLY SPECIAL SIZES ACCORDING  
TO CUSTOMER'S REQUEST



- Manual drive
- Floating by air pressure, the rotary table can rotate smoothly and be free from wear

## Application



- Stage Size: Ø320mm/Ø400mm/Ø500mm/Ø600mm
- Rotation accuracy in radial/axial: <0.3µm



# **Roughness And Profile Measuring Machines (P1)**

Surface Profile Measuring Machine SPM-1000



Roughness And Profile Measuring Machine (Two Probes Type) SPM-2000



- Measure curved surfaces

# **Roughness And Profile Measuring Machines (P2)**

Roughness And Profile Measuring Machine (One Probe Type) SPM-5000



- Roughness, waviness, and profile analysis can be achieved with just one measurement

Roughness Measuring Machine SPM-4000

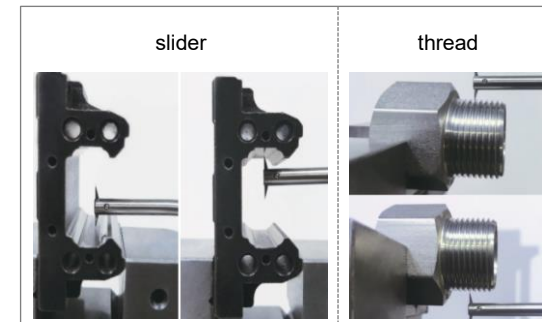


- Hundreds of parameters can be evaluated, such as roughness profile, waviness profile, primary profile, etc.

# **Bidirectional Roughness And Profile Measuring Machine SPM-6000**



## Application



- Bidirectional probe measurement
- Constant measuring force
- Intelligent tracking control system, real-time scanning measurement

# Roughness Tester (Separable Type) ISR-C300/ISR-C301/ISR-C300WL

BLUETOOTH

TOUCH  
SCREEN

DATA  
OUTPUT

CAN BE OPERATED BY  
COMPUTERS OR MOBILE PHONES



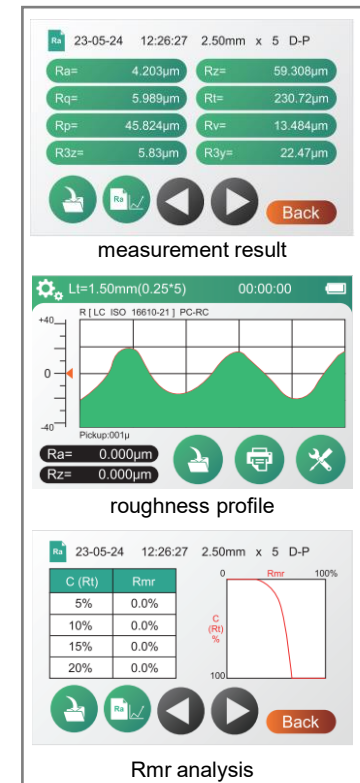
Probe and main unit Can be combined together



- Roughness tester can be operated by mobile phones or computers
- Optional wireless or Bluetooth receivers can be used to output keyboard signals, connecting to a computer to send data to Excel
- Support bluetooth printer
- 36 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards

- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off

Roughness tester screen display



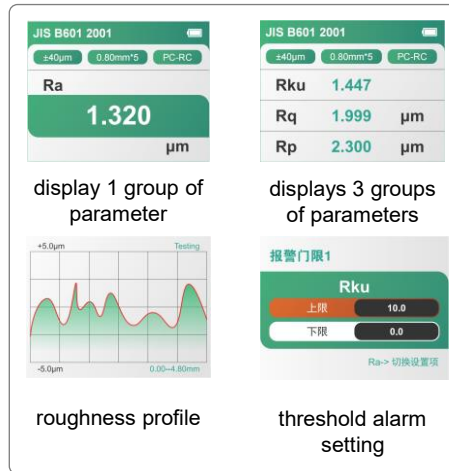
# Roughness Tester For Automation ISR-C400

CAN BE OPERATED BY  
MOBILE PHONES OR COMPUTERS

BLUETOOTH

DATA  
OUTPUT

## Screen display



## Application



- Range: 320μm (-160μm~160μm)
- Accuracy: ±10%
- Resolution (Ra): 0.001μm

# Roughness Testers (P1)

## Surface Roughness And Profile Tester ISR-S600



standard roughness probe (included),  
for measuring plane and curved surfaces



standard profile probe (included),  
for measuring profile and dimension

- Profile measurement specification

X axis measuring range: 59mm  
X axis resolution: 1μm  
Z axis measuring range: 3mm  
Z axis resolution: 1μm

- Roughness measurement specification

Range: 1500μm  
Resolution (Ra): 0.0001μm

## Roughness Tester (Compact Type) ISR-C200



- Range: X axis: 17.5mm  
Z axis: 250μm
- Accuracy:  $\pm(5\%+0.025)\mu\text{m}$
- Resolution (Ra): 0.001μm



## Roughness Testers (P2)



Roughness Tester ISR-C002

- Range: 320μm (-160μm~160μm)
- Accuracy:  $\pm 10\%$
- Resolution (Ra): 0.001μm



Roughness Tester ISR-T120

- Range: X axis: 17.5mm  
Z axis: 640μm (-320μm~320μm)
- Accuracy:  $\pm 10\%$
- Resolution (Ra): 0.001μm



Roughness Tester (Basic Type) ISR-C003

- Range: Ra, Rq: 0.05-15μm  
Rz, Rt: 0.1-50μm
- Accuracy:  $\pm 10\%$
- Resolution (Ra): 0.01μm

# 10 3D Measurement

←INSIZE→

**CMM**



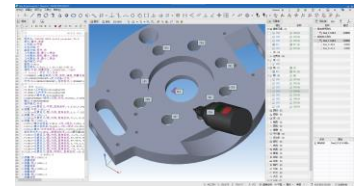
**Workshop Coordinate Measuring Machines**



**Measuring Arms**



**Software For Measuring Arms**



**Handheld 3D Scanners**



**Styli For CMM**



**Ceramic Ball Gauges**



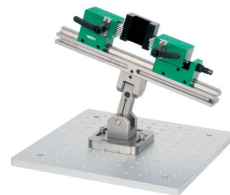
**Gauge Block Stands for CMM**



**CMM Check Masters**



**Jigs For CMM**



# Coordinate Measuring Machines



## Standard accuracy (LM series)

- Range: X: 500-800mm  
Y: 600-1500mm  
Z: 400-600mm
- MPEE ( $\mu\text{m}$ ):  
 $\pm(2.1+L/250)\mu\text{m} \sim \pm(2.7+L/250)\mu\text{m}$

## High accuracy (LE series)

- Range X: 500-800mm  
Y: 600-1500mm  
Z: 400-600mm
- MPEE ( $\mu\text{m}$ ):  
 $\pm(1.6+L/330)\mu\text{m} \sim \pm(2.1+L/330)\mu\text{m}$

CMM-LM/CMM-LE Series (Small Range)



## Standard accuracy (PM series)

- Range: X: 600-1800mm  
Y: 800-4000mm  
Z: 600-1000mm
- MPEE ( $\mu\text{m}$ ):  
 $\pm(1.5+L/300)\mu\text{m} \sim \pm(3.9+L/300)\mu\text{m}$

## High accuracy (PE series)

- Range X: 600-1800mm  
Y: 800-4000mm  
Z: 600-1000mm
- MPEE ( $\mu\text{m}$ ):  
 $\pm(1.2+L/350)\mu\text{m} \sim \pm(3.5+L/350)\mu\text{m}$

CMM-PM/CMM-PE Series (Large Range)

# Workshop Coordinate Measuring Machines

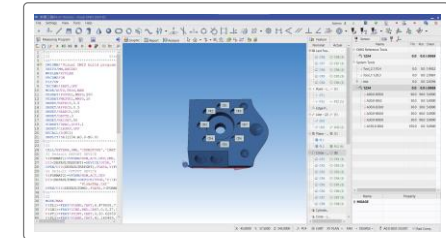
## CMM-WM Series



- Ultra-high-speed measurement Measurement efficiency is three times of ordinary CMM
- Built-in temperature sensor with real-time temperature compensation
- Ready to use when connected to the power supply, no compressed air
- Dedicated touchscreen software with configurable access permissions ensures both convenience and safety during production site operations.



workshop specific software  
(included)



measurement software  
(included)

| Code                | CMM-WM342A            | CMM-WM342B | CMM-WM565A      | CMM-WM565B |
|---------------------|-----------------------|------------|-----------------|------------|
| Range               | 300×400×200mm         |            | 500×600×500mm   |            |
| Accuracy MPEE       | ±(2.7+L/200) μm       |            | ±(3.1+L/200) μm |            |
| Movement speed      | 860mm/s               |            |                 |            |
| Moving acceleration | 5000mm/s <sup>2</sup> |            |                 |            |

# Measuring Arms



Adjustable tripod (optional)



Laser line probe (optional)

CMM-CM30



- Internal balance
- Aerospace grade carbon-fiber material
- Equivalent-arm design
- U-shaped anti-collision design of the base



3mm zircon ball probe (included)



6mm zircon ball probe (included)



calibration cone (included)



- High precision, CM series, 6-axis: range: 1500-4500mm
- High precision, CM series, 7-axis: range: 2000-4500mm
- Standard precision, BE series, 6-axis: range: 1500-4500mm
- Ultra High Precise: HP series, 6-axis: range: 1500-4500mm
- Ultra High Precise: HP series, 7-axis: range: 2000-4500mm
- Temperature rate: 3°C/5min

## Measuring Arms (Advanced)



Laser line probe (optional)



Adjustable tripod (optional)



CMM-HM30S



3mm intelligent  
probe (included)



6mm intelligent  
probe (included)



calibration cone  
(included)

- Standard Accuracy, HE Series, 6-Axis: Measuring range: 1500-4500mm
- Standard Accuracy, HE Series, 7-Axis: Measuring range: 1500-4500mm
- High Accuracy ,HM Series, 6-Axis: Measuring range: 1500-4500mm
- High Accuracy ,HM Series, 7-Axis: Measuring range: 1500-4500mm
- Ultra High Accuracy, GP Series, 6-Axis: Measuring range: 1500-4500mm
- Ultra High Accuracy, GP Series, 7-Axis: Measuring range: 1500-4500mm

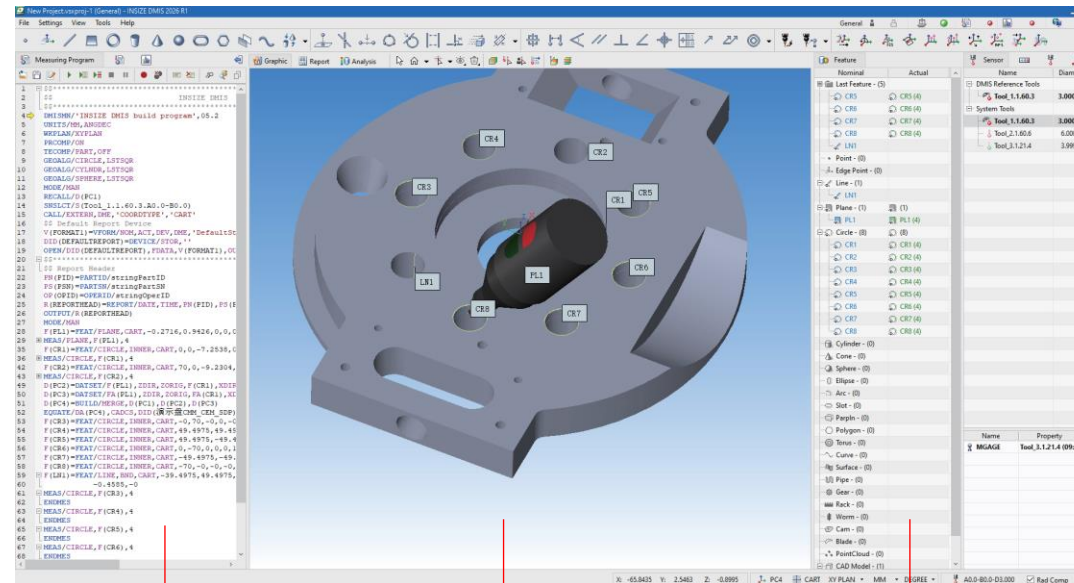


# Software For Measuring Arms CMM-ARM-DMIS

- Simple and intuitive user interface
- Drag-and-drop operation for simplicity and efficiency
- Standard DMIS kernel with self-learning programming function
- Multilingual design
- The tolerance algorithm supports ISO and ASME Y14.5



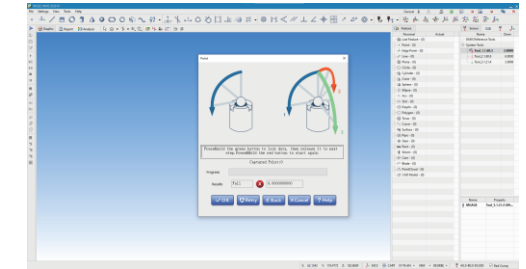
Measuring arm (optional) applications



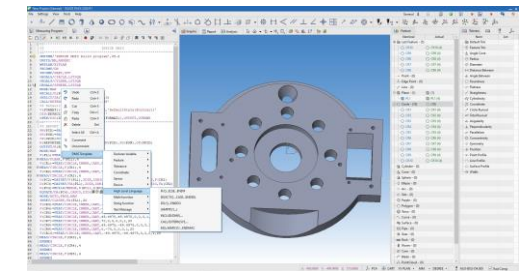
measuring program

integrated display window

element library



probe calibration



advanced programming

# Handheld 3D Scanner LSM-L340/L560

- Three scanning modes to suit different situations
- AI algorithm module, greatly improve the scanning effect
- Highly efficient scanning with ultra-fast measuring speeds
- Metrology-grade measuring accuracy

Scanning software (included)

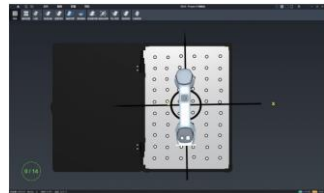
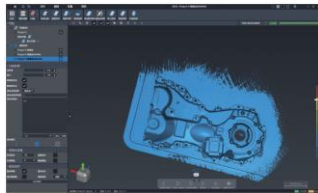
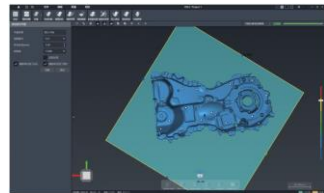


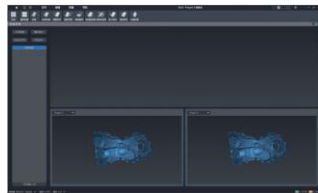
image-guide calibration



point cloud meshing



invalid area removal



scanning splicing

laser  
transmitter

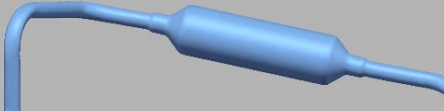


scan indicator



Multi-function keys

| Code                   | LSM-L340                    | LSM-L560                    |
|------------------------|-----------------------------|-----------------------------|
| High-speed scanning    | 26 cross blue laser lines   | 50 cross blue laser lines   |
| Precision scanning     | 7 parallel blue laser lines | 7 parallel blue laser lines |
| Deep hole scanning     | 1 blue laser line           | 1 blue laser line           |
| Maximum scanning speed | 5400000 measurements/s      | 7100000 measurements/s      |
| Maximum resolution     | 0.01mm                      |                             |



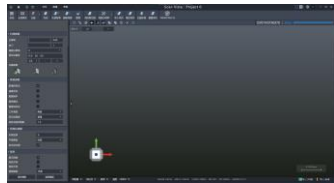
| Feature Table      |         |        |       |       |      |       |     |        |     |
|--------------------|---------|--------|-------|-------|------|-------|-----|--------|-----|
| Lengths            |         | Widths |       | Depth |      | Area  |     | Volume |     |
| Coordinate Systems |         | Units  |       | Units |      | Units |     | Units  |     |
| Data Alignment     |         | Units  |       | Units |      | Units |     | Units  |     |
| Name               | Control | Item   | Value | Tol   | Dir  | Tol   | Dir | Tol    | Dir |
| # Feature_1        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_2        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_3        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_4        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_5        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_6        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_7        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_8        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_9        | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_10       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_11       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_12       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_13       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_14       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_15       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_16       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_17       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_18       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_19       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_20       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_21       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_22       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_23       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_24       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_25       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_26       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_27       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_28       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_29       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_30       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_31       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_32       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_33       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_34       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_35       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_36       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_37       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_38       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_39       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_40       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_41       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_42       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_43       | Isolate | 14.40  | 14.40 | 1.00  | 0.00 | 0.00  |     |        |     |
| # Feature_44       | Isolate | 14.40  | 14.40 | 1.00  |      |       |     |        |     |

- Supports exporting inspection reports in multiple formats, including PDF, Excel and Word, for convenient archiving and storage
- Precise calibration of tube bending machinery based on actual measurement data such as XYZ and LRA obtained from testing

# Large FOV Handheld 3D Scanner LSM-L560S

- Large FOV
- Highly efficient scanning with ultra-fast measuring speeds
- Built-in photogrammetry
- Fast calibration, high-speed efficiency
- Ultra-large depth of field

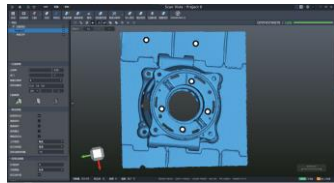
## Scanning software (included)



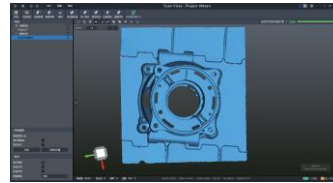
software main interface



image-guide calibration



data processing



point cloud meshing



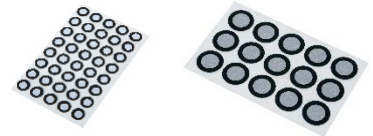
camera



laser transmitter



multi-function keys



Ø6mm and Ø12mm marks (included)



calibration plate (included)



photogrammetric rulers (included)

- Scan mode: 50 cross blue laser lines
- Maximum scanning speed: 7100000 measurements/s
- Volume accuracy: 0.1mm+0.015mm/m
- Maximum scanning field: 2200mm × 2200mm



# Gauge Block Stands For CMM



6885

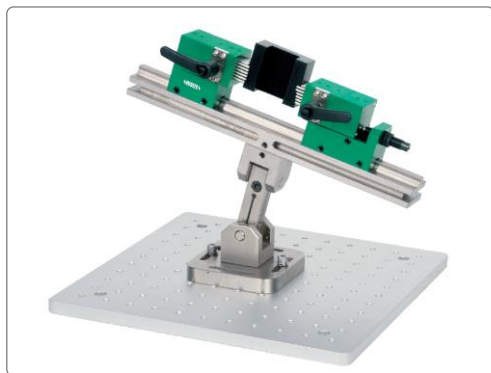
- Length: 500mm, 600mm, 650mm, 700mm, 750mm, 800mm, 850mm, 900mm, 1000mm
- Height: 235mm, 355mm, 475mm



7398

- Applicable block length: 30mm, 100mm, 125mm, 150mm, 175mm, 200mm, 250mm, 300mm, 400mm, 500mm, 600mm, 700mm, 800mm, 900mm, 1000mm
- Column height: 450mm
- Angle adjustment range: 0 ° ~90°

# Jigs For CMM



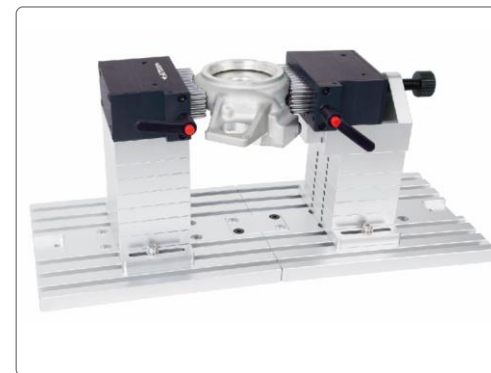
Anvil Ø2.5mm



Anvil Ø2.5mm



Anvil ø6mm



Anvil ø6mm



# Profile Projectors, Quick Measurement Systems, Vision Measuring Systems



**Profile Projectors**



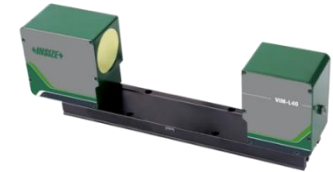
**Sheet Metal Vision Measuring Systems**



**Quick Measurement Systems**



**Online/Offline Quick Measurement Systems**



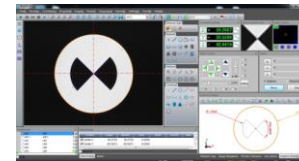
**CNC Vision Measuring Systems (Standard Type)**



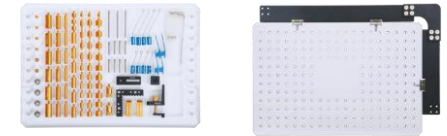
**CNC Vision Measuring Systems (Advanced Type)**



**Vision Measuring Softwares**



**Jig Set For Vision Measuring Systems**



**Standard Glass Scales**



# Profile Projectors



High Precision Profile Projectors  
ISP-A5000E Series

Projector screen diameter:  
Ø300mm



Horizontal Profile Projectors  
ISP-W4025/ISP-A7000E

Projector screen diameter:  
Ø400mm



Profile Projectors  
ISP-A6000/ISP-A6000E

Projector screen diameter:  
Ø600mm



Large Size Profile Projector  
ISP-T800

Projector screen diameter:  
Ø800mm



Large Size Profile Projector  
ISP-T1200

Projector screen diameter:  
Ø1200mm

# Quick Measurement Systems



Large Size Quick Measurement System  
QMS-A450



Quick Measurement Systems (With Stitching)  
QMS-A220/QMS-A315



Quick Measurement Systems (Without Stitching)  
QMS-A110/QMS-A200

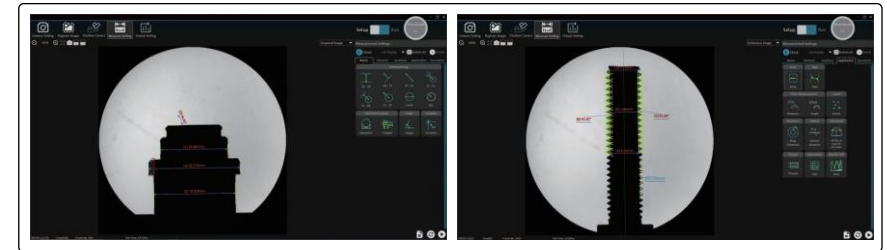
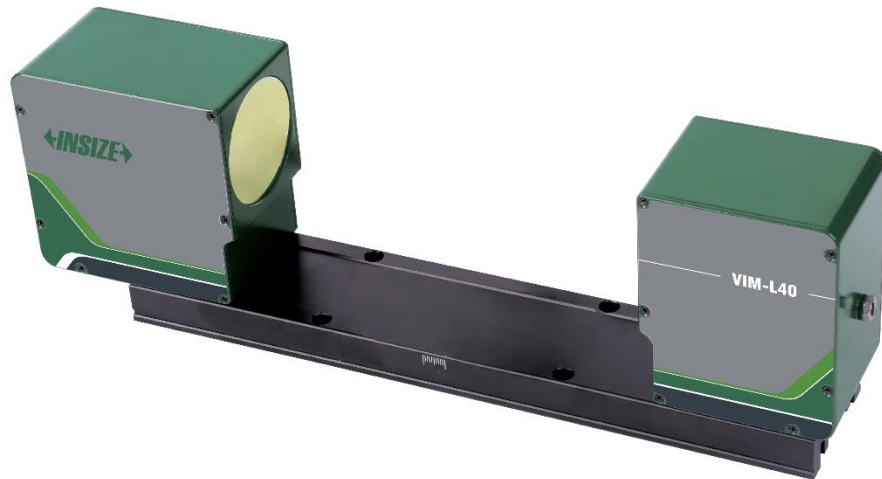
# Online/Offline Quick Measurement System VIM-L Series

TELECENTRIC SYSTEM WITH  
LARGE DEPTH OF FIELD

ONLINE/OFFLINE DIMENSION  
MEASUREMENT



Application



Automatically measure widths, pitch, arc, angles at  
the same time, simple and efficient

- Low-distortion system assures the accuracy throughout the field of view
- The dual telecentric optical system ensures sharp edges without losing accuracy even for misaligned targets
- Easy to use measurement tools for simplified setup

#### Measurement range

- View field: high precision measurement area: Ø26mm-Ø60mm  
full measurement area: Ø40mm-Ø120mm
- Depth of field: high precision measurement area: 10mm-20mm  
full measurement area: 20mm-40mm

#### Measurement accuracy

- high precision measurement area:  $\pm 2\mu\text{m} \sim \pm 4\mu\text{m}$
- full measurement area:  $\pm 3\mu\text{m} \sim \pm 5\mu\text{m}$

# Vision Measuring Systems



2D+3D Composite CNC Vision Measuring Systems ISD-U Series



CNC Vision Measuring Systems (With Stand) ISD-E320/ ISD-E430



CNC Vision Measuring Systems (Standard Type) ISD-V220CNCA



Manual Vision Measuring Systems (Standard Type) ISD-V Series



CNC Vision Measuring Systems ISD-V500N Series

# CNC Vision Measuring Systems (Advanced Type)

## ISD-K Series

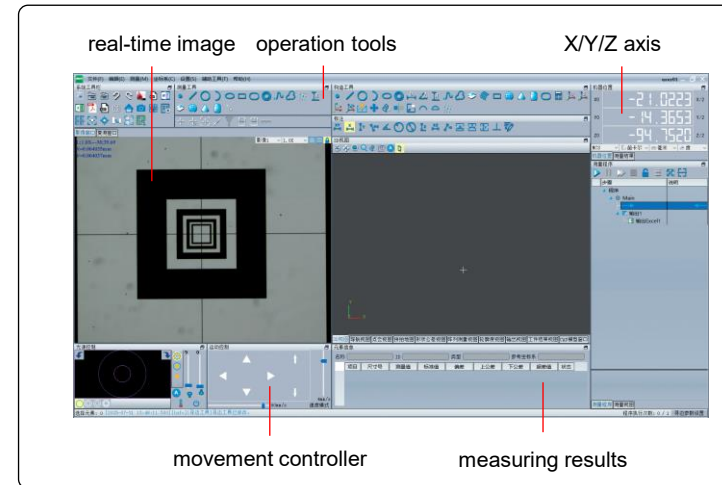


- RSF brand linear scales
- Panasonic servo control motor, with precise positioning performance in high-speed movement

Software (included)

HIGH-RESOLUTION  
AUTO ZOOM LENS

NAVIGATION  
CAMERA



| Code                     | ISD-K322                       | ISD-K432      | ISD-K542                       |
|--------------------------|--------------------------------|---------------|--------------------------------|
| Measuring range (X×Y×Z)  | 300×200×200mm                  | 400×300×200mm | 500×400×200mm                  |
| Resolution of X/Y/Z axis | 0.5μm                          |               |                                |
| Accuracy of X/Y axis     | $\leq(1.8+L/200)\mu\text{m}^*$ |               | $\leq(2.3+L/200)\mu\text{m}^*$ |
| Magnification            | 27X~356X (on 23.8" monitor)    |               |                                |

\*L is the measuring length in mm



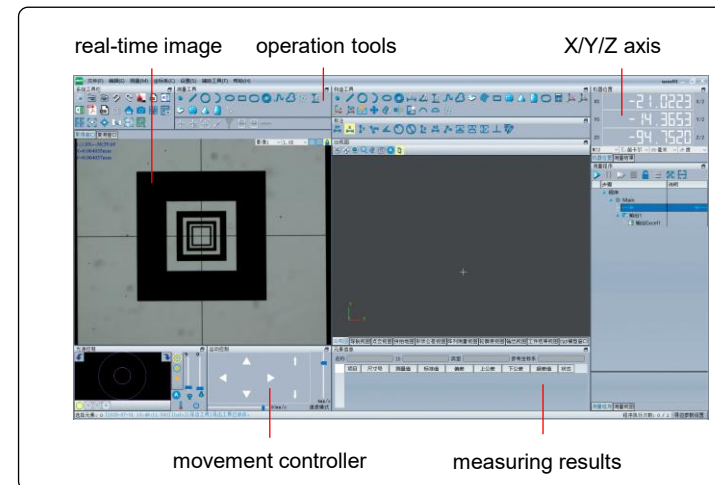
# CNC VISION MEASURING SYSTEMS (STANDARD TYPE)

## ISD-R Series

- Motorized zoom objective
- Granite body, high accuracy and stability



Software (Included)

NAVIGATION  
CAMERA

| Code                     | ISD-R320                    | ISD-R430      | ISD-R540         |
|--------------------------|-----------------------------|---------------|------------------|
| Measuring range (X×Y×Z)  | 300×200×200mm               | 400×300×200mm | 500×400×200mm    |
| Resolution of X/Y/Z axis | 0.5μm                       |               |                  |
| Accuracy of X/Y axis     | ≤(2.5+L/200)μm*             |               | ≤(2.8+L/200)μm * |
| Magnification            | 35X~165X (on 23.8" monitor) |               |                  |

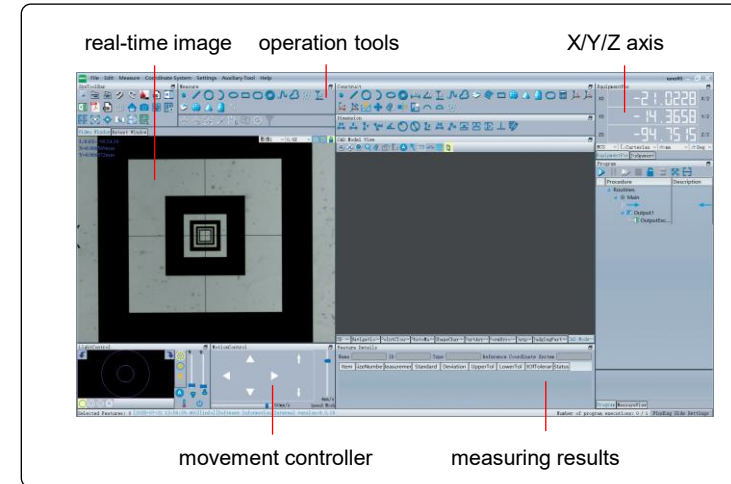
\* L is the measuring length in mm

# CNC Vision Measuring Systems (Advanced Type)

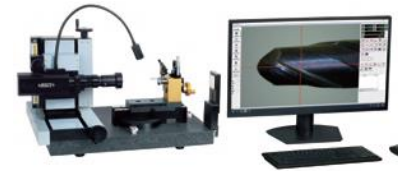
## ISD-Q Series



Software (included)

HIGH-RESOLUTION  
AUTO ZOOM LENSNAVIGATION  
CAMERA

| Code                     | ISD-Q542                                         | ISD-Q652      | ISD-Q762      | ISD-Q1210       | ISD-Q1612       | ISD-Q2015       |
|--------------------------|--------------------------------------------------|---------------|---------------|-----------------|-----------------|-----------------|
| Measuring range (X×Y×Z)  | 400×500×200mm                                    | 500×600×200mm | 600×700×200mm | 1000×1200×200mm | 1200×1600×200mm | 1500×2000×200mm |
| Accuracy of X/Y axis     | ≤(2.5+L/200)μm (L is the measuring length in mm) |               |               |                 |                 |                 |
| Resolution of X/Y/Z axis | 0.5μm                                            |               |               |                 |                 |                 |
| Magnification            | 27X~356X (on 23.8" monitor)                      |               |               |                 |                 |                 |

**Tool Presetters****Dual-display Cutting Tools Microscope****Cutting Tools Vision Measuring Systems****Tool Presetter****Tool Runout Testers****Laser Measuring Instrument For Tool Diameter/Runout****Shank Runout Testers****Shank Taper Inspection Instruments**

# Tool Presetters



ISP-B420

- Maximum tool diameter (X axis): 420mm
- Range of snap gauge (X axis): 100mm
- X/Z axis resolution: 1μm
- Maximum tool height (Z axis): 420mm/600mm
- Repeatability: X axis: 2μm, Z axis: 2μm

AUTOMATIC RECOGNITION  
OF CUTTING EDGE SHAPES

CHECK, PRESET AND MEASURE  
CUTTING TOOLS

DATA  
OUTPUT



ISP-A350

- Maximum tool diameter (X axis): 320mm
- Repeatability: X axis: 2μm, Z axis: 2μm
- Maximum tool height (Z axis): 350mm
- X/Z axis resolution: 1μm

# **Dual-display Cutting Tools Microscope ISM-CT600**



**MULTI-ANGLE  
OBSERVATION**

**4K**



- Cutting tools range:  $\varnothing 3\sim 20\text{mm}$ , length 20~60mm
- Resolution: 3840×2160
- View field: 1.4×2.5~14×25mm
- Magnification: 23X~230X (on 27" monitor)
- Rotary table: sliding distance: 90mm, rotation range: 0~220°



# **Cutting Tools Vision Measuring System TLP-D150**

**CUTTING TOOLS  
MEASUREMENT**

**SCAN MAXIMUM  
PROFILE**

**CAD  
COMPARISON**



- Measuring range (X×Y): 150×60mm
- Applicable range: 0-40mm
- Resolution of X/Y axis: 1μm
- Accuracy of X/Y axis: 5μm
- Magnification: 20X-240X(on 27" monitor)

- Measurement and inspection of milling cutters, drill bits, non-standard molding tools under surface light
- Profile measurement, automatic profile capture for straight and helical fluted tools
- High magnification for clear observation of tool chipping and grinding wheel pattern on the back face
- The crosshairs of the cutting edge can be automatically recognized and captured



**White Light Interference  
Measuring Microscope**



**Areal Confocal 3D Microscope**



**Large Depth Of Field 3D  
Measuring Microscopes**



**Universal Toolmaker Microscope**



**Motorized Zoom Microscope  
(Basic Type)**



**Low-Magnification High-  
Definition Stereo Microscopes**



**Metallurgical Microscopes**



**Metallurgical Microscopes  
(Advanced Type)**



**Zoom Stereo Microscopes**



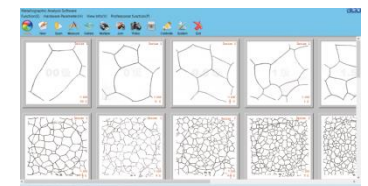
**Digital Cameras For Microscopes**



**AI Visual Inspection System  
(Local Deployment)**



**Metallurgical Analysis Softwares**



**Digital Depth Measuring  
Microscope**



**Portable Measuring Microscopes**



**Table Magnifiers  
With Illumination**



**Magnifiers**



**Telescoping Inspection Mirrors**



**Telescoping Pick-up**



# White Light Interference Measuring Microscope ISM-A8000

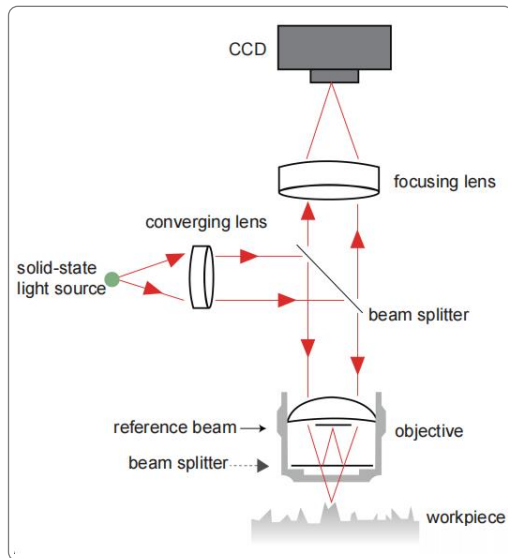
NON-CONTACT ROUGHNESS  
MEASUREMENT

SUB-NANOMETER  
VERTICAL RESOLUTION

MOTORIZED  
STITCHING

MICRO 3D MORPHOLOGY  
MEASUREMENT

working principle of white light  
interference measuring microscope



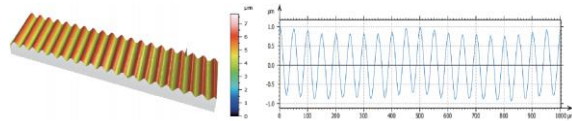
computer is included

- Measuring mode: PSI (physiognomic scanning)/VSI (vertical scanning)/bright field
- Light source: white light, green light
- Resolution of camera: 1600×1100
- View field (20X interference objective): 414×414μm

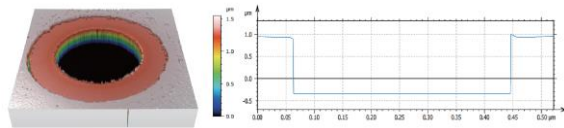
# Areal Confocal 3D Microscope ISM-A7000

- Used to wafers, substrates, HDI boards, flexible printed circuits, glass wafers, glass substrates, microprisms, PV panels, Li batteries and etc.
- Suitable for critical dimension measurement of semiconductor wafer patterns, solder ball, probe indentation and MEMS device

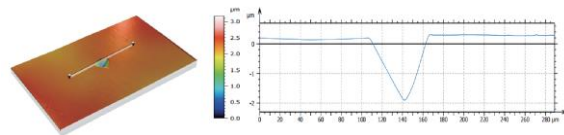
## Applications



roughness measurement



IC carrier board laser via measurement



wafer dislocation measurement



computer (included)

**NON-CONTACT ROUGHNESS  
MEASUREMENT**

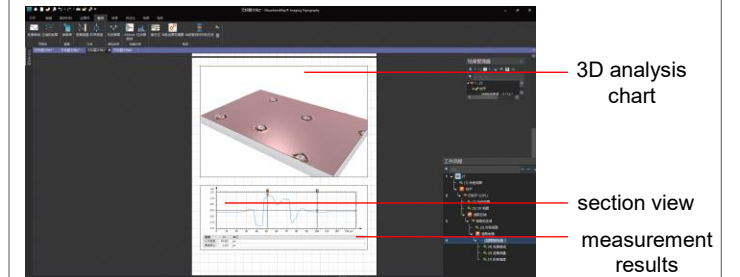
**SUB-NANOMETER  
Z-RESOLUTION**

**FOCUS  
STACKING**

**MOTORIZED  
STITCHING**

**WHITE LIGHT  
AREA CONFOCAL**

## Software (Included)



3D analysis  
chart

section view

measurement  
results

- Travel of Z-axis: 30mm
- Scanning range of Z-axis: 500μm (PZT), 30000μm (motor)
- Resolution of Z-axis: 0.01μm (PZT), 0.1μm (motor)
- XY stage resolution: 0.1μm
- XY stage control method: motorized
- Accuracy:  $\pm(0.1+L/200)\mu\text{m}^*$

\* L is measured height and μm is the unit

# Large Depth of Field 3D Measuring Microscope (Advanced Type) ISM-H5000



controller

STEREOSCOPIC  
3D IMAGING

IMAGE  
STITCHING

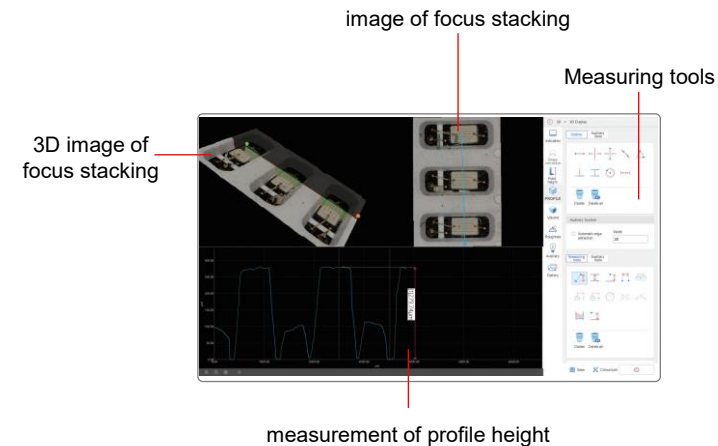
MOTORIZED  
XYZ AXIS

2D/3D  
MEASUREMENT

MAGNIFICATION  
30~6000X

MOTORIZED  
ZOOM LENS

MAP  
NAVIGATION



- Objective: 1.5X, 5X, 20X, 50X
- Maximum depth of field: 30mm
- Max. height of workpieces: 90mm
- View field: 50.60×38.00μm-9977.30×7483.00μm

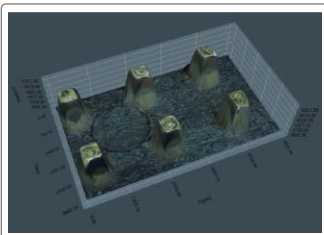
- Horizontal resolution: 0.42μm
- Working distance: 2-30mm
- Accuracy:  $\pm(0.5+0.005L)\mu\text{m}$   
(L is measuring length or height in μm)



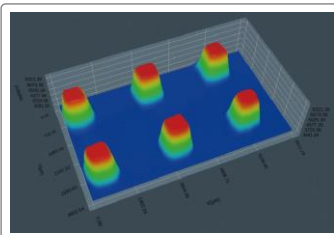
# Large Depth of Field 3D Measuring Microscope

**5324-K210**

constructing stereoscopic 3D imaging that can be dragged and rotated for viewing



the chromatogram height clearly shows the difference in three-dimensional height

**5324-K220**

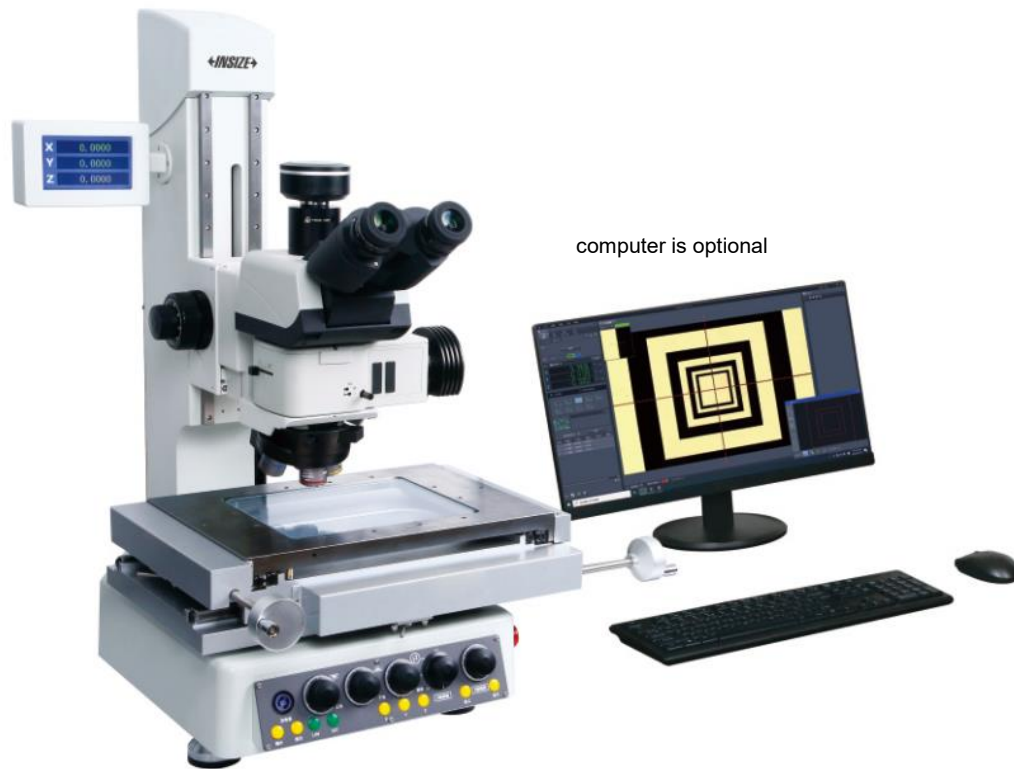
fast measurement of profile height difference

**ROTATABLE  
WORKTABLE****PLANE MEASUREMENT AND  
PROFILE HEIGHT MEASUREMENT****ROTATABLE OBSERVATION  
STEREOSCOPIC 3D IMAGING****AUTO  
FOCUS**

| Code          | 5324-K210      | 5324-K220    |
|---------------|----------------|--------------|
| Stand         | vertical stand | tilted stand |
| Magnification | 100X~750X      |              |
| Sensor        | 1/2" CMOS      |              |
| Pixel         | 2M             |              |
| Resolution    | 1920×1080      |              |
| Frame rate    | 60fps          |              |



# High Magnification Toolmaker Measuring Microscopes (Advanced Type) ISD-TM Series



- Optical magnification: 50X-500X, up to 1000X with optional 100X objective
- Digital magnification: 150X-1500X (on 23.8" monitor), up to 3000X with optional 100X objective

| Code             | ISD-TM215   | ISD-TM320   | ISD-TM330   | ISD-TM430   |
|------------------|-------------|-------------|-------------|-------------|
| X/Y axis travel  | 200 × 150mm | 300 × 200mm | 300 × 300mm | 400 × 300mm |
| Metal stage size | 400 × 280mm | 500 × 350mm | 500 × 450mm | 600 × 450mm |
| Glass stage size | 245 × 192mm | 350 × 250mm | 350 × 300mm | 450 × 300mm |

# Digital Microscopes (P1)



Auto Focus Digital Microscopes (Large View Field) 5302-AF105/AF108



Manual 3d Rotation Microscope 5313-S407



Digital Measuring Microscopes ISM-DL301



Motorized Focus Stacking Microscope (Large Depth Of View) ISM-DL520

# | *Digital Microscopes (P2)*



Horizontal Microscope  
5316-HM810



Flexible Arm Auto Focus Digital Microscopes  
5317-AF



Auto Focus Digital Microscope (Advanced Type)  
5319-AF290

# Smart Microscope ISM-DL402

dimension measurement

OK

out of tolerance,NG



automatically locate and measure, and judge OK or NG

circle diameter inspection

OK

out of tolerance,NG

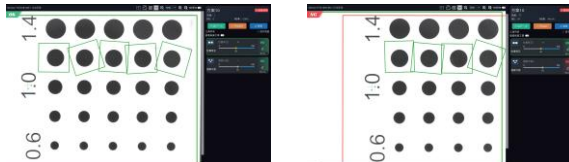


detection circle diameter, and judge OK or NG

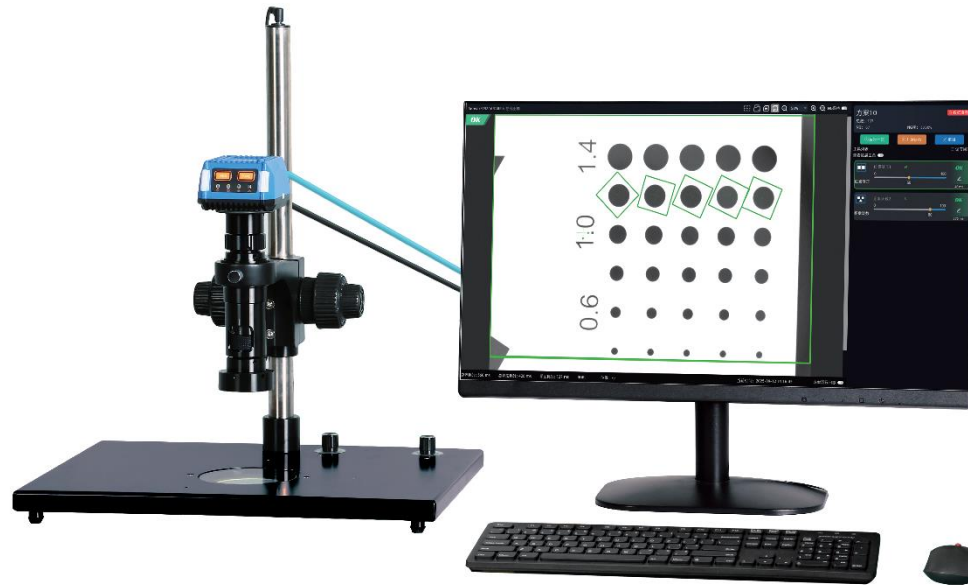
counting

5 circles, OK

4 circles, NG



automatically locate and count, and judge OK or NG

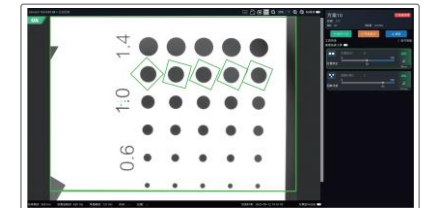


**AUTOMATIC  
RECOGNITION**

**AUTOMATIC  
MEASUREMENT**

**AUTOMATICALLY LOCATE WORKPIECES  
REGARDLESS OF POSITION AND DIRECTION**

Software for computer (included)



- Magnification\*: 13.5X~90X
- View field: 17×14~2.5×2mm
- Sensor: 1/1.8" CMOS
- Pixel: 5M
- Resolution: 2448×2048
- Single pixel size: 2.74×2.74μm
- Frame rate: 30fps

\*Magnification for using the measuring tool: 13.5X~54X

# **Motorized Zoom Microscope (Basic Type) 5325-VM100**

**PROGRAMMABLE SEGMENTED  
RING LIGHT**

**DISPLAY ACTUAL  
MAGNIFICATION**



Focus stacking



focus on the top



focus on the bottom



clear image of both  
top and bottom

- Measuring accuracy:  $\pm 0.02\text{mm}$
- Frame rate: 60fps
- Magnification: 10-68.5X (1X included)  
5-34.2X (0.5X optional)



# ***Metallurgical Microscopes (Advanced Type) 5108***



- Infinite chromatic aberration correction optical system
- Three way observation tube with infinite hinge
- Translucent and reflective frame, front low-hand position coarse and fine coaxial focus adjustment mechanism, with adjustment elastic device to prevent sliding and random upper limit device
- Bright and dark field five-hole converter with DIC slot
- Adopt digital dimming, with light intensity reset and setting function
- With polarizer insert plate and 360° rotating analyzer insert slot

- Optical magnification: 50X-500X (up to 1000X with optional 100X objective)
- Digital magnification: 170X-1700X(on 21.5" monitor), up to 3400X with optional 100X objective

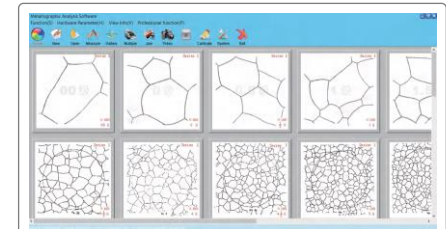


# **Metallurgical Analysis Software And Camera ISM-MAS100**



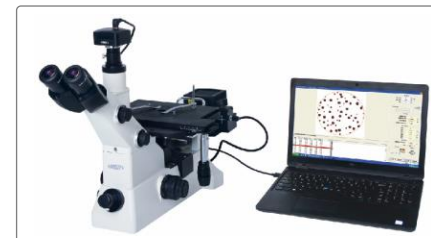
- Sensor: 1/1.8" CMOS
- Pixel: 6.3M
- Resolution: 3072×2048

Metallurgical analysis software (included)



this software can be used with variety of metallographic microscopes for acquisition, processing, analysis, report generation of metallurgical images

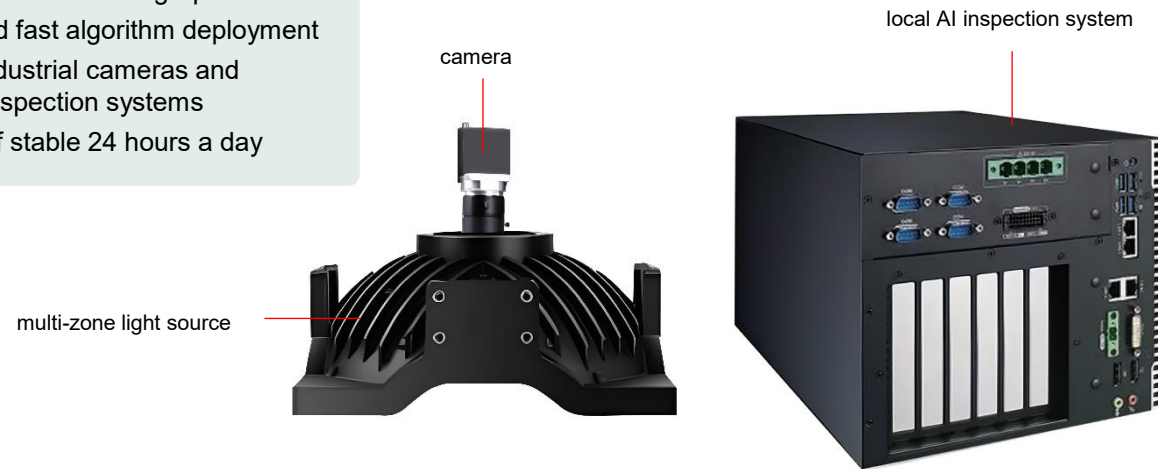
Application



- More than 100 standards (ISO, ASTM, JIS, etc.)
- For metallurgical microscopes
- The camera can be inserted into the eyepiece tube or camera connector of microscopes
- Metallurgical analysis software is included, which can make comparative analysis, measurement and evaluation of various materials

# AI Visual Inspection System (Local Deployment) AVS-20

- Equipped with a high-end NVIDIA dedicated graphics card
- Short AI model training time and fast algorithm deployment
- Compatible with mainstream industrial cameras and seamlessly integrable with AI inspection systems
- AI inspection system capable of stable 24 hours a day

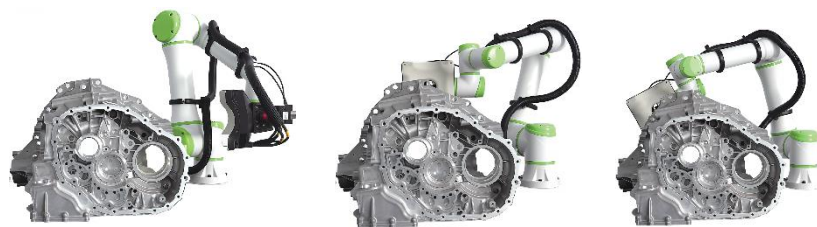


## Application

coordinating with a robot arm to capture real-time images and detect defects on rotating gears



integrated with a robot arm for multi-angle and multi-directional defect and flaw detection



**DEFECT  
DETECTION**

**SCRATCH  
DETECTION**

**SCUFF  
DETECTION**

**CUSTOM-  
MADE**

Software (included)

real-time  
monitoring  
display



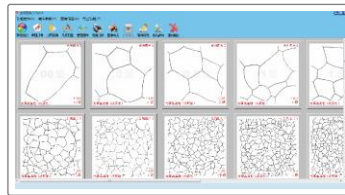
- Defective samples: 5~10pcs
- Model training time: 10min
- Frame rate: 75fps
- Lighting combination: 236types
- Multi-channel independent control: 40pcs
- System: local AI inspection system

# Software And Cameras

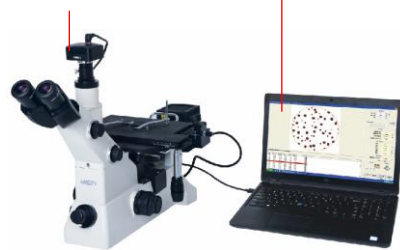
Camera (included)



Metallurgical analysis software (included)



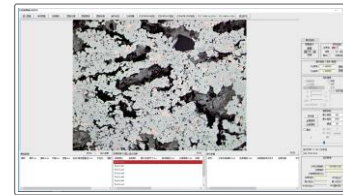
camera



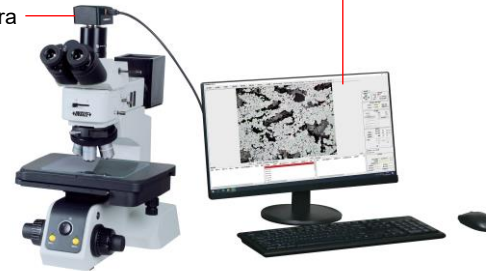
application

Metallurgical Analysis Software And Camera  
ISM-MAS100

Porosity measurement software (included)



camera



application

Porosity Measurement Software And  
Camera ISM-MAS200

Weld seam measurement software (included)



camera



application

Weld Seam Measurement Software And  
Camera ISM-MAS300

# Digital Depth Measuring Microscope ISM-PM110

- Measuring the depth of scratches, chips, burrs, pitting, chattering, scribe lines, engraving, markings, etc.
- Built-in light source for on-the-spot detection
- Equipped with a display indicator that clearly shows the data

- Total magnification: 100X
- Eyepiece: 10X with graduation
- Objective (achromatic): 10X (numerical aperture 0.25)
- Working distance: 7mm
- Accuracy:  $\pm 0.02\text{mm}$
- Viewing field:  $\varnothing 1.8\text{mm}$
- Focus range: 30mm
- Depth measurement distance: 7mm
- Illumination: LED light

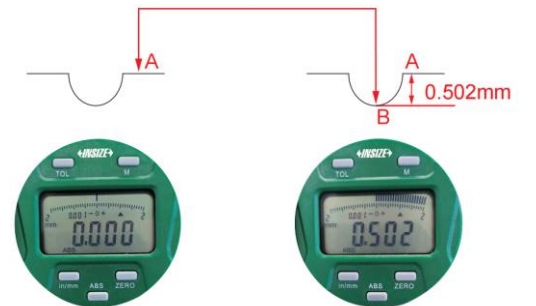


## Depth measurement

focus on surface A



focus on surface B



# Measuring Magnifiers (With Illumination) 7527

- Base with scale
- With 5 white LED and 5 UV LED
- Charging port: Type-C
- Work for 30min after fully charged

Base with scale



|                    |         |          |
|--------------------|---------|----------|
| Code               | 7527-D2 | 7527-D1B |
| Magnification      | 10X     | 10X      |
| Lens diameter (ØD) | Ø30mm   | Ø30mm    |



**Videoscopes (Desk Type)****Videoscopes****Multipurpose Videoscopes****Carbon Fiber Telescopic Pole Videoscopes****Rigid Borescopes****Cameras (With Display)****Fixture For Rigid Borescopes**



# **Videoscope (Desk Type) ISV-Y**



rigid straight lens tube,  
front view/side view/front  
view & side view

Lens tube:

- Diameter: Ø1.2-Ø6.0mm
- Length: 90mm-300mm (optional 90-1000mm)



bending spring lens tube

Lens tube:

- Diameter: Ø3.0-Ø7.0mm
- Length: 1000mm

# Videoscopes (Cable Is Optional) ISV-L Series



REAR FIBER  
ILLUMINATION

Changeable lens cable



Front view:

- One-direction cable (no bending): diameter: Ø0.95mm-Ø1.5mm
- Two-direction bending cable: diameter: Ø1.8mm-Ø2.4mm
- Four-direction bending cable: diameter: Ø2.8mm-Ø6.0mm

Side view:

- Two-direction bending cable: diameter: Ø1.8mm
- Four-direction bending cable: diameter: Ø2.8mm-Ø6.0mm

# Multipurpose Videoscope VSP-201



Four-direction bending cable



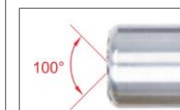
Rotating lens cable

$\pm 90^\circ$  rotation in radial  
direction,  $\pm 180^\circ$  rotation  
in axial direction

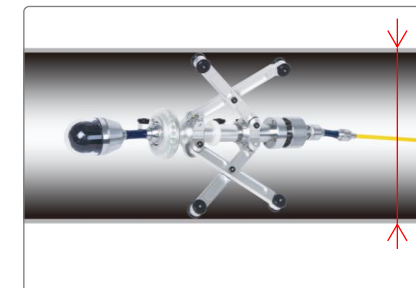


Wide-angle lens cable

angle of view ( $\theta$ )



Adjustable support



# 4K Carbon Fiber Telescopic Pole Videoscope ISV-CF5



7" LCD touch screen

- Dual motorized control of lens view, 300° horizontal and vertical 360° rotation
- 4K HD true color camera
- Built-in infrared and white light for night and day use

IP65  
WATERPROOF

- Resolution: 3840×2160
- Lens diameter (ØD): 40mm
- Pole: carbon fiber, can be fixed between 1~5 meters

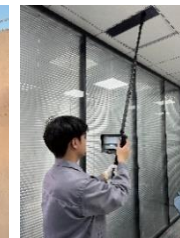
## Application



underbody  
inspection



constructure  
inspection  
(WIFI real-time  
image transmission)



ceiling duct  
inspection



roof inspection



car roof  
inspection

# Other Dimension Measuring Instruments (P1)

**Pen Type Electromagnetic Ultrasonic Thickness Gauges**



**Built-In Wireless Ultrasonic Thickness Gauge**



**Ultrasonic Case Hardening Depth Gauge**



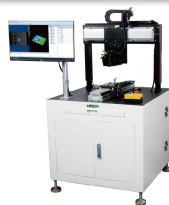
**Hall-effect Thickness Gauge**



**Glass Thickness Meters**



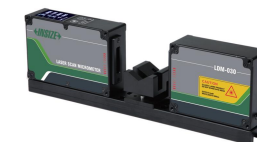
**3D Line Laser Profile Measuring Machine**



**Laser Distance Meters**



**Laser Scan Micrometers**



# Other Dimension Measuring Instruments (P2)

**Automatic Laser Scan Micrometer**



**Dual Axis Photoelectric Autocollimators**



**Linear Laser Interferometer Measurement System**



**Air Gauges And Displays**



**Length Presetters (Motorized Type)**



**Digital Gap Gauges**



**Manual Putty**



**Total Stations**





# Pen Type Electromagnetic Ultrasonic Thickness Gauges EMU-A100/EMU-B100

- Compact size, easy to carry, comes with waveform display and full-function keyboard, easy to adjust the measurement parameters
- Non-contact measurement of rough, corroded surfaces without sanding
- Suitable for inspection of workpieces of various shapes, such as pipes, small tubes, elbows, etc.

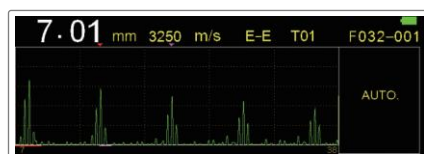
**COUPLING AGENT  
IS NOT REQUIRED**

**MEASUREMENT THROUGH  
COATING AND RUST LAYER**

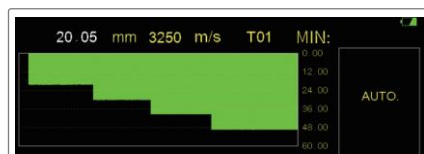
**WORK AT MAXIMUM  
600°C**

**WITH A AND B  
SCAN**

A-Scan



B-Scan



high temperature  
probe (optional)



calibration block  
(included)

- Measuring range: 1.5-300mm
- Resolution: 0.01mm
- Accuracy\*:  $\pm 0.04\text{mm}$  ( $H \leq 10\text{mm}$ )  
 $\pm (0.04 + H/1000)\text{mm}$  ( $10 \leq H < 100\text{mm}$ )  
 $\pm H/333$  ( $H \geq 100\text{mm}$ )  
H is measuring thickness in mm

\*On C45 carbon steel

# Ultrasonic Thickness Gauges



Ultrasonic Thickness Gauge  
ISU-810D



Ultrasonic Thickness Gauge  
ISU-720D



Ultrasonic Thickness Gauge (For Thick Workpieces  
Made Of Organic Materials) ISU-710D



Ultrasonic Thickness Gauge (For Thin Workpieces)  
ISU-700D



Ultrasonic Thickness Gauge  
(Through Coating) ISU-300D



Ultrasonic Thickness Gauge  
ISU-250C



Ultrasonic Thickness Gauge  
ISU-200D



Ultrasonic Thickness Gauge (Basic Type)  
ISU-100D

# **Built-In Wireless Ultrasonic Thickness Gauge (Advanced Type) ISU-800DWL**

PENETRATE COATING AND MEASURE  
THE THICKNESS OF SUBSTRATE

BUILT-IN  
WIRELESS

REAL-TIME TEMPERATURE  
COMPENSATION

DATA  
OUTPUT



transducer ISU-S15-P06  
(included)

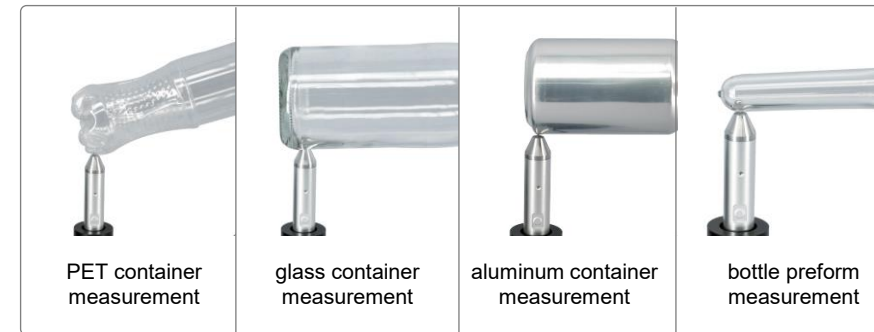


- Measuring (included): I-E: 0.9-28mm  
E-E: 0.15-14mm
- Resolution: 0.01mm/0.001mm
- Accuracy\*:  $\pm 0.02\text{mm}/0.3\%H$  \*\* (take the larger one)
  - \* On C45 carbon steel
  - \*\* H is the measured thickness in mm

# Hall-effect Thickness Gauge 5408-HE25

DATA  
OUTPUT

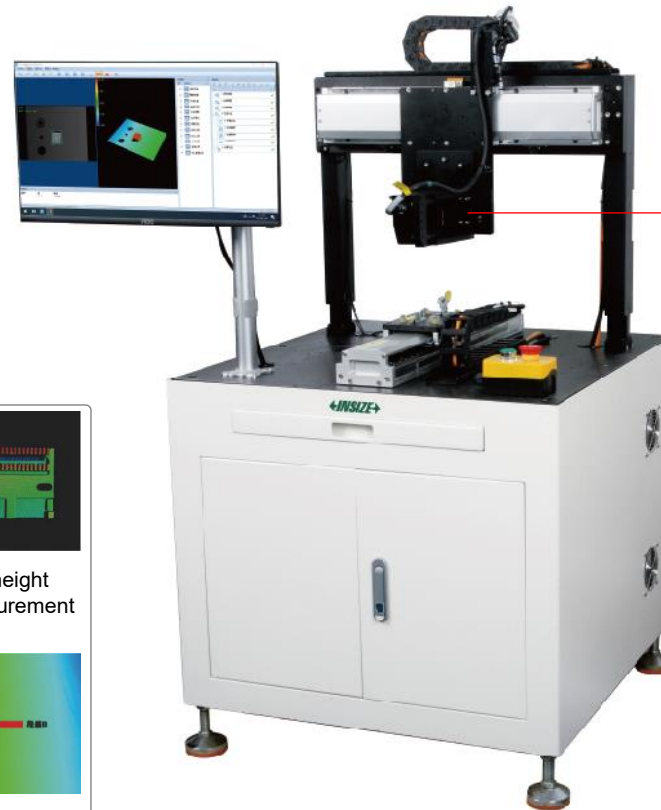
## Measurement Application



- Range : 4mm/ 6mm/ 8mm/ 10mm  
(determined by the calibration performed with standard gauge blocks)

| Accuracy of single-point calibration           | Accuracy of multi-point calibration                             | Suggested measuring range |
|------------------------------------------------|-----------------------------------------------------------------|---------------------------|
| 5%+0.003mm (calibrated with 1.59mm steel ball) | 3%+0.003mm (calibrated with gauge blocks and 1.59mm steel ball) | 0~2mm                     |
| 4%+0.003mm (calibrated with 3.18mm steel ball) | 2%+0.003mm (calibrated with gauge blocks and 3.18mm steel ball) | 0~4mm                     |
| 3%+0.003mm (calibrated with 4.76mm steel ball) | 1%+0.003mm (calibrated with gauge blocks and 4.76mm steel ball) | 0~4mm or 0~6mm            |
| 3%+0.003mm (calibrated with 5.00mm steel ball) | 1%+0.003mm (calibrated with gauge blocks and 5.00mm steel ball) | 1~8mm or 1~10mm           |

# 3D Line Laser Profile Measuring Machine VIM-P140

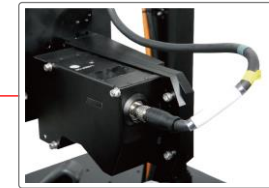


**NON-CONTACT  
SCANNING**

**HIGH SPEED  
MEASUREMENT**

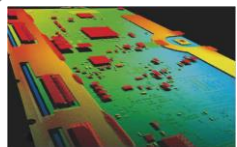
**FLATNESS/HEIGHT  
DIFFERENCE MEASUREMENT**

**CUSTOM-  
MADE**

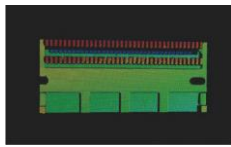


3D line laser  
scanning camera

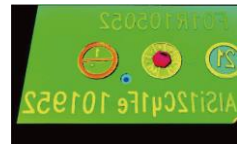
## Application



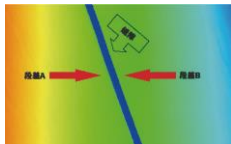
component height  
measurement on circuit  
boards



flatness and height  
difference measurement



character height  
measurement



gap depth measurement

- Flatness and height difference measurement of machinery, electronics, cell phones, molds, circuit boards and other products
- Full-range focusable optical system allows you to take pictures in focus range, even when the target height is changed
- Combining 2D and 3D data for complete detection; 2D data can be used for localization, code reading, character recognition, etc.
- The software is automatically corrected for workpiece position deviation; multiple scanned images can be automatically spliced to achieve stable detection

- Travel range XY: 400×350mm
- Repeat positioning accuracy: 2μm
- Measuring range of Z-axis: 24mm
- Width of X-axis: 96mm
- Accuracy of Z-axis: ±0.02mm
- Repeatability of Z-axis: ±0.5μm
- Scanning speed: 2500-10000Hz



# Laser Scan Micrometers

Laser Scan Micrometers LDM Series



- Measuring range: 0.1-85mm
  - Accuracy (at 25°C):  $\pm(0.5+10\%D)\mu\text{m}$ , D is measuring diameter in mm/ $\pm 6\mu\text{m}$
  - Small-range accuracy (calibration position  $\pm 4\text{mm}$ , at 25°C)\*:  $\pm 1\mu\text{m}/\pm 2\mu\text{m}$
  - Repeatability (at 25°C):  $(0.3+5\%D)\mu\text{m}$ , D is measuring diameter in mm/ $3\mu\text{m}$
  - Resolution: 0.01/0.1/1/10/100 $\mu\text{m}$  selectable
- \* The calibration position is set according to the customer's requirements before pre-factory

Dual-axis Laser Scan Micrometer LDM-XY14



- Measuring range: 0.05~14mm
- Resolution: 0.01/0.1/1/10/100 $\mu\text{m}$  selectable
- Single-axis accuracy (at 25°C):  $\pm(0.5+10\%D)\mu\text{m}$ , D is measuring diameter in mm
- Single-axis repeatability (at 25°C):  $(0.3+5\%D)\mu\text{m}$ , D is measuring diameter in mm



# Automatic Laser Scan Micrometer LDM-AT01

**CUSTOMIZED ACCORDING  
TO WORKPIECES**



- Motorised rotation with adjustable speed
- Auto-moving laser scan micrometer
- Measure the outer diameter, roundness and runout of workpieces at multiple sections

Clamping workpieces by  
center-type bench center



Clamping workpieces by  
v-type bench center



Center-type bench center

- Measuring range of workpieces:  
length: 5-300mm  
Diameter: 3-60mm  
Max. Weight: 20kg

V-type bench center

- Measuring range of workpieces:  
length: 10-230mm  
Diameter: 10-60mm  
Max. Weight: 1.5kg

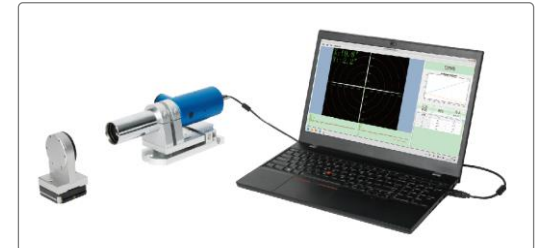
• Accuracy at 25°C:  $\pm(0.5+10\%d)\mu\text{m}$ , D is measuring diameter in mm

# Dual Axis Photoelectric Autocollimator CMS-L401

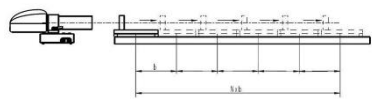
- Dual axis simultaneous measurement, convenient and efficient
- Electronic eyepiece, low aiming error
- High resolution photodetector, high measurement accuracy
- Semiconductor LED light source, long service life of the light source
- Automatic curve plotting, automatic error calculation
- Multiple data processing methods, can generate standard Excel reports



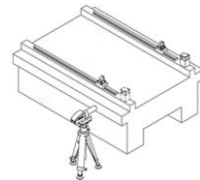
## Software (included)



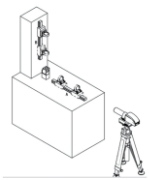
## Application



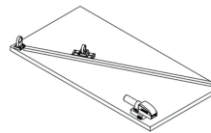
straightness measurement



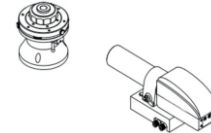
parallelism measurement



perpendicularity  
measurement



flatness  
measurement



turntable  
measurement

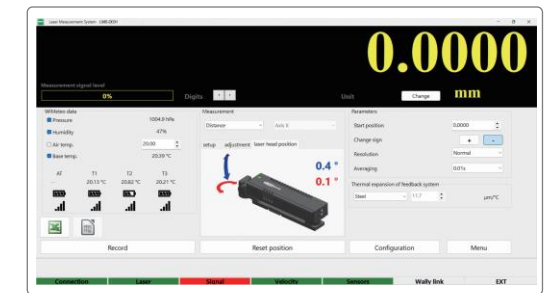
- Field of view range: 3200×2400"
- Accuracy:  $\pm 1000''$  within  $\pm 1''$
- Resolution: 0.1"

# Linear Laser Interferometer Measurement System LMS-D301

- Built-in alignment tools indicator for the laser head, it shows the pitch and yaw angles, it helps to reduce setup time
- Unique machine tools analysis capability, high dynamic sampling frequency
- Compensated measurement of linear positioning accuracy for CNC/CMM machines



Software (included)



Laser head and tripod (included)



linear retro-reflector  
(included)



linear interferometer  
(included)



environment compensation  
sensor (included)



material temperature  
compensation sensor (included)

## Laser head specification

- Laser type: He-Ne laser
- Wavelength accuracy:  $\pm 0.005\text{ppm}$
- Short term stability:  $\pm 0.001\text{ppm}$
- Long term stability:  $\pm 0.001\text{ppm}$

## Distance specification

- Range: 0~30m
- Resolution: 100pm (0.1nm)
- Accuracy:  $\pm 0.4\mu\text{m/m}$

# Air Gauges And Air Gauge Displays

9408



- Can store 10 measuring programs, and the program can be switched quickly
- Data storage and query function

9401



| Range | Resolution |         | Accuracy |
|-------|------------|---------|----------|
|       | LED        | Display |          |
| 10μm  | 0.1μm      | 0.1μm   | 0.2μm    |
| 20μm  | 0.2μm      | 0.1μm   | 0.4μm    |
| 50μm  | 0.5μm      | 0.5μm   | 1μm      |
| 100μm | 1μm        | 0.5μm   | 2μm      |

# Multi Channel Air Gauge Displays 9440-DP Series

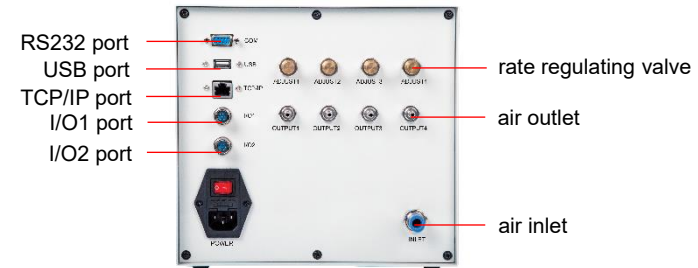
- With data statistics and analysis functions, can display graphs and Xbar-R control charts

DATA TRANSMISSION  
CAN BE CUSTOMIZED

TOUCH  
SCREEN



Back of display



- Number of channels: 1-8
- Resolution: 0.1 $\mu$ m
- Range: 10-100 $\mu$ m(adjustable)
- Accuracy: 0.2-3 $\mu$ m

Scanning gun input product  
code function (customised)



Air filter (optional)



Foot switch (optional)



RS232 cable (optional)





# Length Presetters (Motorized Type) ISQ-S Series



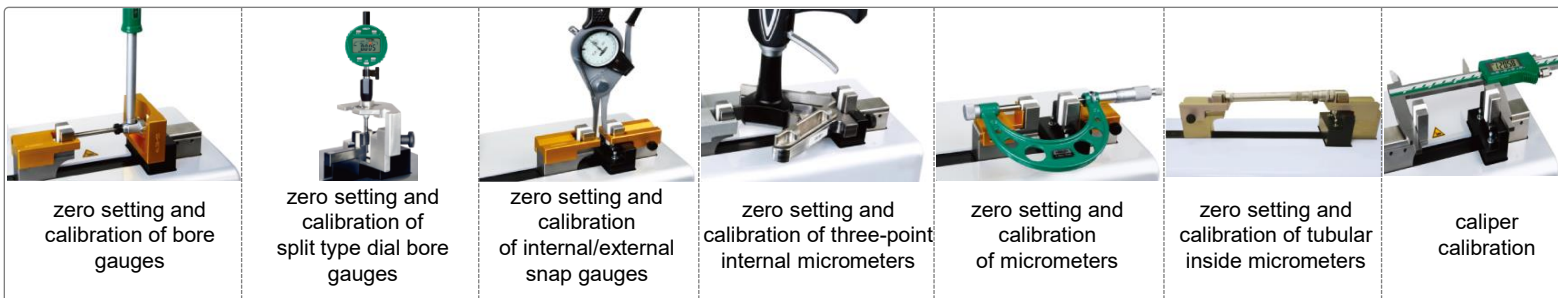
REPLACING RING GAUGES  
AND GAUGE BLOCKS

CAN BE USED  
IN WORKSHOPS

ATTENTION: WORKING TEMPERATURE 10-35°C,  
TEMPERATURE CHANGE  $\leq 1^\circ\text{C/h}$

ATTENTION:  
ADAPTERS ARE NEEDED

## Application



- Range: inter diameter 0.1-5000mm  
outer diameter 40-5040mm
- Resolution: 0.5 $\mu\text{m}$
- Accuracy:  $(1.5+L/500)\mu\text{m}$  /  $(3+L/500)\mu\text{m}$   
(L is measuring length in mm)
- Repeatability: 0.8 $\mu\text{m}$



# Length Presetters (Motorized/Manual Type) ISQ-M Series

- Range: inter diameter 0.1-2950mm  
outer diameter 40-2990mm
- Resolution: 0.5μm
- Accuracy:  $(1.5+L/500)\mu\text{m}$   
(L is measuring length in mm)
- Repeatability: 0.8μm

REPLACING RING GAUGES  
AND GAUGE BLOCKS

CAN BE USED  
IN WORKSHOPS

ATTENTION: WORKING TEMPERATURE 10-35°C,  
TEMPERATURE CHANGE  $\leq 1^\circ\text{C/h}$

ATTENTION:  
ADAPTERS ARE NEEDED



## Application



zero setting and  
calibration of bore gauges



zero setting and calibration of  
split type dial bore gauges



zero setting and  
calibration  
of internal/external snap  
gauges



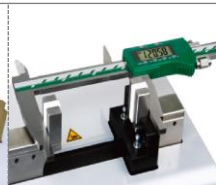
zero setting and  
calibration of three-point  
internal micrometers



zero setting and  
calibration of  
micrometers



zero setting and  
calibration of tubular  
inside micrometers



caliper  
calibration



measuring  
workpieces  
(manual mode)

# Digital Gap Gauges (P1)



- Customizable measuring range: 0.35-6mm
- Effective range:  $\pm 0.5$ mm
- Accuracy: range: (0.35-2)mm, Accuracy:  $\pm 0.03$ mm  
range: (0.35-6mm), Accuracy:  $\pm 0.04$ mm
- Resolution: 0.1/0.01/0.001mm
- Max. customizable length: 500mm
- Repeatability: 0.02mm
- Measuring force: < 3.5N

Application



# Digital Gap Gauges (P2)

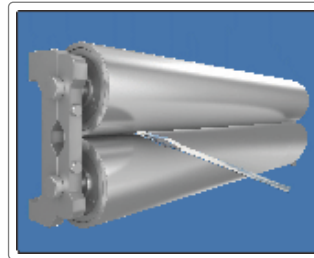
Measuring car body seam



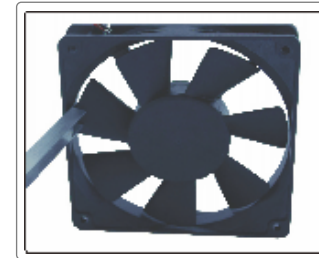
Measuring gaps on the car dashboard



Measuring roll gap



Measuring blade to sidewall gap



Bilateral probe (optional)



Depth positioning probe (optional)



Single-side hockey stick shaped probe (optional)



90° probe (optional)



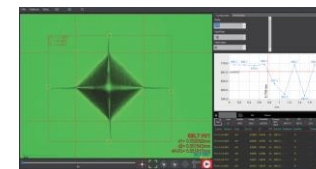
Single-side positioning probe (optional)



# | **Digital Gap Gauge -- Application**



In the steam turbine assembly workshop, measure the gap between the rotor and the cylinder block

**Rockwell Hardness Testers****Micro-Vickers Hardness Testers****Vickers Hardness Testers****Vickers Hardness Measuring Systems****Brinell Hardness Testers****Rockwell/Brinell/Vickers Hardness Testers****Brinell Indentation Hardness Measuring Systems****Brackets****Ultrasonic Hardness Testers****Portable Leeb Hardness Testers****Portable Rockwell Hardness Tester****Aluminum Hardness Testers**

## Aluminum Hardness Testers



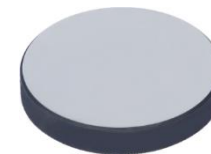
## Shore Durometers



## Fruit Hardness Testers



## Hardness Test Blocks



## Concrete Strength Testers





# Motorized Digital Rockwell/Superficial Rockwell Hardness Testers (Dolphin-Nose Type) HDT-DM Series

V-type anvil  
(included)



Ø150mm flat anvil  
(included)



4mm high Rockwell  
indenter (optional)



14mm high Rockwell  
indenter (included)



test interface



FORCE LOADING BY ELECTRIC  
MOTOR (WITHOUT WEIGHTS)

TOUCH  
SCREEN

Can test rings, tubes, internal  
Surfaces of frame parts, etc.



- Full closed-loop precise control, real-time monitoring of test force, greatly increase the accuracy
- Dolphin-nose structure indenter, more measuring space
- Measurements on 30 Rockwell and Superficial Rockwell scales
- Convertible to various hardness standards such as HB, HV, HLD, HK and tensile strength

# Motorized Digital Rockwell/Superficial Rockwell Hardness Testers HDT-RT Series



FORCE LOADING BY ELECTRIC  
MOTOR (WITHOUT WEIGHTS)

TOUCH  
SCREEN

Test interface



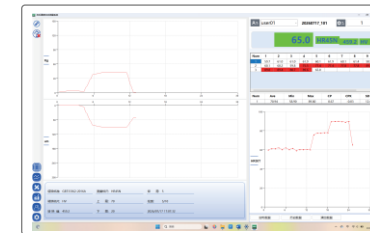
Test result display interface



Chart interface



Computer software (included)



# **Dual Touch Screen Digital Micro-Vickers Hardness Tester (Advanced Type) HDT-DMV90**

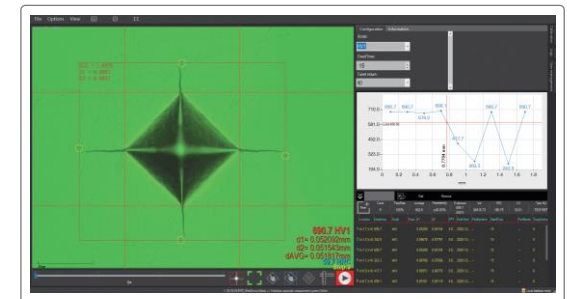
**MOTOR DRIVEN  
TURRET**

**AUTOMATIC  
TEST**



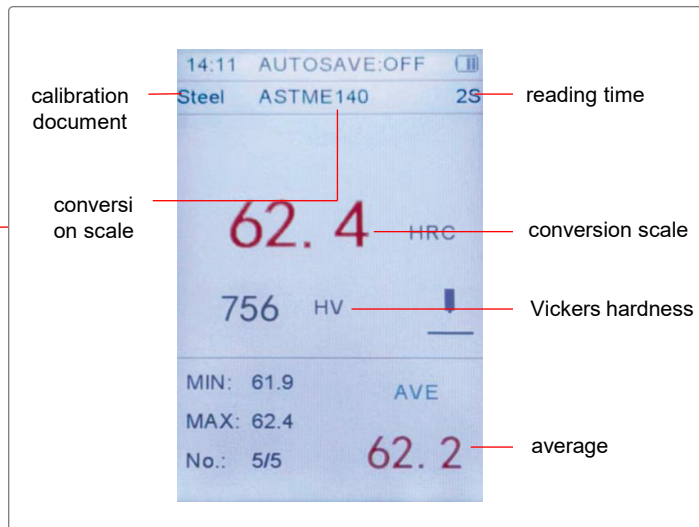
- Dual touch screen control, high-definition image measurement and analysis
- One click start, automatic pressing and automatic measurement
- The host and vickers hardness measurement software can be operated independently
- Automatic switch between the indenter and objective lens
- Data storage and average value calculation
- Can connect with wired and wireless networks to transmit data

Vickers hardness measurement software (included)



- Test force: 0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf)

# Ultrasonic Hardness Testers 9646



ATTENTION: NEED TO CONFIRM IF THE  
WORKPIECES ARE SUITABLE BEFORE PURCHASE

SMALL TEST  
INDENTATION

ATTENTION: HARDNESS BLOCKS  
FOR CALIBRATION ARE OPTIONAL

WIRELESS TRANSMISSION  
IS OPTIONAL

## Applications:

1. Hardness measurement of flange edges and gear root stampings, gears and gear grooves with surface hardening of lamina, taper sections
2. Hardness measurement of shafts and thin-walled pipes and container
3. Hardness measurement of thin plating, wheels, turbine rotors and welded parts
4. Measurement of the depth of a certain diameter deep holes, dents of the larger curvature and convex marks, irregular planes
5. Covering the majority of hardness measurement of industrial production of ferrous metals, non-ferrous metals and their alloys

| Code          | 9646-300        | 9646-301               | 9646-310        | 9646-311               |
|---------------|-----------------|------------------------|-----------------|------------------------|
| Data printout | without printer | with bluetooth printer | without printer | with bluetooth printer |

- Small size, light weight, portable, convenient for on-line measurement and can be used to measure large workpieces
- Support 360° measurement, fast test speed, the fastest results in 1 second
- Standard Vickers indentation, small test indentation and low damage to the workpiece

# Test Stands For Ultrasonic Hardness Testers

## 9646-STANDV/9646-300-STAND

- Suitable for 9646 series ultrasonic hardness testers
- Reduce the human error caused by manual operation of hardness tester, and improve the measuring accuracy and repeatability

**9646-STANDV****9646-300-STAND**

|                      |                                                                                              |                              |
|----------------------|----------------------------------------------------------------------------------------------|------------------------------|
| Code                 | 9646-STANDV                                                                                  | 9646-300-STAND               |
| Type                 | magnetic base                                                                                | normal base                  |
| Applicable workpiece | large flat and shaft-shaped workpieces                                                       | small workpieces             |
| Workpiece dimension  | Min. magnetic suction plane size: 170×50mm<br>Min. magnetic suction cylinder diameter: Ø20mm | Max. workpiece height: 210mm |



# Portable Leeb Hardness Tester With Wireless Probe HDT-WP201

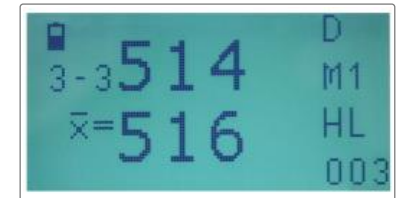
- Wireless digital probe
- Universal testing angle, no need to set impact direction
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC, HRB), Shore (HSD) and tensile strength ( $\sigma_b$ )
- Dual value display, shows both Leeb and converted hardness
- Large LCD display with backlight
- Can choose large font display and statistics display
- Automatically calculate maximum, minimum and average value
- Save 300 data



large font display



statistics display



- Resolution: 1HLD/1HV/1HB/0.1HRC/0.1HRB/0.1HSD/1 $\sigma_b$
- Accuracy:  $\pm 6$ HLD (when HLD=800)



# Hardness Test Blocks



Rockwell



Vickers



Leeb



Knoop



Micro-Vickers



Brinell



Shore



Ultrasonic

# Metallography Preparation And Analysis

←INSIZE→

**Cutting Machines**



**Mounting Presses**



**Grinders And Polishers**



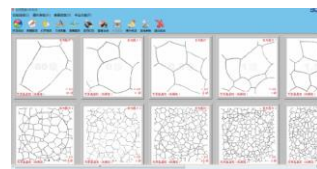
**Automatic Liquid Droppers**



**Metallurgical Microscopes**



**Metallurgical Analysis Softwares**



**Cutting Machine Accessories**



**Mounting Press Accessories**



**Grinder And Polisher Accessories**



# Cutting Machines



Automatic Specimen Cutting Machine  
(Advanced Type) MLP-ACM160



Automatic Cutting Machine  
(Advanced Type) MLP-HCM102



Cutting Machine (Standard Type)  
MLP-CM60



Cutting Machine (Basic Type)  
MLP-CM86

# Manual Precision Cutting Machine MLP-PCM100



- Equipped with a high-torque DC motor and stepless speed control system, boasting strong power and high efficiency
- The rotation speed is digitally displayed for simple operation
- With a magnetic safety switch, the motor automatically stops when the protective cover is opened, ensuring safety performance
- Integrally formed high-strength composite material shell, anti-corrosive and rust-proof
- Panoramic transparent observation window, facilitating the observation of the sample cutting process
- With circulating cooling water tank, lightweight in volume

Cutting coolant (optional)



Cutting blade (optional)



Diamond blade (optional)



- Maximum cutting diameter: Ø40mm
- Maximum travel: 190mm
- Diamond blade: Ø200×0.8×Ø12.7mm
- Cutting method: manual cutting, Y-axis

# Mounting Presses



Mounting Presses (Advanced Type) MLP-MP53



Mounting Press (Standard Type) MLP-MP30



Mounting Press (Basic Type) MLP-MP62



Vacuum Mounting Press MLP-MP25

# Grinders And Polishers



Automatic Grinder And Polisher  
(Advanced Type) MLP-GP406



Automatic Grinder And Polisher  
(Advanced Type) MLP-GP505



Automatic Grinder And Polisher  
(Standard Type) MLP-GP305



Automatic Grinder And Polisher  
(Standard Type) MLP-GP260



Manual Grinders And Polishers  
(Standard Type) MLP-GP280



Manual Grinder And Polisher  
(Basic Type) MLP-GP314



**Portable Eddy Current  
Flaw Detectors**



**Ultrasonic Flaw Detectors**



**Ultrasonic Phased Array  
Detectors**



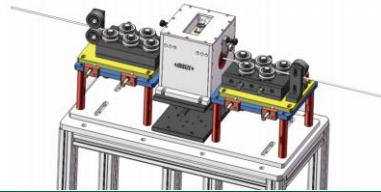
**Standard Test Blocks For  
Ultrasonic Flaw Detection**



**Ultrasonic Water Immersion  
Detection Systems**



**Online Eddy Current Testing  
System**



**Air-Coupled Ultrasonic Detector**



**Ultrasonic Flaw Detector  
For Concretes**



**Portable Magnetic  
Powder Flaw Detectors**



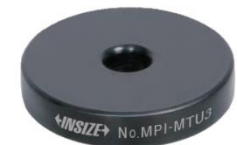
**Permanent Magnet Yoke Flaw  
Detector**



**Fluorescent Magnetic  
Powder Flaw Detectors**



**Magnetic Powder Test Blocks**



**Magnetic Field Indicator Sets****UV Flaw Detection Lights****Penetration Standard Test Blocks****Supplementary Materials****Variable Frequency Portable X-Ray Flaw Detectors****Industrial Automatic X-Ray Film Processor****Industrial Viewing Lamps****Black And White Densitometers****Wire Rope Flaw Detectors**

# Portable Eddy Current Flaw Detector ECT-S610



- Real-time impedance plane and time base sweep display modes available
- Applicable to all kinds of metal materials and parts, such as weld cracks, copper pipe, seamless steel pipe, stainless steel pipe, folding, scars, pits, cracks, delamination and other defects, with high sensitivity

Right angle probe (included)



Pen probe (included)



- Detection channel: channel 1 (X1-Y1), channel 2 (X2-Y2), mixing channel
- Detection frequency: 2
- Transmission frequency: 50Hz-10MHz
- Sampling frequency: 40MHz, 12-bit data acquisition

# Ultrasonic Flow Detectors



Digital Ultrasonic Flow Detector  
(Advanced Type) UFD-P710



Digital Ultrasonic Flow Detector  
(Excellent Type) UFD-C870



Digital Ultrasonic Flow Detector  
(Standard Type) UFD-F720



Digital Ultrasonic Flow Detector  
(Basic Type) UFD-B450

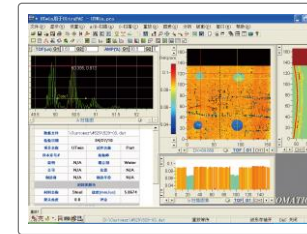


Digital Ultrasonic Flow Detector  
(Basic Type) UFD-T680

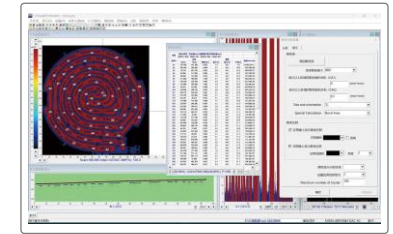
# ***Ultrasonic Water Immersion Detection System***



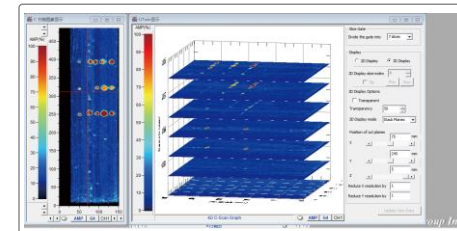
A, B, C, scanning integrated image interface



## Defect automatic measurement Function interface



Ultrasonic tomography (CT)  
interface



UT reporting  
interface

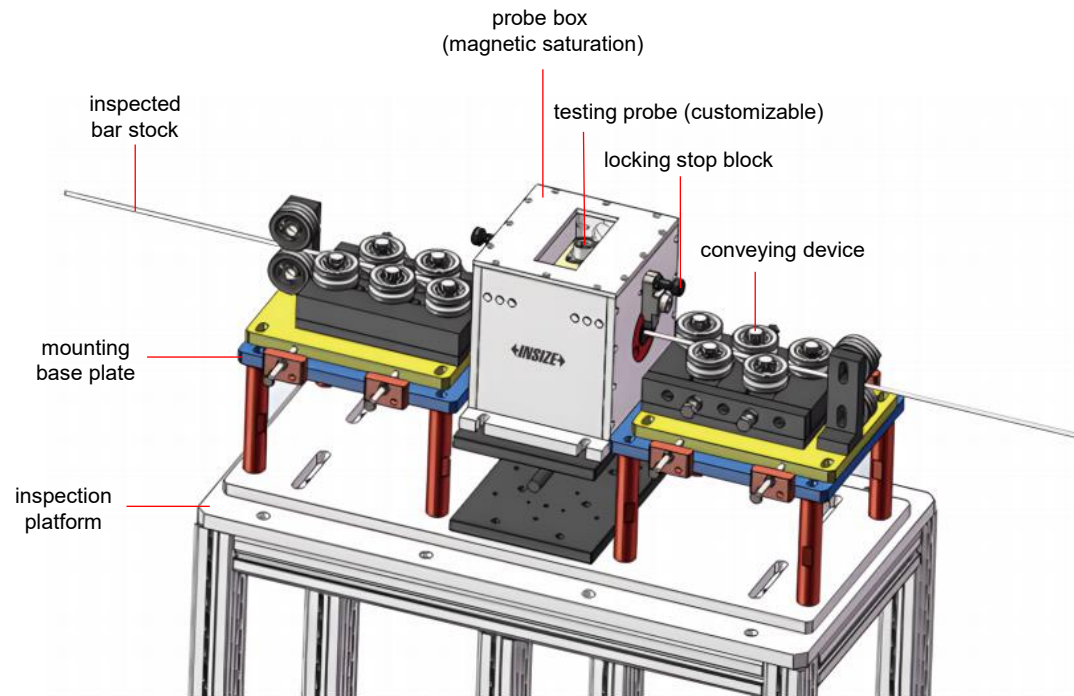


- Suitable for automatic scanning of inclusions, cracks, porosity, delamination and other defects in metal and composite parts
- Automatic localization, quantification, and statistical calculation of defects



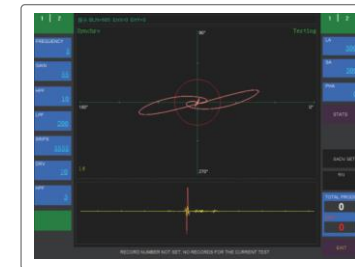
# Online Eddy Current Testing System ECT-WZ

**CUSTOMIZABLE**

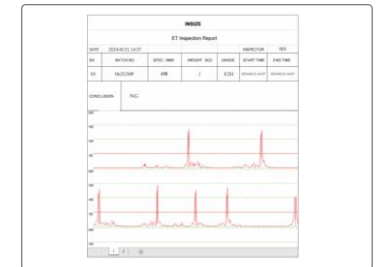


- Capable of high-speed data processing, with a detection speed up to 1~1200 m/min
- High-performance DSP algorithm and signal processing enable the detection of microcracks with a depth of 0.05mm

eddy current testing window



ET report display



- Measuring range: Ø1mm-Ø100mm(customizable)
- Detection sensitivity: detection of  $0.05 \times 0.01 \times 5\text{mm}$  (D×W×L) crack notch with signal-to-noise ratio  $\geq 10\text{dB}$
- Flaw detection speed:  $> 0.5\text{m/min}$

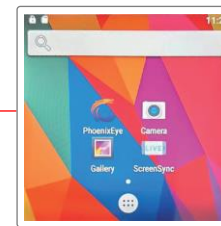


# ***Fluorescent Magnetic Powder Flaw Detector MPI-FX1000***

CAN BE CUSTOMIZED ACCORDING  
TO CUSTOMER NEEDS



# Intelligent Image UV Flaw Detection Light MPI-SC608



3" touch LCD



Imaging

- UV-B/C content is 0
- Without preheating, instant start, instant on/off, no need to wait
- Continuous irradiation surface spot uniform, no dark areas, no point-like strong light source
- 13M UV-resistant specialized lens for high-definition photos and videos
- Precise measurement of small defects
- High-definition defects can be freely magnified up to 12 times (3 times optical magnification, 4 times electronic magnification)

- UV(Light)Lux: about  $4000\mu\text{W}/\text{cm}^2$
- Covering area:  $\varnothing 180\text{mm}$  (at 381mm distance)

# Testing Machines, Force Gauges, Tension Meters (P1)

**Electronic Universal Testing  
Machines**



**Electronic Universal Testing  
Machines**



**High And Low Temperature Test  
Chambers For Electronic Universal  
Testing Machines**



**Hydraulic Universal Testing  
Machines**



**Extensometers**



**Video Extensometers**



**Gauge Marking Instruments  
(Marking Point)**



**Gauge Marking Instruments  
(Marking Line)**



**Electro-Hydraulic Servo Flexural And  
Compressive Testing Machines**



**Servohydraulic Fatigue Testing  
Machines**



**Impact Testing Machines**



**Impact Standard Samples**



# Testing Machines, Force Gauges, Tension Meters (P2)

**Impact Specimen Notch  
Broaching Machines**



**Impact Specimen Notch  
Projectors**



**Impact Broaches**



**Plastic Pendulum Impact  
Testing Machines**



**Melt Flow Index Tester**



**Steel Bar Bending Testing  
Machines**



**Friction And Wear Testing  
Machines**



**Friction/Peel Testers**



**Terminal Tension Testers**



**Bond Force Testers**



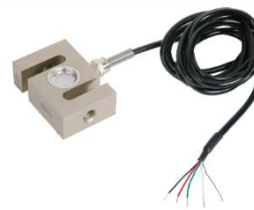
**Package Drop Testing Machines**



**Paperboard Bursting Strength  
Tester**



# Testing Machines, Force Gauges, Tension Meters (P3)

**DIN Abrasion Tester****Pneumatic Key Life Testers****Spring Hammers****Tablet Hardness Tester****Tensile And Compression Testing Machines****Automatic Spring Testing Machines****Digital Spring Testers****Force Gauges****Test Stands For Force Gauges****Force Gauges****Tensile/Compression Sensors****Tube Force Gauges**

# Testing Machines, Force Gauges, Tension Meters (P4)

**Handheld Force/Torque Indicators**



**Wire Tension Meters**



**Cable Tension Meters**



**Infrared Belt Tension Meter**



**Belt Tension Meters**



**Spindle Tension Meters**





# Electronic Universal Testing Machines UTM-Z Series



Computer and software (included)



- Max. test force: 50N-5000N
- Accuracy class: class 0.5
- Accuracy of test force:  $\pm 0.5\%$  of indicating value
- Range of test force: 0.4%-100%FS
- Resolution of test force: 1/300000FS
- Accuracy of displacement:  $\pm 0.5\%$  of indicating value

- Resolution of displacement: 0.2 $\mu$ m
- Range of crossbeam speed: 0.001-1000mm/min
- Accuracy of crossbeam speed:  $\pm 0.5\%$  of indicating value
- Range of force control speed: 0.05%-10%FS/s
- Accuracy of force control speed:  $\pm 0.5\%$  of indicating value

# Electronic Universal Testing Machines

CUSTOMIZABLE

Electronic Universal Testing Machines UTM-E series

- Max. test force: 10kN-600kN
- Accuracy class: class 0.5
- Accuracy of test force:  $\pm 0.5\%$  of indicated value
- Range of test force: 0.2%-100%FS
- Resolution of test force: 1/500000FS



High And Low Temperature Test Chambers For  
Electronic Universal Testing Machines UTT-M Series

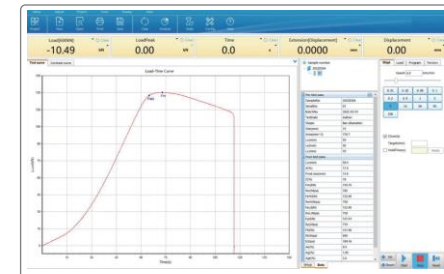


- Temperature range: -60~300°C
- Temperature accuracy:  $\pm 1^{\circ}\text{C}$
- Temperature fluctuation:  $\pm 0.5^{\circ}\text{C}$
- Temperature uniformity:  $\leq 2^{\circ}\text{C}$
- Temperature resolution:  $0.1^{\circ}\text{C}$

# Hydraulic Universal Testing Machines UTM-H Series



Computer and software (included)

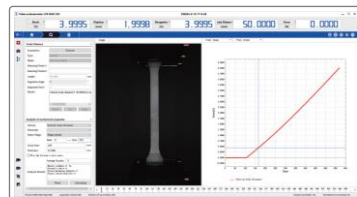


- Max. test force: 300kN-3000kN
- Accuracy:  $\pm 1\%$
- Test force measurement range: 2%-100%FS
- Resolution of test force measurement: 1/300000 of Max. test force  
(same resolution all the way)

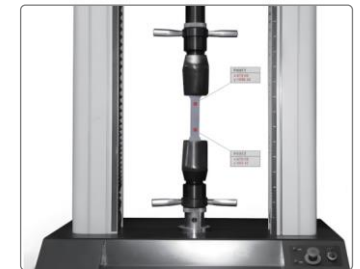
# Video Extensometers UTM-M Series

- It is used for testing and analyzing the performance of specimens in tension, compression, bending, creep, fatigue, etc. It includes strain (elongation) measurement, tensile/compressive strength measurement, modulus of elasticity measurement and Poisson's ratio measurement

Software (included)



Application



- Resolution: 0.1 $\mu$ m
- Range of deformation: standard: 60-240mm  
extensions: 100-1500mm ( $\pm 1\%$ )

# Electro-hydraulic Servo Flexural And Compressive Testing Machine UTM-RA10300



Cementitious sand flexural fixture (included)



Cementitious sand compression fixture (included)



- Suitable for cementitious sand flexural test, cementitious sand compressive test and concrete flexural test
- With constant stress control and load holding function

| Application              | flexural                       | compression |
|--------------------------|--------------------------------|-------------|
| Max. test force          | 10kN                           | 300kN       |
| Accuracy class           | 0.5 class                      |             |
| Accuracy of test force   | $\pm 0.5\%$ of indicated value |             |
| Range of test force      | 1%-100%FS                      |             |
| Resolution of test force | 1/300000FS                     |             |

# Servohydraulic Fatigue Testing Machines

Servohydraulic Fatigue Testing Machines  
(Cylinder Down-mounted) FTM-D Series



- Max. test force: 50kN-500kN
- Accuracy of static force measurement:  $\pm 0.5\%$  of indicated value
- Accuracy of dynamic force measurement:  $\pm 2\%$  of indicated value
- Actuator stroke:  $\pm 75\text{mm}$
- Accuracy of displacement measurement : linearity error $<40\mu\text{m}$ , repeatability $<0.001\%\text{FS}$
- Range of frequency: 0-100Hz

Servohydraulic Fatigue Testing Machines  
(Cylinder Up-mounted) FTM-U Series



- Max. test force: 10kN-2500kN
- Accuracy of static force measurement:  $\pm 0.5\%$  of indicated value
- Accuracy of dynamic force measurement:  $\pm 2\%$  of indicated value
- Actuator stroke:  $\pm 75\text{mm}$
- Accuracy of displacement measurement: linearity error $<40\mu\text{m}$ , repeatability $<0.001\%\text{FS}$
- Range of frequency: 0-100Hz

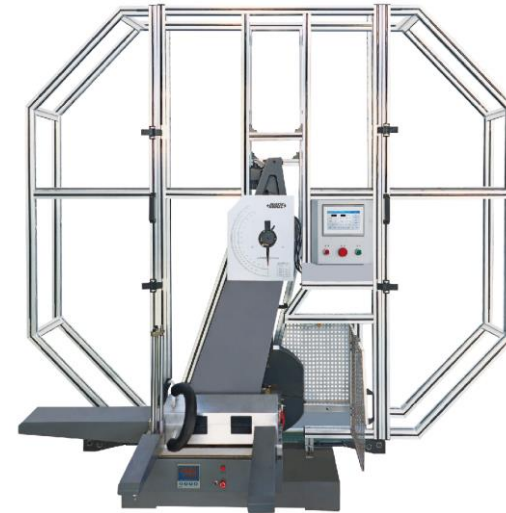


# **Impact Testing Machines**



Impact Testing Machines ITM-S Series

- According to GB/T 3808, GB/T 229, JJG 145, ASTM E23(with American standard blade), ISO 148.1, ISO 148.2, ISO 148.3, ISO R83



Low Temperature Automatic Impact Testing Machines ITM-T Series

# Bending Testing Machines



Steel Bar Bending Testing  
Machines STM-D



Vertical Bending Testing  
Machine STM-E1



Metallic Material Reverse Bending  
Testing Machine STM-F1



Friction And Wear Testing  
Machine STM-C1

## **Friction/Peel Testers STM-A Series**

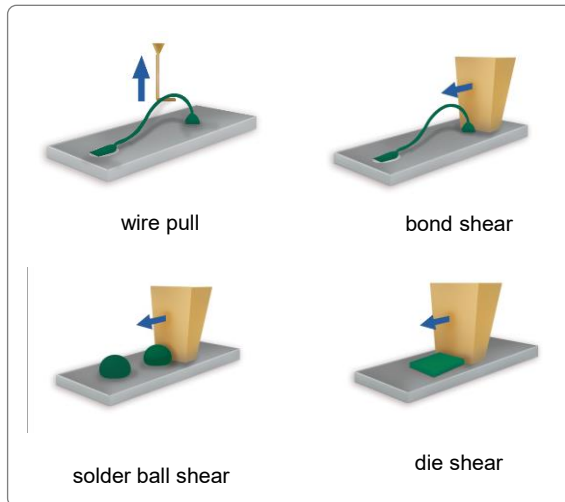


- Suitable for plastic film, foil, paper, cardboard, fabrics, communication cables and cables with metal materials composite belt, conveyor belt, paper and other related materials, dynamic and static coefficient of friction and adhesive composite products, medical patches, paper, protective film and other products, peel strength determination

- Max. test force: 5N-30N
- Accuracy of test force:  $\pm 0.5\%$
- Resolution of test force : 0.001N
- Range of test force: 0.5%-100%FS

# **Bond Force Testers DTM-A Series**

Measurement schematic



- Suitable for testing the strength of microelectronic after bonding, and adhesion testing between solder and substrate surfaces, and failure analysis
- Suitable for wire pull, bond shear, ball shear, die shear test

- Max. load capacity: 50KG-200KG
- Axis travel: X: 140-320mm  
Y: 140-320mm  
Z: 65-100mm
- Speed: 0.1-1000mm/min
- Min. travel distance of Z-axis: 0.25μm/0.1μm

# Electronic Tensile And Compression Testing Machines

## UTM-SC Series

- Suitable for tensile, peeling and tearing tests of metal wires, metal foils, plastics, food packaging, textile fibres, wires and cables, adhesives, connectors and other industries

CUSTOMIZABLE



Test interface



- Max. test force: 100N-1000N
- Test force measurement range: 0.4%-100%FS
- Test force measurement resolution: 0.01N
- Test force measurement accuracy:  $\pm 0.5\%$  of indicating value

# | Spring Testing Machines



Automatic Spring Testing  
Machines SRT-C Series



Automatic Spring Testing  
Machines SRT-W



Digital Spring Testers  
ISF-S Series



# Digital Force Gauges (Standard Type) ISF-DF Series

- Type A and B can be used for tension and pressure tests, type C is only used for pressure tests



Type A

- Type A (internal sensor):
- Load capacity: 5N-1000N
  - Resolution: 0.0005N-0.1N
  - Accuracy:  $\pm 0.2\%$  FS



Type B

- Type B (external sensor):
- Load capacity: 1000N-20000N
  - Resolution: 0.1N-5N
  - Accuracy:  $\pm 0.2\%$  FS



Type C

- Type C (external sensor):
- Load capacity: 10kN-200kN
  - Resolution: 0.001kN-0.05kN
  - Accuracy:  $\pm 0.2\%$  FS

DATA  
OUTPUT

# Test Stand For Force Gauges



Test Stand For Digital Force Gauges ISF-MT1K



Manual Vertical Test Stands For Force Gauges ISF-V10A/ISF-V10D



Manual Horizontal Test Stands For Force Gauges ISF-H20A/ISF-H20D

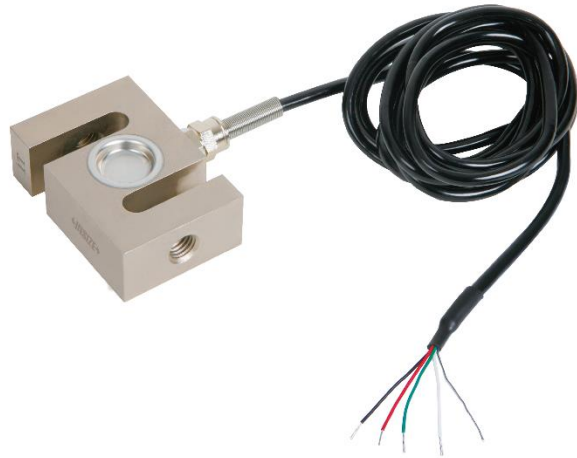


Manual Stripping Force Test Stands ISF-P30A/ISF-P30D

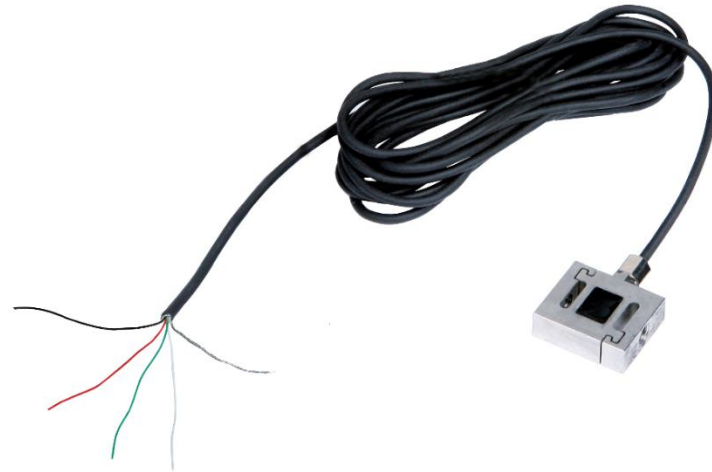
# S-Type Tensile/Compression Sensors



Connected with handheld indicator (optional)



8650



8651



Connected with handheld indicator (optional)

# Wire Tension Meters

- Suitable for testing the tension of stranding machines, winding machines, wire cutting machines, carbon fibre winding equipments, fibre optic winding equipments, fibre optic cable production equipments, glass fibre winding equipments, steel cord production equipments, steel wire rope production equipments and so on

Wire Tension Meters  
ISF-DT



- Accuracy class:  $\pm 2\%$ FS
- Range of test force: 2.0cN-2000cN
- Test force resolution: 0.1cN-1N

- For tension measurement of high-speed threads: textiles, chemical fibers, fine wires



High-speed Wire Tension Meters  
ISF-DV

- Accuracy class:  $\pm 3\%$ FS
- Range of test force: 1cN-500cN
- Test force resolution: 0.1cN/1cN

**Torsion Testing Machines****Torque Testers****Torque Testers****Torque Wrench Test Stands****Dynamic Torque Sensors****Torque Sensors****Handheld Force/Torque Indicators****Torque Screwdrivers****Desktop Automatic Tightening Machines****Electric Screwdrivers****Torque Testers For Electric Screwdrivers****Digital Torque Wrenches**

**Interchangeable Head Preset Digital "Click" Torque Wrenches (WiFi Lan)**



**Interchangeable Head Production-Grade Color Digital Torque Wrenches (WIFI Lan)**



**Color Screen Multifunctional Digital Torque Wrenches**



**Torque Wrenches**



**Preset Torque Wrenches**



**Automatic Torque Wrench Calibrator**



**Dial Torque Wrenches**



**Torque Adapters**



**Torque Multipliers**



**Hydraulic Torque Wrenches With Drive Shaft**



**Electromagnetic Ultrasonic Bolt Axial Force Tester**





# Electronic Torsion Testing Machines UTM-TT

- Suitable for torsion testing of metallic and non-metallic materials, composite materials and components

OPTIONAL ACCURACY  
CLASS: CLASS 0.5



| Code                             | Type A                       | Type B          |
|----------------------------------|------------------------------|-----------------|
| Max. test torque                 | 2N.m-50N.m                   | 200N.m-5000N.m  |
| Accuracy of test torque          | $\pm 1\%$ of indicated value |                 |
| Range of test torque             | 2%-100%FS                    |                 |
| Min. resolution of test torque   | 0.0001N.m-0.001N.m           | 0.01N.m-0. 1N.m |
| Accuracy of torsion angle        | $\pm 1\%$ of indicated value |                 |
| Range of torsion angle           | 0-9999°                      |                 |
| Resolution of torsion angle      | 0.01°                        |                 |
| Accuracy of torsion angle speed  | $\pm 1\%$ of the set value   |                 |
| Accuracy of constant load torque | $\pm 1\%$ of the set value   |                 |

# Torque Sensors IST Series

## Dynamic Torque Sensors



single key joint

- Overall accuracy:  $\pm 0.2\%FS$
- Repeatability:  $0.1\%FS$
- Response frequency: 2kHz
- Maximum range: 1N.m-20000N.m

## Static Torque Sensors

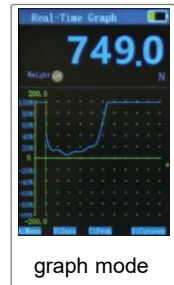


- Output sensitivity: 1.0-2.0mV/V
- Zero output:  $\pm 1\%FS$
- Accuracy:  $\pm 0.2\%FS$
- Repeatability:  $\pm 0.2\%FS$
- Maximum range: 10N.m-5000N.m

# Handheld Force/Torque Indicators ISF-DG Series

- For use with force sensors and torque sensors
- Three modes of real-time value display, peak value display and valley value display
- High sampling rate captures peak value accurately
- Parameter backup and restoration, even if the parameters are messed up, you can restore them with a single click
- Weightless calibration, just enter the sensor parameters and you are ready for calibration
- A variety of alarm options: upper limit alarm, lower limit alarm, peak and valley alarm, over 1.2 times of the range alarm

- Max. sampling frequency: 3200Hz-12800Hz
- Accuracy:  $\pm 0.1\%$ (of load capacity)



graph mode



example of torque  
sensor connection



example of force  
sensor connection

# Torque Screwdrivers



Digital Torque Screwdrivers  
IST-SD Series

- Range: 10-400cN.m
- Resolution: 0.1cN.m
- Accuracy:  $\pm 2.5\%/\pm 3\%$  (clockwise)  
 $\pm 3.5\%/\pm 4\%$  (counter-clockwise)



Bluetooth Digital Torque Screwdrivers  
(Keyboard Signal) IST-3SD Series

- Range: 10-600cN.m
- Resolution: 0.1cN.m
- Accuracy:  $\pm 2\%$  (clockwise)  
 $\pm 3\%$  (counter-clockwise)



Torque Screwdrivers  
IST-MG Series

- Range (clockwise): 20cN.m–6.0N.m
- Graduation: 2cN.m/5cN.m/0.1N.m
- Accuracy:  $\pm 6\%$

# Build-in Wireless Digital Torque Screwdrivers IST-4SD Series

- Clockwise and counter-clockwise operation
- Peak and track working mode
- Upper and lower tolerance limits can be set and measurement results automatically calculate % difference from target value
- 10 preset target torque values and usage modes, parameters can be locked to prevent change

BUILD-IN  
WIRELESS

DATA  
OUTPUT



Application



| Code       | IST-4SD50                    | IST-4SD200 | IST-4SD400 | IST-4SD600  |
|------------|------------------------------|------------|------------|-------------|
| Range      | 10~50cN.m                    | 40~200cN.m | 80~400cN.m | 120~600cN.m |
| Accuracy   | Clockwise: $\pm 2\%$         |            |            |             |
|            | counter-clockwise: $\pm 3\%$ |            |            |             |
| Resolution | 0.1cN.m                      |            |            |             |

# Desktop Automatic Tightening Machine ATM

CUSTOMIZED ACCORDING  
TO WORKPIECES

Screw feeding system



- Positioning repeatability:  $\pm 0.05\text{mm}$
- Number of preset positioning programs: 80
- Number of positioning points for one program: 350
- Applicable torque range:  $0.01\text{--}7.50\text{n.m}$
- Applicable screw outside diameter:  $1.0\text{--}7.0\text{mm}$
- Torque accuracy:  $\pm 5\%$  at  $30\%\sim 80\%$  of maximum output torque,  $\pm 8\%$  in other range



# Intelligent Electric Screwdrivers (Current Control) HES-E



- Torque range: 0.01-5.50N.m
- Max. speed: 800-5000rpm
- Torque accuracy:  $\pm 5\%$  at 30%~80% of maximum output torque,  $\pm 8\%$  in other range

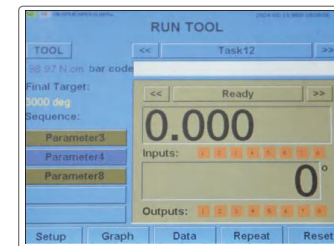


Controller type A

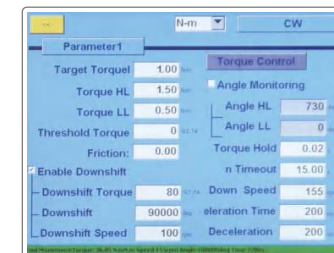


Controller type B

Controller (included)



Interface of tightening parameter setting



Balance arm (optional)



# ***Torque Testers For Electric Screwdrivers*** **IST-CD Series**

- Compatible with all electric screwdrivers
- Widely used in manufacturing sectors such as 3C, new energy, automotive parts and etc.
- Compact in size, extremely easy to integrate, and designed specifically for automated assembly lines
- Set upper and lower tolerance limits and output pass/fail signals via I/O ports which can be connected to external alarm indicator or PLC



| Code                      | IST-CD08A                    | IST-CD50A | IST-CD100A | IST-CD02B                                          | IST-CD08B   | IST-CD50B | IST-CD100B | IST-CD500B |
|---------------------------|------------------------------|-----------|------------|----------------------------------------------------|-------------|-----------|------------|------------|
| Type                      | A (integrated type)          |           |            | B (split type, embedded mounting of display meter) |             |           |            |            |
| Optimal measurement range | 0.08~0.8N.m                  | 0.5~5N.m  | 1~10N.m    | 0.02~0.2N.m                                        | 0.08~0.8N.m | 0.5~5N.m  | 1~10N.m    | 5~50N.m    |
| Accuracy                  | $\pm 1\%$ of indicated value |           |            |                                                    |             |           |            |            |

# Quality Inspection Torque Wrenches IST-4W Series



OPTIONAL ACCURACY: CLOCKWISE:  $\pm 1\%$   
COUNTER-CLOCKWISE:  $\pm 2\%$  ONLY FOR RANGE 6~340N.m

MEASURE THE TORQUE  
OF TIGHTENED BOLTS

- Three measuring modes:
  - Angle mode: rotation angle can be set, when turning to the angle, 2 LED lights blinking and buzzer beeping, capturing torque values
  - Maximum value display mode: capturing peak torque values
  - Real-time value display mode: real-time tracking of torque values
- In angle mode and maximum value mode, upper and lower tolerance limits can be set to determine pass or fail by LED lights
- Clockwise and count-clockwise operation

## Type A

- Range: 6-340N.m
- Resolution: 0.01N.m/0.1N.m
- Accuracy: clockwise:  $\pm 2\%$   
counter-clock wise:  $\pm 3\%$

## Type B

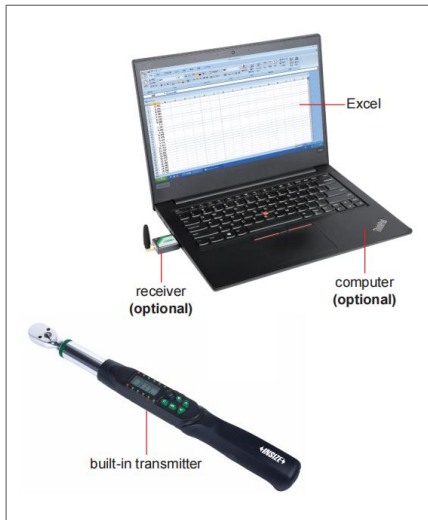
- Range: 170-2000N.m
- Resolution: 0.1N.m/1N.m
- Accuracy: clockwise:  $\pm 2.5\%$   
counter-clock wise:  $\pm 3.5\%$

# Built-in Wireless Digital Torque Wrenches (Keyboard Signal) IST-42W Series

DATA  
OUTPUT

clockwise/counter-clockwise setting

Application



Type B

| Type       | Type A                                                                                 | Type B      | Type C         |
|------------|----------------------------------------------------------------------------------------|-------------|----------------|
| Range      | 1.2N.m-20N.m                                                                           | 6N.m-500N.m | 170N.m-2000N.m |
| Resolution | 0.001N.m-0.1N.m                                                                        |             | 0.1N.m-1N.m    |
| Accuracy   | Clockwise : $\pm 2\% \sim \pm 2.5\%$ ,<br>counter-clockwise : $\pm 3\% \sim \pm 3.5\%$ |             |                |

# Interchangeable Head Two-way Wireless All-mode Digital Torque Wrenches IST-45W Series

ALL  
MODE

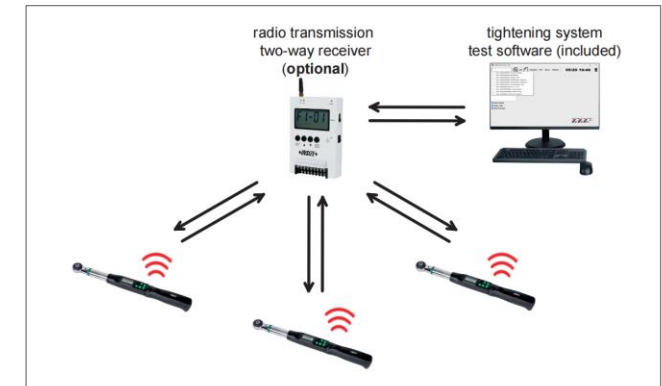
ANGLE  
CURVE

DATA  
OUTPUT



- Unit: N.m, in.lb, ft.lb, kg.cm, °
- Clockwise and counter-clockwise operation
- Includes all operating modes of the digital torque wrench
- Upper and lower tolerance limits can be set to determine pass or fail by LED lights, can set whether to send beyond tolerance limits
- 10 preset target values and usage modes, parameters can be locked to prevent change

## Data transmission application

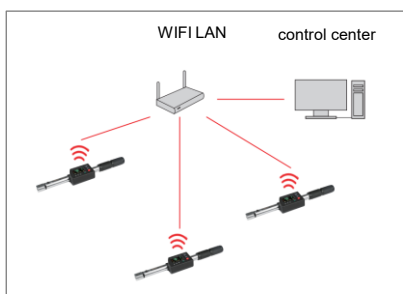


- Range: 2.4-410N.m
- Resolution: 0.01N.m/0.1N.m
- Accuracy: CW:  $\pm 2\%$   
CCW:  $\pm 3\%$ ,  $\pm 2^\circ$  (rotate  $90^\circ$ )



# Interchangeable Head Digital “Click” Torque Wrenches (Wifi Lan) IST-WPE Series

## Application



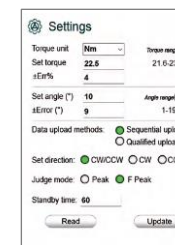
Type-C port

scanning windows

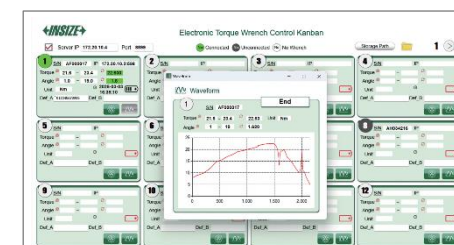


DATA  
OUTPUT

## Parameter setting software (included)



## Work display software (included)



- Clockwise and counter-clockwise operation
- Mechanical structure adjusts torque value, digital sensor displays real torque value, wrench can be used without torque tester
- Set the angle range to strictly monitor angle of the screw from fitting surface to tightening
- Interval display of curved interface and main interface after unloading, upper and lower tolerance limits can be set to determine pass or fail by LED lights
- Provide torque graph for analyzing and adjusting the tightening strategy
- Scanning module and scanning windows to match corresponding screws
- Open communication protocols for users to develop and interface with factory MES, PLC and other systems

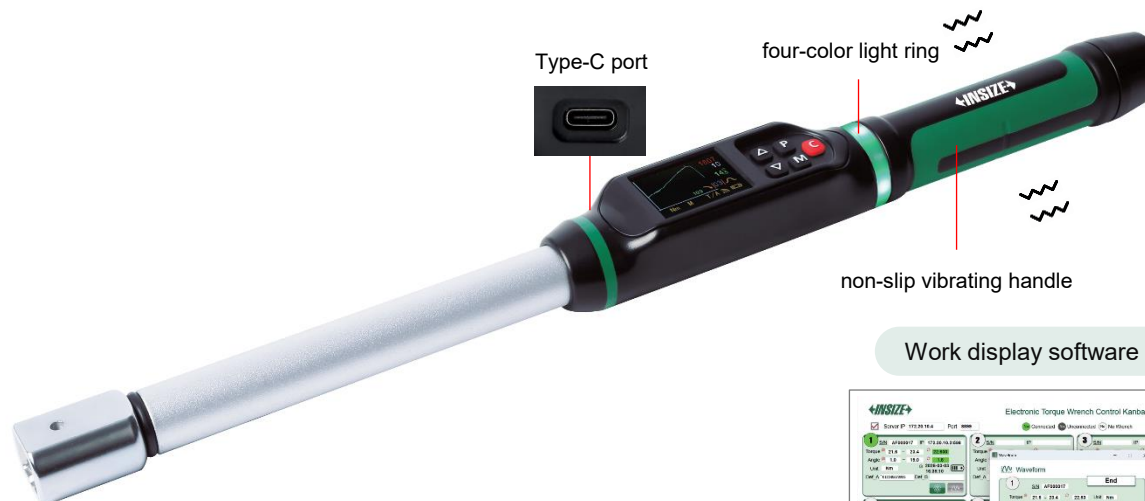
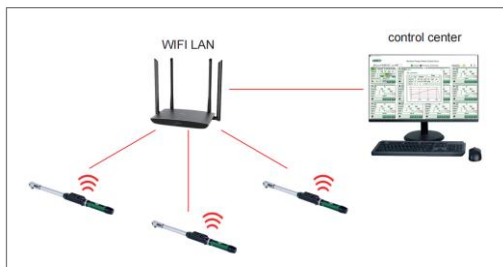
- Range: 2-400N.m
- Resolution: 0.001N.m-0.1N.m
- Accuracy: Torque:  $\pm 3\%$   
Angle:  $\pm 1\%$  of indicated value +  $\pm 1^\circ$  (speed  $10^\circ \sim 180^\circ/\text{s}$ ) +  $\pm 1^\circ$  (clamping error)



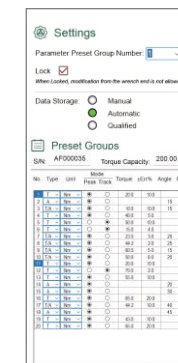
# Interchangeable Head Production-grade Color Digital Torque Wrenches (Wifi Lan) IST-WEC Series

DATA  
OUTPUT

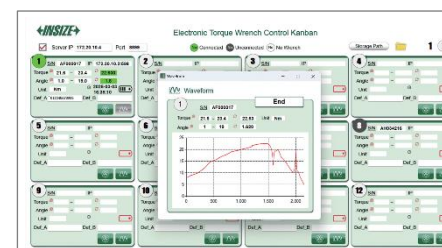
Basic transmission software application



Parameter setting software (included)



Work display software (included)



- Aluminum tube body for lighter use
- Unit: N.m, cN.m, lb.in, lb.ft, kg.cm, kg.m, oz.in, °
- Clockwise and counter-clockwise operation
- 20 preset parameter groups are available for recall which can be locked to prevent changes and switching
- Interval display of curved interface and main interface after unloading

- Range: 1-400N.m
- Resolution: 0.001N.m-0.1N.m
- Accuracy: Torque: CW:  $\pm 2\%$ , CCW:  $\pm 3\%$   
Angle:  $\pm 1\%$  of indicated value +  $\pm 1^\circ$  (speed  $10^\circ \sim 180^\circ/\text{s}$ ) +  $\pm 1^\circ$  (clamping error)

# Color Screen Multifunctional Digital Torque Wrenches IST-40W

clockwise/counter-clockwise setting

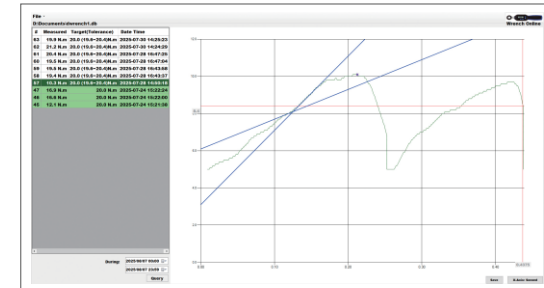
alarm LED

square driver



Software (included)

DATA  
OUTPUT



pointer mode



numerical mode



curve mode

- Clockwise and counter-clockwise operation
- Maximum value and real-time value displayed simultaneously
- Three display modes for torque values: pointer, numerical, and curve
- Upper and lower tolerance limits can be set to determine pass or fail by LED lights
- The data is stored in the wrench when the wrench is disconnected, and the data is automatically uploaded to computer after transmission cable is connected to the software
- Real-time uploading of data when transmission cable is connected to the software

- Range: 6-340N.m
- Resolution: 0.01N.m/0.1N.m
- Accuracy: clockwise:  $\pm 2\%$   
counter-clock wise:  $\pm 3\%$

# Torque Wrenches



Digital Torque Wrenches  
IST-W Series



Mechanical Torque Wrenches  
(Digital Setting) IST-19WM Series



Torque Wrenches  
IST-9WM Series



Preset Torque Wrenches  
IST-PW Series



Dial Torque Wrenches  
IST-DW Series

# Digital torque wrench transmission mode

## Wired transmission (keyboard signal)

- Keyboard signal through a cable, can be transmitted to Excel, Word, Txt, etc.
- Press the output button once to output a value

## Bluetooth transmission (keyboard signal)

- Built-in Bluetooth 4.0 module, which can be connected with computers (with Bluetooth function), mobile phones, tablets and other devices
- Keyboard signal, can be transmitted to Excel, Word, TXT
- Transmission distance is 10 meters (no obstacles, no electromagnetic interference)
- Bluetooth connection and disconnection are respectively shown by indicator lights

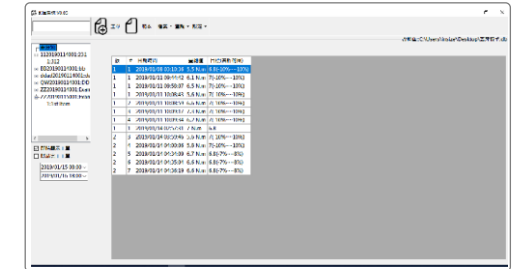
## Two-way radio transmission

- A two-way receiver can be connected with up to 10 wrenches at the same time, and the maximum transmission distance is 100 meters
- Two data transmission modes: automatic or press button to send
- When the wrench is disconnected, data is stored in the wrench and automatically sent to computer after wireless connection

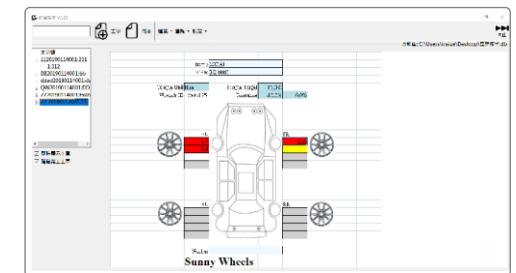
## Two-way bluetooth transmission

- Data transmission via bluetooth (bluetooth 4.0)
- Two-way transmission and control
- Transmission distance: 10m (no obstacles, no electromagnetic interference)
- Bluetooth connection and disconnection are displayed by indicator light
- Two data transmission modes: automatic or press button to send
- When the wrench is disconnected, data is stored in the wrench and automatically sent to computer after connection via Bluetooth

## Data transmission mode



## Program guidance mode



# Digital Torque Wrenches



Small Range Digital Torque Wrenches IST-WP Series



Short Handle Digital Torque Wrenches IST-WS Series



Interchangeable Head Quality Inspection Torque Wrenches IST-16W Series



Digital Angle Torque Wrenches IST-1W Series



Digital Torque Wrenches IST-W Series



Swing-head Digital Torque Wrenches IST-21W Series



Adjustable Open Head Digital Torque Wrenches IST-24W Series

# Automatic Torque Wrench Calibrator IST-HT1000

- Unit: N.m, cN.m, in.lb, ft.lb, kg.cm
- Automatically load clockwise or counterclockwise
- The test curve can be displayed in real time
- Four test modes: preset mode, preset mode (manual), indication mode (standard), indication mode (device under test)
- Single-point and multi-point automated testing and fatigue testing of torque wrenches

**AUTO  
LOAD**



selection of test modes on  
the calibrator



calibrator test  
process interface

computer and software  
(included)



- Automatic load torque range: 1~1000N.m
- Sampling frequency:  $\geq 1500\text{Hz}$
- Arm length range: 135~1575mm
- Limit stop angle:  $\pm 20^\circ$
- Adaptor: 3/4" to 1/2", 3/4" to 3/8", 3/4" to 1/4"



# Electromagnetic Ultrasonic Bolt Axial Force Tester UFT-Q100

- Primarily applied in wind power, oil and petrochemical, nuclear power, hydrogen energy, heavy industry, and other sectors

PROBE CAN BE CUSTOMIZED ACCORDING  
TO SPECIAL BOLT SPECIFICATION

DATA  
OUTPUT

PROBE CAN BE CUSTOMIZED ACCORDING  
TO WORKING TEMPERATURE



## Application



tablet computer  
(included)



electromagnetic ultrasonic  
probe

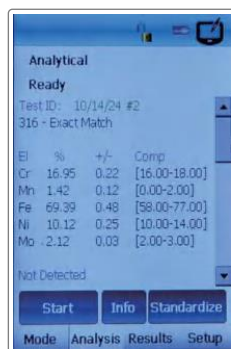
- Measurement method: electromagnetic ultrasonic single-wave and dual-wave measurement methods
- Applicable bolt range: M8~M42, length less than 6m
- Applicable bolt surface: front end is flat, rear end can adapt to different types
- Accuracy of axial force:  $\pm 5\%$  (when calibrated precisely)
- Manual testing speed: 4~10s/piece

**Handheld XRF Alloy Analyzers****Handheld LIBS Spectrometers****XRF Spectrometers****XRF Precious Metals Analyzer****XRF Oil Analyzers****Standard Sheets For XRF Plating Thickness Instruments****Spark Direct Reading Spectrometers****Standard Samples For Spectral Analysis****Spectral Sample Grinders****Carbon And Sulfur Analyzers****Oxygen/Nitrogen/Hydrogen Analyzers**

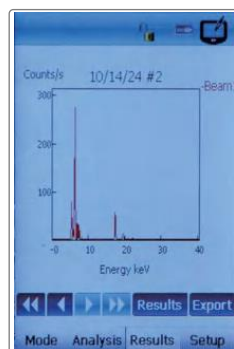
# Handheld XRF Alloy Analyzer (Basic Type)

## HSM-A310

Test interface



Spectral analysis



### Elemental analysis range

K, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Rb, Sr, Zr, Nb, Mo, Ru, Rh, Pd, Ag, Cd, Sn, Sb, Ba, Ta, Hf, W, Re, Ir, Pt, Au, Hg, Pb, Bi

### Alloy analysis mode

1. iron-based alloys (stainless steels, chromium/molybdenum alloys, low alloy steels, tool steels, seamless steels), nickel-based alloys, cobalt-based alloys, titanium-based alloys, copper-based alloys, molybdenum/tungsten-based alloys, aluminium-based alloys
2. comes with 288 commonly used alloy grades
3. can create your own grade database

- Fast and non-destructive test to identify alloy grade and composition
- For iron-based alloys (stainless steels, chromium/molybdenum alloys, low alloy steels, tool steels, seamless steels), nickel-based alloys, cobalt-based alloys, titanium-based alloys, copper-based alloys, high-temperature alloys (molybdenum/tungsten alloys), aluminium-based alloys

# Handheld XRF Alloy Analyzers (Advanced Type) HSM-S Series

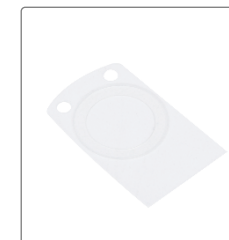
- Widely used in alloy identification, metal scrap recycling, and quality assurance/control processes within the metal manufacturing industry
- High accuracy, fast measurement speed, and intuitive display of alloy grades, element percentages (with up to 0.001% resolution), and ppm-level concentrations

CAN BE  
CUSTOMIZEDDATA  
OUTPUT

316 reference sample (included)



window protective film (included)



| Code                     | HSM-S110       | HSM-S130                           | HSM-S150                   | HSM-S620       | HSM-S640                           | HSM-S650                   |
|--------------------------|----------------|------------------------------------|----------------------------|----------------|------------------------------------|----------------------------|
| Analysis mode*           | alloy analysis | alloy analysis<br>plating analysis | precious metal<br>analysis | alloy analysis | alloy analysis<br>plating analysis | precious metal<br>analysis |
| Detector                 | Si-PIN         |                                    |                            | SDD            |                                    |                            |
| Elemental analysis range | Ti~U           |                                    |                            | Mg~U           |                                    |                            |
| Target material          | Ag target      |                                    |                            | Rh target      |                                    |                            |

\*can be customized according to user requirements: RoHS analysis mode, ore analysis mode

# Handheld Libs Spectrometer HLS-B410

- Widely used in metallurgy, casting, steel, non-ferrous metals and scrap metal recycling, etc.
- Ability to quickly analyze the metal elements of materials for quantitative characterization and grade differentiation

EYE SAFE  
LASERLASER CLASS  
CLASS INO  
RADIATIONIP54  
WATERPROOF

Test interface

| Element | Content(%) | Content Range |
|---------|------------|---------------|
| Al      | 92.83      | 91.25 - 93.97 |
| Cu      | 4.18       | 3.80 - 4.30   |
| Mg      | 1.83       | 1.70 - 2.30   |
| Mn      | 0.61       | 0.50 - 1.00   |
| Si      | 0.16       | - 0.50        |
| Fe      | 0.15       | - 0.50        |
| Ni      | 0.11       | -             |
| Zn      | 0.06       | - 0.10        |
| Cr      | 0.03       | -             |

## Application

### alloy analysis

can be used for almost all alloys, including scrap metal, high temperature alloys, alloy steel, stainless steel, tool steel, chromium molybdenum steel, aluminum alloys, nickel alloys, titanium alloys, cobalt alloys, copper alloys, precious metals, zinc alloys, anomalous alloys, zirconium alloys, mixed alloys, etc.

### material properties identification (PMI)

can be used for quality control in the metal fabrication and processing industry to analyze material composition and identify alloy grades for a wide range of materials including critical components, raw materials, and welded seams



# XRF Plating Thickness Instrument

MANUAL  
ZOOM



XRF Plating Thickness Instrument  
XRF-PT230

AUTOMATIC MOBILE  
PLATFORM



Automatic XRF Plating Thickness Instrument  
XRF-FA350

VACUUM SYSTEM  
MANUAL ZOOM



Vacuum XRF Plating Thickness  
Instrument/Rohs Analyzer XRF-VF300



XRF Plating Thickness Instrument/Rohs  
Analyzer/Alloy Analyzer XRF-B210



# Spark Direct Reading Spectrometers

Spark Direct Reading Spectrometer (Basic Type) OES-T350



- Rowland circle of diameter: 350mm
- Wavelength range: 160-510nm
- Pixel resolution: 20pm
- Spark frequency: 100-1000hz

Portable Spark Direct Reading Spectrometer OES-P200



- Detector: high performance CMOS
- Optical system construction: paschen-runge double optical chamber structure
- Raster scribing: 3600 lines/mm
- Ultraviolet focal length: 298mm

# Handheld Raman Spectrometers

Handheld Raman Spectrometer (Basic Type) HHL-R240



- Excitation wavelength:  $785 \pm 0.5 \text{ nm}$
- Wavenumber range:  $200\text{-}4000 \text{ cm}^{-1}$
- Resolution:  $10 \text{ cm}^{-1}$

- Equipped with raman spectral recognition algorithms, including standard spectra of up to 10,000 kinds of substances

Handheld Raman Spectrometer (Advanced Type) HHL-S360



- Wavelength:  $1064 \text{ nm}$
- Wavenumber range:  $200\text{-}2500 \text{ cm}^{-1}$
- Resolution:  $14 \text{ cm}^{-1}$

- Widely used in industry, medicine, environmental protection, food, public security, defense, etc.
- For the qualitative identification of inorganic and organic substances in various forms

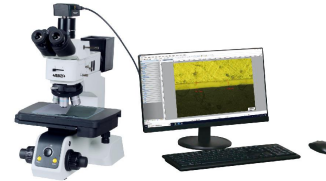
## Coating Thickness Gauges



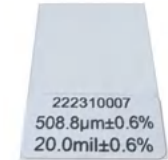
## Coating Thickness Gauges (Advanced Type)



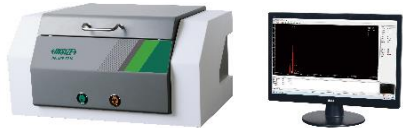
## Coating/Film Thickness Measurement Systems



## Calibration Foils For Coating Thickness Gauges



## XRF Plating Thickness Instrument/ RoHS Analyzer/ Alloy Analyzer



## Surface Profile Gauges



## Wet Film Gauges



## Gloss Meters



## Spectrophotometers



## Holiday Detectors



## Digital Adhesion Testers



## Automatic Pencil Hardness Tester



**Pencil Hardness Testers****Rotational Abrasion Testers****Cross Cut Adhesion Testers****Conical Mandrel Test Apparatus****Impact Testers****ISO Flow Cups****Rotational Viscometers**

# Coating Thickness Gauges



Coating Thickness Gauge  
(Standard Type) 9501-1200



Coating Thickness Gauge  
(Advanced Type) 5402-TC21



Coating Thickness Gauge  
(Basic Type) ISO-1000FN



Coating Thickness Gauge  
(Basic Type) ISO-1200FN



Double Screen Coating  
Thickness Gauge 5404-QM42

# Coating Thickness Gauges (Advanced Type)



Coating Thickness Gauges  
(Advanced Type) 5411



5413-TC31-FN15  
probe (included)

Coating Thickness Gauge (Advanced Type)  
5413-TC31

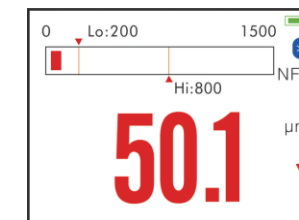
- Can measure the thickness of non-magnetic coating and non-metallic coating on magnetic metal substrate  
Substrate: iron, steel, magnetic stainless steel  
Coating: zinc, aluminum, copper, chrome, tin, plastic, powder, paint (not for nickel)
- Can measure the thickness of non-conductive coating on non-magnetic metal substrate  
Substrate: copper, aluminum, zinc, non-magnetic stainless steel  
Coating: plastic, powder, paint, anodizing (not for chrome and zinc plating)



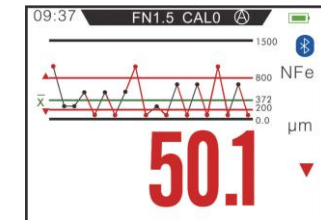
reading only



reading and statistics



reading and bar graph



reading and run chart

| Code            | 5413-TC31                                                                                                                       | 5411-TC15                              | 5411-TC30                              | 5411-TF50       |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|-----------------|
| Measuring range | 0~1500μm*                                                                                                                       | FE/NFE (auto recognition):<br>0~1500μm | FE/NFE (auto recognition):<br>0~3000μm | FE:<br>0~5000μm |
| Accuracy        | $\pm(2\%L+1\mu\text{m}): \leq 1500\mu\text{m}$<br>$\pm(3\%L+1.5\mu\text{m}): >1500\mu\text{m}$ , L is measuring thickness in μm |                                        |                                        |                 |

\* Interchangeable probes provide multiple ranges



# Coating/Film Thickness Measurement Systems

## MTF-Y430

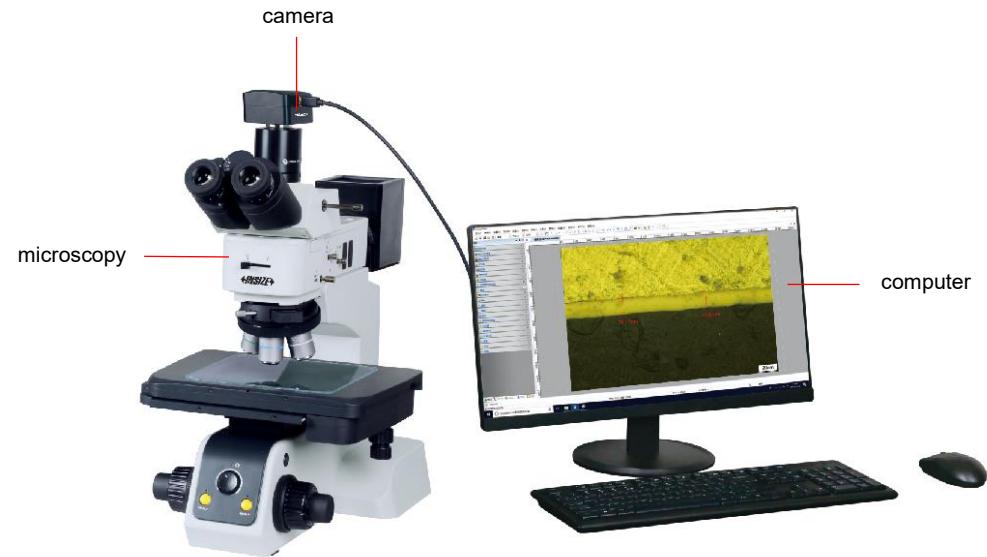


Image measurement software (included)

selectable resolution

histogram (quantify the distribution of color and brightness)

black balance (reduce color difference)

flat field correction (reduce brightness difference)

dark field correction (reduce thermal noise)

measurement items

- Suitable for measuring the thickness of various coatings or multi-layer composite films, with a wide measurement range
- Capable of analyzing the quality of coatings and identifying the causes of defects (such as pores, cracks, inclusions, peeling, etc.)

# Gloss Meters



Gloss Meters  
5702-DG8



60° Gloss Meter  
ISQ-DG6



Microporous Gloss Meter  
(Advanced Type) 5711-SG60



20°/60°/85° Gloss Meter  
ISQ-DG8

# Colorimeters



Colorimeter  
5700-LS35



Handheld Spectrophotometers  
5701-D40



Portable Spectrophotometer  
9710-30



Multi-angle Spectrophotometer  
5705-MS45



Spectrophotometer  
5706-DS01

# Digital Adhesion Tester SPT-AD21



Ø20mm dolly (included)



Cutting tool (included)



Glue gun and glue (included)



- Resolution: 0.01MPa (1psi)
- Accuracy:  $\pm 1\%$  full scale
- Pull-off force: 0.7-20MPa

**Industrial Acoustic Imager****Parts Cleanliness Testing Cabinets****Automatic Cleanliness Analysis Systems****Oil Testing****Bearing Radial Clearance Tester****Contact Angle Goniometer****Laser Position System****Vibration Isolation Platforms****Transport Simulation Vibration Tester**

# Industrial Acoustic Imagers

IP56  
WATERPROOF

Industrial Acoustic Imager SCX-DMM72

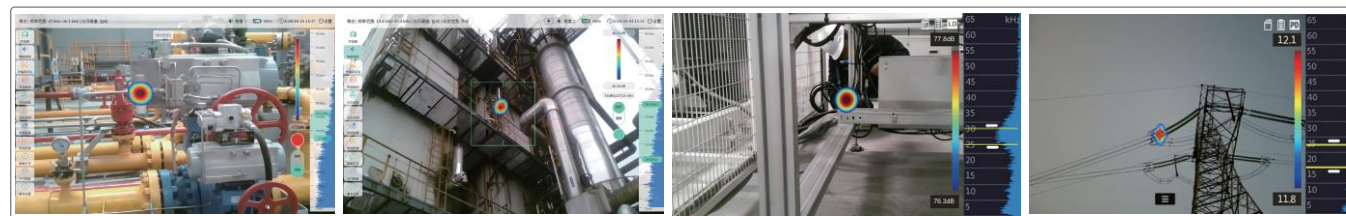
DATA  
OUTPUT

IP54  
WATERPROOF

Industrial Acoustic Imager SCA-M136



Application





# **Parts Cleanliness Testing Systems**



Parts Cleanliness Testing Cabinet  
OPP-GZ01



Automatic Cleanliness Analysis  
System (Advanced Type) OPP-OM53



Automatic Cleanliness Analysis  
System (standard Type) OPP-OS18

# Oil Testing



Online Oil Particle Counters  
PSC-ZX100



Portable Oil Particle Counter  
(Basic Type) PSC-BX200



Portable Oil Particle Counter  
(Standard Type) PSC-BX300



Oil Particle Counter (Standard Type)  
PSC-TX100

# Laser Position System DLP-V300

- Used to composite layup, aerospace, automotive engineering, shipbuilding, rail transit, precast concrete production and heavy machinery
- Suitable for precision positioning, operation guidance, laser marking, drilling, welding and defect inspection

## Application



aerospace component



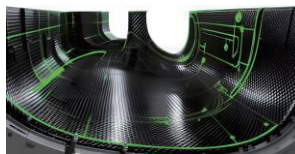
automotive body inspection



aluminum-steel structure



wood truss assembly



composite layup and painting



welding positioning



DYNAMIC  
TRACKING

LASER  
POSITION

SUB-MILLIMETER  
POSITION ACCURACY

can be used with a tripod  
(computer is not included)



- Working distance: 1.5~5.5m, no dynamic focusing
- Projection accuracy:  $\geq 0.25\text{mm}$
- Projection angle:  $60^\circ \times 60^\circ$
- Laser wavelength: 520nm
- Data formats: IGES, STP, DXF, DWG, compatible with FiberSIM, CATIA CPD software type
- Environmental requirement: temperature:  $-5\sim 40^\circ\text{C}$ , relative humidity: 10~90%, no condensation

# Vibration Isolation Platforms



0790-B

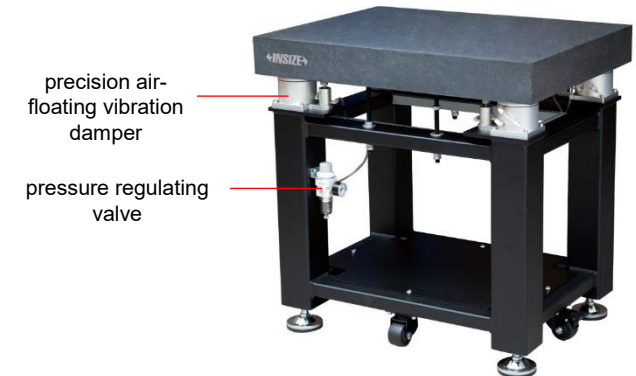
- Countertop material: marble/honeycomb platen
- Countertop thickness: 100mm/200mm
- Max. load: 400kg-800kg
- Dimension (L×W×H):  
800×800×800mm-2000×1200×800mm

built-in air spring  
vibration  
isolation system  
(included)



0791-S

- Countertop material: marble/honeycomb platen
- Countertop thickness: 100mm/200mm
- Max. load: 500kg/800kg
- Dimension (L×W×H):  
800×800×800mm-2000×1200×800mm



0792-A

- Countertop material: marble/honeycomb platen
- Countertop thickness: 100mm-200mm
- Max. load: 300kg-1500kg
- Dimension (L×W×H):  
800×600×780mm-1600×1200×780mm



# ***THANKS !***

*Quality | Innovation | Service | Value*