CHOTEST PRO

Automated Dial Indicator Testing Machine SJ2018

Automated Dial Indicator

Testing Machines SJ2620

Item No.: SJ2018

Product name: SJ2018 Fully Automated Dial Indicator Testing Machines

Measuring range: 0~50mm

Resolution: 0.01μm

Repeatability: 0.1μm

Indication error: Random 2mm≤0.6μm, Random 10mm≤0.8μm, 50mm≤1μm

Application: Measure all kinds of indicator.

Manufacturer: Chotest Technology Inc.

Parameters

Measuring Range	(0-50)mm
Resolution	0.01μm
Repeatability	0.1μm
Accuracy of Automated Reading	1/30 of division value for 0.001mm dial gauge 1/60 of division value for 0.01mm dial gauge
Indication Error	Random 1mm ≤0.6μm Random 2mm ≤0.6μm Random 10mm ≤0.8μm Random 30mm ≤0.9μm 50mm ≤1μm
Return Error	≤0.5μm
CE Certificate	CE-EMC, CE-LVD
Interface	RS232 (Can convert to USB)
Input Voltage	AC 220V 50Hz
Operation Environment	Temp.(20±2)℃, RH(50~70)%
Dimension	Dimension (640×240×530) mm
Weight	35kg

Functions

1. Measure dial gauges, micrometer dial indicators, dial test indicators, dial bore indicators, comparators automatically according to the newest relevant regulations and standards.
2. Measure the above objects with digital display automatically.
3. Measure the above objects with imperial system automatically.
4. Semi-auto testing function, which is for testing dial indicators with stains.
5. Automatic zeroing after click Start.
6. Over standard hinting in measuring process.
7. Process and qualify the measured data automatically.
8. Can display and print former test data and test reports including error sheet or curve of measuring points and deviation values compared to specified standard.
9. Can query and manage the test records according to object type, manufacturer, manufacturing number, inspector, submitted institution, equipment number, inspection date or effective date etc.
10. Can print multiple selected test records at once.
11. Can export test data in Word or Excel.
12. Data backup and restore.
13. Support user-defined template of report.
14. Support user-defined program and tolerance.

Description

Thanks to precision linear encoder system, long-life patented precision rail, high-end servo motor, patented non-reflective light source, high-resolution CCD camera, SJ2018 measures dial indicators accurately and automatically by applying with accurate control technology of glass-scale displacement and the intelligent image processing technology. A motor controlled by computer drives glass-scale to travel accurately; All data are acquired by software automatically without manual sampling; Indication values of test object are identified automatically by CCD camera which completely simulates manual reading; That Significantly reduces human labor and brainwork, as well as improves the testing speed.

SJ2018 is a fully automated testing machine. The operator only needs to install the dial indicator and select few parameters in software, then the machine measures automatically in accordance with selected norm after click the "Start" button. After measurement, the test data and report can be generated and printed quickly (including data list of measuring points, error carve of forward—reverse measuresurement, qualification& eligibility level of indication errors, etc.)

Features

1. **Artificial intelligence**: Do not need manual reading & recording & calculating and manual adjustment with hand wheel or micro drum.
    (1) Scale and indication value are identified automatically by the CCD camera which completely simulates manual reading, without observed, read and recorded by operator
    (2) Function of automatic zeroing without manual zeroing before testing;
    (3) A motor controlled by computer drives measuring spindle to arrive measuring point accurately, without manual adjustment by hand wheel or micro drum
    (4) Powerful software automatically processes and qualifies the measured data, finally generates test result, additionally all test records can be queried, displayed, saved, printed.

2. **Special light source:**
    (1) Patented no-reflective light source (Patent No.: ZL200620056214.1)
    (2) If the surface of dial indicator is convex, the no-reflective light source is necessary to assure reliability of test data

3. **New patented slider:**
    National utility model patent (Patent No.: ZL201220239454.0)
    Eliminate gap in forward – reverse measuring by reducing the wear between the slider and the guide rail;
    High repeatability: significantly improve lifespan of the slider and guide rail.

4. **Humanized design:**
    Thanks to user-friendly interface, operation of software is extremely simple. With Humanized design for both machine and software, the operator can be trained to use it in a short time. Particularly the system can identify pointer of dial indicator and acquire the indication value of object accurately even if the dial indicator is not in the right center of camera, so the dial indicator can be installed fast, and that simplifies the operating procedure and save operating time.

5. **Large-capacity database**
    With built-in large-capacity storage space for database, the system can record and save all test records automatically.

6. **Powerful print**
    Support user-defined template of report(curve, sheet or error value). Test data can be saved automatically, particularly a number of test reports can be printed at once.

Accessories

A. Workholder for regular dial indicator

- Item No.: SJ20A
- Function: For testing of regular dial indicators
- Rod diameter of indicator: Φ8

B. Workholder for lever-type indicator and bore dial indicator

- Item No.: SJ20B
- Function: For testing of lever-type indicators and bore dial indicators
- Rod diameter of indicator: Φ4, Φ6, Φ8 (lever-type indicators); Φ6~Φ28 (bore dial indicators)
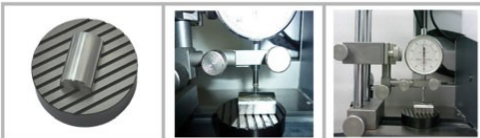
C. Workholder for expanding head bore dial indicator and Steel ball-type dial indicator

- Item No.: SJ20C
- Function: For testing of expanding head bore dial indicators and Steel ball-type dial indicators
- Rod diameter of indicator: Φ6~Φ28

D. Fixture for radial force to dial indicator

- Item No.: SJ21A
- Function: Test influence of radial force to dial indicator; Include object table and semicircular block
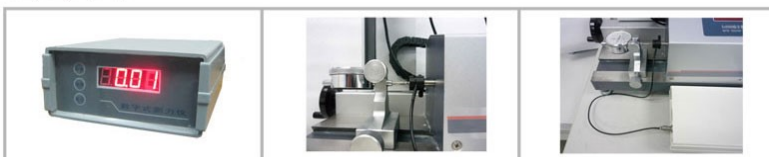
E. Extension bar for camera

- Item No.: SJ22
- Function: For testing of bore dial indicator with long rod

F. Digital force testing instrument

- Item No.: SJ30A
- Function: Compatible with dial indicator testing machines for test the measuring force of dial indicators
- Accuracy: Second grade
- Resolution: 0.01N
- Testing range: (0~20)N

G. Three balls object table

■Item No.: SJ23A

H. Micro printer

Configuration

Standard configuration
1. SJ2018 host machine
2. Work holder
3. Desktop computer
4. HP laser printer
5. Aluminum alloy case
6. Measuring software
7. Cables
8. User manual
9. Product certification and Warranty card

Optional configuration
1. J30A digital force testing instrument
2. SJ21A Fixture for radial force to dial indicator
   Function: test influence of radial force to dial indicator
3. SJ22 Extension bar for camera
   Function: for testing of bore dial indicator with long rod
4. SJ20C Workholder for expanding head bore dial indicator and steel ball-type dial indicator
   Function: For testing of expanding head bore dial indicators and Steel ball-type dial indicators
5. SJ20G work holder for imperial system indicator with rod diameter Φ9.525mm
6. SJ20J work holder for torsion spring indicator and Mechanical comparator with rod diameter Φ28mm
7. SJ20E Quick Work holder for lever-type indicator
8. Customize special work holder for rod diameter except Φ4-28mm
9. Machine verification fixture
10. Summer or winter laboratory uniform