

Full/Semi-Automatic Inspection System i-Checker

Catalog No. E4217-170



Specially designed to calibrate measuring accuracy of dial indicators, dial test indicators, and other electronic comparison gage heads with a stroke of up to 100mm.

Mitutoyo

Improved efficiency and remarkable ease of operation reduce measuring time and virtually eliminate fatigue.

FEATURES

Absolute precision for every inspection

- Mitutoyo brings you $\pm(0.2+L/100)\mu\text{m}^*1$ indication accuracy -- the world's highest -- for higher inspection reliability with various types of indicators and probes.

*1 When inspecting in vertical posture.

Accommodating various types of indicators and probes

- Now you can directly inspect an indicator with a stroke of up to 100mm. What's more, optional accessories let you inspect the dial test indicator, bore gage and lever-type inductive head each with a different form of support.



Attached bore gage accessory set (optional)



Attached test indicator accessory set (optional)

Order No.

	Bush supplied	User's Manual	Calibration certificate
170-302□	∅8	A4 size	—
170-303□	∅3/8"	A4 size	—
170-304□	∅8	8.5" x 11" size	—
170-305□	∅3/8"	8.5" x 11" size	—
170-302□-01	∅8	A4 size	Supplied
170-303□-01	∅3/8"	A4 size	Supplied
170-304□-01	∅8	8.5" x 11" size	Supplied
170-305□-01	∅3/8"	8.5" x 11" size	Supplied

Note: To denote your AC line voltage fill the blank of order number with the following suffixes (e.g. 170-302A). **A** for 120V, **D** for 220V, **E** for 240/220V. No suffix is required for 100V.

i-Checker

Improve the efficiency of inspection and remarkable ease of operation

- Adjustment of the measurement position is very easily accomplished because of semi-automatic measurement and full automatic measurement functions.

Output the inspection result to external

- It is possible to save inspection result as CSV file for reusable inspection result by any kind of software.

Create and print out the simple inspection certificate

- It is possible to create own simple inspection certificate.

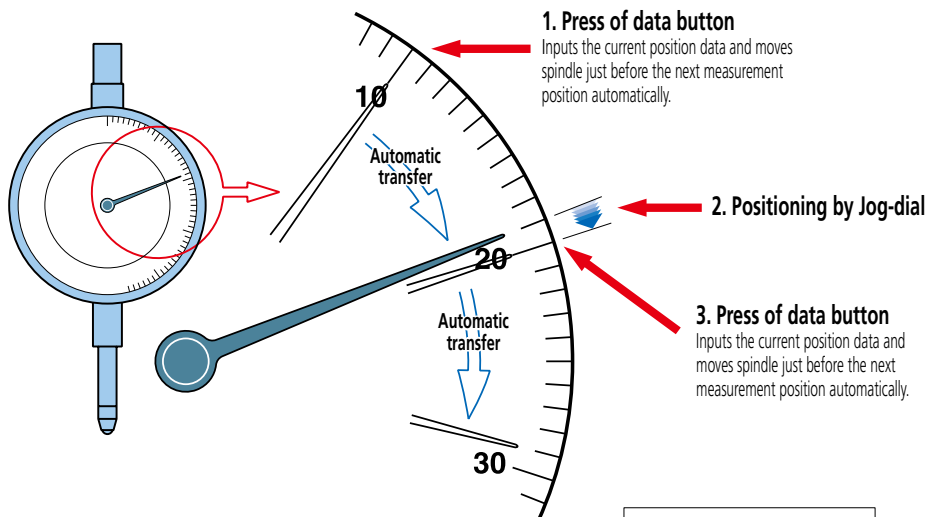


PERSONAL COMPUTER (OPTIONAL)

Semi-Automatic / Full-Automatic Inspection

Inspect your analog indicator semi-automatically!

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



Notes: It is possible to designate arbitrary graduation the remaining amount to measurement position of the automatic transfer

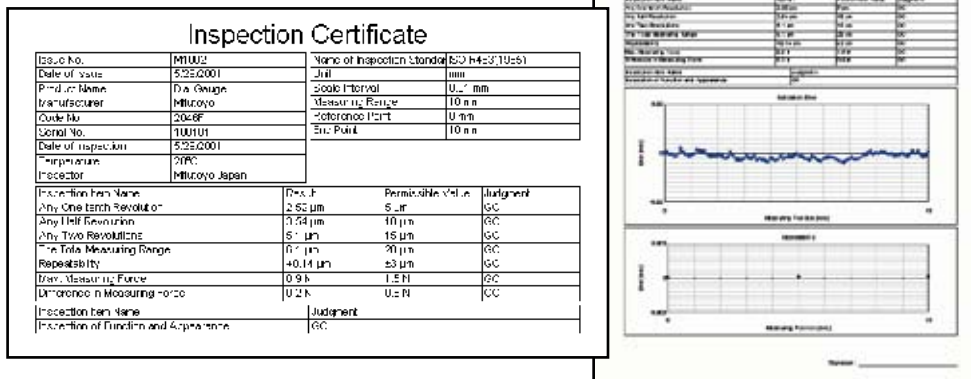
Fully automatic inspection of digital indicator

- The Automatic Measurement function, in tandem with a digital indicator makes the spindle move so that measurement data is acquired automatically. Therefore, manual adjustment to the measurement position is needless and the efficiency of every inspection is enhanced.



Create and printout a simplified inspection certificate

- It is possible to create, edit and print out your own inspection certificate. Further more, that data can be saved as a CSV file.



Technical Data

SPECIFICATIONS

i-Checker main unit

Item	Contents
Measuring Range	100mm/4"
Resolution	0.02μm/0.8μin
Accuracy (at 20°C)	vertical position ±(0.2+L/100)μm L=Arbitray length lateral position ±(0.3+2L/100)μm L=Arbitray length
Feed speed	4mm/sec (max.)
Drive method	Motor draive
Measuring Unit	Reflective-type metal linear encoder
Thermal expansion coefficient of measurement mode	(8±1)X10 ⁻⁶ /K
Measurement method	Semiautomatic measurement Fully automatic measurement Digimatic Indicator with RS-232C output*2
Input data connector	Digimatic data input connector X*3 Flat cable connector 10pin/equivalent to XG4-1301 from OMRON*4
Dimensions (WxDxH)	184 x 225 x 532mm/7.24" x 8.86" x 20.94"
Operating temperature range	20°C±3°C
Operating humidity range	58%RH±15%RH (Only free of condensation)
Storage temperature range	-10°C to 50°C
Storage humidity range	5%RH to 90%RH (Only free of condensation)
Power supply	100VAC to 240VAC ±10%, 50/60Hz
Mass	20kg/44.1lbs

*1 Automatic measurement requires the indicator's connection cable. Additionally some form of indicator, along with a connecting machine (the optional accessory for indicator as a Digimatic power-supply unit on EF counter) will be needed.

*2 The indicator that can be measured via RS-232C is the one equipped with the function to receive the "send data" request command from the main unit and can output the counter value to the main unit.

*3 For the RS-232C connector, uses the connector from a computer

*4 The connection cable connector is equivalent to MIL-DTL-83503/7D-10.

Operation Box

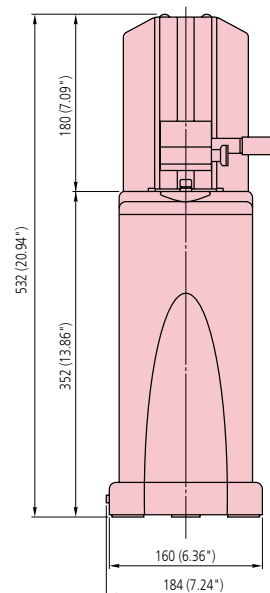
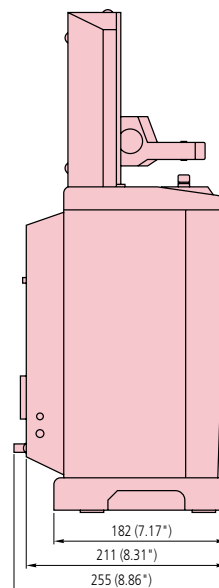
Item	Contents
Switch	Jog-dial Shuttle moves main unit spindle up and down.
[DATA] button	Use for acquiring the measurement data.
[RETRY] button	Handy for retrying "measremnt positioning" Automatically removing indicator hysteresis
[CANCEL] button	Deletes previous data and measures it again.
[STOP] switch	Forcibly halts operation.
Dimension (WxDxH)	170 x 100 x 55mm/6.69" x 3.94" x 2.17"
Mass	1kg/2.2lbs.

[RETRY] button [STOP] switch



[DATA] button [CANCEL] button Jog-dial

DIMENSIONS



Unit: mm (inch)

Mitutoyo

SPECIFICATIONS

Applicable computer and printer*¹

Item	Operating environment (minimal condition)	Suggested environment
Machine type	IBM-PC compatible	
OS	Windows 2000, NT4.0 or XP (IE5.0 or newer)	
Microprocessor	Pentium III 450MHz	Pentium III 600MHz or more
Memory	64MB	120MB or more
HDD	more than 50MB free space except for OS	more than 1GB free space except for OS
Drive	CD-ROM, FDD	
Interface	Parallel (for printer) X1 RS-232C (for full-automatic measurement) X1	
Slot	PCI (PC12.1 Compatible) X1 : for control board	
Screen resolution	1024 (W) x 768 (H) x High Color (16Bit)	1024 (W) x 768 (H) x True Color (32Bit)

*¹Windows supporting printer



*Personal computer and printer are optional.

i-Pak

Item	Contents										
Supporting industrial standard* ¹	ISO, JIS, JMAS, DIN, VDI/VDE/DGQ, ANSI/ASME										
Basic functions	<ul style="list-style-type: none"> • Create an inspection standard conforming to the industrial standards. • Create an original inspection standard, though customization industrial standard • Inspect an indicator using a newly created inspection standard (inspection for accuracy, dispersion) • Create and print of simplified inspection certificates. • Display measurement results graphically. 										
Other functions	<table border="1"> <tr> <td>Warning</td> <td>This window is displayed when the measured value exceeds the limit during the semiautomatic inspection</td> </tr> <tr> <td>Re-measurement</td> <td>It is possible to confirm the measuring data, by re-measuring the specified position after the inspection</td> </tr> <tr> <td>Display of inspection manual</td> <td>Display the inspection manual when starting an inspection*²</td> </tr> <tr> <td>Retry</td> <td>Use for retry the "measurement positioning". (it removes the hysteresis of indicator automatically)</td> </tr> <tr> <td>Password</td> <td>Restricted access through by password registration</td> </tr> </table>	Warning	This window is displayed when the measured value exceeds the limit during the semiautomatic inspection	Re-measurement	It is possible to confirm the measuring data, by re-measuring the specified position after the inspection	Display of inspection manual	Display the inspection manual when starting an inspection* ²	Retry	Use for retry the "measurement positioning". (it removes the hysteresis of indicator automatically)	Password	Restricted access through by password registration
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*¹ Refer to the reference materials (attached paper) for details about support for industrial standards.

*² To create an inspection manual, it is necessary to install the application software used to create the document, in the computer where i-Pak is installed.

Optional accessories

Attachment

02ASK000	Test indicator accessories set (ø6 stem)
02ASK180	Test indicator accessories set (ø8 stem)
02ASK370	Test indicator holder (ø6 stem)
02ASK380	Test indicator holder (ø8 stem)
02ASK110	Bore gage accessories (1 set)
02ASL310	Accessory for Bore gages
902803	ø6 dovetail grooved stem
902804	ø8 dovetail grooved stem



Stem bush

02ASK040	Stem bush ø6
02ASJ856	Stem bush ø8
02ASK150	Stem bush ø8, short
02ASL150	Stem bush ø10, short
02ASK050	Bush ø9.5*
02ASK060	Stem bush ø12
02ASK070	Stem bush ø15
02ASK080	Stem bush ø20
02ASK710	Stem bush ø28
02ASK090	Stem bush 3/8"
02ASK130	Case

*Requires 02ASK070

Cable*¹

905338	Connecting cable (1m/40")
905409	Connecting cable (2m/80")
936937	Connecting cable (1m/40")
905014	Connecting cable (2m/80")
905387	Connecting cable (1m/40")
905013	Connecting cable (2m/80")

*¹: for automatic measurement

Others

02ASK730	Reflector
937179T	Foot switch



i-Checker

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- Vision Measuring Systems
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- Optical Measuring
- Sensor Systems
- Test Equipment and Seismometers
- Digital Scale and DRO Systems
- Small Tool Instruments and Data Management

Mitutoyo Scandinavia AB

Släntv. 6 • Box 712
 SE-194 27 Upplands Väsby
 Tel: 08-594 109 50
 Fax: 08-590 924 10
 info@mitutoyo.se
 www.mitutoyo.se

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