

PORTABLE INSTRUMENTS

HA HELMUTH A. JENSEN A/S
Islevdalvej 187 • 2610 Rødovre • Denmark • Tel. +45 44 91 11 77 • Telefax +45 44 92 13 53
E-mail: info@viking1913.dk • Website: www.viking1913.dk



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Changes in products and/or product specifications can emerge due to new technologies and continuous development.

We reserve the right to change or modify specifications of products without prior notice.

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Company information

INNOVATEST® Group of companies

With its foundation laying in the 19th century (1890) INNOVATEST® has a rock solid position in the market of materials testing instruments, optical measuring equipment and general testing instruments such as surface roughness, wall thickness, vibration, and other portable testing equipment.

For the last 25 years, the owners have largely invested in the product tier Hardness Testing, while still keeping their focus on other product lines.

This leaflet offers you an easy overview of our range of hardness testing instruments, but is limited in showing particular technical details of each individual product.

Please ask our sales team for detailed product leaflets showing all instruments and their details.

Service and calibration

We have confidence in our products. Therefore we offer a limited guarantee of 2 years or longer on all our products. All products are supplied with a quality and guarantee certificate and a service passport.

Our modern workshops and professional technical staff offer service on demand, at any time and at any location in the world. First line, local after sales service and support.

Unique commitment:

Buying an INNOVATEST® portable testing instruments is a secure investment:

Not only you enjoy 2 years guarantee but we also calibrate your instruments 3 years in a row (year of purchasing) according to traceable standards, providing a new certificate after each calibration, FREE OF CHARGE*. Ask our sales department for more details.

Product portfolio

INNOVATEST® develops & manufactures hardness testing instruments, accessories and machine vision systems as well as tester automation. The company further supplies a range of optical instruments such as microscopes, profile projectors, vision measuring systems, roughness testers, wall thickness testers, coating thickness gauges, vibration meters and other quality assurance instruments.

Our goal is to assure you confidence and to reach absolute customer satisfaction by offering high quality affordable instruments and an ever lasting service.

We welcome you to challenge us.

R.H.J.M. Engbersen
Managing Director
Chief Executive Officer

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Portable hardness testers

TH-1100

All instruments in our range are covered by
2 years limited guarantee.

Portable testing instruments have an additional
3 years FREE recalibration service.

Simply send the instrument to our company with a calibration request and we will return the unit to you, calibrated according to traceable standards, with a new 1 year valid certificate.

Portable hardness tester

- Leeb principle, portable rebound hardness tester
- Hardness values in Leeb HLD, Rockwell HRB, HRC, Vickers HV, Brinell HB, Shore HS
- Test results appear directly on the display
- Impact Device D integrated: no cables
- Tests at any angle, even upside down
- Rechargeable Li-on battery
- Simple handling and low test expenditure



Portable hardness testers

TH-170



Portable hardness tester

- Most sold range of portable hardness tester in the world. Superior quality and reliability. Impact device D integrated
- Leeb HL, Rockwell HRB, HRC, Vickers HV, Brinell HB, Shore HS

TH-172



Portable hardness tester

- Impact device C applying low impact energy for surface hardened components and thin walled components
- Leeb HL, Rockwell HRB, HRC, Vickers HV, Brinell HB, Shore HS

TH-174



Portable hardness tester

- Impact device DL for testing confined spaces
- Leeb HL, Rockwell HRB, HRC, Vickers HV, Brinell HB, Shore HS

Portable hardness testers

ROCKY TH-110



Portable hardness tester

- World famous ROCKY portable hardness tester with 3 years free of charge calibration service
- Built-in printer
- Correction for impact direction 360 degrees
- Display scales HL, HRC, HRB, HV, HB, HS and conversion to tensile strength
- Six impact devices are available for special applications



Portable hardness testers

DYNAMIC TH-180



Portable hardness tester

- Hand-held device with a rugged shock-resistant housing
- Large and clear display with adjustable contrast and backlight
- Converts directly to HV, HB, HRC, HRB, HRA, HS
- Highly accurate ± 4 HL (0.5% at 800 HL) with automatic correction for impact direction
- Simple operating menu structure and extensive on-screen help files
- Internal storage up to 2500 batches of data
- Up to 10 wireless impact device, each can store 500 groups on main unit
- Wireless Impact device D stores over 500 groups of data
- Wired Impact device D included in standard delivery
- Down-/upload data from/to PC via USB, Ethernet or RS-232
- The instrument works with different kind of wireless slave units, such as impact device Dw, Cw and DLw
- The data of the slave unit is transferred to the instrument via bi-directional wireless communication
- Six impact devices are available for special applications (see TH-110)

Portable hardness testers

MET-U1A



Ultrasonic Contact Impedance (UCI) system (Vickers)

- Hardness measurements of metals and alloys on standardized hardness scales: Rockwell (HRC), Brinell (HB), Vickers (HV) and Shore (HSD)
- Three additional scales H1, H2, H3 for calibration of self defined hardness scales
- Rm scale for determination of tensile strength
- Typically suitable for components that are unsuitable for dynamic hardness testers (small articles, structures with thin walls, pipes, reservoirs, steel sheets etc.)

HV-400



Ultrasonic Contact Impedance (UCI) system (Vickers)

- Ultrasonic Contact Impedance test principle, fast, accurate, easy to use in confined spaces
- Suitable for hardness tests on metals, plastics, ceramics
- Direct reading in Vickers HV, and direct conversion to HRC, HRB, HB & UTS
- High reproducibility, tolerance within $\pm 1\%$
- Extensive range of application at locations difficult to access
- Large memory, statistics and multiple data outputs
- Windows software for testing, remote control, data processing and file storing

Portable hardness testers

WEBSTER



Portable hardness tester

- The WEBSTER hardness method is ideal for sheet metal, sheet aluminum and other thin materials
- Test is made by simply applying pressure to the handles until "bottom" is felt
- Easy - to - read dial indicator with 20 graduations, permits use of the tester as "Go" and "No - Go" gauge
- Tests materials up to 13mm in thickness

HB1500



Brinell

- Solid fine finished C-frame
Load applied comparable to 10mm ball at 3000kgf
- Easy to operate, also under difficult and harsh conditions
- Tolerance of test force <math><0.5\%</math>
- Test force is controlled by a shear pin
- Two types of application:
C clamp and hammer impact
- Suitable for assemblies inconvenient to be taken to the lab and not allowed to be cut
- Accuracy of the hammer configuration is much higher than any other type hammer impact tester
- Used to test the hardness of forgings, castings, steels, nonferrous metal and its alloy products, and to test the hardness of annealed, normalizing and tempered mechanical parts

Portable hardness testers

INSTRUMATIC



Portable hardness tester

The large clearly marked dials on this type of instruments covers a full range of hardness values in Vickers, Brinell, Rockwell A, B, C, and K_p/mm^2 according to the British, American and German specifications.

The system is entirely mechanical employing the use of special pre-loaded springs which provide a load of about 15kg.

RANGEMASTER



Portable hardness tester

- Dynamic test indicator
- Hardness values in all major international scales with simple conversion facilities from one to the other
- RS-232 output for connection to PC or serial printer
- Memory storage capacity in excess of 400 readings
- Integral icon facility provides operator with easy visual identification of mode in which unit is operating

Ultrasonic thickness gauges

TT-100



Ultrasonic thickness gauge

- Easy to operate ultrasonic wall thickness gauge
- Suitable for metal, glass, homogeneous plastics
- Standard 5 MHz transducer included
- Sound velocity range up to 9999m/s
- Clear 4-Digit LCD display
- Display resolution 0.1 mm
- Memory for 10 readings
- 5 pre-set sound velocities for repeating applications

TT-120



Ultrasonic thickness gauge

- Easy to operate ultrasonic wall thickness gauge
- Special model featuring high-speed test mode for high temperature steel surfaces up to 300°C
- Standard ZW5P shielded transducer (high temperature) included
- Clear 4-Digit LCD display
- Display resolution 0.1 mm

TT-130



Ultrasonic thickness gauge

- Easy to operate ultrasonic wall thickness gauge with enhanced 0.01mm reading
- Suitable for metal, glass homogeneous plastics
- Standard 5 MHz transducer included
- Sound velocity range up to 9999m/s
- 5 pre-set sound velocities for repeating applications
- Clear 4-Digit LCD display
- Memory for 10 readings

Ultrasonic thickness gauges

TT-300



Ultrasonic wall thickness gauge

- Easy to operate ultrasonic wall thickness gauge for metals, glass, plastics etc.
- Range 1.2mm to 225mm (steel)
- Display resolution selectable over menu
- Large internal memory for 500 readings
- Including protection case, couplant and carrying case
- Min. mode for minimum thickness measurement
- Automatic zero setting
- Two-point calibration possible
- LCD display with backlight
- Mm/inch selectable
- Data output RS-232

TT-320



Ultrasonic thickness gauge

- Special model for testing thickness of high temperature steel surface up to 300°C
- Min. mode for minimum thickness measurement
- Two-point calibration possible
- Automatic zero setting
- LCD display with backlight
- Large internal memory 500 readings
- Mm/inch selectable

TT-340



Ultrasonic thickness gauge

- Easy to operate handheld ultrasonic thickness gauge especially casting materials
- Min. mode for minimum thickness measurement
- Two-point calibration possible
- Automatic zero setting
- LCD display with backlight
- Large internal memory 500 readings
- Mm/inch selectable

Ultrasonic thickness gauges

TT-500



Ultrasonic thickness gauge

- A-Scan method for waveform verification
- Echo-echo mode to determine the distance excluding the coating between two echoes
- Two Alarm modes:
Standard High-Low and Previous thickness
- Two Differential modes:
Thickness difference between actual measuring and reference value; Percent difference between actual measuring and reference value
- Min. and Max. mode
- Wide thickness range (0.75mm - 508mm)

TT-700



Ultrasonic thickness gauge

- Especially suitable for testing thin workpieces
- Range 0.15mm to 20mm
- I-E testing mode and E-E testing mode
- Sound velocity testing and single point calibration
- Sound alarm and differential mode are available
- Data store, view and delete
- Results can be print out and transferred to PC
- Mm/inch selectable

Roughness testers

TR-110



Surface roughness tester

- Both Ra and Rz parameters in one instrument
- LCD with back-light, dynamic test display: progress bar gives indication of measuring process
- Protection slide on pick-up
- Auto-off after 90 seconds
- Software calibration
- Large measuring range suitable for most materials
- Piëzo-electric pick-up stylus for external surfaces

TR-200



Surface roughness tester

- Measures Ra, Rz, Ry, Rq, Rt, Rp, Rmax, Rv, R3z, RS, RSm, RSk, Rmr roughness parameters, digital filters
- Easy to operate menu software
- Graphical display on large LCD shows roughness graphics and statistics
- DYNAMIC, inductive pick-up stylus
- Pick-up stylus position indicator
- Auto-off after 5 minutes, with auto-store
- Data output RS-232 to printer or PC
- Excellent battery power with Li-ion technology
- Including free software
- Optional pick-up for grooves/bores and holes

Roughness testers

TR-220



Surface roughness tester

- Measures Ra, Rz, Ry, Rq, Rt, Rp, Rmax, Rv, R3z, RS, RSm, RSk, Rmr, Rpc, Rk, Rpk, Rvk, Mr1 & Mr2 roughness parameters, digital filters
- Easy to operate menu software
- Graphical display on large LCD shows roughness graphics and statistics
- DYNAMIC, inductive pick-up stylus
- Pick-up stylus position indicator
- Auto-off after 5 minutes, with auto-store
- Data output RS-232 to printer or PC
- Excellent battery power with Li-ion technology
- Optional pick-up for grooves/bore and holes

TR-300



Surface form & finish tester

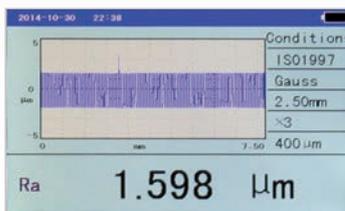
- Measures Roughness, waviness and primary profile;
Ra, Rp, Rv, Rt, Rz, Rq, RSk, Rku, Rc, RS, RSm, Rlo, RHSC, R_{Pc}, Rmr(c), RzJIS, R3y, R3z, Wa, Wp, Wv, Wt, Wz, Wq, WSk, Wku, Wc, WS, WSm, Wlo, WHSC, W_{Pc}, Wmr(c), Wz JIS, Pa, Pp, Pv, Pt, Pz, Pq, PSk, Pku, Pc, PS, PSm, Plo, PHSC, PPc, Pmr(c), PzJIS, Rk, Rpk, Rvk, Mr1, Mr2 according to ISO/DIN/ASTM and JIS standards
- Cut-off length 0.08, 0.25, 0.8, 2.5, 8mm
- LCD, digital graphic display
- Skidded and skidless pick-ups available
- Memory for 10 groups of primary data
- Advanced Windows software available for data evaluation and storage
- RS-232 and USB connectivity

Roughness testers

TIME® 3220/3221



**2 new models of roughness testers
robust enough for the shop floor
and flexible enough for a quality
inspection room.**



Surface roughness tester

- Large range of parameters and graphical measuring system.
- High resolution industrial touch screen
- Digital and analogue filtering methods (2RC, GAUSS)
- Complies to ISO, ASTM, JIS standards
- Can be connected to TIME® TA230 printer, prints all parameters and graphs
- Built-in standard RS232 interface and USB interface
- Automatic switch off
- Integrated design, simple to use

Roughness testers

R-130/135



Surface roughness tester

- Swivel stylus roughness tester, allows testing in different directions and confined spaces
- Protruding pick-up stylus allows external and internal surface finish testing
- Ra and Rz parameters or parameter on request
- Standard cut-off 0.8mm, adjustable to 1-3-5 times
- Piëzo-electric pick-up stylus for external surfaces with diamond tip of 2 micron according to the latest ISO standards
- R-135 with data output to printer or PC
- Standard 9V battery

Concrete testers and Vibration testers

TC-100/110



Concrete tester

- Detection of rebar and other metal building elements (such as steel pipes) and their orientation
- Easy and accurate measurement of concrete cover depth and rebar diameter
- Self correction function for the influence of neighbouring bars
- Large LCD display with backlight
- RS-232 output and data memory
- Metric or imperial (mm/inch) setting
- Optical as well as acoustic position signals

TC-200



Concrete tester

- Entire English display, clear and easy to use
- Direct digital read-out of the crack depth
- Use special bracket to ensure the accuracy of two testing points
- Data base to store and manage completed test data for analysis reporting RS-232 interface to PC

TC-300



Concrete tester

- Measuring the thickness of concrete
- No coupling agents required
- Works through paint and most types of bonded tile
- Easy to read LCD backlit display
- Displays in mm or in inches
- Download data to excel RS-232 and USB connectivity
- Built-in Data storage and Data logging
- Memory for 32,000 tests and 4,000 components identification

TV-200



Vibration tester

- Used for fast failure detecting of motor, electric fan, pump, air compressor, and machine tool bearings
- For quick checking direct test results, clearly displayed
- Guard against mechanical malfunction
- Automatic switch-off after 40 seconds

Coating thickness gauges

TT-220



Coating thickness gauge F probe

- For ferrous substrates
- Economic type, integrated probe, no cables
- Continuous or single measurement modes
- Statistics
- Real time or batch printing with TA-230 printer
- Rechargeable batteries

TT-230



Coating thickness gauge N probe

- For insulating coatings on non ferrous substrates
- Economic type, integrated probe, no cables
- Continuous or single measurement modes
- Statistics
- Real time or batch printing with TA-230 printer
- Rechargeable batteries

Coating thickness gauges

TT-210



Coating thickness gauge F/N

- Pocket type, easy to use menu structure
- Integrated probe F/N
- Measurement modes: continuous/single
- Automatic calculation: Mean/Max/Min/No./S.Dev
- Upper-lower limit setting and sound alarm
- Data output RS-232 to printer TA-230 or PC
- Storage function for 500 measuring results
- Automatic substrate recognition
- Statistics
- Battery operated

TT-211



Coating thickness gauge F

- Ferrous only, ideal for car painters
- Integrated probe F
- Auto off
- Mm/inch selectable
- Battery operated

TT-260



Coating thickness gauge

- Robust design with removable integral printer
- Large measuring range with several probes such as F, FN etc. available
- Direct testing mode and batch statistics mode (APPL/BATCH)
- Direct print out of statistical values
- Data transmission to pc with Dataview software

TT-270



Coating thickness gauge

- Two measuring methods: magnetic induction (F) & eddy current (N)
- Large measuring range with several probes such as F1, N1, F1/90, F10, CN02, F400 available
- Measurement modes: continuous / single
- Automatic calculation: Mean values / Max. values / Min. values / No of tests, S.Dev
- Memory for maximum 640 readings
- Integrated printer
- Battery low indication
- Switch off modes: manual and auto

Coating thickness gauges

CG330



Coating thickness gauge

- CG330 memory 10,000 readings, 100 batches
- 20 probes available, F, NF, combined
- Direct testing mode and batch statistics mode
- Large memory with block statistics computation
- Coating-through-coating feature
- Data output to printer CG300 or PC

CG600



Ultrasonic coating thickness gauge

- Designed for non-destructive coating thickness measurement
- Paint, varnish, plastics and other insulation coatings applied on wood, plastics, glass, ceramics, etc. as well as for polymer layers on metal
- Total thickness as well as the individual layers in one measuring process
- Appropriate for use in laboratory
- Data output to printer CG300 or PC

CG650



Coating thickness gauge

- Coating thickness gauge with rubber rimmed casing for use in the field.
- Designed with new sensor made of carbide metal tip
- For non-magnetic coatings on steel (range 0- 3000micron) (F sensor)
- For insulating coatings on non-ferrous metal materials (range 0- 2000 micron) (N sensor)
- For insulating coatings on non-ferrous metal materials (range 0- 2500 micron) (FN sensor; identifies substrate material and switches to the suitable measuring principle)
- Battery operated with backlit display
- Data transfer possible through USB with transfer program

CG170



Coating thickness gauge

- Coating thickness gauge with built in combined FN sensor or F sensor
- Designed for easy and fast non-destructive coating thickness measurement
- For non-magnetic coatings on steel (range 0- 3000micron)
- For insulating coatings on non-ferrous metal materials (range 0- 2500 micron) (FN sensor)

Thickness gauges

CG500



Wall thickness gauge

- Considerably improved measuring properties due to SIDSP signal
- Non-destructive wall thickness measurement up to 4mm and/or 10mm
- Up to 20 measurements per second
- For all non-magnetic materials such as plastics, wood, glass, ceramics, glass fiber, carbon fiber laminates, non-ferrous metals, etc.
- For hollow parts and containers of all kinds such as bottles, cans, injection moulding products, etc.
- Also for plastic sheets, automotive body parts, glass panes, SMC plastics other large-sized components, etc.
- Complete measuring technique is integrated in the sensor

PT900



Pinhole detector

- Light-weight and hand-held test electrodes provide convenient operation
- Test method conforms to DIN 55 670
- 15 sensitivity settings
- Pre-set test voltages related to material thickness
- Backlit display to indicate current test voltage, number of pores and material thickness
- High voltage probe with equipment on and pore indicator tested
- Residual voltage indicator for variable test voltages of industrial steel constructions

CG700



Thickness gauge

- Correct readings, interference free measurement, precise evaluation due to SIDSP® process signal
- Extended field of application through exchangeable sensors
- High flexibility of use through versatile sensors (the CG700 sensor can be changed from built-in to external sensor on a lead)
- Automatic substrate identification
- Efficient temperature compensation
- High precision characteristic curves achieved during the manufacturing process by calibrating up to 50 calibration points
- Large memory capacity for storing up to 100,000 readings in 10 and/or 100 batches
- Readings and statistical values can be called-up individually
- Large, easy-to-read backlit graphics display, with 180° rotatable display orientation
- Built-in IrDA port for infrared data transmission to printer or PC

Shore durometers

SHA



Shore A

- Fast and easy to read
- Hand - held operation or via optional bench stand
- Available in Shore A
- Testing rubbers, plastics, leather and other soft materials
- Supplied with a setting / reference block
- The optional bench stand is intended for use with 1kg loading
- According to DIN 53505, ASTM D2240, ISO R/868
- UKAS certified

SHD



Shore D

- Fast and easy to read
- Hand - held operation or via optional bench stand
- Available in Shore D
- Testing rubbers, plastics, leather and other soft materials
- Supplied with a setting / reference block
- The optional bench stand is intended for use with 5kg loading
- According to DIN 53505, ASTM D2240, ISO R/868
- UKAS certified

Shore durometers

DSAS001



Shore A

- Testing rubber, plastic, leather and all other soft materials
- Large digital display, digits 8mm high
- Use by hand or mounted on a stand
- Supplied with a reference block
- Data output for SPC
- Power on/off automatic
- Electronic module protection to IP65, even with data output
- Can be used in conjunction with Shore bench stand
- UKAS certified

DSDS001



Shore D

- Testing rubber, plastic, leather and all other soft materials
- Large digital display, digits 8mm high
- Use by hand or mounted on a stand
- Supplied with a reference block
- Data output for SPC
- Power on/off automatic
- Electronic module protection to IP65, even with data output
- Can be used in conjunction with Shore bench stand
- UKAS certified

Shore durometers

THS-200/A



Shore A

- Pocket size model with integrated probe
- Meets DIN 53505, ASTM D 2240, ISO 7619
- RS-232 data output
- Operating stand optional
- Bright and clear LCD display
- 300 hours continuous use with standard batteries

THS-210/A



Shore D

- Pocket size model with integrated probe
- Testing hard rubber, plastic and other soft materials
- According to DIN 53505, ASTM D 2240, ISO 7619, JIS K7215
- RS-232 data output
- Operating stand optional
- Bright and clear LCD display
- Automatic switch off
- Battery low indication

Represented by:



HELMUTH A. JENSEN A/S

Islevdalvej 187 • 2610 Rødovre • Denmark • Tel. +45 44 91 11 77 • Telefax +45 44 92 13 53
E-mail: info@viking1913.dk • Website: www.viking1913.dk

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