

MICRO-VICKERS HARDNESS TESTER CV-400AAT™

Motorized turret with analogue measurement microscope and easy-to-use integrated hardness calculator

- Motorized turret
- High quality microscope with analogue scale
- Fully automatic load control
- Easy-to-use operating system
- Two optical paths
- Built-in high speed thermal printer
- XY stage with minimum reading of 0.01mm
- CV-CCD Video measurement system optional
- Dual indenter (Vickers/Knoop) turret optional
- 2kg load optional

Typical applications

- Steels, nonferrous metals, IC wafers, small precision components
- Thin plastic, metallic foils, plating, coating, surface layers, laminated metals
- Effect of heat treatment, case depth analysis, depth of carburised and flame hardened layers



Technical specifications

Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1 (HV2)
Display	Shows: hardness readings through calculator input, general settings, diagonals, dwell time, RS-232 connections, illumination settings
Test load	10 - 25 - 50 - 100 - 200 - 300 - 500 - 1000gf (2000gf optional)
Accuracy	Conforms to EN-ISO 6507 and ASTM E384
Load control	Automatic (loading/dwell/unloading)
Load duration	5 to 60 sec (5 sec increments)
Test force selection	By dial knob; applied load shows on display
Microscope	
Objectives	10x, 40x
Eyepiece magnification	15x / mechanical thumbwheel
Total magnification	150x (observation), 600x (measurement)
Measuring range	200µm
Resolution	0.03µm
XY stage	
Dimensions	100mm x 100mm
Travel range	25mm x 25mm
Resolution	0.01mm (micrometers)
Specimen	
Maximum height	85mm (2.55")
Maximum depth	90mm (3.35") (from the centre)
Optical path	2-way switchable
Power supply	110-220V, 50Hz
Dimensions	470mm x 210mm x 420mm
Weight	36kg

Standard delivery

- Main unit
- Motorized turret
- Diamond indenter Vickers
- Objectives 10x, 40x
- Eyepiece 15x
- XY-stage with micrometers
- Adjustable feet (3pcs)
- Clamping devices (3pcs)
- Extension tube for CCD-camera
- Analogue eyepiece incl. protection cover
- Spirit level
- Micro-Vickers test plates (2pcs)
- Spare light bulb 12V-30W
- Spare fuses (2pcs)
- Installation and user manual
- CV Instruments certificate

Optional accessories

- 2kg test load / scales
- Knoop indenter
- Precision vice
- Video filar system
- Certified indentors and test blocks

Optional system

- CV-CCD system for (semi-) and automatic traverses, pattern testing through pc support and motorised XY stage

MICRO-VICKERS HARDNESS TESTER CV-400DAT™

Motorized turret with digital measurement microscope, menu operated user interface

- Motorized turret
- High quality digital microscope for efficient operation
- Fully automatic load control
- Easy operating system
- Two optical paths
- Built-in high speed thermal printer
- XY stage with minimum reading of 0.01mm
- CV-CCD Video measurement system optional
- Dual indenter (Vickers/Knoop) turret optional
- 2kg load optional

Typical applications

- Steels, nonferrous metals, IC wafers, small precision components
- Thin plastic, metallic foils, plating, coating, surface layers, laminated metals
- Effect of heat treatment, case depth analysis, depth of carburised and flame hardened layers



Technical specifications

Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1 (HV2)
Display	Dwell time (sec), hardness value, menu operated user interface, shows: hardness readings, general settings, diagonals, dwell time, RS-232 connections, illumination settings
Test load	10 - 25 - 50 - 100 - 200 - 300 - 500 - 1000gf (2000gf optional)
Accuracy	Conforms to EN-ISO 6507 and ASTM E384
Load control	Automatic (loading/dwell/unloading)
Load duration	5 to 60 sec (5 sec increments)
Test force selection	By dial knob; applied load shows on display
Microscope	
Objectives	10x, 40x
Eyepiece magnification	15x / mechanical thumbwheel, digital encoder built-in
Total magnification	150x (observation), 600x (measurement)
Measuring range	200µm
Resolution	0.03µm
XY stage	
Dimensions	100mm x 100mm
Travel range	25mm x 25mm
Resolution	0.01mm (micrometers)
Specimen	
Maximum height	85mm (2.55")
Maximum depth	90mm (3.35") (from the centre)
Optical path	2-way switchable
Power supply	110-220V, 50Hz
Dimensions	470mm x 210mm x 420mm
Weight	36kg

Standard delivery

- Main unit
- Motorized turret
- Diamond indenter Vickers
- Objectives 10x, 40x
- Digital eyepiece 15x
- XY-stage with micrometers
- Adjustable feet (3pcs)
- Clamping devices (3pcs)
- Extension tube for CCD-camera
- Digital eyepiece incl. protection cover
- Spirit level
- Micro-Vickers test plates (2pcs)
- Spare light bulb 12V-30W
- Spare fuses (2pcs)
- Installation and user manual
- CV Instruments certificate

Optional accessories

- 2kg test load / scales
- Knoop indenter
- Precision vice
- Video filar system
- Certified indentors and test blocks

Optional system

- CV-CCD system for (semi-) and automatic traverses, pattern testing through pc support and motorised XY stage

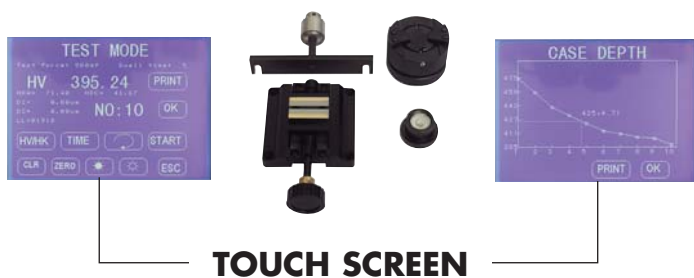
MICRO-VICKERS HARDNESS TESTER CV-400DTS™

Motorized turret with digital measuring microscope, touch screen user interface

- Motorized turret
- High quality digital microscope for efficient operation
- Fully automatic load control
- Easy to use operating system
- Case depth measurement with graphical display
- Two optical paths
- Built-in high speed thermal printer
- XY stage with minimum reading of 0.01mm
- CV-CCD Video measurement system optional
- Dual indenter (Vickers/Knoop) turret optional
- 2kg load optional

Typical applications

- Steels, nonferrous metals, IC wafers, small precision components
- Thin plastic, metallic foils, plating, coating, surface layers, laminated metals
- Effect of heat treatment, case depth analysis, depth of carburised and flame hardened layers



TOUCH SCREEN



Technical specifications

Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1 (HV2)
Display	Dwell time (sec), hardness value, menu operated user interface, shows: hardness readings, general settings, diagonals, dwell time, case depth analysis, RS-232 connections, illumination settings
Test load	10 - 25 - 50 - 100 - 200 - 300 - 500 - 1000gf (2000gf optional)
Accuracy	Conforms to EN-ISO 6507 and ASTM E384
Load control	Automatic (loading/dwell/unloading)
Load duration	5 to 60 sec (5 sec increments)
Test force selection	By dial knob; applied load shows on display
Microscope	
Objectives	10x, 40x
Eyepiece magnification	15x / mechanical thumbwheel, digital encoder built-in
Total magnification	150x (observation), 600x (measurement)
Measuring range	200µm
Resolution	0.03µm
XY stage	
Dimensions	100mm x 100mm
Travel range	25mm x 25mm
Resolution	0.01mm (micrometers)
Specimen	
Maximum height	85mm (2.55")
Maximum depth	90mm (3.35") (from the centre)
Optical path	2-way switchable
Power supply	110-220V, 50Hz
Dimensions	470mm x 210mm x 420mm
Weight	36kg

Standard delivery

- Main unit
- Motorized turret
- Diamond indenter Vickers
- Objectives 10x, 40x
- Eyepiece 15x
- XY-stage with micrometers
- Adjustable feet (3pcs)
- Clamping devices (3pcs)
- Extension tube for CCD-camera
- Digital eyepiece incl. protection cover
- Spirit level
- Micro-Vickers test plates (2pcs)
- Spare light bulb 12V-30W
- Spare fuses (2pcs)
- Installation and user manual
- CV Instruments certificate

Optional accessories

- 2kg test load / scales
- Knoop indenter
- Precision vice
- Certified indentors and test blocks

Optional system

- CV-CCD system for (semi-) and automatic traverses, pattern testing through pc support and motorised XY stage

MICRO-VICKERS HARDNESS SYSTEM CV-400DM™

Motorized turret, digital measuring microscope with external ccd monitor system

- "Easy measure" monitor system
- Motorized turret
- High quality digital microscope
- Fully automatic load control
- Easy to use operating system
- Two optical paths
- Built-in high speed thermal printer
- XY stage with minimum reading of 0.01mm
- Dual indenter (Vickers/Knoop) turret optional
- 2kg load optional

Typical applications

- Steels, nonferrous metals, IC wafers, small precision components
- Thin plastic, metallic foils, plating, coating, surface layers, laminated metals
- Effect of heat treatment, case depth analysis, depth of carburised and flame hardened layers



Technical specifications

Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1 (HV2)
Display	Dwell time (sec), hardness value, menu operated user interface, shows: hardness readings, general settings, diagonals, RS-232 connections, illumination settings. CCD camera on eyepiece projects indentation on standard accessory CRT screen, allowing easy to read and more accurate measurement
Test load	10 - 25 - 50 - 100 - 200 - 300 - 500 - 1000gf (2000gf optional)
Accuracy	Conforms to EN-ISO 6507 and ASTM E384
Load control	Automatic (loading/dwell/unloading)
Load duration	5 to 60 sec (5 sec increments)
Test force selection	By dial knob; applied load shows on display
Microscope	
Objectives	10x, 40x
Eyepiece magnification	15x / mechanical thumbwheel, digital encoder built-in
Total magnification	150x (observation), 600x (measurement)
Measuring range	200µm
Resolution	0.03µm
XY stage	
Dimensions	100mm x 100mm
Travel range	25mm x 25mm
Resolution	0.01mm (micrometers)
Specimen	
Maximum height	85mm (2.55")
Maximum depth	90mm (3.35") (from the centre)
Optical path	2-way switchable
Power supply	110-220V, 50Hz
Dimensions	470mm x 210mm x 420mm
Weight	36kg

Standard delivery

- Main unit with CCD Camera and monitor
- Motorized turret
- Diamond indenter Vickers
- Objectives 10x, 40x
- Eyepiece 15x
- XY-stage with micrometers
- Adjustable feet (3pcs)
- Clamping devices (3pcs)
- Extension tube for CCD-camera
- Digital eyepiece incl. protection cover
- Spirit level
- Micro-Vickers test plates (2pcs)
- Spare light bulb 12V-30W
- Spare fuses (2pcs)
- Installation and user manual
- CV Instruments certificate

Optional accessories

- 2kg test load / scales
- Knoop indenter
- Precision vice
- Certified indentors and test blocks

Optional system

- CV-CCD system for (semi-) and automatic traverses, pattern testing through pc support and motorised XY stage

VICKERS/MICRO-VICKERS VIDEO FILAR SYSTEM CV-CCD™

Fast and easy determination of Vickers/Micro-Vickers hardness on PC, featuring hardness depth graphics



CV-CCD system

Unique, user friendly system combines the power, speed and flexibility of a personal computer with the precision of our Vickers/Micro-Vickers hardness testers series, to accommodate a full spectrum of micro hardness testing requirements.

Simple test procedure, user defines simple or complex pattern for automatic positioning and indentation. The software automatically measures and records indentation size and hardness measurement. Results display includes depth versus hardness XY plotting as well as statistics and individual indent results.

Ideal for industrial, production, and research applications. Measurements are made through the high-resolution video camera system. Productivity is dramatically increased due to the elimination of time consuming, stage and eyepiece manual intervention, typically associated with high quantity pattern testing.

Standard delivery

- Different configurations available depending on specific requirements. Please contact our sales department for advice.

VICKERS/MICRO-VICKERS VIDEO FILAR SYSTEM CV-CCD™

Fast and easy determination of Vickers/Micro-Vickers hardness on PC, featuring hardness depth graphics

CV-CCD1, Video filar system 1 Basic system for individual tests with PC

Standard delivery

- Software level 1
- Frame grabber card
- Micrometer
- CCD-camera 1/2" pal, C-mount
- Cable-camera with frame grabber, UIB
- Camera adapter direct
- Camera power supply 12V
- Applicable on our models:
CV-400AAT, CV-400DAT, CV-400DTS, CV-405AAT, CV-410AAT,
CV-430AAT, CV-450AAT, CV-405DAT, CV-410DAT, CV-430DAT, CV-450DAT

Option:

Automatic positioning and indentation

Languages available:

English, French, German, Spanish, Italian, Swedish, Portuguese, Polish, Czech, Hungarian

Excluding:

PC, monitor, keyboard, mouse and hardness tester
Minimum PC configuration:
Pentium IV, 2GHz, 256MB, 2PSI-slot, 2 USB, 2 RS-232, Grafic card
(ATI-Radeon or Intel 745), CD-rom, Hard disk

CV-CCD2, Video filar system 2 Basic system for testing traverses with PC

Standard delivery

- Software level 1
- Frame grabber card
- CCD-camera 1/2" pal, C-mount
- Digital micrometer (1)
- Cable-camera with frame grabber, UIB
- Camera adapter hardness tester
- Camera power supply 12V
- Micrometer clamp
- Cable PC SER-hardness tester
- Applicable on our models:
CV-400AAT, CV-400DAT, CV-400DTS, CV-405AAT, CV-410AAT,
CV-430AAT, CV-450AAT, CV-405DAT, CV-410DAT, CV-430DAT, CV-450DAT

Option:

Automatic positioning and indentation

Languages available:

English, French, German, Spanish, Italian, Swedish, Portuguese, Polish, Czech, Hungarian

Excluding:

PC, monitor, keyboard, mouse and hardness tester
Minimum PC configuration:
Pentium IV, 2GHz, 256MB, 2PSI-slot, 2 USB, 2 RS-232, Grafic card
(ATI-Radeon or Intel 745), CD-rom, Hard disk

CV-CCD3, Video filar system 3 Semi-automatic configuration with PC

Standard delivery

- Software level 2
- X-Y table 100mm x 100mm or 160mm x 100mm
- FM stepper box 2-AXIS
- Frame grabber card
- CCD-camera 1/2" pal, C-mount
- Cable-camera with frame grabber, UIB
- Table adapter
- Camera adapter direct
- Camera power supply 12V
- Cable PC SER-hardness tester
- Cable PC SER-FM stepper box
- Applicable on our models:
CV-400AAT, CV-400DAT, CV-400DTS, CV-405AAT, CV-410AAT,
CV-430AAT, CV-450AAT, CV-405DAT, CV-410DAT, CV-430DAT, CV-450DAT

Option:

Automatic positioning and indentation

Languages available:

English, French, German, Spanish, Italian, Swedish, Portuguese, Polish, Czech, Hungarian

Excluding:

PC, monitor, keyboard, mouse and hardness tester
Minimum PC configuration:
Pentium IV, 2GHz, 256MB, 2PSI-slot, 2 USB, 2 RS-232, Grafic card
(ATI-Radeon or Intel 745), CD-rom, Hard disk

CV-CCD4, Video filar system 4 Full-automatic system for testing complex patterns and traverses with PC

Standard delivery

- Software fully automatic
- X-Y table 100mm x 100mm or 160mm x 100mm
- FM stepper 3-AXIS
- Z-axis installation kit
- Frame grabber card
- CCD-camera 1/2" pal, C-mount
- Cable-camera with frame grabber, UIB
- Table adapter
- Camera adapter hardness tester
- Camera power supply 12V
- Cable PC SER-hardness tester
- Cable PC SER-FM stepper box
- Applicable on our models:
CV-400AAT, CV-400DAT, CV-400DTS, CV-405AAT, CV-410AAT,
CV-430AAT, CV-450AAT, CV-405DAT, CV-410DAT, CV-430DAT, CV-450DAT

Languages available:

English, French, German, Spanish, Italian, Swedish, Portuguese, Polish, Czech, Hungarian

Excluding:

PC, monitor, keyboard, mouse and hardness tester
Minimum PC configuration:
Pentium IV, 2GHz, 256MB, 2PSI-slot, 2 USB, 2 RS-232, Grafic card
(ATI-Radeon or Intel 745), CD-rom, Hard disk