HZ50-4
Hardness tester by Presi

PRESI
BE PRECISE.

FULLY AUTOMATIC HARDNESS TESTER:
OPTICAL QUALITY, RELIABILITY AND PRECISION

PRESI
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HZ50-4
Hardness tester by Presi

The HZ50-4 hardness tester
is instantly recognizable.
100% made in France,
its original design
along with its robustness
and highly technical
capacities make it
an essential work tool.

HZ50-4

Hardness tester by Presi

Fully automatic hardness tester.

7 position turret, equipped
with 4 lenses, 2 indenters,
and 1 touch probe.

High rigidity of the chassis
for a perfect load application.

Large work space with
a major vertical extension.

2 LED lighting system
for micro and macroscopy use.

HZ50-4

Hardness tester by Presi

2 load cells
10g to 50kg loads.

2 cameras for macroscopic
colored view, and microscopic
black & white analysis.

HZ50-4
Hardness tester by Presi

Exclusive feature:
two dimension detection
with sample holder.

Motorized marble stage.

Silent operation.

NIKON objectives,
for a magnification
up to 2000x.

HZ50-4
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Ergonomic joystick
with customizable sensitivity.

Exclusively
USB connected.

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PRESI TOUCH

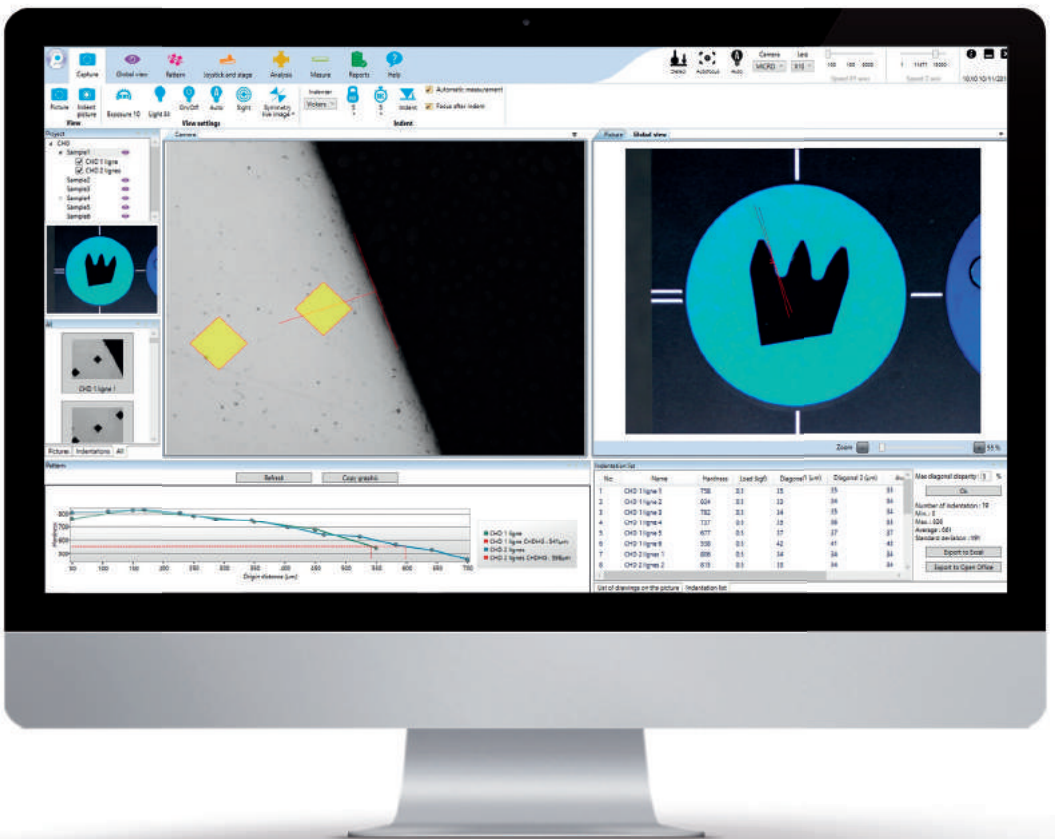Intuitive software with a graphic menu.

100% customizable interface.

Permanent overall view of the results and data.
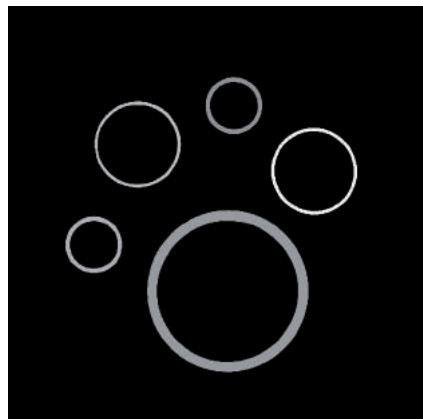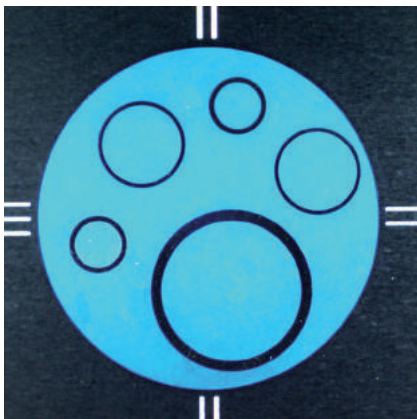
Built-in search engine.

Automatic or manual indent measurement.

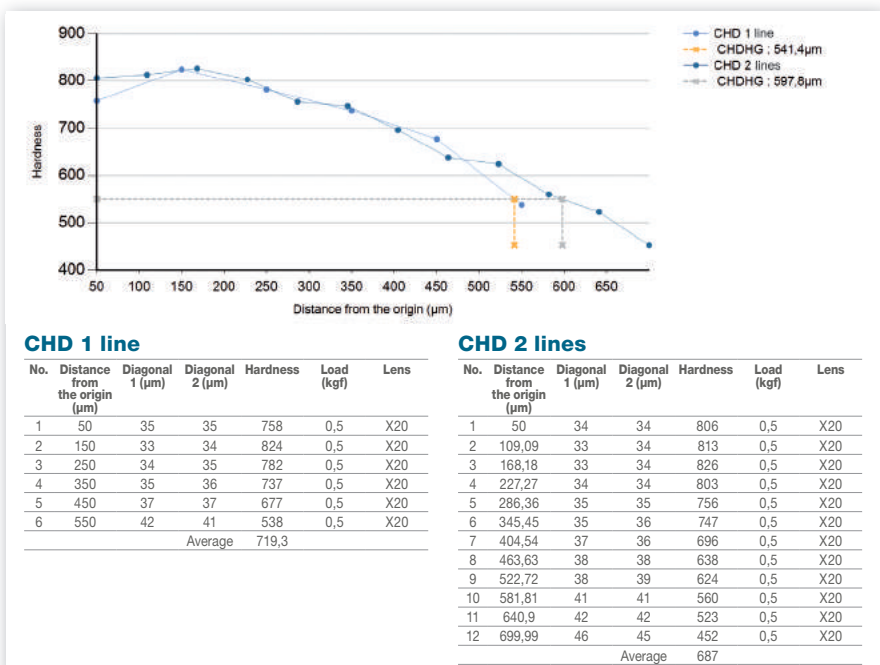Single indent, regular or irregular pattern mapping.

PRESI TOUCH

Automatic sample detection.

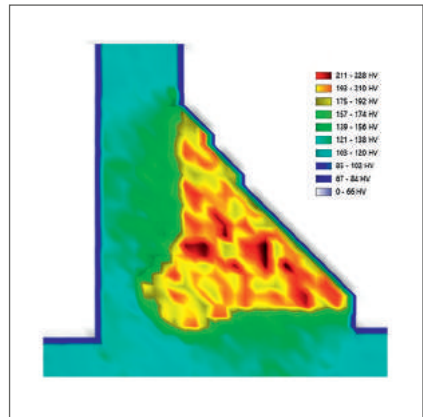Automatic report generator.

CHD 1 line

No.	Distance from the origin (µm)	Diagonal 1 (µm)	Diagonal 2 (µm)	Hardness	Load (kgf)	Lens
1	50	35	35	758	0,5	X20
2	150	33	34	824	0,5	X20
3	250	34	35	782	0,5	X20
4	350	35	36	737	0,5	X20
5	450	37	37	677	0,5	X20
6	550	42	41	538	0,5	X20
			Average	719,3		

CHD 2 lines

No.	Distance from the origin (µm)	Diagonal 1 (µm)	Diagonal 2 (µm)	Hardness	Load (kgf)	Lens
1	50	34	34	806	0,5	X20
2	109,09	33	34	813	0,5	X20
3	168,18	33	34	826	0,5	X20
4	227,27	34	34	803	0,5	X20
5	286,36	35	35	756	0,5	X20
6	345,45	35	36	747	0,5	X20
7	404,54	37	36	696	0,5	X20
8	463,63	38	38	638	0,5	X20
9	522,72	38	39	624	0,5	X20
10	581,81	41	41	560	0,5	X20
11	640,9	42	42	523	0,5	X20
12	699,99	46	45	452	0,5	X20
			Average	687		

Automatic Mapping feature.
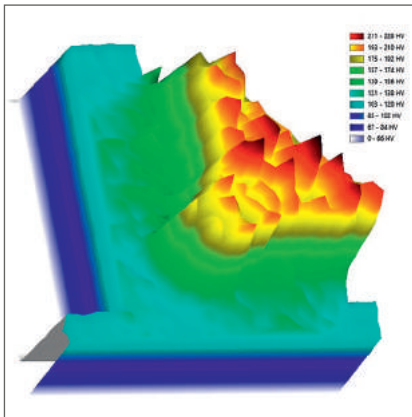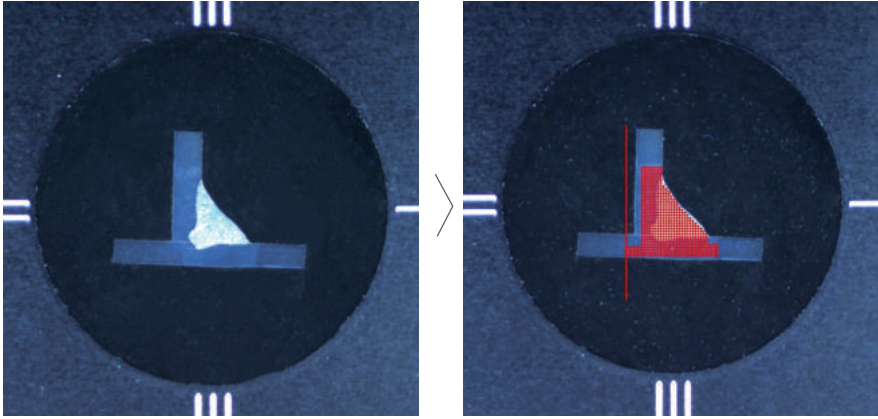
3D mapping

2D mapping

Visual pattern construction,
settings assistant and live view.

Pattern informations

Régular pattern

Name of the pattern	CHD 2 lignes
Number of series	2
Number of point	6
Distance from the edge (µm)	50
Width (µm)	☐ 700
Space X (µm)	100
Space Y (µm)	150
Staggered pitch	☑
Indenter	Vickers
Load (kgf)	0.5
Measure lens	X20
Focus after indent	☑
Simulate hardness (Hv)	700
CHD HG	550

Show numbers ☑
Total number of points : 12

⌄ Coordinates / Irregular pattern

Ok   Cancel   Save template   Use template

PRESI TOUCH

Software

Version	Full automatic
Operating system	Windows 7, 8 & 10 64 bit

Controls

Automatic XYZ movement

XYZ joystick movement

Manual joystick sensitivity control

Automatic Z focus

Automatic and manual light intensity

Features

Various measuring tools

Automatic and manual measurements

Automatic and manual mapping

Single indentation

Pattern/structure indentations (create, save and reopen)

Irregular pattern

Macroscopic view picture

Microscopic/Macroscopic mosaic picture

Automatic load selection

Automatic multi sample detection

Heat treatment feature (CHD)

Integrated search engine

Automatic report generator

Report extraction (PDF, MS Excel, Open Office)
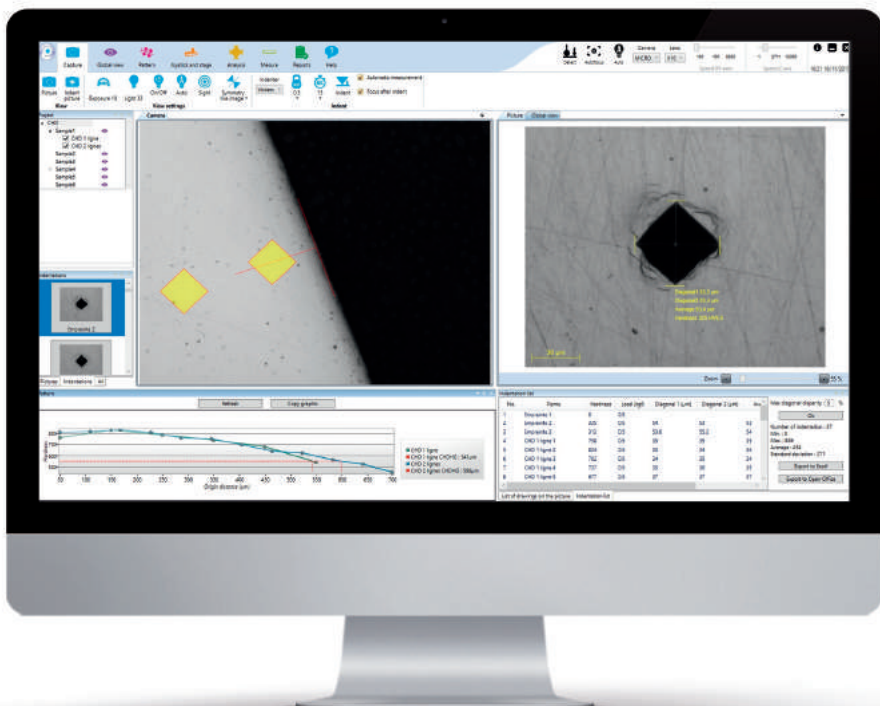
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Load application

Test load range	From 10gf to 50kgf
Scales	Vickers, Knoop
Test load accuracy	<1%
Dwell time	1 - 999 seconds

Turret

Load cells	2
Touch sensor	1
Objectives	4
Magnification	200x to 2000x
Cameras	1 macroscopic view, color 1 microscopic view, black and white
Light source	LED
Z axis travel	250mm with stage
Z axis feeding accuracy	0,05µm

Stage

Material	Marble
Dimensions	420 x 210mm
X axis travel	200mm
Y axis travel	180mm
Stage feeding accuracy	1µm
Max. work piece weight	80kg

General

Power	220W
Ports	3 USB
Standard compliance	ISO 6507 & 4545; ASTM E384 & E92

Accessories

Sample holder
for non mounted sample

Sample holder single place

Sample holder multi place (4 or 6)

Test blocs

800MM

370MM

700MM

80KG

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