SC METROMAT SRL

Compartimentul Comercial: 505600 - Sacele - Piata Libertatii nr.2 - tel/fax: 0268 275 212; 0268 276 807
e-mail: sales@metromat.ro - comert@metromat.ro

INNOVATEST® Durimetre Vickers, seria NOVA 130 & 240



NOVA 130/240 series
Micro Vickers & Knoop hardness tester

The new NOVA 130 & 240 series, Vickers and Knoop hardness testing instruments offer a versatile and user friendly solution for a wide range of micro-hardness scale testing.

For Micro-Vickers & Knoop hardness testing, the NOVA 130 is equipped with a three (3) position turret which includes one indenter position as well as a 10x and 40x objective. For more demanding applications, the NOVA 240 is equipped with a four (4) position turret, including one indenter position as well as 5x, 10x and 40x objectives.

Both units include USB output, up to nine (9) dial selectable test forces and a full color touch screen with interaction dialog support telling the user about the testers current status and what to do next to perform one or more tests.

The intelligent dialog system leads you step by step through the handling of the tester and the bright colors on the display inform in green fields or give warnings in red fields & figures about the outcome of the test results.

The advanced but traditional dead weight NOVA 130/240 series leads in its field of application due to the following key points:

Load selection:
- 8 positions knop; selectable loads, 10gf up to 1kgf (NOVA 130)
- 9 positions knop; selectable loads, 10gf up to 2kgf (NOVA 240)
  (no need to exchange weights)

Optics:
- Analogue or Digital/Electronic eyepiece
- Eyepiece with 15X magnification
- Standard objectives 10X and 40X installed (NOVA 130)
- Standard objectives 5X, 10X and 40X installed (NOVA 240)
- Optional High Resolution CCD camera system can be integrated, directly or afterwards
- High quality objectives providing maximum viewing comfort
- Vertical LED Illuminator
- Laser adjusted optical path
- Dual Channel optical system
- Measuring confirmation button on digital eyepiece

Turret:
- Automatic, high speed, motorized multi position turret
- "Shortest path" program with anti-back lash positioning

Interface & connectivity
- 6,5" Full color high resolution touch screen, tablet type
- Language selectable interaction dialog system
- Graphic tester motion control interface
- Easy operation, no expert skills required, short training time
- Save and load test programs, tester settings
- Limit settings, real time statistics
- Shape correction settings for testing on round parts
- Host and Device USB connectivity
- Integrated high speed thermal printer

Others:
- Prepared for optional remote operation
- Prepared for optional IMPRESSIONS HD Camera & auto measurement systems
- Prepared for optional motorized CNC, X-Y stages
- Prepared for optional motorized Z axis / auto-focus

NOVA 130/240
Micro Vickers & Knoop hardness tester



Overview of test force configurations

Test force versus model number



Scales and testing methods, depending on force configuration

Vickers - DIN EN ISO 6507, ASTM E-384

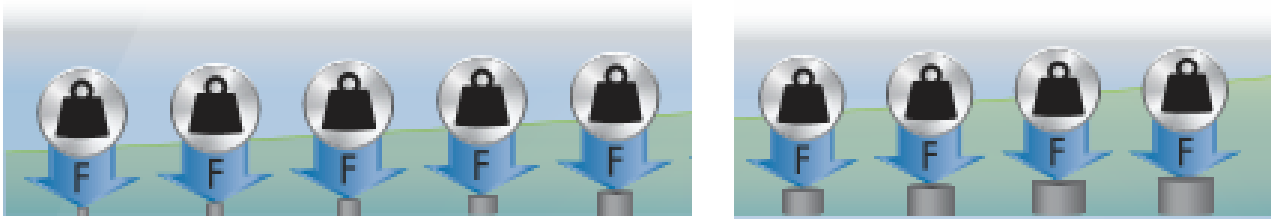


HV0.010	HV0.025	HV0.050	HV0.1	HV0.2	HV0.3
HV0.5	HV1	HV2			

Knoop - DIN EN ISO 4545, ASTM E-384

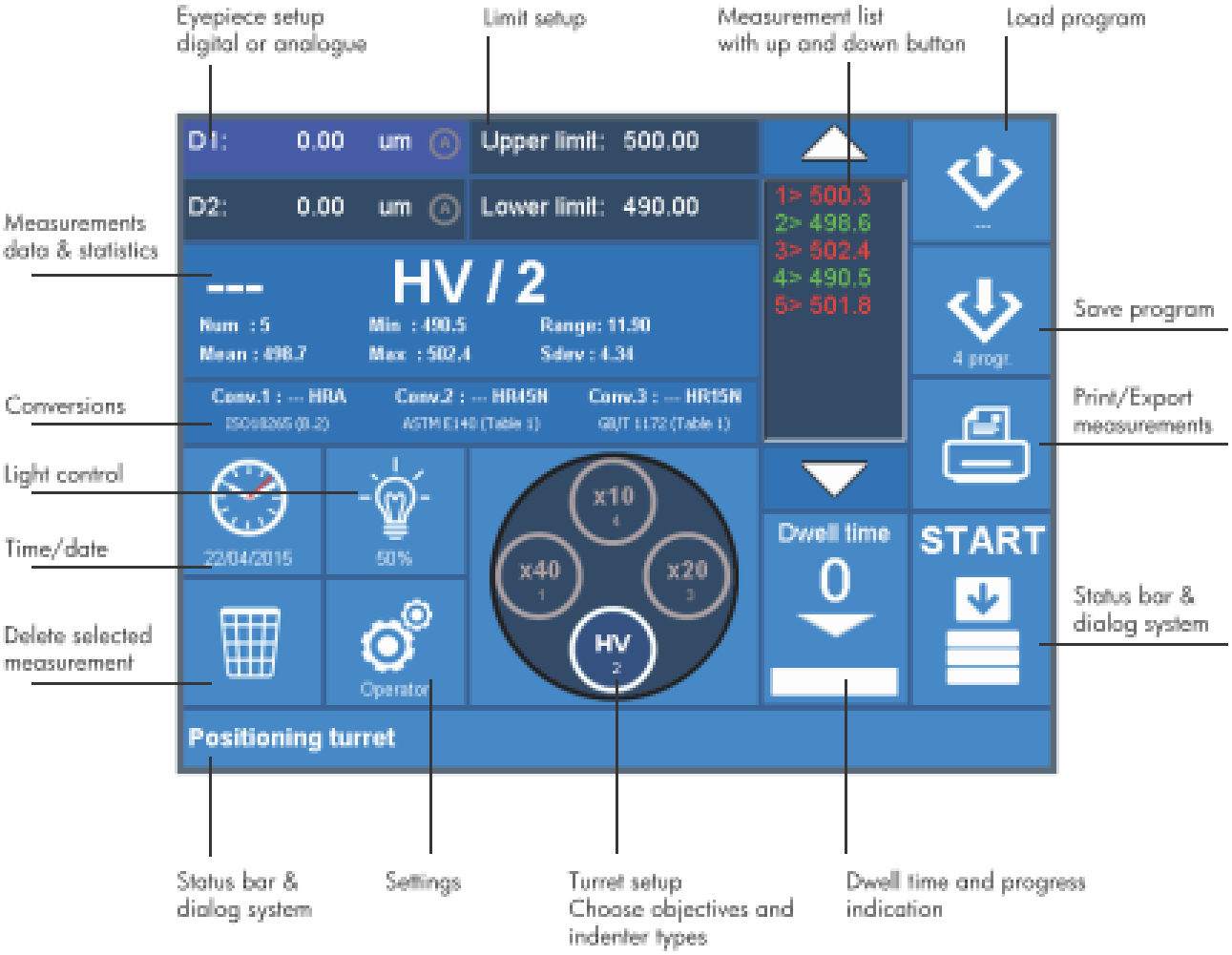


HK0.01	HK0.025	HK0.05	HK0.1	HK0.2	HK0.3
HK0.5	HK1	HK2			



0.010 0.025 0.050 0.1 0.2 0.3 0.5 1 2

NOVA 130/240
User interface



Measurement
within limits



Measurement
outside limits



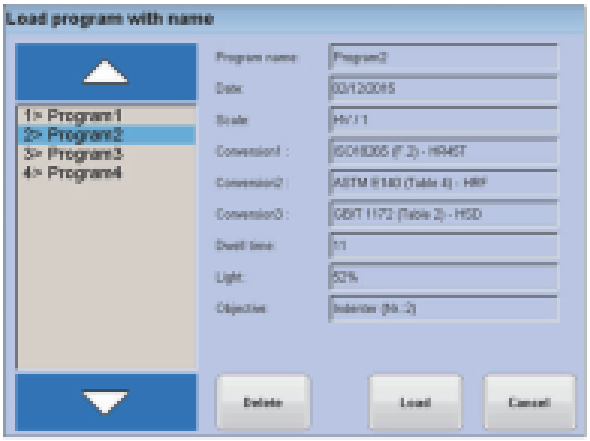
Smart graphical user interface

Smart graphical user interface with dialog system and color indication support

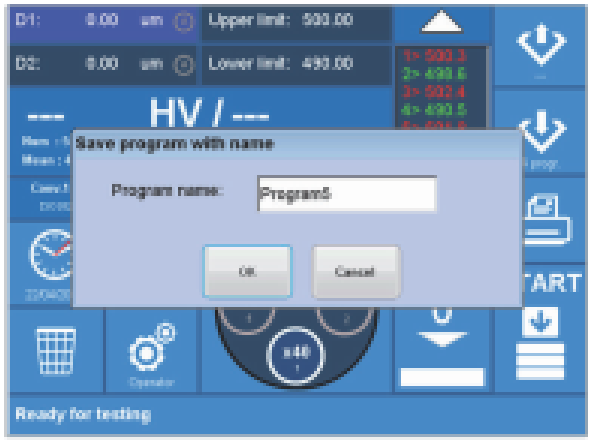
The clearly structured full color High Definition Touch Screen Tablet can be simply operated through finger touch or a screen pen. The ridged screen cover is made out of solid aluminum.
The software functions are advanced, the screen is graphical and most of the functions or tester actions are visibly supported with live animations. Color Screen and measured values change from green to red depending on test limit settings and values recorded. The user interface also supports set up, save and recall of test programs and has a large memory for test readings. At a finger touch data can be send to the USB-2 printer or a USB storage device.



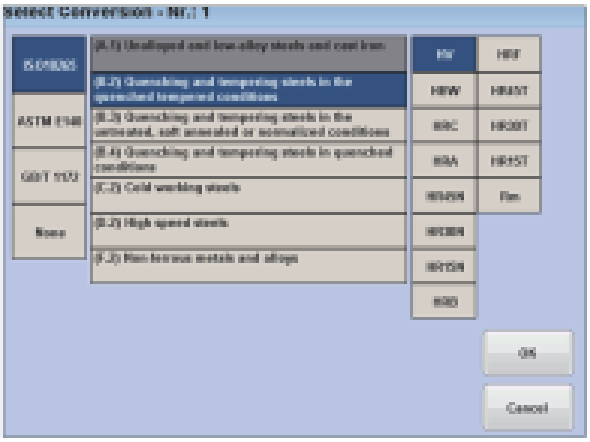
Example: Recall saved test program



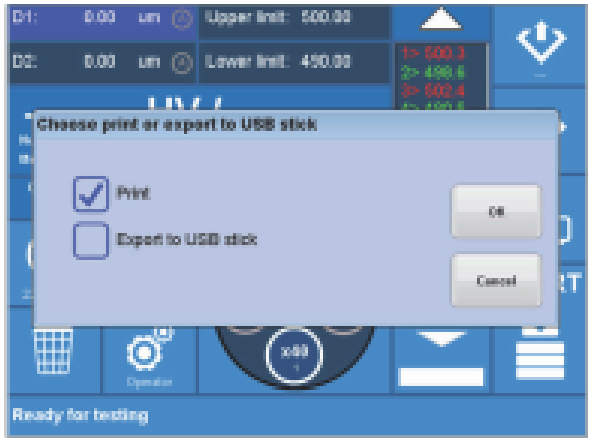
Example: Save test program



Example: Advanced conversions selection



Example: Print or export to USB



Technical specifications

NOVA 130/240

Hardness scale	Micro Vickers & Knoop
Test force selection	Manual
Load selection	8 positions knop; selectable loads, 10gf up to 1Kgf (NOVA 130) 9 positions knop; selectable loads, 10gf up to 2Kgf (NOVA 240) (no need to exchange weights)
Test procedure	Automatic, loading/dwell/unloading proces
Motorized turret	Automatic, high speed, motorized multi position turret, with anti-back lash system
Objectives	10x, 40x (NOVA 130) 5x, 10x, 40x (NOVA 240)
Hardness value	5 digits
Test force tolerance	<0.5% for test force 100gr to 2kg, <0.5% for test force below 100gr
Test loads	10gf, 25gf, 50gf, 100gf, 200gf, 300gf, 500gf, 1kgf, 2kgf
Vickers	HV0.010, HV0.025, HV0.050, HV0.1, HV0.2, HV0.3, HV0.5, HV1, HV2
Knoop	HK0.01, HK0.025, HK0.05, HK0.1, HK0.2, HK0.3, HK0.5, HK1, HK2
User display	6,5'' Full color high resolution touch screen, tablet type
Display resolution	0.1 HV, HK
Hardness conversion	Vickers, Rockwell, Rockwell Superficial, Brinell, Leeb, Tensile & Shore
Standards	Meets or exceeds, ISO, ASTM, JIS standards & Nadcap requirements
Statistics	Limit settings, real time statistics
Control panel	Start test, stop test, light intensity, dwell time, print, clear. Menu operation for date, time, scale and load settings, language
Firmware	V2.01 German, English, French
Memory	Save and load test programs, tester settings , save up to 50 results
Connectivity	USB
Dwell time setting	Default 10 seconds, user defined 1 to 99 seconds (1 sec increments)
Printer	Integrated high speed thermal printer
Eyepiece	15x magnification
Light source	LED dual channel vertical illuminator
Optical path	Laser adjusted optical path
Workpiece accommodation	Vertical capacity 90mm (maximum workpiece height), Horizontal capacity 120mm (from center-line)
Stage dimensions	Stage 100mm x 100mm, Travel 25mm x 25mm, Reading 0.01mm
Operating temperature	10°C to 35°C, non-condensing
Humidity	10% to 90% non-condensing
Machine dimensions	480mm x 280mm x 550mm
Machine weight	37.5kg
Power consumption	25W
Power supply	100VAC to 240VAC, 50/60Hz, single phase

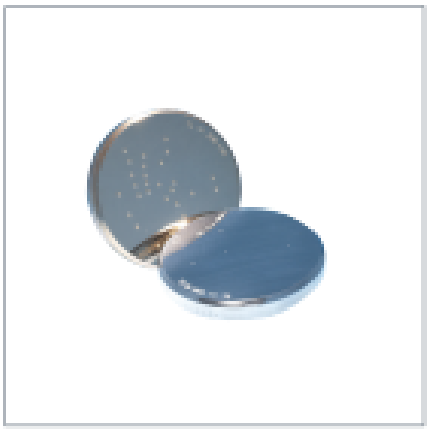
Standard delivery

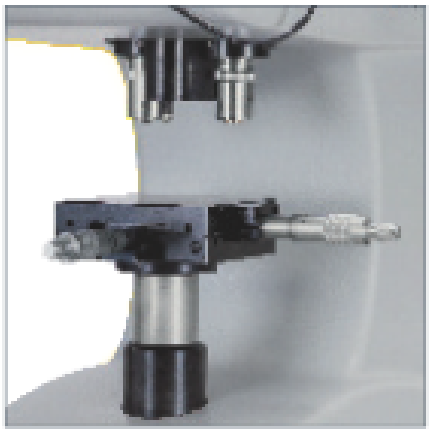
- Manual X-Y stage
- Objectives 10x & 40x (NOVA 130)
  Objectives 5x,10x & 40x (NOVA 240)
- Electronic microscope 15x
- Set of workpiece fixtures, vice, chuck, clamp
- Level gauge
- Power LED
- Integrated high speed thermal printer
- Four adjustable feet
- Power cable
- INNOVATEST® certificate
- Installation & user manual

Optional accessories

- Certified indenters (ASTM, DIN, ISO)
- Certified reference hardness blocks
  (ASTM, DIN, ISO)
- Custom testing tables
- 20x Objectives
- IMPRESSIONS™ XT Video indent measuring software
- Motorized X-Y stage (small or large)
- Motorized Z-Axis stage (auto focus)
- Solid tester table and storage cabinet
- High Resolution CCD camera system





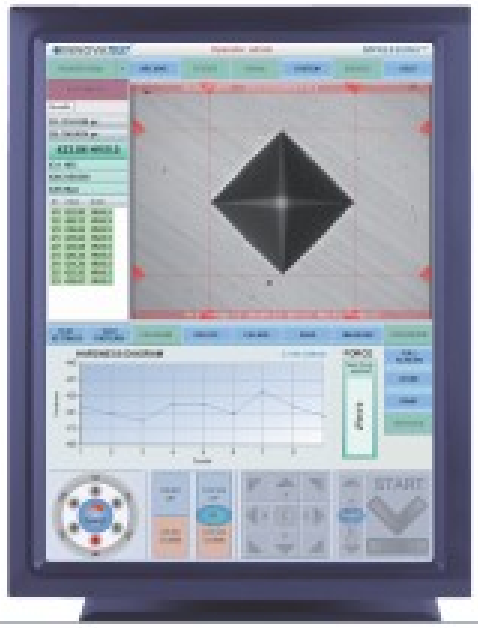


Order details

NOVA 130 Micro Vickers & Knoop, digital, 2 objectives for measuring/observation, test forces 10gf to 1kgf
NOVA 240 Micro Vickers & Knoop, digital, 3 objectives for measuring/observation, test forces 10gf to 2kgf

NOVA 130/240
IMPRESSIONS™ Video indent measuring system

AUTOMATIC MEASUREMENT



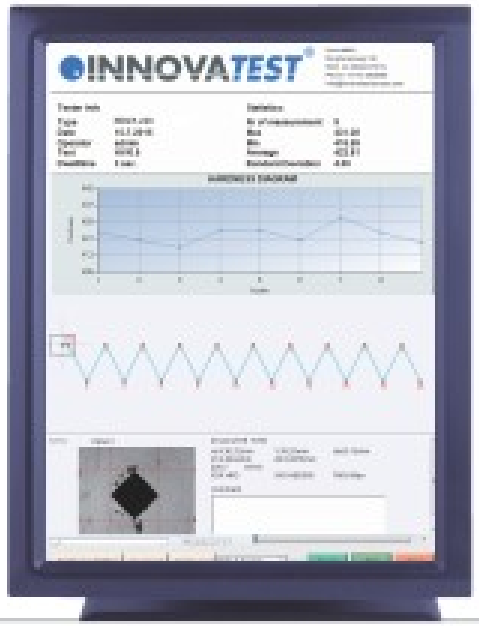
MAGNIFIED, FINE ADJUSTMENT



FULL SCREEN, ZOOM



REPORT GENERATOR



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