Fuel Instruments & Engineers
Precision leadership

GROUP

Over 60 years of consistent excellence

Motorized X-Y Stage Computerized Microvickers Hardness Testing Machine

Model : MV1-Pro

Fully Computerized PC based Micro Hardness Tester

High accuracy & repeatability of measurement at all loads

Wide Testing Range from Soft metal up to hardest

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Features :

- Fully computerized (PC based) Micro hardness tester.
- Touch control XY movement.
- Direct and accurate measurement of micro hardness number using 'state of art' image processing technology.
- Wide testing range from soft metal such as lead up to hardest, like hardened steel.
- Load range from 10 gf to 1000 gf.
- High accuracy and repeatability of measurement at all loads
- Small size of indentation makes it a non-destructive testing on finished components.
- Load selection by external knob.
- Motorized loading and unloading cycle.
- Measure case depth hardness.
- Advanced windows based software includes:
  - Latest GUI features with user friendly software.
  - Online indentation setting & focusing on PC monitor.
  - Advanced image processing algorithms implemented for precise calculations of hardness numbers with various options to cover all ranges of specimen.
  - Batch file processing: Option for data/storage & reports generation for case depth analysis etc.
  - Statistical evaluation: Software for calculating standard deviation, mean, medium, frequency distribution graph, variation graph etc.
  - Calibration mode facility.

Construction :

The machine frame is designed to accommodate the high precision loading system. Specimen is clamped by vice or supported by proper fixtures. The test cycle is fully automatic.

The accurate load is allied on a diamond indenter by means of dead weights. After lapse of time, the load is removed automatically.

The image is digitalized using a CCD camera fitted on the machine and is captured by the PC.

The diagonals of the indentation are measured by the state of art Image Analysis software and the Micro hardness number is displayed directly on monitor.

Automated motorised XY platform used for measuring case depth in various conditions.

Application :

'FIE' Computerized Micro-Vickers hardness tester is a simple and accurate mean to produce and automatically measure the diamond indentation to give micro hardness number directly as well as case depth.

These testers are suitable for measuring the hardness of precision metallic parts with wide testing range from soft to hard and their results are as per standard.

Technical Specifications :

Test Loads	10,20,50,100,200,300,500 gf.
Maximum test height	55 mm with clamping vice 75 mm without clamping vice
Scale least count	0.0001 mm
X-Y Stage movement	50 mm movement in each axis.
Clamping vice capacity	40 mm Max.
Measuring Range	0.01 to 0.2 mm.
Magnification of Objective	20X
Machine Dimensions	L 450 X W 275 X H 535
Weight (Approx.)	48 kg.

Standard Accessories :

Standard Test Block	1 No.
Diamond indenter	1 No.
80mm x 80mm X-Y Stage with Micrometer Heads	1 No.
Standard Vice	1 No.
Spanners	1 Set
Electric Cord & PC interface cord.	1 No. each
USB Device for Video	1 No.
Micro-Vicksys software CD	1 No.
Instruction Manual	1 Book

* **Optional Test Load : 1000 gf.**
* PC & Printer is not in our standard scope of supply.

Due to constant Research & Development, Specifications and Features are subject to change without notice.

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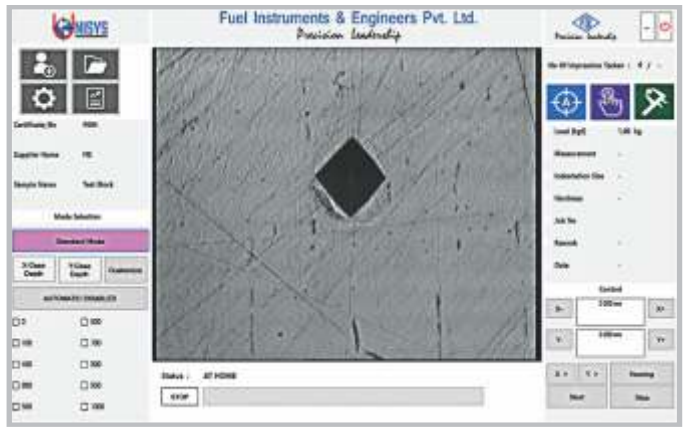
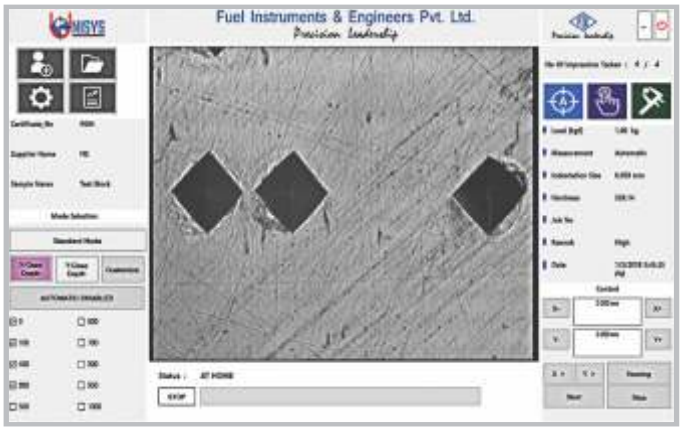
Screen Shots of Micro-Vickers Software Package :

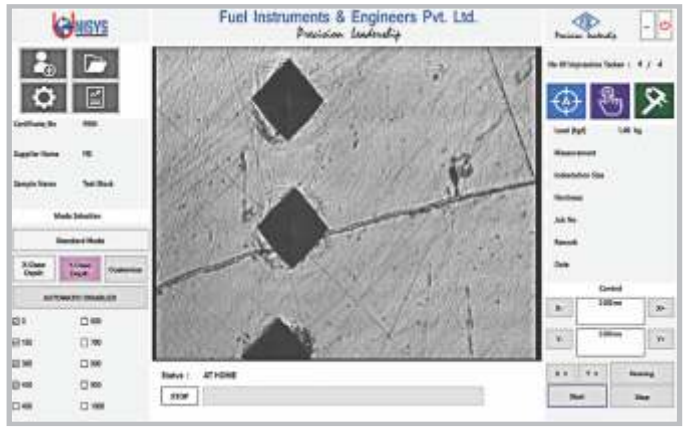
Home Screen



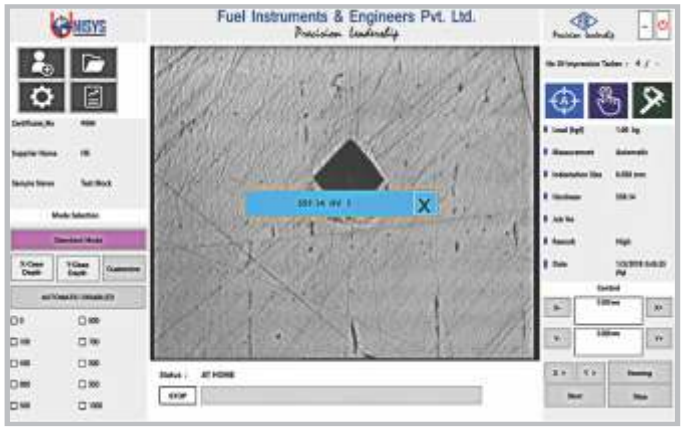
Standard Mode



X Case Depth



Y Case Depth



Result

Motorized X-Y Stage Computerized Micro-Vickers Hardness Testing Machine

Series : MV1-Pro

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Manufactured By :
Fuel Instruments & Engineers Pvt. Ltd.

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