TRUEMET

Computer Control Touch Screen Microvickers Hardness Tester

- Digital Eyepiece
- Automatic Turret
- Computer Controlled
- Digital x-y Table
- User Friendly VIDAS 4.0 Software

Model :- HT-1000ADT + VIDAS 4.0

Touch Screen Microvickers Hardness Tester

Model :- HT-1000ADT

1. Multifunction 7 inch touch screen display hardness value, conversion hardness value, test method (HV / HK), test force, brightness, dwell time, number of measurements, statistical data, upper and lower limit range etc.

2. The brightness of optical system can be adjusted.

3. Can store upto 100 sets of test data.

4. Can be displayed simultaneously max., min., mean, standard deviation and repeatability

5. The main interface can display 4 conversion scales at a time and can be switched to ASTM & ISO standards.

6. Can set the upper and lower limit measurement range.
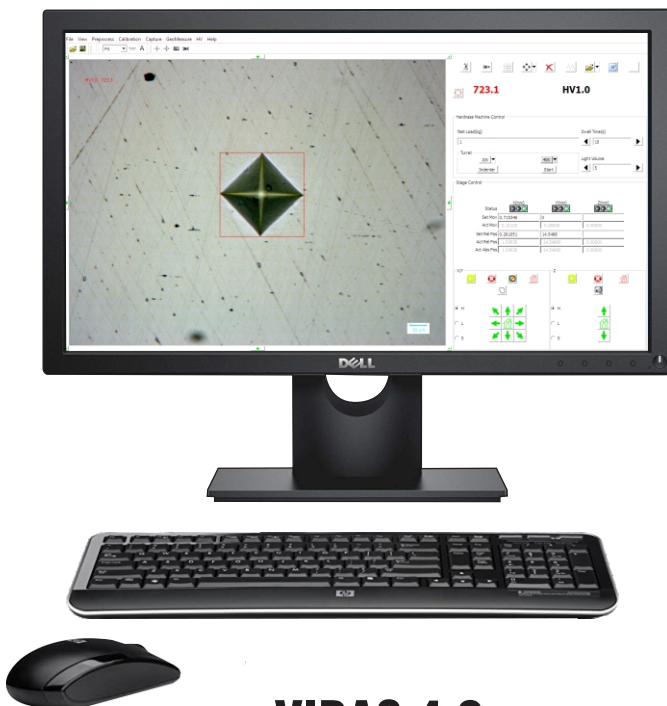
VIDAS 4.0

HT-1000ADT
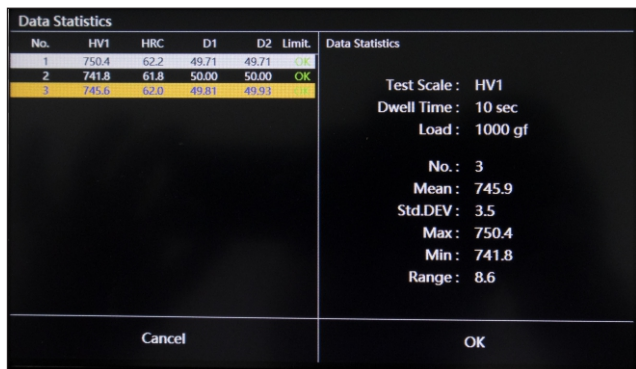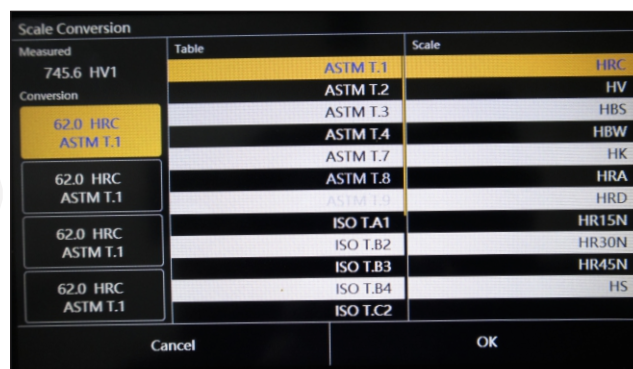
Touch Panel Display and Fuction

Standard Window

- Hardness value
- Diagonal length
- converted hardness values
- Dwell time
- Light Brightness

Scale conversion Window

- ASTM E140 Hardness conversion tables
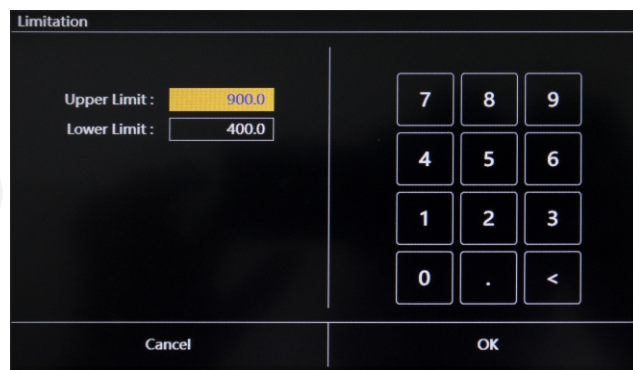- ISO 18265 Hardness conversion tables

Data Statistics window

- Measured Hardness Value
- Mean
- Standard Deviation
- Max
- Min
- Range

Limits Window

- Uper Limit
- Lower Limit
  (for OK / NG judgement)

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VIDAS- Vickers Impression Diagonal Analysis Software

- **TRUEMET VIDAS 1.0:** The Basic version comes with a USB camera and the measurement software, it applies to almost all Vickers hardness machine with a camera port.

- **TRUEMET VIDAS 2.0:** This version of software comes with a feature of Auto Measurement and system automatically measures the indentation.

- **TRUEMET VIDAS 3.0:** This version of software comes with a feature of Auto Measurement and also receive the command of digital x-y micrometer.

- **TRUEMET VIDAS 4.0:** This is the Turret Control version which is capable of setting parameters and commanding the operations of the turret of the hardness machine via RS232 communication port and system automatically measure the indentation in single click.

- **TRUEMET VIDAS 5.0:** This is the Semi-automatic version which is supplied with a motorized XY stage. The software allows user to set indentation pattern and with a single click it automatically test and measure test points in reference to sample edges.

- **TRUEMET VIDAS 6.0:** This is Full Automatic version provides the function in auto-focusing by raising/lowering the sample stage at each test point, if the hardness machine is equipped with a sample Z axis motor.
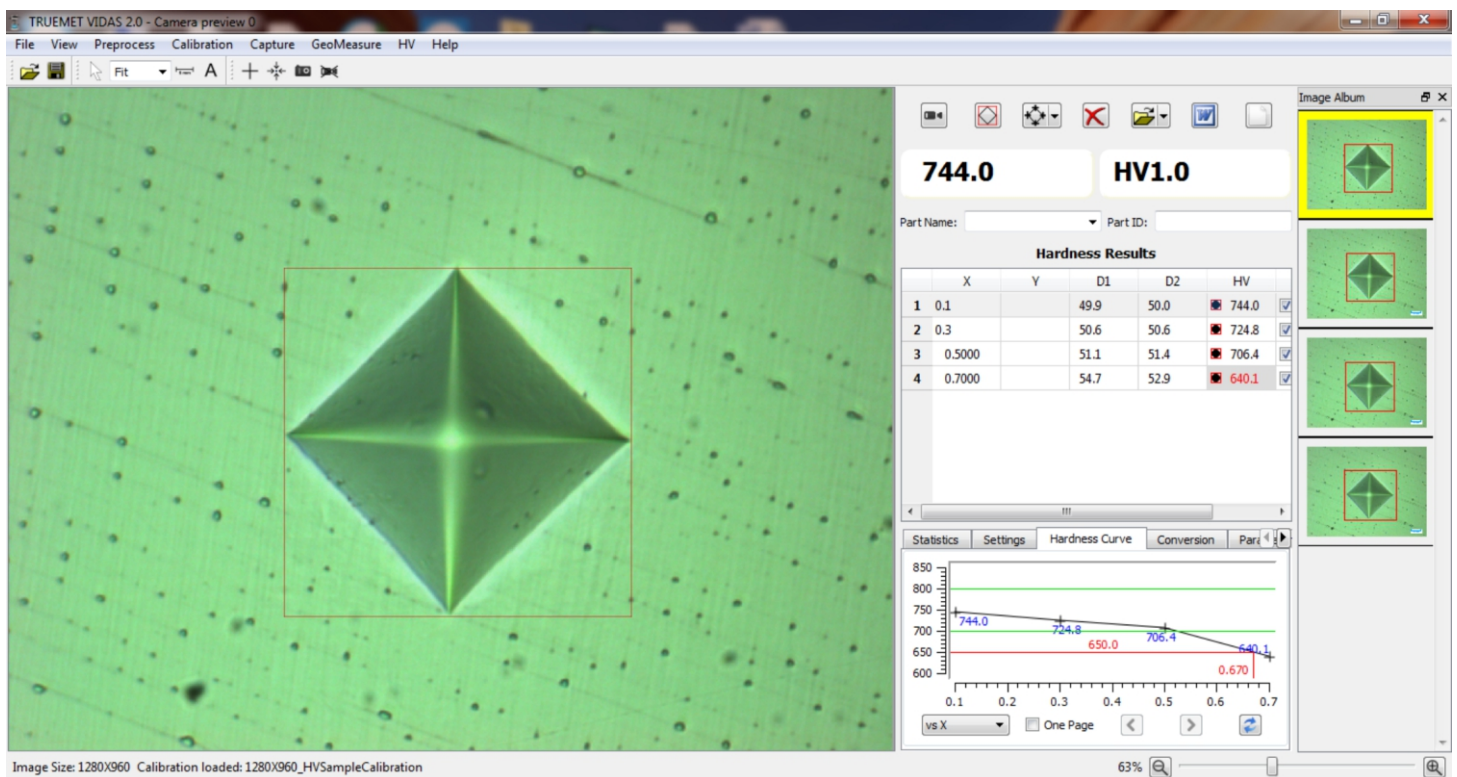
Main Features

- **Auto measurement:** With a single click , system automatically measures the indentation and gives the vickers hardness value

- **Hardness curve graph:** System automatically plots the hardness value vs. test point depth graph and calculates the effective case depth.

- **Hardness conversion, Cylindrical correction, and validation:** The measured Vickers Hardness value can be converted to other hardness scales such as HBW, HK, HRC, HRB etc . HV can be corrected for non-planar surfaces. System calculates the minimum sample thickness, minimum test point to sample edge distance etc for validation.

- **Statistical Calculation:** Statistical values such as average, min, max, standard deviation, Cp, Cpk etc are automatically generated.

- **Automatic sample contour scan and indentation pattern set up:** This feature is limited to VIDAS 5.0 and VIDAS 6.0 versions only, system can automatically scan the sample contour and generate test points by defined patterns.

- **Working Data saving and retrieval:** Software can save and retrieve the hardness measurement data and images in data files.

- **Hardness Report:** With a mouse click, the system automatically generates a Microsoft Word or Excel document to reports which contains the measurement data, statistical information, the measurement images and the hardness Curve graph. User may enter own additional information for reporting.

Standard Features

- **Image/Video capturing:** Software can capture and save images/videos on DirectShow compatible USB cameras.

- **Geometry measurement:** System provides the tools to draw and measure common geometric shapes such as lines, angles, rectangles, arcs/circles, ellipses, polygons, point-to-line, and point-to-arc etc. With a mouse click, system generates a Word document for the geometry measurements.

- **Calibration:** For measurement applications, the camera can be calibrated with a stage micrometer ruler or grid.

- **Calibration management:** Software allows save/manage multiple calibrations as per machine's magnification.

- **Image processing:** Software provides a rich set of image processing tools for advanced applications, which include adjusting Brightness, Contrast, Gamma, and Histogram Level, and the Sharpen, Smooth, Invert, and Convert to Grey functions.On grey scale images,system provides various advanced tools in filtering and finding edges, as well as some standard tools in morphological operations such as open, close, dilation,erosion,and flood fill etc.
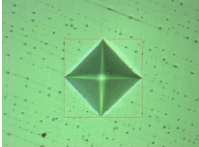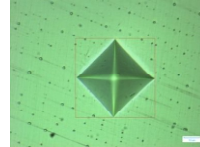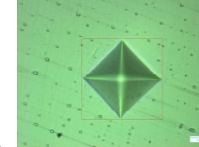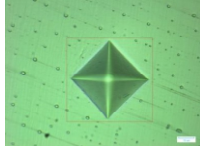

Hardness Curve Graph View

Hardness Conversion, Cylindrical Correction, and Validation View

Statistical Calculation View

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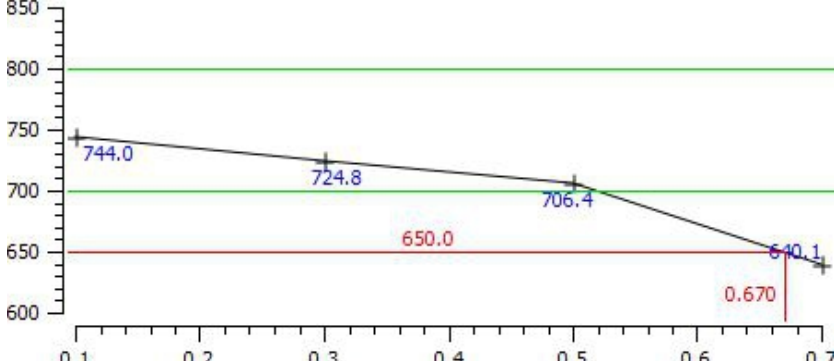
Micro Vickers Hardness (HV) Test Results

Customers	Bhatt Metal	Date	
Part Name		Part No.	
Heat No.		Lot No.	
Upper Limit	800.0	Lower Limit	700.0
Sample Cyl./Sph. Diam.	0.00 mm	Test Load	1000g

Test Results										
Sr	X	Y	D1	D2	Hardness	Sr	X	Y	D1	D2	Hardness
	mm	mm	um	um	HV		mm	mm	um	um	HV
1	0.100		49.9	50.0	744.0						
2	0.300		50.6	50.6	724.8						
3	0.500		51.1	51.4	706.4						
4	0.700		54.7	52.9	640.1						

Case Hardness (HV)	650.0	Case Depth	0.670 mm

Indent Images

1.   2.   3.   4.

Hard. Curve

Statistics			
Maximum	744.0	Minimum	640.1
Average	703.8	Std. Dev.	45.2
Cp	0.37	Cpk	0.03

Test Report View

Technical Specfication

Model	HT-1000ADT ✚ VIDAS 4.0
Turret Movement	Automatic
Measuring Eyepiece	10X Digital Eyepiece
Testing Force (gf)	10, 25, 50, 100, 200, 300, 500, 1000
Hardness Scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1,
Hardness Conversion Scale	HRA, HRB, HRC, HRD, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Hardness Range	1 HV-4000 HV
Hardness Value of Reading	7 inch LCD touch screen
Magnification	100X(For observation), 400 X (For Measurement)
Dwell Time	5~60 sec
Loading Control	Automatically (Load, Dwell, Unload)
X-Y Testing Table	Size: 100X100, Max. Travel Range:25X25mm, Resolution : 0.001mm
Max height of specimen	85mm
Max depth of specimens	110mm
Light Source	Helogen Bulb
Data Output	Built-in-Printer Built in RS-232 interface
Carried Standard	IS 1501:2013 &, ASTM-E384 & E92
Overall Dimension	540X200X530 mm (L X W X H)
Net weight(Approx.)	35Kg
Power Supply	AC220V±5% 50-60Hz
Standard Accessories	10x digital micro eyepiece — 1 No. 10X and 40X objective lens — 1 No. each Vickers indenter — 1 No. Digital X-Y Testing Table — 1 No. Flat fixture — 1 No. Thin specimen fixture — 1 No. small parts fixture — 1 No. Hardness Test Block (HV1, HV0.2) — 1 No. each Screw Driver — 1 No. Level Bubble — 1 No. Allen Keys — 1 Set. Leveling Screw — 4 Nos. VIDAS 4.0 Software — 1 No 5 MP USB Camera — 1 No
Optional Accessories	TRUEMET VIDAS 1.0, 2.0, 5.0, 6.0, Knoop Indentor, Knoop Hardness Block.

*TRUEMET reserves the rights to changes the above specification due to constant improvements in design