

The Tukon 2500 Automated Knoop/ Vickers Hardness Tester is a precision instrument that boasts a powerful load application range of 10 gf - 50 kgf, along with a completely modular five-position motorized turret. With the most flexible and expansive testing range in the industry and all components and software completely designed, manufactured, and integrated by Wilson Hardness, the Tukon 2500 meets virtually any Knoop/ Vickers testing requirement. Innovative digital zoom stepping provides the widest magnification range ever provided on a hardness tester and the long working distance objectives and high accuracy automated stage provide the basis for a truly powerful test system.



Precision optical measurement path with a high resolution digital camera

Motorized five position modular turret

Microscope quality, long working distance optics

Optional 180 × 160 mm motorized XY-Stage with 5 μm or better accuracy



Minuteman software with calibrated optical zooming, CHD analysis, graphing, data collection, and more

Applications

- Steels, non-ferrous metals, IC wafer
- Thin plastics, metallic foils, platings, coatings, surface layers, laminated metals
- Effect of heat treatment
- Hardness depths of carburized layer
- Cemented carbide, ceramics, steels, non-ferrous metals
- Thin plates, metallic foils, plating, miniature objects
- Hardness resulting from welding or deposition

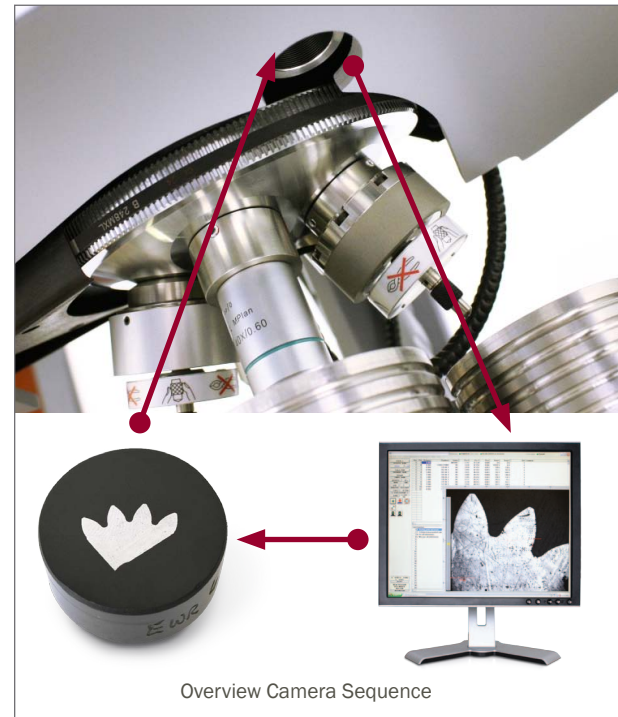


Technical Specifications

Scales	HV, HK
Test Load	10 gf - 50 kgf
Test Load Accuracy	+/- 1.5% < 200g, +/- 1% > 200g
Force Application	Load Cell
Dwell Time	1 - 999 seconds
Standard Compliance	ASTM E384, ASTM E92, ISO 6507, ISO 9385, ISO 4546
Turret	288° motorized five position modular turret
Z-Axis Travel	Motorized, 500 mm per minute
Standard Magnification Range	50X, 100X, 200X, 300X, 400X, 500X, 700X
Extended Magnification Range	30X, 50X, 100X, 200X, 300X, 500X, 600X, 1000X, 2000X
Overview Camera	Available on Tukon 2500 fully automatic systems
Light Source	LED
Data Output	Microsoft® Excel® and Crystal Reports
Statistics	Minimum, Maximum, Standard Deviation, Mean, Cp, Cpk
Operating Temperature	10 - 38° C (50 - 100° F)
Humidity	10% - 90% non-condensing
Power Requirements	100VAC, 120VAC, 220VAC, 240VAC, 50/60 single phase
Power	370W
Machine Dimensions (L x W x H)	635 mm (25 in) x 380 mm (15 in) x 978 mm (38.5 in)
Vertical Capacity	114 mm (4.5 in) anvil 110 mm (4.1 in) manual stage 79 mm (3.1 in) motorized Stage
Weight	75 kg (165 lbs)

Software Features

- CHD analysis
- Comprehensive graphing
- Automatic quit value
- Return and re-measure capabilities
- Data export to Microsoft Excel or Crystal Reports
- Photo capture and export
- Automatic test, measure, save, and export
- Automatic image analysis
- Automatic image focusing
- Variable brightness, contrast, and illumination
- Three level password protected user system
- Traverse interrupt and resume
- Virtual joystick for motorized sample traversing



System Configurations

Software Features	1	2	3	4	5	6
Calibrated Digital Zooming	•	•	•	•	•	•
Manual Filar Measurement	•	•	•	•	•	•
Automatic Measurement Analysis		•	•	•	•	•
Automatic Sample Focusing			•		•	•
Automatic Stage Movement				•	•	•
Hardware						
Overview Camera						•
High Performance PC	•	•	•	•	•	•
Sample Support						
Stationary Flat Anvil	•	•				
Manual XY-Stage with PC Interface			•			
Motorized XY-Stage				•	•	•

Accessories

- Knoop and Vickers indenters
- Long working distance objectives
4X, 10X, 20X, 40X, 50X, 100X
- XY-Stage with digital PC interfaced micrometers
- Motorized 180 x 160 mm XY-Stage
- ASTM / ISO compliant hardness reference test blocks
- Universal Clamping and Leveling Device (UCLD)
- Overview camera



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