



INSTRUMENT

# CM-ARS TESTING SYSTEM



VICKERS



KNOOP



BRINELL



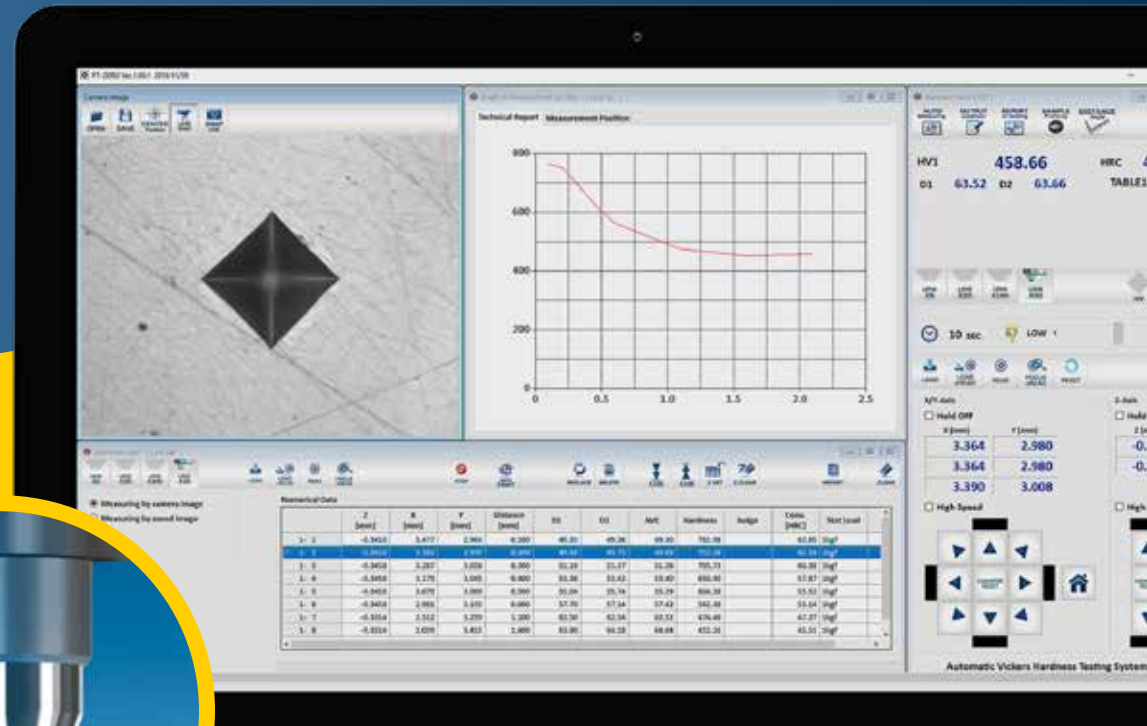
**SUN-TEC**  
HARDNESS TESTING SPECIALISTS

# FULLY-AUTOMATIC VICKERS / KNOOP HARDNESS TESTING SYSTEM



The ARS System is a fully automatic testing system that allows for programming, indenting, auto-reading, viewing and recording data all from one convenient station. It offers a variety of platforms ranging from standard auto-read measuring and reporting to fully automatic; making reading, conversions and reporting easier than ever before.

- Instant HV or HK Hardness Chart Display
- Multi-data Measurements
- Quick Measurement Indentation for Easy Edits and Image Archives
- Convenient Data Transfers, Reports and Storage
- Z-Axis Memory Feature



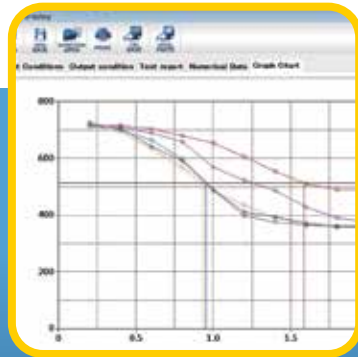
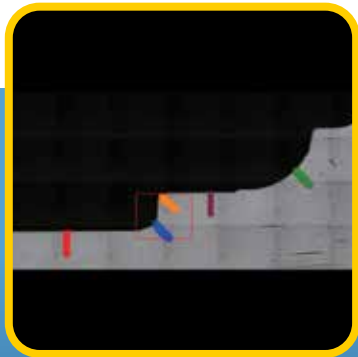
PRECISION INDENTER ASSEMBLY

Consistently produces accurate indentations test after test



## REAL-TIME HARDNESS TEST RESULTS AT YOUR FINGERTIPS

The ARS provides a robust software solution with a familiar interface for easy navigation; simply set your test point, input your parameters and let the system do the rest. The ARS will analyze the sample-surface incline and automatically compensate for the angle. Depending on your configuration, the ARS is capable of processing either Vickers, Knoop or Brinell test results, in a variety of patterns, such as: straight, zigzag, circle, arc, line set, matrix or random. All test results can then be output and stored internally for future analyzation and reference.

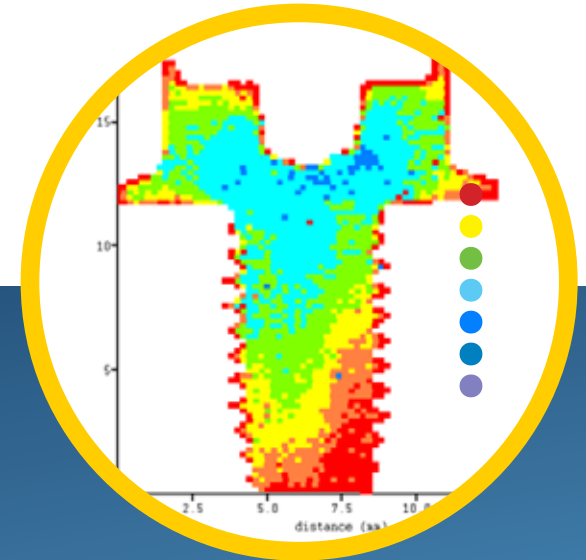


### LINE SET PROGRAM

This program allows for a number of line tests to be setup and conducted on a single sample. Each test can be uniquely spaced apart, displaying both indentations and quantities of indentations across the sample to evaluate the range of hardnesses

### CASE DEPTH VALUE GRAPH

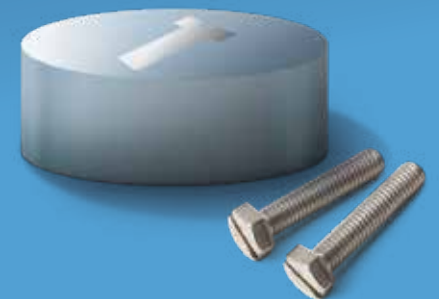
The data points (lines of tests) and case depth value are used to determine the depth to which the hardness of the exterior has been increased over that of the interior of a part. The effective case depth is the distance where the hardness falls below the defined effective case depth value.



### AUTO-MATRIX FEATURE

The system can perform a series of indentations on a single sample, and through the ARS software, outputs a color map of the data based on variable hardness test results. This provides a graphic representation that greatly simplifies the analyzation of the part.

MOUNTED SAMPLE



## SPECIFICATIONS

## CM-ARS

TEST LOADS	
SINGLE INDENTER TURRET	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1 kgf
DUAL INDENTER TURRET	0.005, 0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2 kgf
LOADING SYSTEM	Automatic loading, holding and removing method
FOCUSING METHODS	Automatic Operation or Manual Operation
TURRET ROTATION	Automatic-Motorized
MEASUREMENT OF INDENTATION	Automatic Reading/Manual Reading
LOAD APPLYING SPEED	Initial Descending Speed Approx.120µm/s – actual test speed 55µm/s
DWELL TIME	5 ~ 99 sec
OBJECT LENS	2pcs: X10 & X50 (Optional X2.5, X5, X20, X40)
INDENT MEASUREMENT SYSTEM	Camera: automatic measurement using 1.3 MP
SOFTWARE	ARS (Windows10®/64bit)
OUTPUT SIGNAL	USB (RS232C converter: built-in)
DIMENSIONS	Manual 110X110 mm
X-Y STAGE MOVEMENT	Standard Auto (X) 50mm x (Y) 50mm (mouse or joystick control) Optional Stage (X) 150mm x (Y) 80mm
MAX. HEIGHT OF SPECIMEN	80 mm(3.15") From Auto Stage Top
MAX. DEPTH OF SPECIMEN	115mm (4.5")
LIGHT SOURCE	LED Illumination
ACCURACY	Vickers(HV) / Knoop(HK) Test: Conforming to tolerances per ASTM E-92, ISO 6507-2, ISO 4545-2
SAFETY DEVICE	Protection Cover on Turret for indenter(s) & Each Objective Lens(s)
DIMENSIONS	H504(19.8") X W186(7.3") X D450(17.7") mm
WEIGHT	Approx. 50kg (110 lbs)
POWER SUPPLY	1P AC100~120V / AC240V(50/60Hz)

### STANDARD ACCESSORIES

- Hardness Standards
- Diamond Indenter(s)
- Objective Len(s)
- Machine Cover
- Accessory Box
- Leveling Leg Set
- Operator Manual

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Some aspects are subject to change.



Series CM-102 AT



Series CM-402 AT



Series CM-802 AT



**DUAL INDENTER TURRET**  
The optional dual-indenter auto-turret allows for up to two objectives



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