

# Tinius Olsen

## Universal Hardness Testing System FH-8 Series



**Fig. 1.** FH-8 Universal Hardness Tester with Horizon Video Indent Measuring System and optional T slotted testing table.



**Fig. 2.** Close-up of turret with protective shield removed.

### KEY FEATURES

- All hardness procedures according to global standards — Rockwell, Superficial Rockwell, Brinell, Vickers, and Knoop — also ball and indentation hardness testing for thermoplastics and the new Vickers depth (HVT) and Brinell depth (HBT) procedures
- Superior range of testloads/force application ranging from 500g to 3,000kg (1.1 lbf to 6,700 lbf)
- All procedures comply with EN/DIN/ISO, ASTM, and JIS
- Industrial touch screen, embedded high performance PC + two solid state HD drives
- Automatic video indent measurement and magnification function
- Bright LED illumination
- Connectivity: USB, RS232, UTP-R45-LAN, W-LAN
- HORIZON™ advanced hardness testing software, includes file storage, test program storage, machine settings storage, etc.
- Includes workpiece clamping attachment
- High precision spindle



**Fig. 3.** FH-8 Horizon Firmware

## Technical Specifications

Hardness scales	Brinell, Vickers, Rockwell, Vickers depth (HVT), Brinell depth (HBT)
Optical	5 megapixel HD camera, indent zoom function
Motorized Turret	3 indenter positions and 3 objectives positions
Objectives	3 installed for 0.7x to 1000x magnification.
Display	15" High resolution industrial LCD touch screen Optional: desk top LCD screen Optional: desk top LCD touch screen Optional: Height adjustable LCD touch screen
Controller	Embedded high performance system controller with data storage Optional: External high performance PC
Firmware	HORIZON advanced hardness testing operating system including options for: manual measurement, automatic measurement, indent zoom function, scale conversion, file storage, report printing, test program storage, machine settings storage, graphic interface for swivel system position.
Standards	Meets or exceeds the requirements of ISO 6506, 6507, 6508, 4545, ASTM E18, E92, E10, and JIS
Test load type	Loadcell closed loop, force feedback system with <0.5% accuracy.
Test cycle	Fully Automatic and indent evaluation, and manual.
Test loads - Model FH8-0	0.5 kgf/4.9 N/1.1 lbf – 250 kgf/2.45 kN/551 lbf,
Test loads - Model FH8-1	3kgf / 29 N/ 6.6 lbf - 750 kgf / 7.35 kN/ 1,653 lbf
Test loads - Model FH8-2	10 kgf/ 98 N/ 22 lbf - 3,000 kgf/29 kN/6,600 lbf
Brinell test range (depending on model)	1 kgf/9.8 N/2.2 lbf - 3000 kgf/29 kN/6,600 lbf HB1: 1, 2.5, 5, 10, 30 kgf HB2.5: 6.25, 15.62, 31.25, 62.5, 187 kgf HB5: 25, 62.5, 125, 250 kgf HB10: 100, 250, 500, 750, 1000, 1500, 3000 kgf HBT: 5, 250 kgf
Vickers test range (depending on model)	0.5 kgf/4.9 N/1.1 lbf – 120 kgf/11.76 kN/264 lbf, HV: 1, 2, 3, 5, 10, 20, 30, 50, 100, 120 kgf HVT: 50, 100 kgf
Rockwell test scales	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V, 15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y, (FH8-2 has no Superficial scales)
Load duration	1 - 99 seconds
Connectivity	USB-2(4), UTP RJ45, LAN, W-LAN, RS232, Motorized XY stage (optional)
Specimen accommodation	Maximum test height 350 mm (13.8"), maximum throat 250 mm (9.84")
Specimen access	External surfaces, internal surfaces with goose neck adapter (optional)
Operating Temperature Range	10° to 35°C (50° to 95°F)
Operating Humidity Range	10% to 90% non-condensing
Weight	425 kg (935 lbs)
Power supply	110 to 240V AC, 50/60Hz, single phase

### STANDARD ACCESSORIES

- Hardened flat anvil ø80mm
- Hardened V anvil ø80mm
- Clamping protection nose
- Ring light for (Brinell) dark field illumination
- Testing table, hardened, ø200mm (7.87")
- Power cable
- Installation and user manual
- Certificate

### OPTIONAL ACCESSORIES

- Certified indentors
- Certified hardness test blocks
- T slotted testing table 350x250 mm
- Motorized XY-stages
- Motorized rotary or tilting tables
- Precision vices, V-blocks and special clamps
- Software solutions for advanced application
- Solid tester tables with storage cabinet

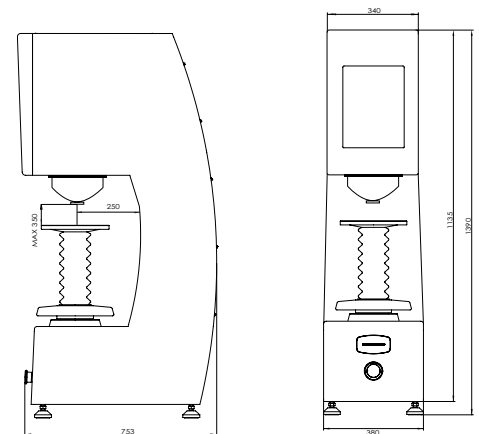


Fig. 3. Model FH-8 All measurements are in mm



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