

# MODEL FH8

## UNIVERSAL HARDNESS TESTER


 Universal


 HB


The FH-8 Series can be used for all hardness procedures according to the most common international standards. Rockwell, Superficial Rockwell, Brinell, Vickers and Knoop. It also can do ball and indentation hardness testing for thermoplastics and the new Vickers depth (HVT) and Brinell depth (HBT) procedures.

The FH-8 universal hardness tester series includes all standard hardness testing methods between 1kgf/9.8N - 250kgf/2.45kN(8001), 3kgf/29N - 1750kgf /7.35kN(8002), 10kgf/98N until 3000kgf/29kN(8003). Additionally, the FH8 series features models that are extra large and can accommodate large work pieces.

The tester features quality mechanical components and is based on a load-cell, closed loop force feed-back system. The advanced user interface controls the automatic testing procedure and offers many functions, such as fully automatic indent measuring and data storage. The integrated camera with calibrated zoom function guarantees fast, and accurate user-independent Vickers or Brinell measurement.

The FH-8 Series represents universal hardness testing, in the broadest meaning of Universal. Aircraft engine parts, automobile parts, production lines, general quality assurance and laboratory use, are all fields covered by the FH-8 Series.

### COMMON APPLICATIONS

- Hardness of castings and forgings
- For flat and cylindrical work pieces
- Wide application within the automotive and aerospace industry
- Laboratory and workshop testing
- Sample testing or quality control testing
- Steels, non-ferrous metals
- Cemented carbide, ceramics, stainless steels

### FEATURES AND BENEFITS:

- **Load cell, force feedback, closed loop system**
- **Complies to all applicable EN/ISO and ASTM standards**
- **Shape correction for curved surfaces**
- **High accuracy depth measuring system (Rockwell, HBT, HVT)**
- **15" Industrial LCD display shows measured values, online statistics, memory overview, tester settings**
- **User-friendly, low training requirements**
- **Direct printer and/or PC connections via RS-232 and USB-2**
- **Large workpiece accommodation (H = 300 mm)**



# SPECIFICATIONS

Universal

HB



## FH8 Specifications

Hardness scales	Brinell, Vickers, Rockwell, Vickers depth (HVT), Brinell depth (HBT)
Optical	5 megapixel HD camera, indent zoom function - Universal models
Motorized Turret	3 indenter positions and 3 objectives positions - Universal models
Objectives	3 installed for 0.7x to 1000x magnification - Universal models
Motorized Head	Extended Indenter location - Brinell Only models
Optical	High resolution Brinell palm scanner - Brinell Only model
Display	15" High resolution industrial LCD touch screen Height adjustable LCD touch screen - Brinell Only Model
Controller	Embedded high performance system controller with data storage
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.
Brinell test range (Model dependent)	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 HV: (Model dependent) HVT:	1 kgf/9.8 N/2.2 lbf – 120 kgf/11.76 kN/264 lbf, 1, 2, 3, 5, 10, 20, 30, 50, 100, 120 kgf 50, 100 kgf
Rockwell test scales (Model dependent)	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
Load duration	1 - 99 seconds (User Defined)
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") - Universal Models Height 520 mm x throat depth 300 mm - Extra height models
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) - Standard models 610 kg (1345lbs) - Extended models
Power supply	110 to 240V AC, 50/60Hz, single phase

## Optional Features For All Models

- FH-50-25 V-Anvil ø80 mm (3.15") for 3.3 to 20 mm
- FH-50-26 V-Anvil ø80 mm (3.15") for 12 to 80 mm
- FH-50-27 V-Anvil ø120 mm (4.72") for 20 to 140 mm
- FH-50-79 Large testing table 350 mm x 250 mm (13.8" x 9.8") with two T slots, 250 kgf maximum load
- Manual XY-stages
- Certified indenters
- Certified hardness test blocks
- Testing table ø150 mm (5.9")
- Testing table ø235 mm (9.25")

## Universal Model Detail

FH008-0000	1–250kgf,	Rockwell, Superficial Rockwell, Brinell, Knoop, HVT and HBT
FH008-0001	3-750kgf	Rockwell, Superficial Rockwell, Brinell, Knoop, HVT and HBT
FH008-0002	10–3000kgf,	Rockwell, Brinell, Knoop, HVT and HBT
FH008-0007	1–250kgf,	<i>Extra Height</i> Rockwell, Superficial Rockwell, Brinell, Knoop, HVT and HBT
FH008-0021	3–750kgf,	<i>Extra Height</i> Rockwell, Superficial Rockwell, Brinell, Vickers, Knoop, HVT and HBT
FH008-0022	10-3000kgf,	<i>Extra Height</i> Rockwell, Superficial Rockwell, Brinell, Knoop, HVT and HBT

## Brinell Only Model Detail

FH008-0013	1–250kgf,	Brinell
FH008-0014	3–750kgf,	Brinell
FH008-0015	10-3000kgf,	Brinell
FH008-0017	1–250kgf,	<i>Extra Height</i> Brinell
FH008-0018	3–750kgf,	<i>Extra Height</i> Brinell
FH008-0019	10-3000kgf,	<i>Extra Height</i> Brinell

## Standard Features For Universal Models

- Objective for 70x magnification
- Objective for 140x magnification
- Clamping protection nose
- Testing table ø80mm (3.15")
- Large 2-T Slotted work surface; 600 x 450 mm (Extra height models)
- Power cable
- Operation manual
- Certificate

## Standard Features For Brinell Models

- High resolution video palm scanner; 5mpx
- Extended Indenter base with clamping feature
- Large 2-T Slotted work surface; 600 x 450 mm (Extra height models)
- Power cable
- Manual
- Certificate



The First Name In Materials Testing

PA, USA • Surrey, UK • UP, IN • Shanghai, CN

www.TiniusOlsen.com • info@TiniusOlsen.com

CONTACT YOUR LOCAL REPRESENTATIVE: