

BRINELL HARDNESS TESTER

SwissBrin[®] SERIES



SB20

SEMI-AUTOMATIC HARDNESS TESTER

GNEHM[®]
A Swiss premium brand

INTRODUCTION

The SWISSBRIN SB20 Brinell Hardness Tester is an innovative and high-precision solution tailored to meet the needs of modern material testing. With a testing range of 62.5 kgf to 3000 kgf, it combines robust mechanics with solid electronics to deliver consistent and accurate results.

Key to its good performance is its embedded industrial computer running Windows 11, paired with an HD video measuring microscope. This advanced setup ensures seamless operation, enhanced precision, and a streamlined user experience.

The included Brinell Video Scanner further revolutionizes the hardness testing process by automating indentation measurements with high-resolution accuracy.

CLOSED-LOOP LOAD CELL CONTROL SYSTEM

Accommodates forces from 62.5 kgf to 3000 kgf, enabling versatile application across materials like soft metals, hard alloys, and composites.

Durable Construction: Industrial-grade materials and components ensure reliability and longevity, even in demanding environments.

With its combination of advanced features, the SWISSBRIN SB20 is ideal for industries requiring precise and efficient hardness testing, including: **Automotive and Aerospace, Metallurgy and Foundries as well as Construction Materials**



KEY FEATURES

Embedded Industrial Computer, powered by Windows 11. This system provides a reliable, secure, and user-friendly platform for system operation.

Pre-installed advanced software offers intuitive navigation, real-time data analysis, and comprehensive reporting capabilities.

Eliminates the need for external computers, reducing system complexity and provides a more wireless and reliable connectivity.

HD Video Measuring Microscope equipped with a high-definition (HD) camera, the microscope captures crisp and detailed images of Brinell indentations for precise analysis.

High-resolution imaging ensures accurate edge detection, even on challenging material surfaces.

Automated measurement of indentation diameters reduces operator dependency and eliminates manual errors. High-speed image processing accelerates workflows and increases productivity.

Ensures compliance with ASTM E10 and ISO 6506 standards, guaranteeing accurate and repeatable results.

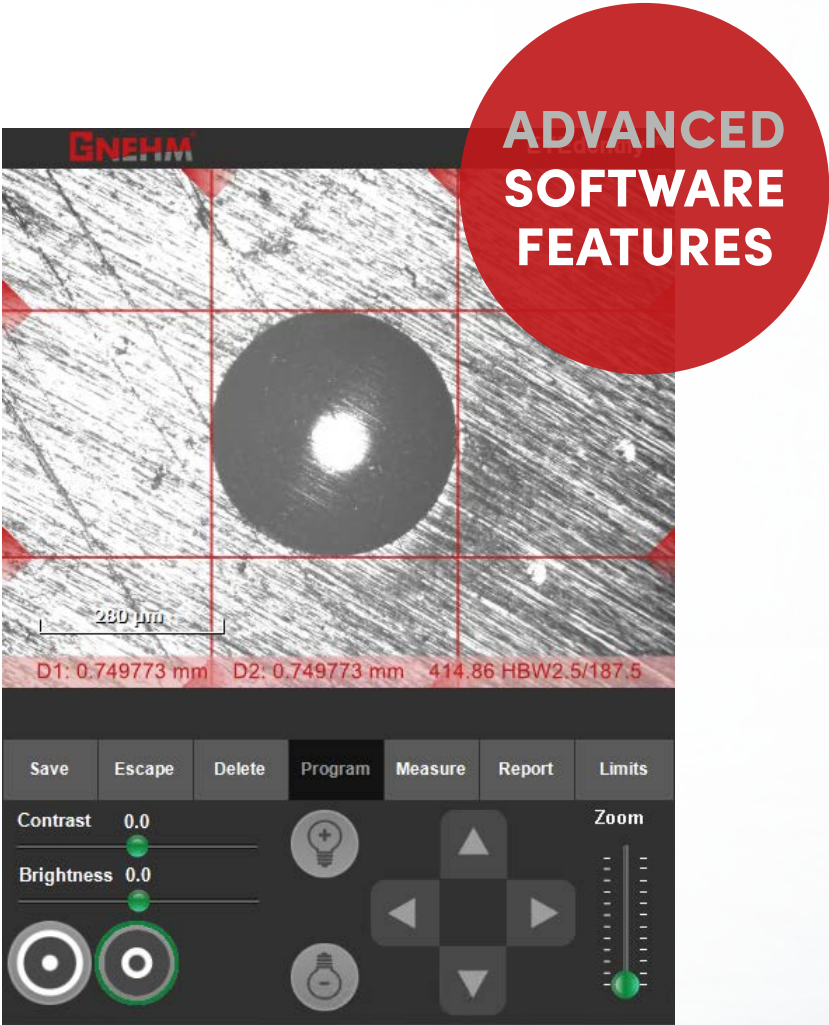
“DISCOVER THE ART
OF **PERFECTION**”

EFFORTLESS OPERATION AND CONTROL

The 6.5" full-color HD touchscreen delivers intuitive control of the machine and its functions. Its angled design ensures the display is easy to view, whether you're sitting or standing, making it convenient to operate. The software offers intuitive multi-function keys for testing, setup, storing, and uploading test programs, as well as for statistical control and more, making the operation of the tester as simple as possible.

Data export, whether single or batch readings, can be done with a single press of a button or automatically after each measurement. The data can be stored on a USB drive or transferred via cable to a PC for import for further analysis in Excel.

Additional advanced features include extended statistical analysis, shape correction for convex, concave, or spherical specimens, and hardness conversion to Rockwell, Brinell, or Tensile strength according to ASTM E140 and ISO 18625, using various material tables.



BRINELL TESTING EXCELLENCE

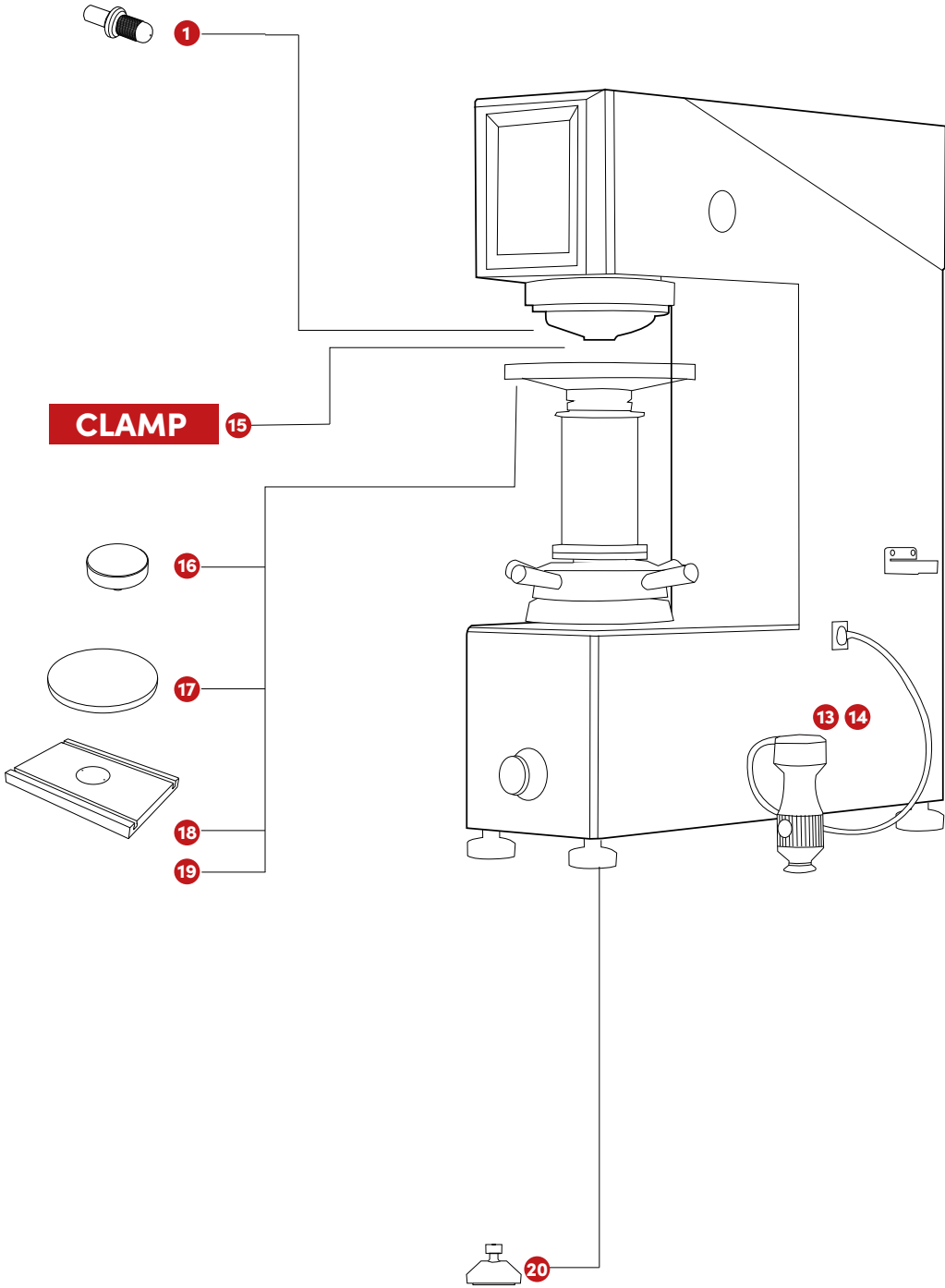
Tester model	SB20
Load system	
Test load range	62,5kgf - 3000kgf
Load steps	10
Loads in kgf	62.5 100 125 187.5 250 500 750 1000 1500 3000kgf
Load application system	Load cell, closed loop, force feedback
Force control	Load Cell Transducer
Load operation sequence	Automatic - (Manual pre-load) Load Dwell Unload (auto start at reaching Pre Load)
Load application speed	Compliant to applicable standards
Load dwell time	1-999 seconds
Parameters & settings	
Brinell scales	HB(W) 2.5/31.25 HB(W) 2.5/62.5 HB(W) 2.5/187.5 HB(W) 5/31.25 HB(W) 5/62.5 HB(W) 5/125 HB(W) 5/250 HB(W) 5/750 HB(W) 10/100 HB(W) 10/125 HB(W) 10/250 HB(W) 10/500 HB(W) 10/1000 HB(W) 10/1500 HB(W) 10/3000
Conversion to other methods	All hardness scale conversions compliant to ISO & ASTM
Cylindrical and spherical	Offset for both available via touch panel
Go/No Go	Settings via touch panel
Brinell video scanner	
Brinell video scanner	18mpx USB3 Brinell Indent Optical Scanner
Electronics system	
Screen	Full colour screen 6,5" Portrait mode Touchscreen
Integrated controller	High performance industrial electronics
Connectivity	USB-2 front & rear connection
Storage	Memory for 999 readings / external via USB stick
Display information	Scale, test load setting, test result (hardness value), Go-No go settings (limits), results list, output channel, load progress indicator, dwelltime, light source on / off, results list selection, limit settings, conversion scales, start/stop button, calibration menu access.
Self diagnosis	Motors, switches, power supplies
Machine settings	Last settings memory
Calibration	Password controlled settings

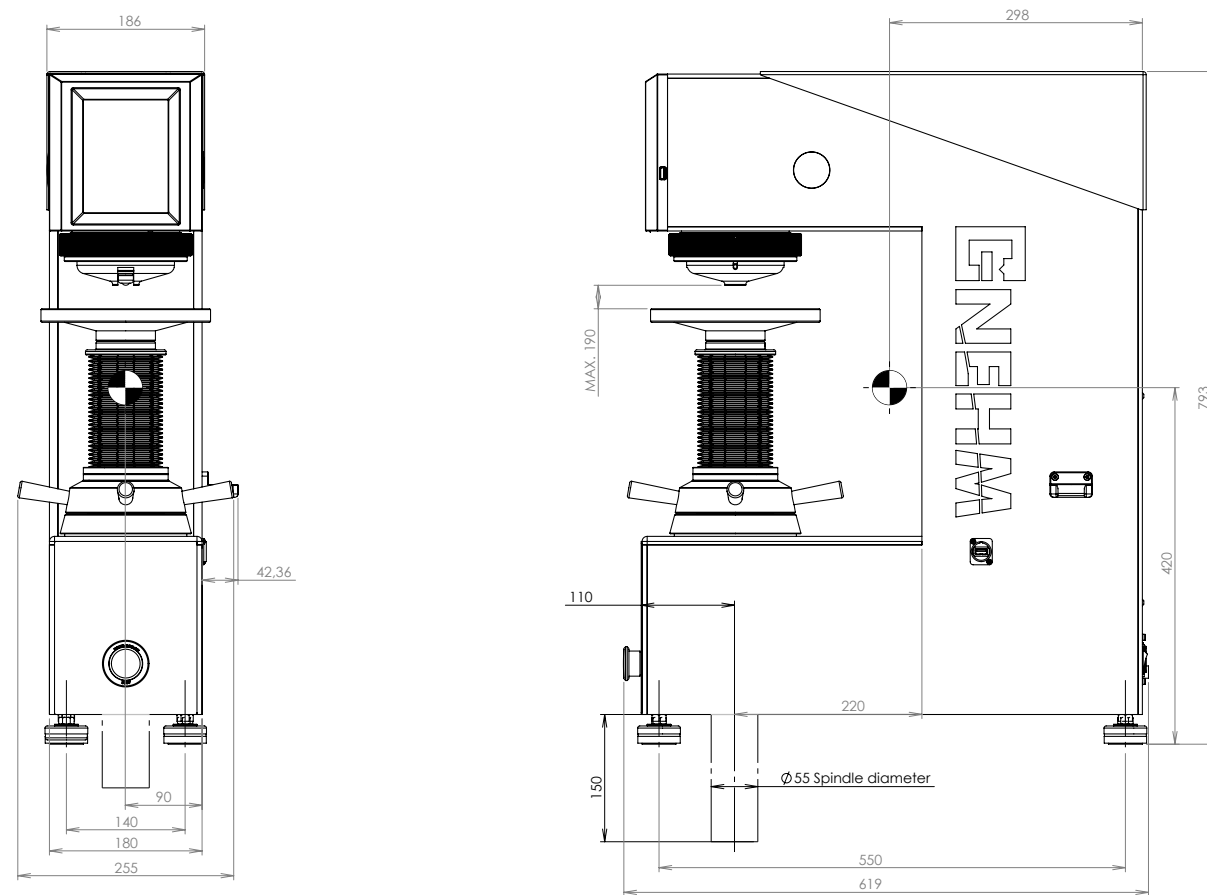
Compliance	
Measuring system & operation	Conform to EN ISO 6508 ASTM E18 JIS B-7726
Certification	Factory calibration certificate or ISO 17025 accredited ILAC-MRA certificate
Electronic system	Meeting general global safety & European CE standards
General data	
Electric connectivity	Single phase AC100~240V 50/60Hz
Workspace dimensions	Workpiece height Max 190mm Depth from spindle middle 220mm
Dimensions	W255 x D620 x H793mm
Weight (net)	130kg



SB20 STANDARD ACCESSORIES		
1	100.SB20.ACC	IND-B6355 Brinell Indenter 5mm. Incl. 1 carbide ball. Ø6.35mm
4		IND-B63510 Brinell Indenter 10mm. Incl. 1 carbide ball. Ø6.35mm
17		150.TT.106 Round Testing table 200mm, hardened Stainless steel, spindle fixed
		HTB-300B5750 Hardness test block Brinell +/- 300HBW5/750
		HTB-300B103000 Hardness test block Brinell +/- 300HBW10/3000
13		170.VM.105 Brinell Video Microscope Model A
20		LVLDLMP4 4 Level Dampers
		PWCBL1 Powercable EU / Powercable US
		ACCBOX2 Accesories packing Box
		INSMANENG English Instruction Manual
		900.PB.50 Standard packing box for air/seafreight

SB20 OPTIONAL ACCESSORIES		
1	IND-B63511A	Brinell Indenter 1mm. Incl. 1 carbide ball. Ø6.35mm. ISO & ASTM certified
2	IND-B63525IA	Brinell Indenter 2.5mm. Incl. 1 carbide ball. Ø6.35mm. ISO & ASTM certified
3	IND-B6355IA	Brinell Indenter 5mm. Incl. 1 carbide ball. Ø6.35mm. ISO & ASTM certified
4	IND-B63510IA	Brinell Indenter 10mm. Incl. 1 carbide ball. Ø6.35mm. ISO & ASTM certified
5	RU-CB116IA	1/16" carbide ball. ISO & ASTM certified
6	RU-CB118IA	1/8" carbide ball. ISO & ASTM certified
7	RU-CB114IA	1/4" carbide ball. ISO & ASTM certified
8	RU-CB112IA	1/2" carbide ball. ISO & ASTM certified
9	RU-CB1IA	1.0mm carbide ball, only for ø6.35mm. ISO & ASTM certified
10	RU-CB25IA	2.5mm carbide ball, only for ø6.35mm. ISO & ASTM certified
11	RU-CB5IA	5.0mm carbide ball, only for ø6.35mm. ISO & ASTM certified
12	RU-CB10IA	10.0mm carbide ball, only for ø6.35mm. ISO & ASTM certified
13	170.VM.105	Brinell Video Microscope Model A
14	170.VM.110	Brinell Video Microscope Model B
15	120.CL.105	Workpiece clamp, clamps parts on stage or test table if required
16	140.AV.105	Flat anvil 60mm
17	150.TT.106	Round Testing table 200mm, hardened Stainless steel, spindle fixed
18	150.TT.150	Large test table 350x250mm
19	150.TT.155	Large test table 450x350mm
	150.MF.105	Mounting flange for large test table
	140.ST.105	Large swivel test table / irregular shaped parts test platform





All dimensions in these drawings are approximate and in millimeters. Working heights and workpiece accommodation may vary based on the stages and accessories used.

For more details, please contact our sales department.

Catalogue SB20 V1.3

Product specifications may evolve with new technologies and ongoing development.

We reserve the right to update or modify product specifications without prior notice. For the most current information, please contact our sales office.

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