



BOWERS GROUP

Brinell Hardness Tester EW-3000 Series



Partners in Precision



EW-3001
WITH ANALOGUE MICROSCOPE



EW-3000 XL SERIES
MOTORIZED SPINDLE

FEATURES

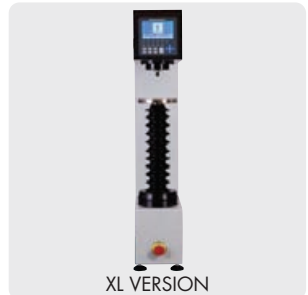
Top quality Brinell hardness tester with various options for optical measuring systems. Ability to measure Brinell indentations starting from 30kgf/294.2N - 120kgf/1176N, depending on the model. Advanced user interface with "key in" option for indent dimensions, automatic Brinell hardness calculation. Display automatically shows Brinell hardness with conversion to Rockwell, Vickers and Leeb.

- Load cell, closed loop system
- Test loads 30kgf/294.2N - 3000kgf/29kN
- LCD display showing Brinell value, statistics and tester settings
- Simultaneous conversion to Rockwell, Vickers, Brinell and Leeb rebound testing
- Microscope with analogue scale for indentation measurement (3001 models)
- Fully automatic indent measurement with motorized turret (IMP models)
- Indent ZOOM function (IMP models)
- Brinell microscope with LED ring light (3001 models)
- Connectivity for data output via RS-232
- XL version, 390mm workpiece height, 220mm throat depth

Brinell microscope with LED ringlight

3001, 3001XL, 3001XLM

Motorized turret for automatic Brinell Video Indent Measuring System 3001XLM-IMP



TECHNICAL SPECIFICATIONS

Hardness scales	Brinell
Load range	30kgf/294.2N to 3000kgf/29kN
Test loads	30kgf/294.2N, 31.25kgf/306N, 40kgf/392N, 50kgf/490N, 60kgf/588.4N, 62.5kgf/612N, 80kgf/784N, 100kgf/980.7N, 120kgf/1176N, 125kgf/1225N, 187.5kgf/1838N, 250kgf/2.45kN, 500kgf/4.9kN, 750kgf/7.35kN, 1000kgf/9806N, 1500kgf/14.7kN, 3000kgf/29kN
Brinell test range	HB: 31.25kgf/306N, 62.5kgf/612N, 100kgf/980.7N, 125kgf/1225N, 187.5kgf/1838N, 250kgf/2.45kN, 500kgf/4.9kN, 750kgf/7.35kN, 1000kgf/9806N, 1500kgf/14.7kN, 3000kgf/29kN
Test force selection	Electronic, closed loop, load cell, force feedback system, indication in kgf or N. Test force selectable over menu operation
Test procedure	Automatic, loading/dwell/unloading
Loading speed	Variable, depending on test load
Test force accuracy	Tolerance within 1% full range
User display	Diameter of indent, length of diagonals, hardness value, converted value, test force, online statistics
Display resolution	0.1 HB
Hardness conversion	Rockwell, Vickers, Brinell, Leeb and Tensile 2 scales simultaneously
Standards	Complies to, or exceeds EN ISO 6506, ASTM E-10-08
Statistics	Total tests, max, min, average, range, standard deviation, all in real time after each test
Control panel	Start test, stop test, dwell time, print, clear, menu operation for date, time, scale and load settings, language
Firmware	V2.01 German, English, French (standard) V2.02 English, Italian, Spanish
Memory	Large memory for testing results
Data output	RS-232, Bi-Directional, USB
Loading mechanism	Fully automatic, closed loop, force feedback, loading, dwell, unloading
Dwell time setting	Default 10 seconds, user defined 1 to 99 seconds
Printer	Optional silent high speed printer
Eyepiece microscope	Depending on model, analogue, electronic, video measuring, 0.1µm reading
Specimen accommodation	Vertical capacity 220mm normal model, 390mm XL model Horizontal capacity 220mm (from center-line), 220mm XL model (from center-line)
Humidity	10% to 90% non condensing
Machine weight	130kg, 160kg XL model
Dimensions	612mmx180mmx755mm, 620mmx180mmx950mm (XL model)
Power supply	100V AC to 240V AC, 50Hz/60Hz, single phase

STANDARD DELIVERY

- Analogue measuring microscope with 20x (3001/XL/XLM series)
- V-anvil $\varnothing 80\text{mm}$
- Large flat anvil $\varnothing 200\text{mm}$
- Fuse 2A (3 pcs)
- RS-232 data output
- Adjustable feet (4 pcs)
- Eseyaw certificate
- Installation and user manual

OPTIONAL ACCESSORIES

- Motorized spindle for fully automatic testing on XL models
- Large testing table 350mm x 250mm
- HB100 Video measuring and data base system
- Extended height/width frame XL models
- Motorized X-Y stage
- Indentors and hardness test blocks
- Certified indentors
- Reference hardness blocks
- Solid tester table and storage cabinet
- Specified color requirement
- Ball indentors $\varnothing 1\text{mm}$, $\varnothing 2.5\text{mm}$, $\varnothing 5\text{mm}$ and $\varnothing 10\text{mm}$
- Hardness test block 150-250 HBW 10/3000
- Hardness test block 75-125 HBW 10/1000
- Hardness test block 150-250 HBW 2.5/187.5



ORDER DETAILS

EW-3001 Brinell, analogue micrometer reading

EW-3001XL Brinell, analogue micrometer reading, tall version

EW-3001XLM Brinell, analogue micrometer reading, tall version with motorized spindle

EW-3001XLM-IMP Brinell, Vickers digital microscope, tall version with motorized spindle with automatic measurements



PICTURE SHOWS: **EW-3001 XLM-IMPRESSIONS™**
AUTOMATIC MEASUREMENT

FEATURES 3000XL(M)-IMPRESSIONS™

FULLY-AUTOMATIC SYSTEM

Brinell hardness tester with fully automatic indent video measuring system, equipped with a automatic motorized turret/revolver (indenter/objective positions). Optical system with high quality objectives. Powerful PC based indent measuring software IMPRESSIONS™ with database testing results storage. Optional motorized spindle for fully automatic indentation procedure.

Procedure:

Auto-load, automatic indentation, automatic focus, automatic indent measuring, unload.

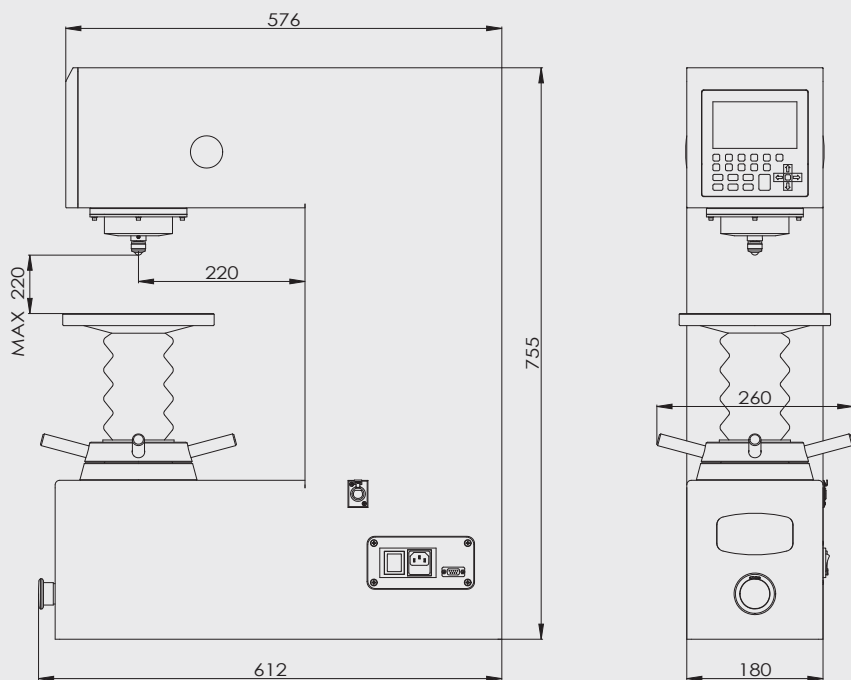
Key features IMP-modus:

- 2-Position turret (indenter/objective)
- Auto-load, -indentation, -focus, -measuring, unload
- High resolution CCD camera
- IMPRESSIONS™ hardness testing software for automatic measuring and data/image storage
- Powerful PC with 15" industrial LCD touch screen, keyboard and mouse (optional)
- Test loads 30kgf/294.2N - 3000kgf/29kN

Manual mode use:

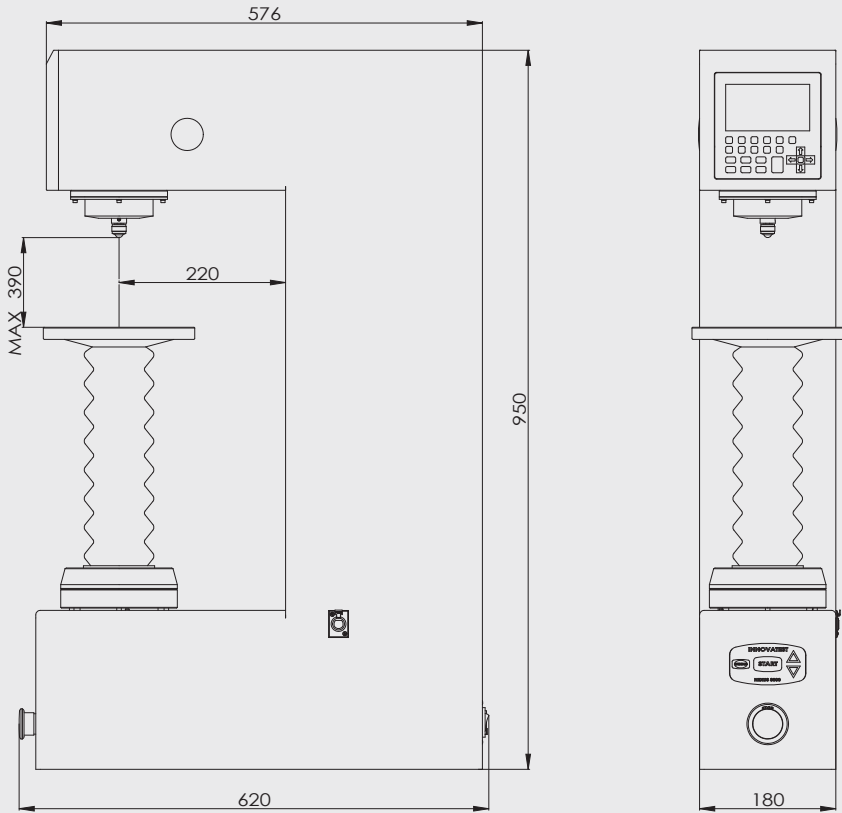
- LCD display showing Brinell value, statistics and tester settings
- Simultaneous conversion to Rockwell, Vickers, Brinell and Leeb rebound testing
- Microscope with analogue scale for indentation measurement
- Standard supplied with analogue measuring microscope

TECHNICAL DRAWING EW-3000



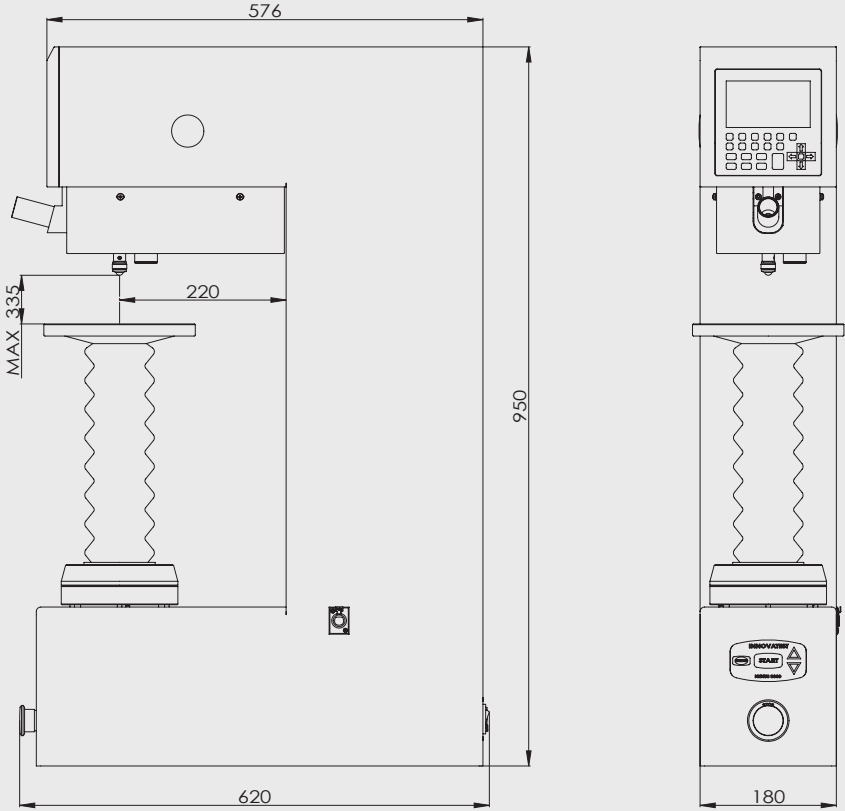
All dimensions are in mm

TECHNICAL DRAWING EW-3000XL



All dimensions are in mm

TECHNICAL DRAWING EW-3000XL(M) IMP





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