

MICRO (MACRO) VICKERS HARDNESS TESTER

SwissVick[®] SERIES



SV10

AUTOMATIC HARDNESS TESTER

ENEHM[®]
A Swiss premium brand

INTRODUCTION

The SwissVick SV10 series advances traditional hardness testing by reducing the impact of user intervention on test results. It utilizes cutting-edge force sensor technology with an electronically controlled load cell in a closed-loop system, providing force feedback to ensure unparalleled accuracy, reliability, and consistency across all testing forces.

The system’s software, featuring integrated Go-No Go judgement process control, facilitates file storage, test program configuration, limit setting, conversion to different hardness scales, system setup, and testing for both convex and concave samples. These features collectively enhance the repeatability and reproducibility of the test results.

TURRET

The SwissVick SV10 has a 6 position turret for indenters and objective lenses and offers the option of an analog or digital eyepiece, depending on your requirements, with the possibility of installing either one of them at will.

Additionally, an HD camera can be added for on-screen measurements, working in conjunction with the optional EYIdentify™ software system. This camera is securely housed within the head cover to avoid accidental misalignment and protect it from dust.

To prevent any accidental collisions between the workpiece and the indenter or objective lenses by moving the Z-axis to far up, the turret features a collision protection system.



KEY FEATURES

- The system features a 6-position collision-protected turret, accommodating maximum 2 indenter positions and 4 long working distance (LWD) objective positions.
- It offers the choice between an analog or electronic digital eyepiece, allowing simultaneous viewing through both the eyepiece and the camera.
- The interface is a full-color 6.5" industrial touchscreen equipped with software for intuitive operation.
- The system is powered by a robust embedded electronic system, and it can be optionally equipped with a Integrated 5-megapixel Full HD camera system supporting the

- EYIdentify™ automatic measurement software system, providing advanced indent evaluation and machine automation capabilities.
- The 6-position turret is a built-in feature on all 300 models, designed to hold indenters for Vickers, Knoop, and Brinell tests (with 1mm and 2.5mm balls). The turret’s precise motorized mechanics enable quick and quiet positioning, with automated transitions between the indenter and objective integrated into the test process.
- The turret offers up to 6 slots, accommodating up to 2 indenters and 4 objectives, giving you flexibility in selecting magnification levels suitable for your application.

“FUNCTIONALITY THAT DELIVERS”

EXPLORE THE
SURFACE WITH
EYIdentify™

SV10 | SEMI-AUTOMATIC HARDNESS TESTER

TOUCH SCREEN PANEL

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.

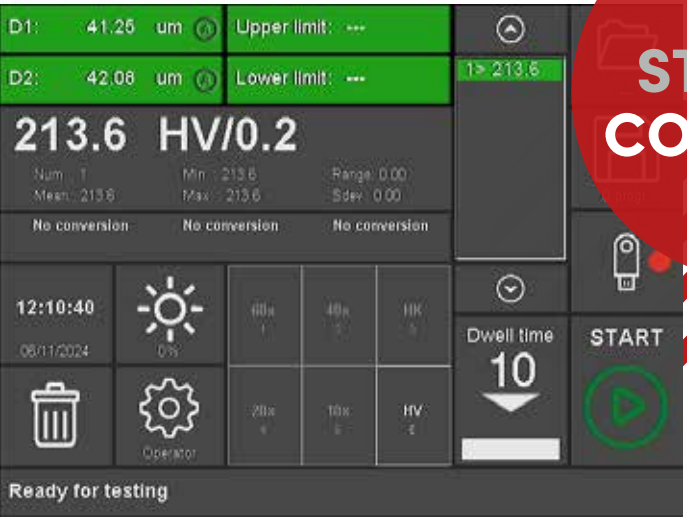
Data export, whether single or batch readings, can be done with a single press of a button or automatically after each measurement. The data can be stored on a USB drive or transferred via cable to a PC for import for further analysis in Excel.

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.

STAGE

The SwissVick SV10 features an adjustable manual stage capable of handling loads up to 60kg, making it ideal for fast and efficient single tests. For added flexibility, the system can be enhanced with various anvils and test tables.

STAY IN
CONTROL



“QUALITY THAT LASTS,
IN EVERY DETAIL”

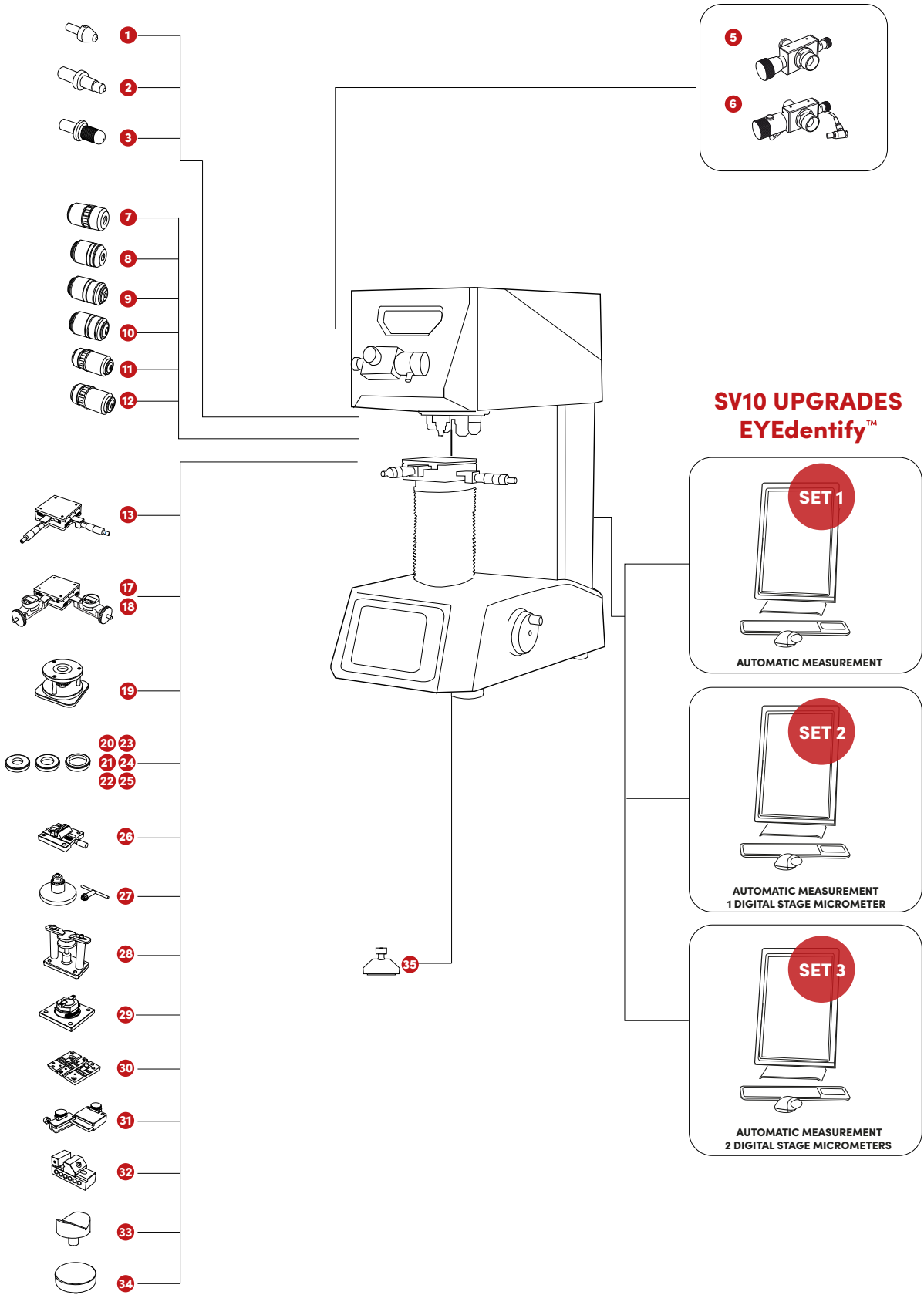
Tester model	SV10 A (2)	SV10 B (2)	SV10 C (2)
Load system			
Test load range	10gf – 1kgf	10gf – 2kgf	10gf – 10kgf
Load steps	8	9	12
Loads in gf	10, 20, 50, 100, 200, 300, 500, 1000	10, 20, 50, 100, 200, 300, 500, 1000, 2000	10, 20, 30, 50, 100, 200, 300, 500, 1000, 2000, 5000, 10000
Optional loads within range	On request		
Load application system	Electronic Load Cell Closed Loop		Electronic Multi Load Cell Closed Loop
Load operation sequence	Fully automatic – Approach Load Dwell Unload (Objective)		
Load application speed	60µm/sec (Compliant standards: JIS B 7725, ISO 6507-2, ASTM E92: 15 to 70µm/sec)		
Load dwell time	1-999 seconds		
Parameters & settings			
Scales	HV / HK / HB compliant to ISO / ASTM / JIS		
Optional scales	Kic (JIS R1607 / IF Method)		
Conversion to other methods	4 simultaneous conversions compliant to ISO & ASTM		
Cylindrical and spherical	Offset available		
Turret & Optical system			
Turret mechanics	6 position, Motorized, Manual & Automatic		
Security	Anti crash Collision detection system		
Indenters vs Objectives (2)	(A model) 1 indenter, 4 objectives (A2 model) 2 indenters, 4 objectives Vickers (HV) Knoop Brinell 1mm / 2,5mm ball		
Indenters	Vickers (HV) Knoop Brinell 1mm / 2,5mm ball		
Optical system	Simultaneous Dual Channel system Eyepiece – Camera		
Objectives (6)	2,5X – 5X – 10X – 20X – 50X – 100X		
Light source	High Power long life LED adjustable		
Electronic eyepiece	15x maginification (Optional 10X magnification)		
Optional camera system	5mpx High Definition Digital Camera System		
Z-axis & stage			
Z-Axis	Trapezoid Spindle, hand wheel driven, for precision height adjustment		
Maximum speciment height	120mm(from X-Y stage top)		
Depth from center (throat)	170mm (from spindle middle)		
Manual X-Y stage	100x100mm, precision polished, displacement 25x25mm Ananlogue Micrometer heads included		

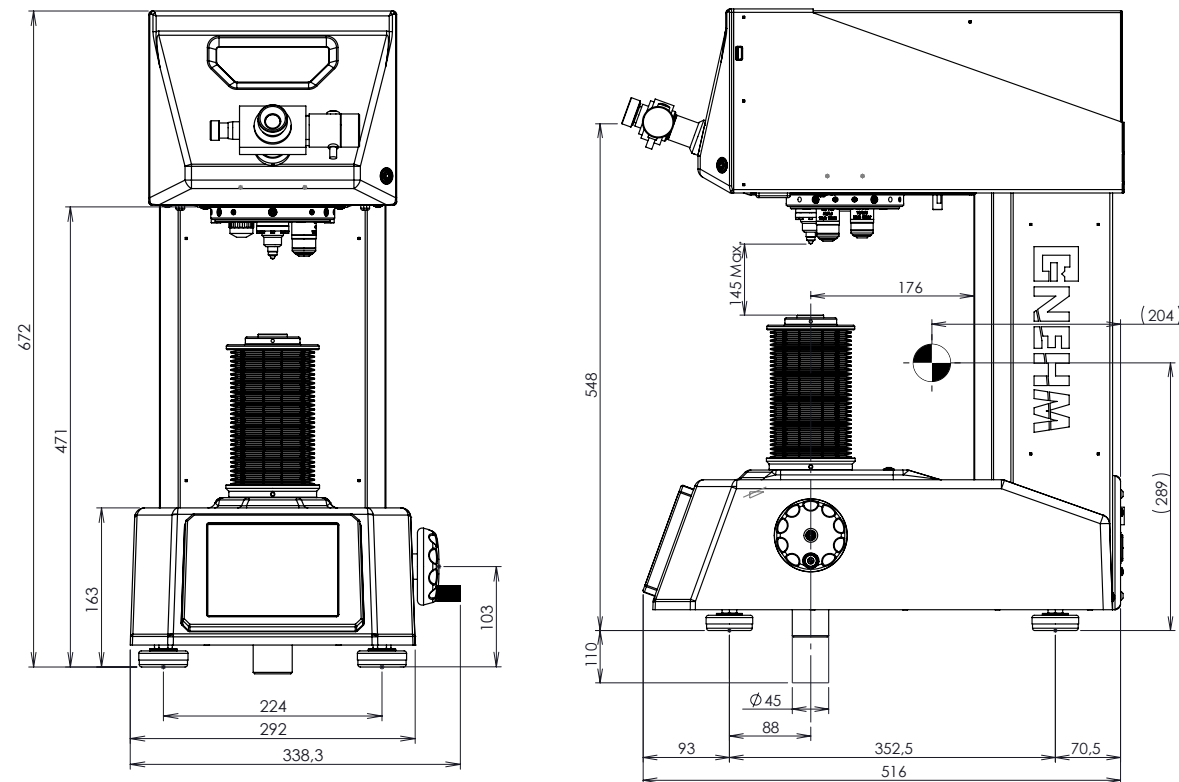
Electronics system	
Screen	Full color capacitive industrial quality touch screen
Display information	Scale, test load setting, D1 & D2, test result (hardness value), Go-No go settings (limits), results list, output channel (USB - printer), load progress indicator, turret postion, start/stop button
Touch functions	Test parameter settings such as scale, test load, objective, dwelltime, light source intensity, results list selection, limit settings, conversion scales, turret control, USB control, export of data, etc.
Storage	Via USB connector to USB stick or computer (hard disk)
Connectivity	USB output on front & back panel / RS-232 output on back panel
Go No Go	Limit setting / No Go values in red colour
Self diagnosis	Motors, switches, power supplies
Machine settings	Password control settings system
Calibration	Password control settings system
Compliance	
Measuring system & operation	Comform to ASTM E-92 ISO 6507-2 JIS B-7725 JIS B-7734,
Certification	Factory certificate or ISO 17025 accredited ILAC-MRA certificate
Electronic system	Meeting global safety and CE standards
General data	
Electric connectivity	Single phase AC100 ~ 240V 50/60Hz
Dimensions	W283 x D480 x H620mm
Weight (net)	45kg

SV10 Upgrades	SET 1	SET 2	SET 3
Software system	EYEdentify™ Hardness Indent Vision & Measuring Software System		
Fits on models	All SV10 models		
Other hardware included	(Analogue Micrometer Heads)	1 pcs Digital wire connected X-Y stage micrometer head, 25mm travel	2 pcs Digital wire connected X-Y stage micrometer heads, 25mm travel
Camera mount	Integrated camera inside the tester Invisible from outside Optional with Eyepeiece		
Camera type included	5mpx High Definition CCD camera		
Software function	Auto Measurement & Indent Scanning		
	Hardness value display, Conversion values, Scale setting, Test load setting, Dwell setting, Start-Stop, Turret position control, Go-No Go settings, test load aplication, manual pattern testing, manual CHD testing, user level management, Calibration & Machine settings management		
	Automatic brightness contol		
	Includes MS Windows PC controller		
	22" Full Colour HD Touch Screen & Control monitor, keyboard & mouse		

SV10 STANDARD ACCESSORIES		
1	IND-V3IAINST	Vickers Indenter 3mm installed
13	XYSTAGE100	Manual X-Y stage 100 x100mm, travel 25x25mm
15	AMHEAD25	Analogue micrometer head 25mm (2 PCS mounted in X-Y stage)
9	FINOBJ10X	Objective lens 10X
11	FINOBJ50X	Objective lens 50X
35	LVLDM4	Level dampers - stand (set of 4)
	PWCBL1	Power cable
	SERVTL1	Service tools set
	INSMANENG	Instruction manual
	ACCBOX1	Accesories storage box

SV10 OPTIONAL ACCESSORIES		
1	IND-V3IA	Vickers indenter 3mm - ISO/ASTM certified
2	IND-K3IA	Knoop indenter 3mm - ISO/ASTM certified
3	IND-B31IA	Brinell 1mm ball indenter 3mm - ISO/ASTM certied
4	IND-B32IA	Brinell 2,5 mm ball indenter 3mm - ISO/ASTM certified
5	100.EP.115	Eyepiece 15X
6	100.EP.120	Electronic Digital Eyepiece 15X
7	100.OL.101	Objective lens 2,5X
8	100.OL.105	Objective lens 5X
9	100.OL.110	Objective lens 10X
10	100.OL.115	Objective lens 20X
11	100.OL.120	Objective lens 50X
12	100.OL.125	Objective lens 100X
13	110.ST.105	Manual X-Y stage 100 x100mm, travel 25x25mm
14	110.ST.110	Manual X-Y stage 150 x150mm, travel 50x50mm
15	115.MH.105	Analogue micrometer head 25mm
16	115.MH.110	Analogue micrometer head 50mm
17	115.MH.115	Digital micrometer head for X-Y stage 25mm
18	115.MH.120	Digital micrometer head for X-Y stage 50mm
19	120.SH.105	Sample holder for 1 embedded sample
20	120.RH.105	Reduction holder 25mm
21	120.RH.110	Reduction holder 32mm
22	120.RH.115	Reduction holder 40mm
23	120.RH.120	Reduction holder 1"
24	120.RH.125	Reduction holder 1 1/4"
25	120.RH.130	Reduction holder 1,5"
26	130.FX.105	Small universal vice self centering
27	130.FX.110	Axle chuck dia. 0.4mm to 5mm
28	130.FX.115	Universal Clamp & Leveling Device
29	130.FX.120	Thin metal clamp
30	130.FX.125	V groove clamp for diameter 0.8-5mm
31	130.FX.130	Wire Testing Fixture for diameter 0.8-3.5mm
32	130.FX.135	Precision polished vice, W36mm, D42mm
33	140.AV.105	Flat Anvil 60mm
34	140.AV.110	V-Anvil 63mm





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 SV10 V1.1

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.

GLOBAL SALES

GNEHM International LLC-FZ

Grandstand, 6th floor
Meydan Road, Nad Al Sheba
Dubai | UAE

+971 50 491 2588
info@gnehm-testing.com
www.gnehm-testing.com

SWITZERLAND (CH + FL) & AUSTRIA

GNEHM Härteprüfer AG

Bönirainstrasse 13
8800 Thalwil
Schweiz

+41 (0) 44 725 43 42
admin@gnehm-haertepreuer.ch
www.gnehm-testing.com

DEALER