

MICRO (MACRO) VICKERS HARDNESS TESTER

SwissVick[®] SERIES



SV10

AUTOMATIC HARDNESS TESTER

GNEHM[®]
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 SV10 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.

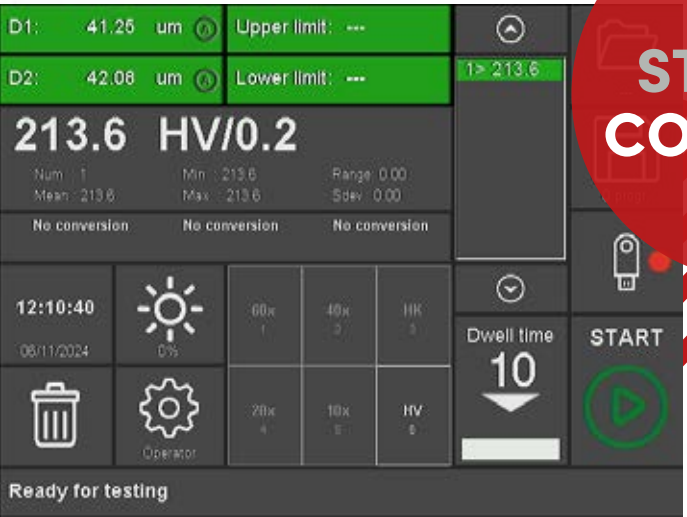
Data export, whether single or batch readings, can be done with a single press of a button or automatically after each measurement. The data can be stored on a USB drive or transferred via cable to a PC for import for further analysis in Excel.

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, 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”

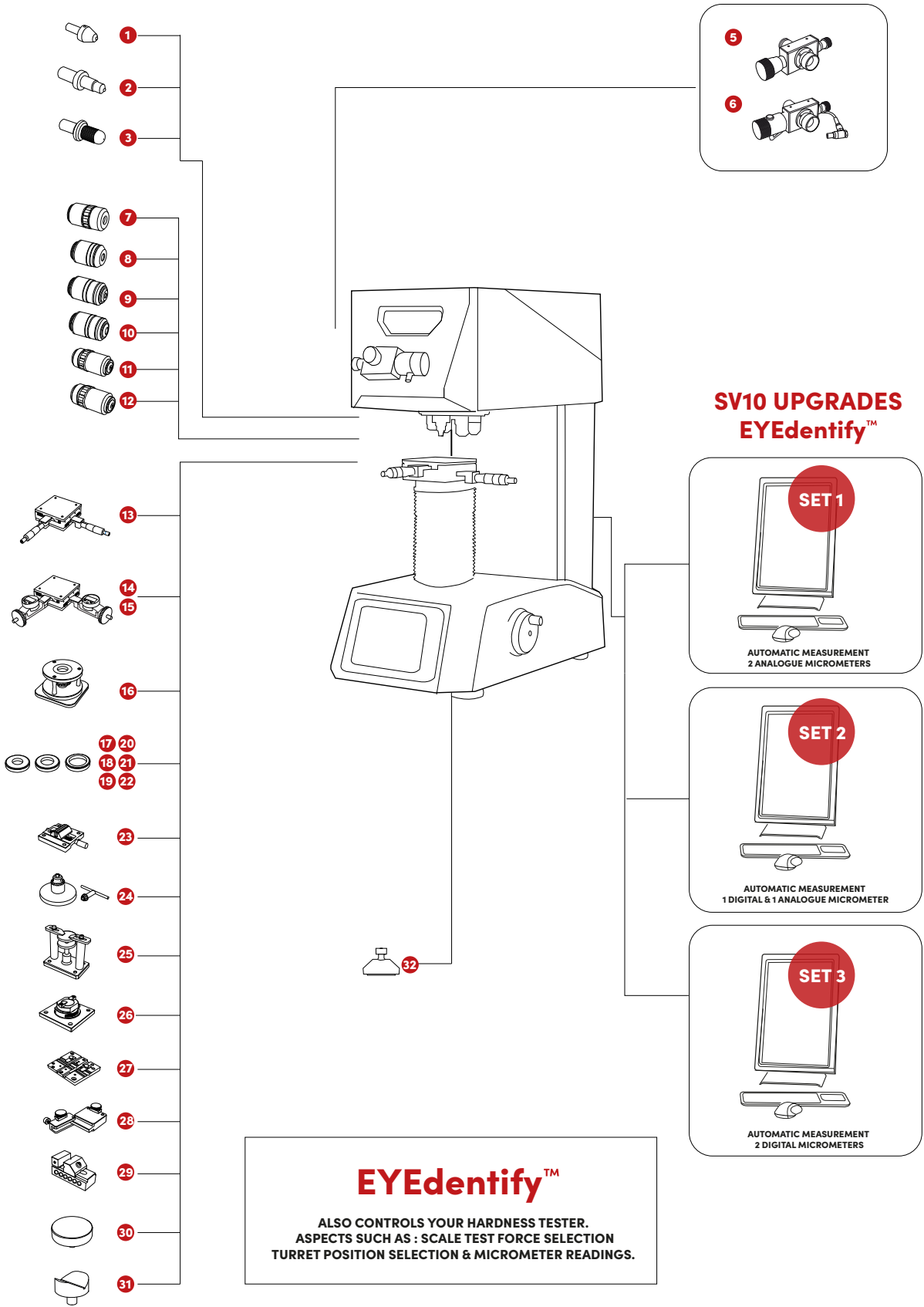
Tester model	SV10 A (2)	SV10 B (2)	SV10 C (2)	SV10 D (2)
Load system				
Test load range	10gf - 1kgf	10gf - 2kgf	10gf - 10kgf	10gf - 62.5kgf
Load steps	10	11	16	25
Loads in gf	10, 15, 20, 25, 50, 100, 200, 300, 500, 1000	10, 15, 20, 25, 50, 100, 200, 300, 500, 1000, 2000	10, 15, 20, 25, 50, 100, 200, 300, 500, 1000, 2000, 2500, 3000, 4000, 5000, 10000	10, 15, 20, 25, 50, 100, 200, 300, 500, 1000, 2000, 2500, 3000, 4000, 5000, 10000, 15625, 20000, 25000 30000, 31250, 40000, 50000, 60000, 62500
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	Similtaneous 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 Ananalogue Micrometer heads included			

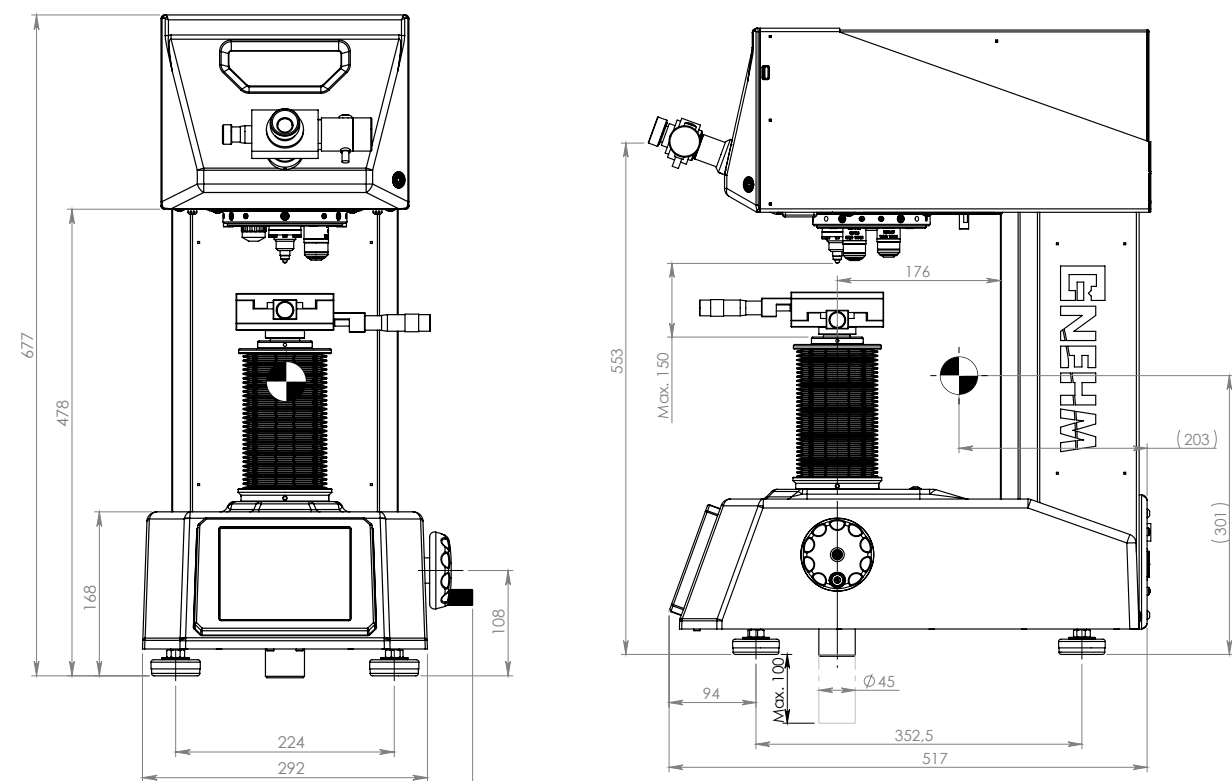
Electronics system	
Screen	Full color capacitive industrial quality touchscreen
Display information	Scale, test load setting, D1 & D2, test result (hardness value), Go-No go settings (limits), results list, output channel (USB – printer), load progress indicator, turret postion, start/stop button
Touch 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	W340 x D520 x H680 mm
Weight (net)	75kg

SV10 Upgrades	AV-PACK 1 OPTION	AV-PACK 2 OPTION	AV-PACK 3 OPTION
Software system	EYEdentify™ Hardness Indent Vision & Measuring Software System		
XY-Stage	Manual, 2 analogue micrometers	Manual, 1 digital, 1 analogue micrometer	Manual, 2 digital micrometers
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. MM, AM, CHD, NHD, SHD, GM, KiC, PW function included		
	Automatic brightness contol		
	Includes MS Windows PC controller		
	22” Full Colour HD Touch Screen & Control monitor, keyboard & mouse		

SV10 STANDARD ACCESSORIES		
1	100.SV1020.ACC	IND-V3FC Vickers diamond Indenter, 3mm
		HTB-400HV1 Test block +/- 400HV1
8		100.OL.FS4 Objective lens 5X, 10X, 20X, 50X installed
32		LVLDLMP4 4 Level Dampers
		PWCBL1 Powercable EU / Powercable US
		ACCBOX1 Accesories packing Box
		INSMANENG English Instruction Manual, USB stick
		900.PB.30 Standard packing box for air/seafreight

SV10 OPTIONAL ACCESSORIES		
1	IND-V3IA	Vickers indenter Ø3mm - ISO/ASTM certified
2	IND-K3IA	Knoop indenter Ø3mm - ISO/ASTM certified
3	IND-B31IA	Brinell 1mm ball indenter Ø3mm - ISO/ASTM certied
4	IND-B325IA	Brinell 2,5 mm ball indenter Ø3mm - ISO/ASTM certified
5	EPA15X	Analogue Eyepiece 15X
6	EPD15X	Electronic Digital Eyepiece 15X
7	FINOBJ2.5X	Objective lens 2,5X
8	FINOBJ5X	Objective lens 5X
9	FINOBJ10X	Objective lens 10X
10	FINOBJ20X	Objective lens 20X
11	FINOBJ50X	Objective lens 50X
12	FINOBJ100X	Objective lens 100X
13	XYSTAGE150	Manual X-Y stage 150 x150mm, travel 50x50mm
14	DMHEAD25	Digital micrometer head for X-Y stage 25mm
15	DMHEAD50	Digital micrometer head for X-Y stage 50mm
16	SAHO1	Sample holder for 1 embedded sample, 50mm
17	SAHOR25	Reduction sample holder 25mm
18	SAHOR30	Reduction sample holder 30mm
19	SAHOR40	Reduction sample holder 40mm
20	SAHOR100	Reduction sampleholder 1"
21	SAHOR114	Reduction sample holder 1 1/4"
22	SAHOR150	Reduction sample holder 1,5"
23	SELCENTV1	Small universal vice self centering
24	ACHK1	Axle chuck dia. 0.4mm to 5mm
25	UCLAMP1	Universal Clamp & Leveling Device
26	THINCLAMP1	Thin metal clamp
27	VCLAMP1	V groove clamp for diameter 0.8-5mm
28	WFIX1	Wire Testing Fixture for diameter 0.8-3.5mm
29	PPV3642	Precision polished vice, W36mm, D42mm
30	140.AV.105	Flat anvil 60mm, high grade stainless steel, hardened
31	140.AV.110	V-anvil 63mm, high grade stainless steel, hardened





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 V1.5

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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