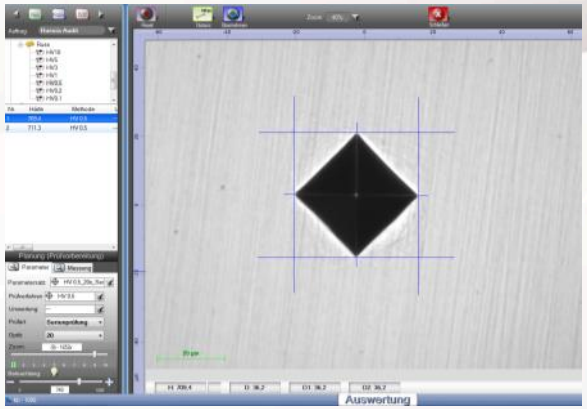
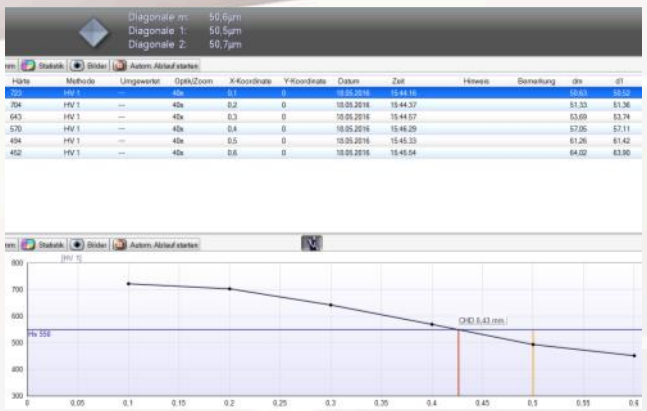
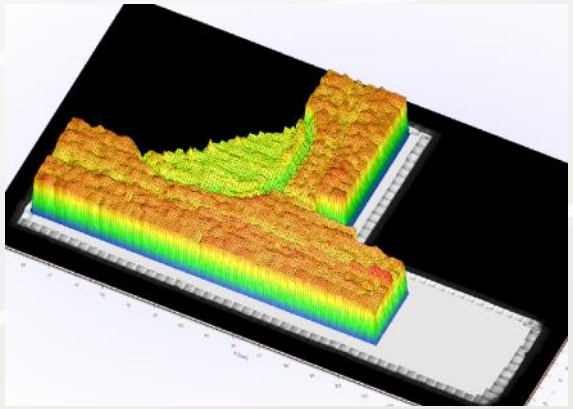
PRÜFTECHNIK

KB Hardwin XL

The Software for Hardness Testing for New Machines and Modernizations







KB Hardwin XL

Software for

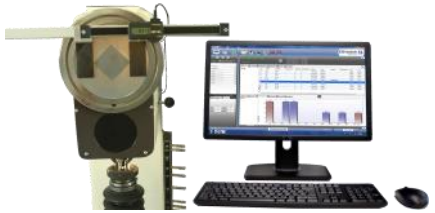
Hardness Testing

Software to Control Hardness Testing Machines

For New Machines and Modernizations

KB PRÜFTECHNIK

Stages of Expansion

Basic (Data Collector)	VIDEO (Camera Evaluation)	SA (Semi Automatic)	FA (Fully Automatic)
			
Software KB Hardwin XL Basic	Software KB Hardwin XL Video	Software KB Hardwin XL Semi	Software KB Hardwin XL FA/ FA basic
No video picture	1,3 -5 MP USB camera	1,3 -5 MP USB camera	1,3 -5 MP USB camera
Interace RS232 connection to hardness tester or sliding caliper	Control of the hardness tester possible	Control of the hardness tester necessary With motorized X/Y-stage	Control of the hardness tester necessary With motorized X/Y-stage

KB Hardwin XL BASIC → **KB Hardwin XL VIDEO** → **KB Hardwin XL SEMI** → **KB Hardwin XL FULLY**

The KB Hardwin XL hardness testing software from KB Prüftechnik enables the connection of a wide range of hardness testing systems thanks to its high flexibility. The range of integrated systems includes the control of new machines as well as the modernization of existing systems with sliding caliper or KB UHP panel. It runs on operating system Windows XP, Vista, 7 (32/64 bit) and 10.

The requirements of EDP and network environment are critical to the current state of your hardness testing software. With KB Hardwin XL you get a software that not only upgrades new systems, but also your existing hardware to the current state.

The usable functions depend on the mechanical equipment of the hardness testing system. Depending on the equipment, the fully automatic functions of the KB Hardwin XL FA software can be used as part of a retrofit.

PRÜFTECHNIK KB

Basic Features

Menu Navigation

- Perfect test process by a clearly arranged and user-oriented menu navigation
- Assistant for easy operation: Solve standard tasks quickly on your own.
- Apply different magnifications and load steps in one test procedure.



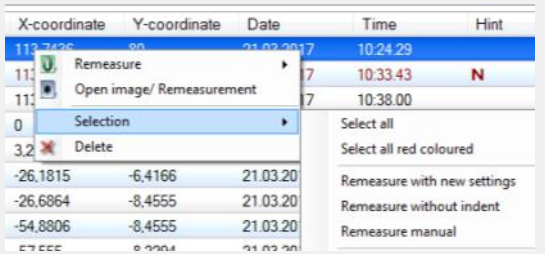
Load Step Change During One Test Procedure

Different load steps and magnifications can be applied during one test procedure without breaking into the test process.

Messwert				
	1	450	HV 5	---
	2	450	HV 5	---
	3	457	HV 5	---
	4	842	HV 1	---
en	5	717	HV 1	---

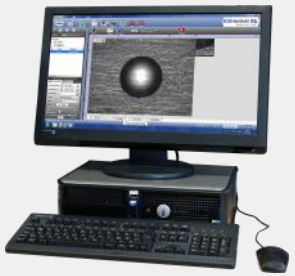
Measuring a Substitution

There are three possibilities to re-measure already existing indentation. The image will be re-opened and then the indentation can be measured. Another way is to save a new picture of the existing indentation with the live camera. Also a new indentation can be set on the sample. The new value replaces the old one.



Operating System

KB Hardwin XL supports Windows XP, Vista (32 bit), 7 (32 bit/ 64 bit), 8 and 10 (32 bit/ 64 bit). The use of a personal computer makes KB Hardwin XL network compatible.



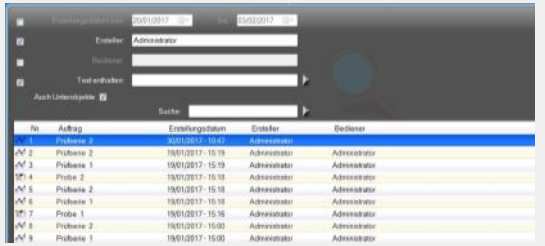
Conversion Tables

Conversion tables according to DIN 50150, DIN EN ISO 18265 (without copper conversion) and ASTM-140-T1-2007 to ASTM-140-T9-2007 are basically included.

HB	Nmm²
HRC	Nmm²
HV	Nmm²

Quick Access on Filed Test Orders

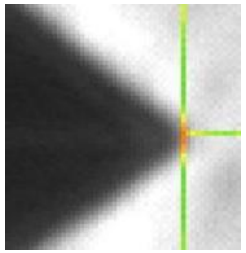
Test orders, samples, indentations and pictures which belong to a previous test order can be re-addressed at any time.

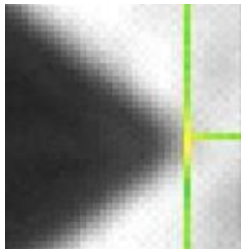


KB PRÜFTECHNIK

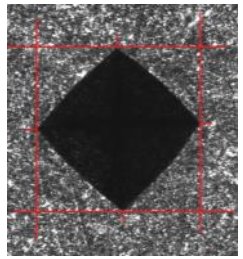
Image Evaluation

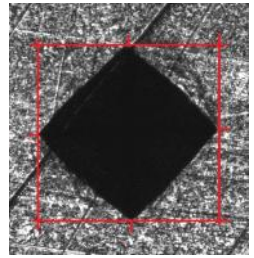
Operator Independent Manual Measurement
Due to the pixel-precise display of the indentation picture and the coloured measuring marks each Indentation is evaluated the same by each operator.


Red: Too hard

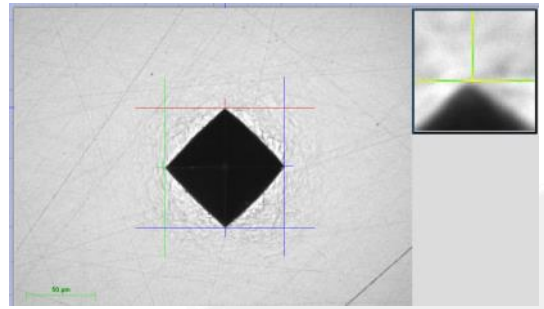

Yellow: Ok

The **improved automatic evaluation** is now even more precise especially on not optimal surfaces.
Etched, sintered or scratched samples cannot interfere the automatic test procedure.

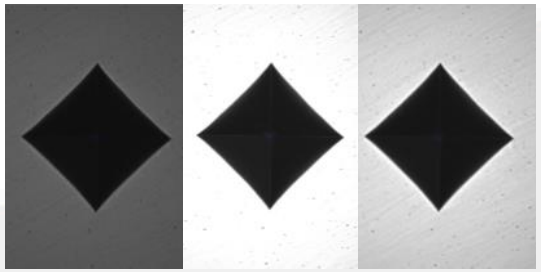

Etched Surface


Scratched Surface

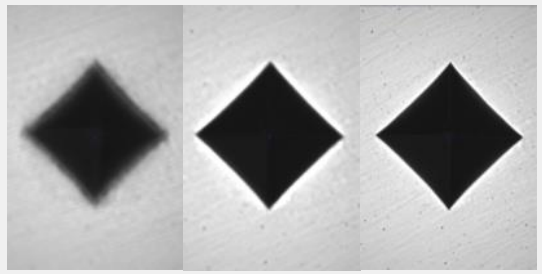
The **magnifying function** allows high precision manual measurement due to the bigger display of the indentation edges.



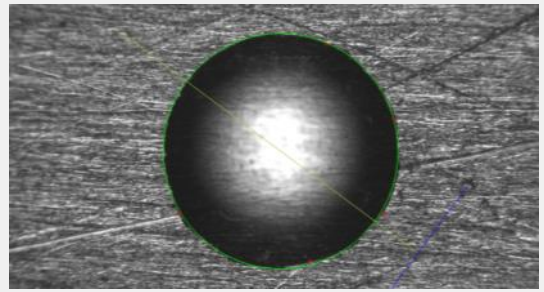
Automatic Light Control
High reproducibility and precision with the KB light control since the optimal illumination is achieved without operator influence. This is especially important at automatic test procedures when the sample surface or the magnifications are changing.



Unique Auto Focus
The KB auto focus works reliably, quickly and precisely. The correct position does not need to be set by the operator at first.



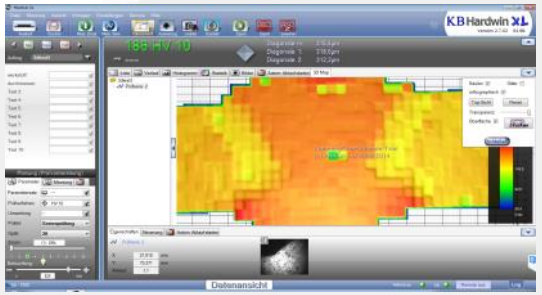
Rotating Measuring Marks
The circular shape is calculated by 3 point. These points are defined by rotation and radius. This way even not round Brinell indentations can be evaluated.

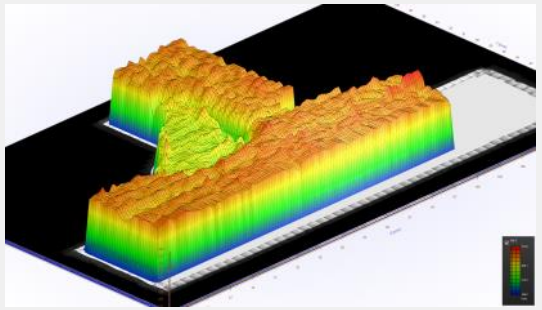


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Mapping

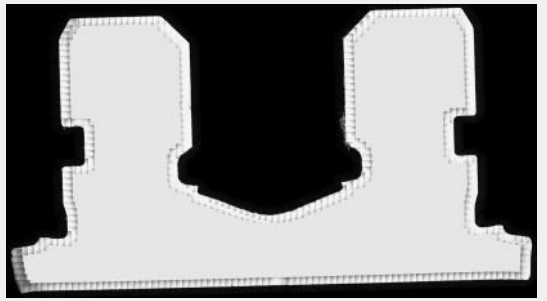
The option mapping shows the hardness profile of the sample either in 2D or 3D.
The operator can observe the hardness profile of the complete sample by one view.



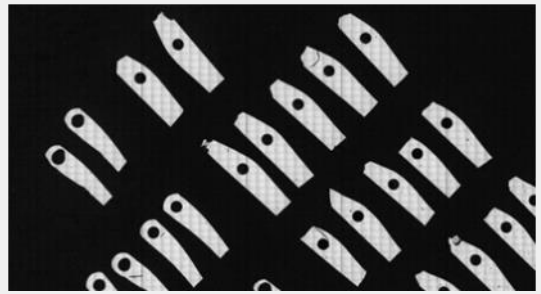


Scanning mit KB Hardwin XL und dem KB Kreuztisch

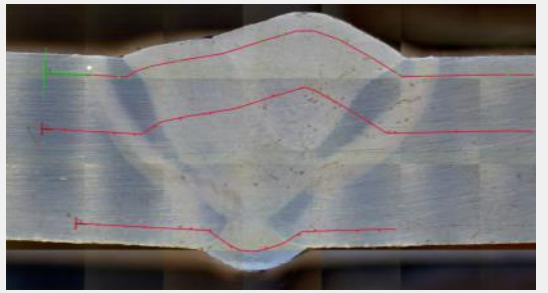
Contour Scanning with Microscope Camera
Just the outline contour of the sample will be scanned with the microscope camera. The single pictures will be automatically assembled.



Area Scan with the Microscope Camera
The complete sample will be scanned with the microscope camera. The size of the scan area can be freely chosen. The single pictures will be automatically assembled.



Area Scan with the Overview Camera
The complete sample will be scanned with the second camera. The size of the area can be freely chosen. The single pictures will be automatically assembled.



Snapshot Overview Camera
The second camera creates the perfect overview of the sample only with one picture.





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Automation

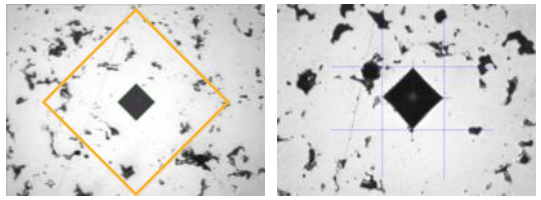
Part Recognition Reco Jet

- After the scanning the correct previously saved contour line with test points will be recognized
- Position and angle will be identified accurately
- The pattern will be applied automatically on the correct sample coordinates
- Extensive time saving since the pattern of the samples has to be generated only one time



Sinter Testing

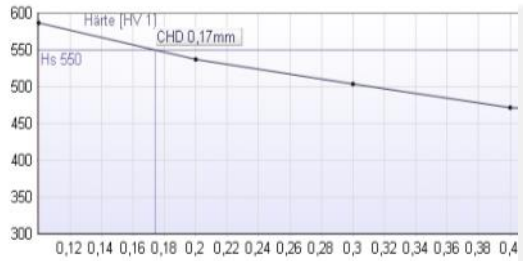
- Average-values curve is supported
- Auto elimination of min and max values
- Interactive elimination of disadvantageously set indentations
- Indentation coordinates will be interactively checked and can be corrected
- Visualisation of the expected indentation size and the allowed distance to the next indentation



Pattern Test (CHD)

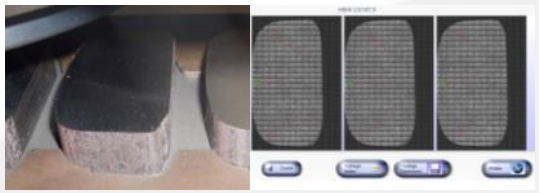
In the Video level CHD patterns can be measured manually (option). Semi– and Fully-Automatic systems include CHD pattern tests.

Time saving: The core hardness can be defined. If this value is reached, an adjustable number of indentations will be set before the test procedure will be completed.



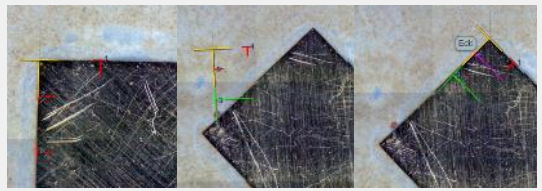
Magazine

Customized magazine patterns can be programmed to test several samples of one kind.



Quicklink

Adjust all test series of one pattern with one click. Orientation on significant points such as symmetry points, reference points, bench marks or pivotal points.



Multiple Sample Holder

In combination with the multiple sample holder, more than one sample can be automatically tested fast, simple and effective.



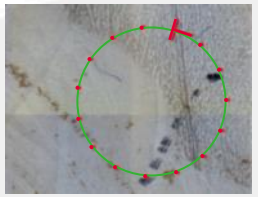
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Option Welding Test

Tools

The polygonal tool, circle tool and splitter tool help to define the test orders individually, simple and according to standard.





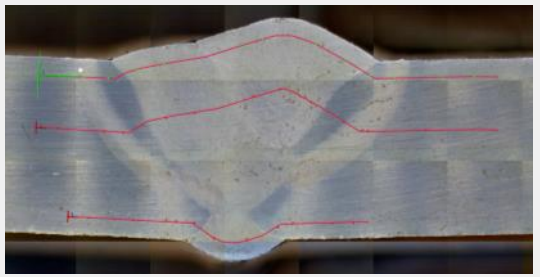
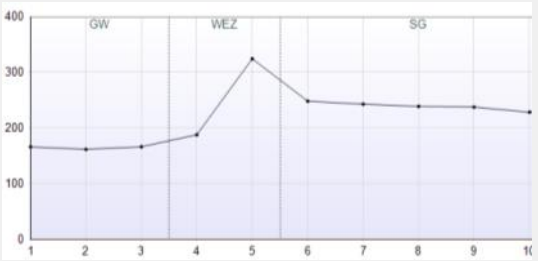


Diagram with Display of the Zones

The assigned zones will be shown in the diagram and the data evaluation.



Configuration Levels and Options

Legend	
Symbol	Meaning
-	Not Applicable
X	Including
O	Option

	Basic	Video	SA	FA Basic	FA
Software					
Data Storage (Pictures and Test Orders)	X	X	X	X	X
Data Export	X	X	X	X	X
Report Generator	X	X	X	X	X
Automatic measurement	-	O	O	X	X
Multi Sampling	-	-	O	O	X
Part Recognition	-	-	O + Scanning	O + Scanning	X
Scanning	-	-	O + Autofokus	O	X
Auto Focus	-	O	O	X	X
Manual Pattern CHD	-	O	-	-	-
Auto CHD Pattern	-	-	X	X	X
Grafical Editor	-	-	X	X	X
Quick Link	-	-	O + Scanning	O + Scanning	X
Light Control	-	O	O	X	X
Welding Test	-	-	O + Scanning	O + Scanning	X
Geometrical Tools	-	-	O + Scanning	O + Scanning	X
Sinter	-	-	-	O	O
K1C Fracture Toughness	-	O	O	O	O
Multiple Sample Holder	-	-	-	O+Scanning +Multisample	O
AMS Interface	-	O	O	O	O

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Data Management

Data Export

The standard data export supports **HTML, PDF, Excel, Word or TXT.**



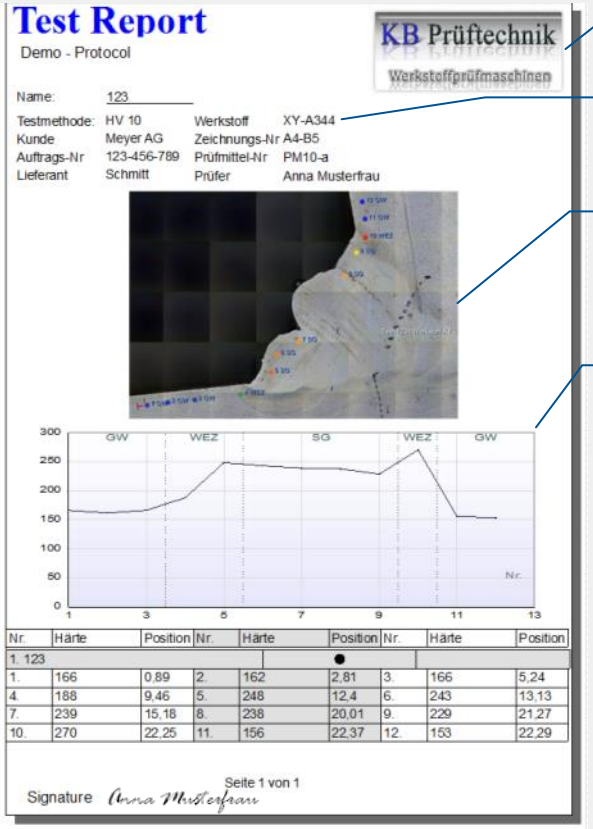
Sample with bar or QR code on the lot slip

The code will be scanned and the saved order information and parameters will be downloaded from the ERP server.

The test order will be processed.

The measuring results will be exported and saved on the ERP server.

Report Generator



Test Report

Demo - Protocol

KB Prüftechnik Werkstoffprüfmaschinen

Name: 123

Testmethode:	HV 10	Werkstoff	XY-A344
Kunde	Meyer AG	Zeichnungs-Nr	A4-B5
Auftrags-Nr	123-456-789	Prüfmittel-Nr	PM10-a
Lieferant	Schmitt	Prüfer	Anna Musterfrau

Nr.	Härte	Position	Nr.	Härte	Position	Nr.	Härte	Position
1. 123								
1.	166	0,89	2.	162	2,81	3.	166	5,24
4.	188	9,46	5.	248	12,4	6.	243	13,13
7.	239	15,18	8.	238	20,01	9.	229	21,27
10.	270	22,25	11.	156	22,37	12.	153	22,29

Signature Anna Musterfrau

Seite 1 von 1

Customized logos can be embedded

Number and content of the property labels are freely adjustable

The selection of the pictures depends on the type of report and can be adjusted to individual needs.

Diagrams and patterns can be integrated in the report.

The test reports can be freely adjusted by the standard report generator.
KB includes the generator in each software level with standard report types. Customized test reports can be programmed on request.
The test report can also be programmed by the operator if required.
The file format of the report can be chosen between PDF, Excel, RTF, JPEG, EMF, TTY, CSV, XML etc.



KB Prüftechnik GmbH
Im Weichlingsgarten 10 b
67126 Hochdorf – Assenheim
Germany

Tel: +49-6231 – 93992-0
Fax: +49-6231 – 93992-69

Email: info@kbprueftechnik.de
Internet: www.kbprueftechnik.com

Information with reservation.

KB Hardiwn XL Video - deu - 04-2018