QATM®
QUALITY ASSURED

Qness 10 / 60 M
Qness 10 / 60 A+
Qness 60 A+ EVO

THE REVOLUTION IN QUALITY ASSURANCE

HARDNESS TESTING + MICROSCOPY SEAMLESSLY COMBINED AND HIGHLY AUTOMATED

part of VERDER scientific

Qness 10 M
Qness 60 M

Qness 10 A+
Qness 60 A+

Qness 60 A+ EVO

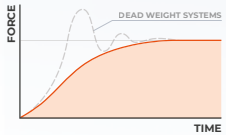
MICROHARDNESS TESTER MEETS METALLOGRAPHIC ANALYSIS

The new QATM micro hardness tester series is a combination of a classic micro hardness tester, universal macro hardness tester up to 62.5 kgf and a microscope for metallographic analysis. With a new design and high-end components such as: **automatic 8-fold tool changer**, plug & play test modules, fully automated axes, **high-resolution optics and optimised motion sequences**. In combination with the QpixControl2 software, there are no limits to the imaging of complex applications. This perfectly harmonised system impresses with its overall package and its **high degree of automation.** Especially in times of automation and simplification of work processes, these devices are ideally suited, particularly with regard to **digitalisation, data transfer and networkability**.

With this new QATM product range, a wide variety of applications can be covered and combined for the respective areas of use.

2 TEST FORCE VARIANTS: QNESS 10 OR QNESS 60

Electronically controlled test forces ensure fast, precise hardness testing, as well as fast method changes and automatic detection of the focal plane.



UNLIMITED POSSIBILITIES

- 2 Test force variants:
  Qness 10: 20 gf to 10 kgf
  Qness 60: 0.25 gf to 62.5 kgf
- 3 Model variants - from semi-automatic application (M) to full automation (A+/A+EVO)
- Ready to Test: including ASTM & DAkkS as standard certified Vickers test diamond and lenses
- Solidly-built machine – 'Made in Austria'
- Variably-structured, vibration-reducing cast body with frame in anodized aluminum.

HARDNESS TESTING

VICKERS
DIN EN ISO 6507, ASTM E-92, ASTM E-384

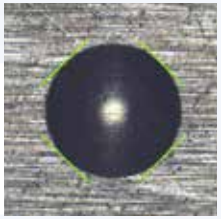
HV 0.00025*	HV 0.005	• HV 0.1	• HV 2	HV 20
HV 0.0005*	HV 0.01	• HV 0.2	• HV 2.5	HV 30
HV 0.001	• HV 0.02	• HV 0.3	• HV 3	HV 50
HV 0.002	• HV 0.025*	• HV 0.5	• HV 5	HV 60*
HV 0.003	• HV 0.05	• HV 1	• HV 10	

KNOOP
DIN EN ISO 4545, ASTM E-92, ASTM E-384

HK 0.001	HK 0.02	HK 0.3
HK 0.002	HK 0.025	HK 0.5
HK 0.005	HK 0.05	HK 1
HK 0.01	HK 0.1	HK 2
HK 0.015	HK 0.2	

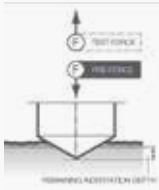
BRINELL
DIN EN ISO 6506, ASTM E-10

HBW 1/1	HBW 2.5/6.5
HBW 1/2.5	HBW 2.5/31.25
HBW 1/5	HBW 2.5/62.5
HBW 1/10	HBW 5/25
HBW 1/30	HBW 5/62.5



ROCKWELL
DIN EN ISO 6508, ASTM E-18

HRA
HRF
HR 15-N/T
HR 30-N/T
HR 45-N/T

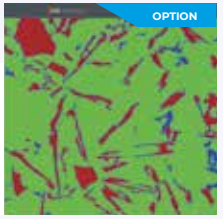


CONVERSION
DIN EN ISO 18265, DIN EN ISO 50150, ASTM E140

MICROSCOPY & ANALYSIS
QPIX INSPECT

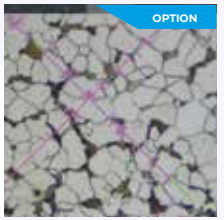
PHASE ANALYSIS
ISO 9042, ASTM E-562

- Automatic image object dimensioning
- Provides analytics results as percentage proportions of a surface or as nominal surface values as tables or diagrams



PARTICLE SIZE DETERMINATION
ISO 9042, ASTM E-562

- Particle size determined via linear or circular section method
- Results of the analysis provided as tables or diagrams
- Abrams Circles, Heyn Lines, Snyder-Graff Line

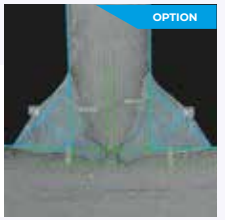


LAYER THICKNESS MEASUREMENT
DIN EN ISO 1463

- Determination of layer thickness
- Semi-automated gauging of horizontal, vertical and radial layers.

WELD SEAM MEASUREMENT
DIN EN ISO 5817

- Standardised measurement and evaluation of weld seams
- Prefabricated templates with all relevant measuring tools such as throat thickness, weld reinforcement, penetration depth, etc.
- Automatic good/bad evaluation and report generation



READY TO TEST

Qness 60 M/A+/A+EVO all Vickers test methods possible with standard scope of delivery • Qness 10 M/A+ with standard scope of delivery HV0.02 to HV10 possible *Not according to standard

CRYSTAL CLEAR IMAGE QUALITY

REVOLUTIONARY OPTIC SYSTEM

The QATM-developed, in-house manufactured lens system sets new standards. As well as providing crystal clear image quality for hardness testing, Koehler illumination uses white LED light and motor-operated aperture shuttering to produce ideal contrast, even for high magnification images. The color-corrected high-quality lens series is used for structural analysis. Experienced metallurgists agree the image quality provided by the Qness 60 EVO is comparable in all aspects with that of established sophisticated microscopes. The up-to-date concept and new lenses in the optic system enable the device to completely meet even the strictest physical 'test system definition' requirements in compliance with DIN EN ISO6507-1/2:2018.

INTERACTIVE TEST SOFTWARE FOR ALL VERSIONS

Qpix Control2 is pioneering the ultra-modern software operation of hardness testing equipment and has been expanded to include intelligent measurement tools for lengths and angles. It's ideal for establishing templates, and now also for the testing of welds (A+ models). In addition, the optional INSPECT software modules can be seamlessly integrated into the overall operating infrastructure:

- Phase analysis
- Layer thickness measurement
- Grain size evaluation
- Weld seam measurement

HARDNESS TESTER OR MICROSCOPE?

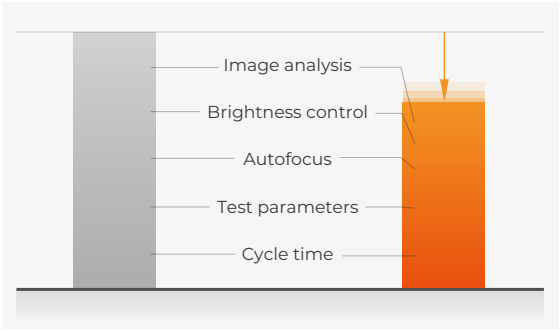
BOTH.

TEST SPACE LIGHTING

All devices are equipped with the new LED work space lighting: Simplified positioning of samples for single-piece tests.

LOGIN VIA NFC

The Qpix Control 2 software supports user login using an external NFC reader. Depending on the NFC tag/card, the customer's existing access cards can also be programmed in, for example.



OPTIMIZED PERFORMANCE AND SILENCED DESIGN

Optimized testing parameters and shorter intervals for serial autofocus, brightness regulation and image analysis, facilitate unbeatable cycle times during everyday operation involving hardness testing devices of the new micro hardness tester product line; and it's even faster than the previous model. A further benefit of the new machine concept is the emphasis on reduced noise emissions in operation and motion, making it **particularly suitable for laboratory work.**

8-POSITION TOOL CHANGER

Up to 8 different test diamonds or lenses can be mounted to the ultra-modern test turret. The compact structure is angled at 20° to guarantee excellent test room visibility. **Highlight:** The newly-developed hardness testing modules serve as modular indenter holders enabling plug-and-play retrofitting of Brinell and Knoop test equipment at any time after delivery.

COMPREHENSIVE RANGE OF BASIC FUNCTIONS

Several labor-saving features are already included in the QATM base model:

- Optimized autofocus system
- Automatic brightness regulation
- Automatic image evaluation for hardness testing with multiple evaluation modes
- Built-in protocol generator

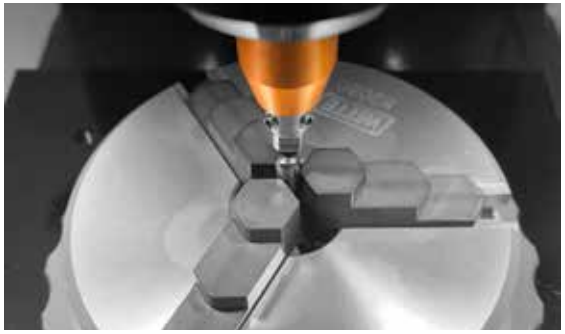
THE PROFESSIONAL INTRODUCTION TO HARDNESS TESTING AND MICROSCOPY

VARIANTE M

- Semi-automatic hardness testing with automatic image evaluation, autofocus and brightness regulation
- Manual XY table can be retooled for simple progression inspections
- Desktop PC with monitor and Qpix Control2 M for full interconnectivity

THE BEST
OF TWO WORLDS

IN A
SINGLE DEVICE

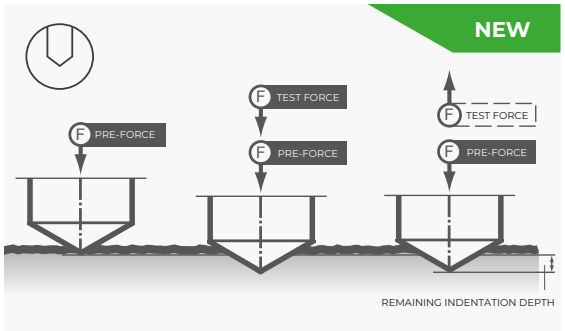


MAXIMUM VERSATILITY

Unsurpassed in single-piece testing and limited series tests on items of all sizes: Simple operability and optional additions for microscopy make QATM Qness 10/60 M a unique, high-quality, all-round package.

DIGITAL CROSS SLIDE WITH DATA FEEDBACK

Enables serial predefinition of test programs with fixed numbers of test points. If required, also with a manual slide, digital micrometer spindle and positioning data feedback – as used for manual CHD progressions.



NEW ROCKWELL TEST METHOD

In addition to the Vickers, Knoop and Brinell optical methods, Rockwell measurements can now also be carried out with the new micro hardness testers. A special Rockwell test module has been developed for this purpose.

VERTICAL CONCEPT WITH 2 Z-AXES

There are decisive benefits in distributing vertical movement across 2 axes. Via the first Z-axis there is dynamic motion control, allowing the indenter to be positioned towards the test surface quickly and conveniently at up to 30mm/s. The additional second Z-axis in the QATM system offers a high-resolution positioning system for greater precision in force application and focusing.

QPIX CONTROL2 M SOFTWARE

The Qpix Control2 M-Version of the intuitively-operated software is included with the Qness 10/60 M to provide sophisticated functionality tailored to the requirements of semi-automatic hardness testing devices. Clearly organized batch management and the effective use of templates from a broad span of testing projects, test result structuring and a complete range of background project information. The easily-generated templates include all the required information on test patterns, test methods, item names and user field details.

AUTOMATED AND PERFECTED

VERSION A+

- Fully automatic XY slide (+/- 2 µm)
- Integrated sample image camera for unique ease of use
- Fully automatic 3D control functions

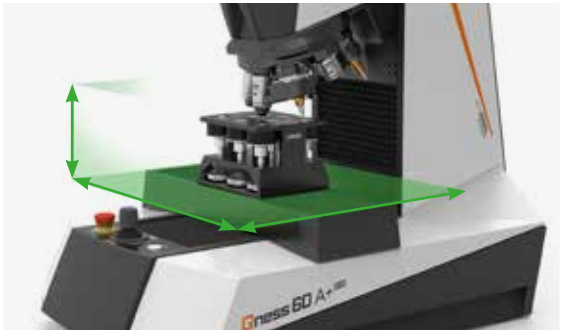
FOR EXCELLENT ACCURACY

VERSION A+ EVO

- High-precision, fully automatic XY slide (+/- 0.2 µm)
- Rotatable indenter (IPC technology)
- Equipped with HQ lenses as standard

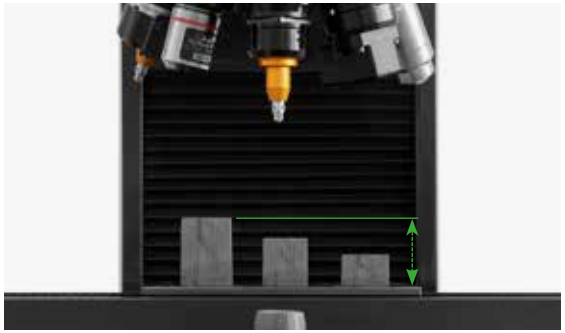
PIONEERING TECHNOLOGY

UNIQUE IMPLEMENTATION



EXACT POSITIONING AND A LARGE TEST SPACE

All 3 axes are equipped with the direct, optical path measuring system as standard. The axes and turret can be positioned to an accuracy of 1.5 µm, so even thin layers, or special testing or analytical coordinates, can be repeatedly and accurately approached.

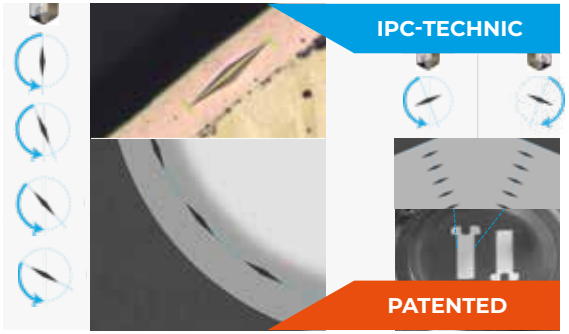


DIFFERENT TEST HEIGHTS

The unique construction of the highly-dynamic tool changer turret allows the positioning of test pieces at various heights within the test area. Innovative CAS technology protects the unit from collisions.

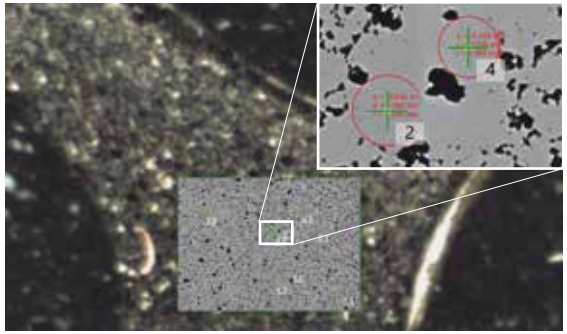
SAMPLE IMAGE CAMERA

It's no coincidence that most QATM customers choose the 'A+' version with a built-in sample image camera. In a few seconds the image of the sample is shot with the additional camera (field of view 52 x 39 mm). The image provides excellent navigational support within the software, particularly in combination with DOUBLE-VIEW TECHNOLOGY, and aids enhanced documentation in the automatically compiled test report.



IPC TECHNOLOGY / ROTATABLE INDENTER

IPC – 'Indenter Parallel to Contour' (optional)
The operator can select the route and points for the Knoop indenter along each contour, either manually, via the software setting, or fully automatically. The compact indenter unit with a built-in rotation drive facilitates fully automated hardness testing in layers or along the edge of the workpiece.



MODULE FOR SINTERED COMPONENTS

With this module, an area on the component can be easily defined and the number of hardness test points defined, especially for sintered samples. The software automatically searches for a position in the selected area where a hardness test indentation can be placed so that it is placed at a suitable location.

PRACTICAL

APPLICATIONS

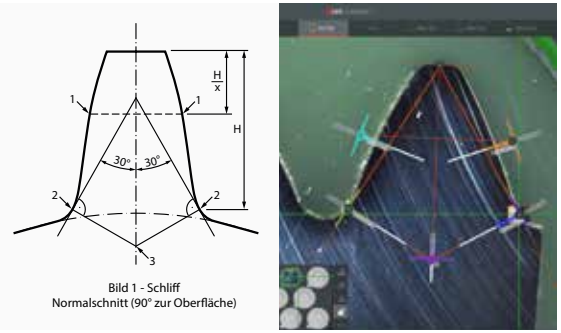


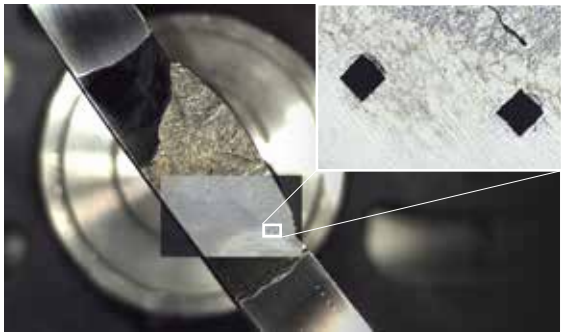
Bild 1 - Schliff
Normalschnitt (90° zur Oberfläche)

TOOTH FLANK TESTING

The time-consuming creation of test points, especially with tooth flank testing, is minimized by means of pre-defined test templates. The Qness 60 A+/A+EVO enables the entire normed procedure between HV30 and HV1 to be done by one single device.

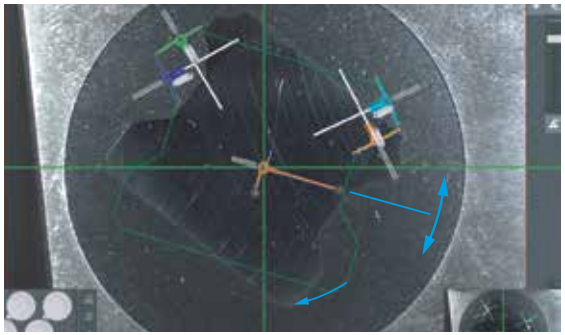
IDENTICAL SAMPLE TESTS

An entire range of relevant data, such as test patterns, test methods and user fields can be activated via pre-defined sample magazines. QATM can provide the most suitable clamping set-up, matrices and cassette systems for every requirement.



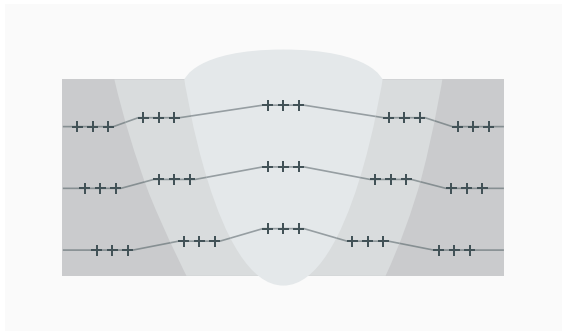
HIGH-RESOLUTION SAMPLE IMAGE (HRI)

If high-quality images of larger areas are required (e.g. for weld seam measurements), the area can be scanned using the HRI function. The Qpix Control 2 software automatically combines the individual images into one large overall image.



TEMPLATE FUNCTION

- Ideal for repeated tests / components
- Alignment of ‘test point mappings’ directly on the work piece with reference lines and bench marks
- Test point and analysis patterns without ‘fixed stop’ or sample holder
- The sample image can be used in a clearly-structured test report



WELD SAMPLE TESTING AND ANALYSIS

Serial provision of ‘Advanced Welding’ functions facilitates the simple, norm-compliant (e.g. EN ISO 9015 & EN ISO 22826) integration of test mapping for hardness testing. Pre-defined patterns can be simply adapted to each respective test piece via interactive functions. If required, Qpix INSPECT modules can also provide a simultaneous material-graphics analysis of the weld seam.

ILLUMINATED STATUS DISPLAY

BRINGS LIGHT INTO THE DARK

The illuminated QATM logo displays the current device status at a glance. The range of flash intervals indicates whether the device is operating automatically or is free to be used for new tasks for staff all around the lab. Furthermore, not only does the LED test space lighting, installed as standard, allow samples and sample holders to be set up correctly, in the A+ version it guarantees uniform light intensity for sample imaging.

8-FOLD SAMPLE HOLDER

PERFECTION IN FULL AUTOMATION

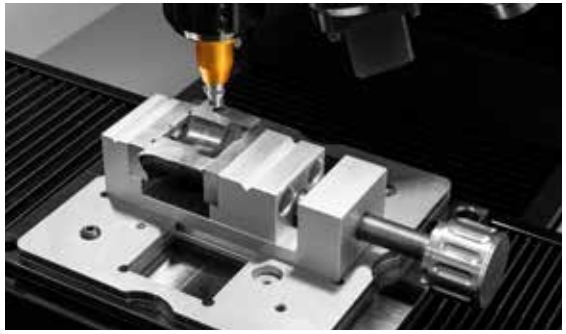
QATM sample holders are designed to ensure maximum sample throughput. 'A+'-device test tables include enough space for an 8-fold sample holder as standard; up to two sample holders can be used in parallel with the optional 300 mm slide.

OPTIMIZED SAMPLE CLAMPING

GUARANTEED

EMBEDDED SAMPLES

The secure clamping of samples thanks to a redesigned sample holder with a built-in clamping force limiter, simplifies sample centering and positioning. A sample plate with a ball-joint even clamps samples that cannot be held flat to prevent them tilting or sliding during testing. Available with 1, 4 or 8 sample-holding positions and adapter rings for a large range of metric and imperial sample diameters.

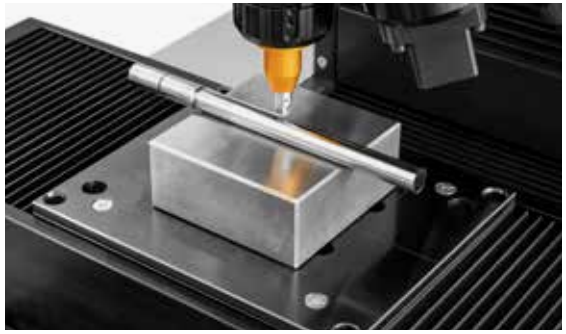


VICES

The clearly-organized, large and robust test room facilitates universality. Additionally, clamping samples straight into conventional vices reduces the effort required to prepare the sample, and expands the range of possible future test applications. QATM vices are also available with extra templates, enabling samples to be repeatedly clamped in precisely the same position.

NON-EMBEDDED SAMPLES

Components of almost all geometrical shapes can be fitted into the universal sample holder. Four clamping bolts can be set variably in various T-slots.



PRISMS

QATM prisms also enable round components to be tested with our devices. Benefit: Integration of the 3D model in the software automatically determines the center of the component and the highest point of each piece.

SPECIAL CLAMPING DEVICES

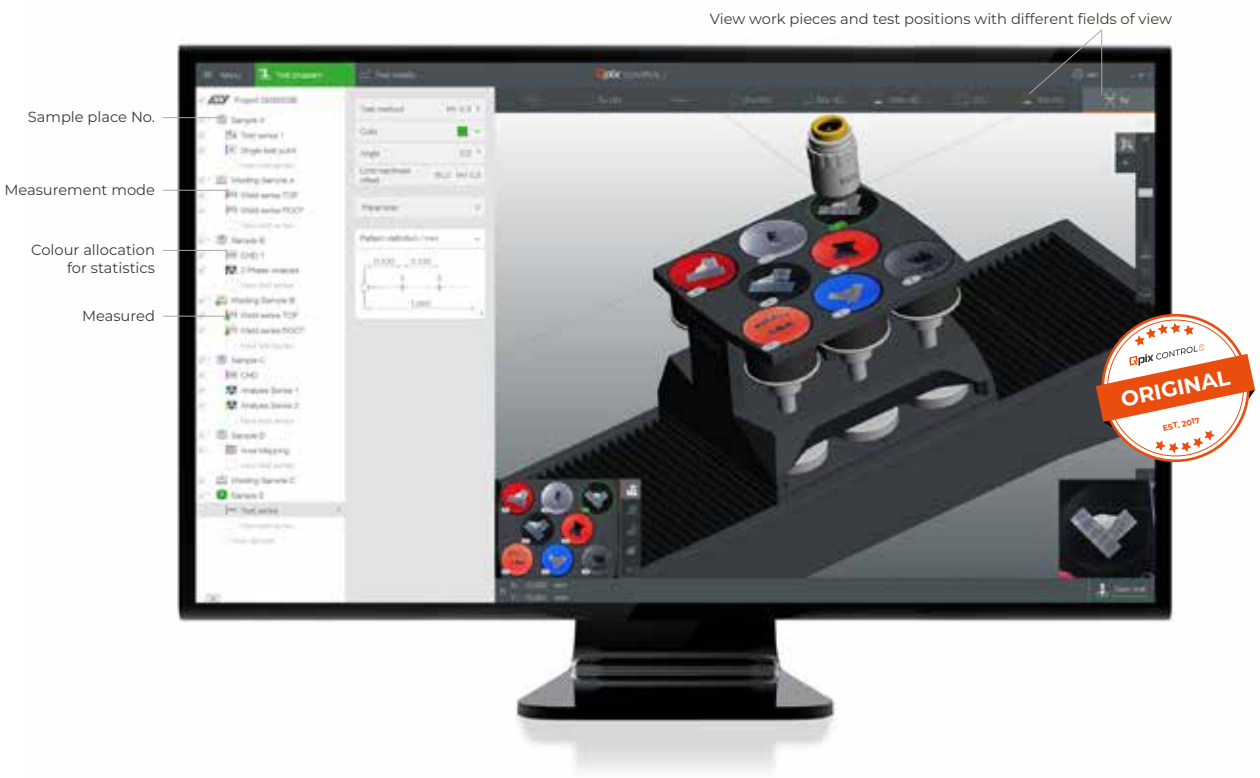
QATM is the right stop for advice on complex requirements and clamping devices! It would be our pleasure to advise, devise, customize and implement a solution for you. Only the right component clamping solution can guarantee reliable results.

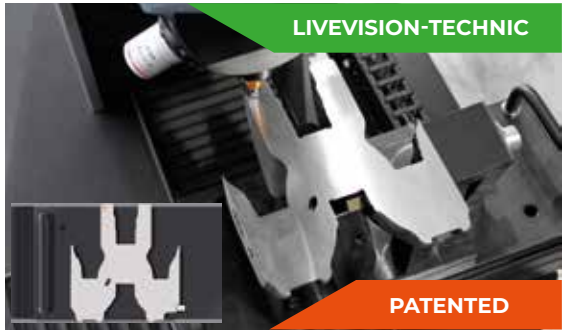
SOFTWARE Qpix CONTROL2

OPERATION VIA EXTERNAL PC SYSTEM

REVOLUTIONARY 3D OPERATING CONCEPT

Intuitive, clearly organized and professional: Qpix Control2 next-generation hardness testing software, developed based on customer feedback and input for maximum user-friendliness. The controlled test head benefits from automatic height adjustment and contactless exploration, complete integration of the Qness sample holder, CAD compatibility with 3D imaging and a whole range of easily understood 3D control elements and views included in the software. It sets new standards in hardness testing.





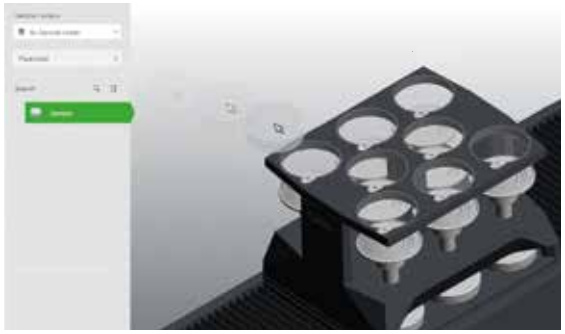
CUSTOMER-SPECIFIC SAMPLE HOLDER

Identical samples can be set up in the software in scale as a 3D model.

SIMPLIFIED LENSE SELECTION

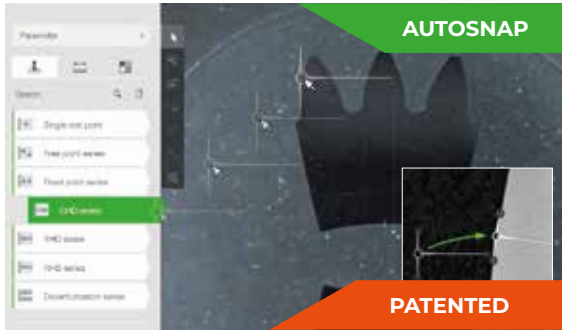
Based on the selected method (e.g. HV10), the suitable hardness range is displayed for each lens, which can be measured. The most suitable lens is also highlighted.

3 STEPS TO THE RESULT



1. LOAD SAMPLES

The machine moves automatically to the height of the sample holder. An image of the sample is taken automatically.



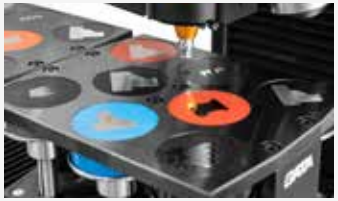
2. LOAD ROW

AutoSnap - Speedy row set-up: Drag the row of test points to the desired position. The serial Auto-Snap function corrects the starting point of the test row automatically.

3. START TEST SEQUENCE

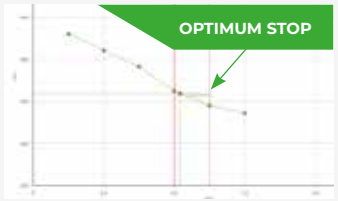
The test sequence is executed according to the applicable hardness testing standards.

MORE ACCURATE RESULTS RAPIDLY



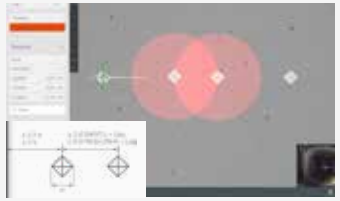
FULLY AUTOMATIC HARDNESS TESTING

Several progressions and samples are created and completed ‘unmanned’ (e.g. 60 progressions on 8 different samples in one test run)



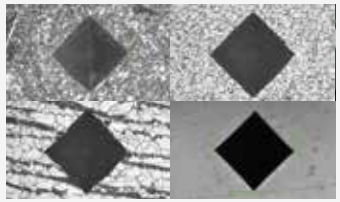
SAVE TIME WITH OPTIMUM STOP

Time-saving test mode ‘Complete all indentations – then evaluate’ and ‘Optimum stop’ to complete test series as soon as the lower hardness limit has been undercut.



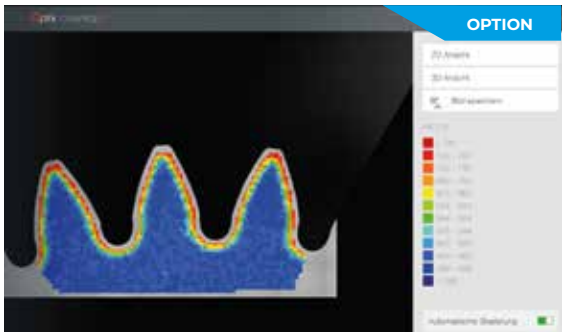
AUTOMATIC MINIMUM DISTANCE

The distances between the test points are generated fully automatically to the minimum standard distance. This makes the test results even more accurate. If the distance is less than required by the standard, the affected test points are highlighted accordingly.



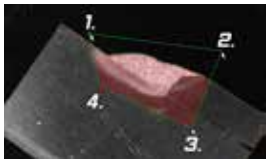
SURFACE INDENTATION RECOGNITION

The adjustable surface indentation recognition function reduces the required effort of sample preparation for testing the hardness of non-optimum surfaces. Hence, automatic indentation recognition is also possible on critical surfaces (etching, grinding...).

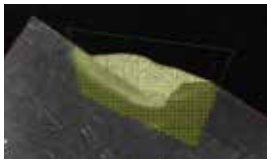


2D/3D AREA MAPPING

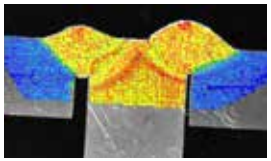
The optional software module '2D/3D hardness chart' is the perfect aid for the detailed determination of hardness distribution over the total cross section, especially for heat-treated samples. This is extremely important in material exploration, and also for weld testing or in damage analysis.



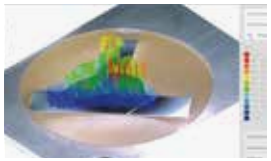
1 . Create area



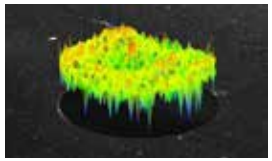
2. Define grid



3. Display in 2D...

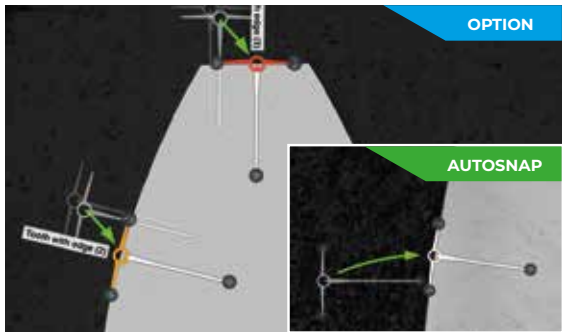


...or 3D



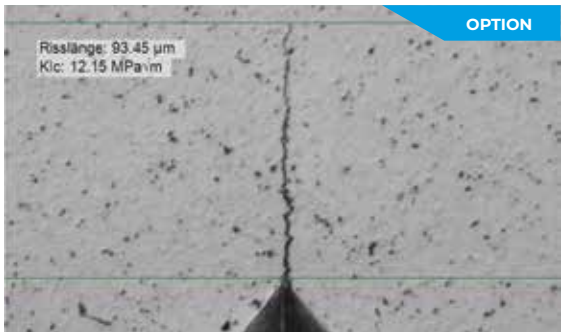
Homogenous hardness distribution chart on wire cross section

Test point pattern on a non-bedded specimen



EDGE RECOGNITION

Edge recognition involves automatic adaption of test row starting points to the sample edge when using project and sample templates. The module significantly increases the degree of automation and is an ideal add-on to the serially provided AutoSnap function.

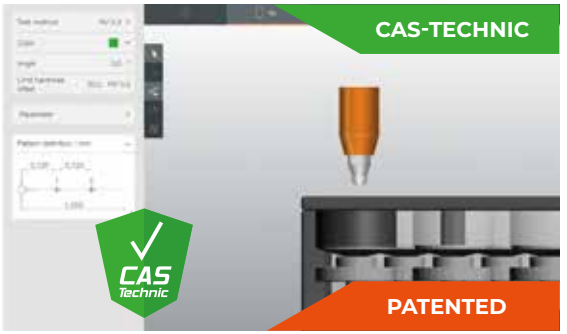


FRACTURE LENGTH MEASUREMENT

The K1C value is established via norm-compliant measurement of the 4 fracture lines. The MPa√m is subsequently calculated automatically.

DIGITAL CALIPER

The digital caliper is compatible with the Qpix Control2 system and reads the dimensions, height and diameter of components wirelessly and at the push of a button, entering them into the software. The test head height control enables the test height to be reached completely automatically with no need for manual input.



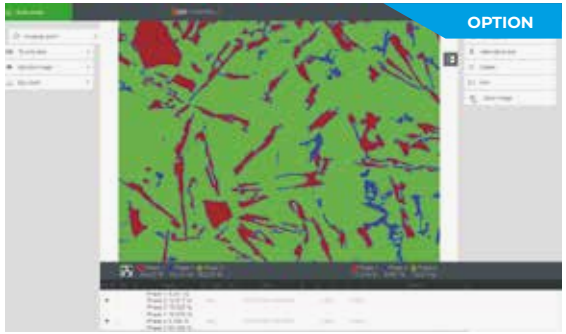
CAS TECHNOLOGY

Innovative Collision Avoiding System (CAS) technology protects the mechanical parts in the device using predictive 3D motion calculations to visualize the effects of collisions and operation errors.

STRUCTURAL ANALYSIS MADE EASY

QPIX INSPECT SOFTWARE MODULES

The intuitive and user-friendly Qpix INSPECT software functionality provides a comprehensive toolbox for microscopic evaluations and result documentation. The multifunctional software can be customized for customer-specific measuring tasks and complemented with add-on modules.

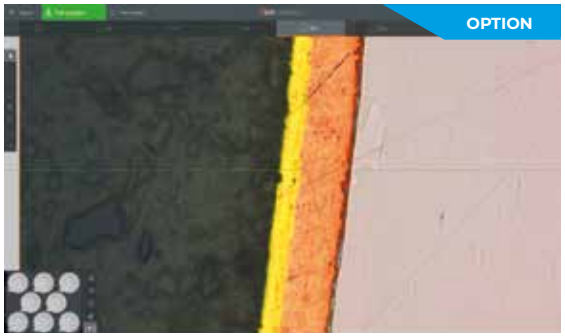


INSPECT PHASE ANALYSIS

- Automatic image object dimensioning
- Evaluation of phase fractions according to ISO 9042 and ASTM E562
- Provides analytics results as percentage proportions of a surface or as nominal surface values as tables or diagrams

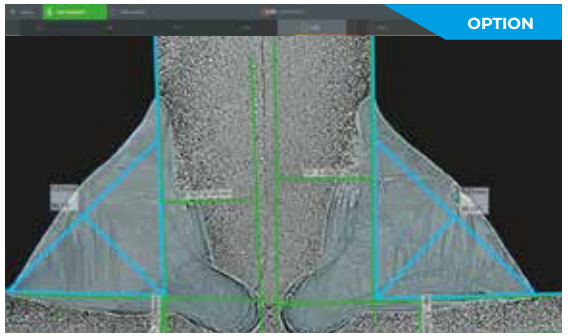
INSPECT PARTICLE SIZE DETERMINATION

- Particle size determined according to DIN EN ISO 643 and ASTM E112 via linear or circular section method.
- Results of the analysis provided as tables or diagrams.
- Documentation of statistical characteristics of particle size and segment lengths cutting through the particles.



INSPECT LAYER THICKNESS MEASUREMENT

- Determination of layer thickness according to DIN EN ISO 1463.
- Semi-automated gauging of horizontal, vertical and radial layers.
- Provision of layer thickness as statistical values for lengths as tables or diagrams.

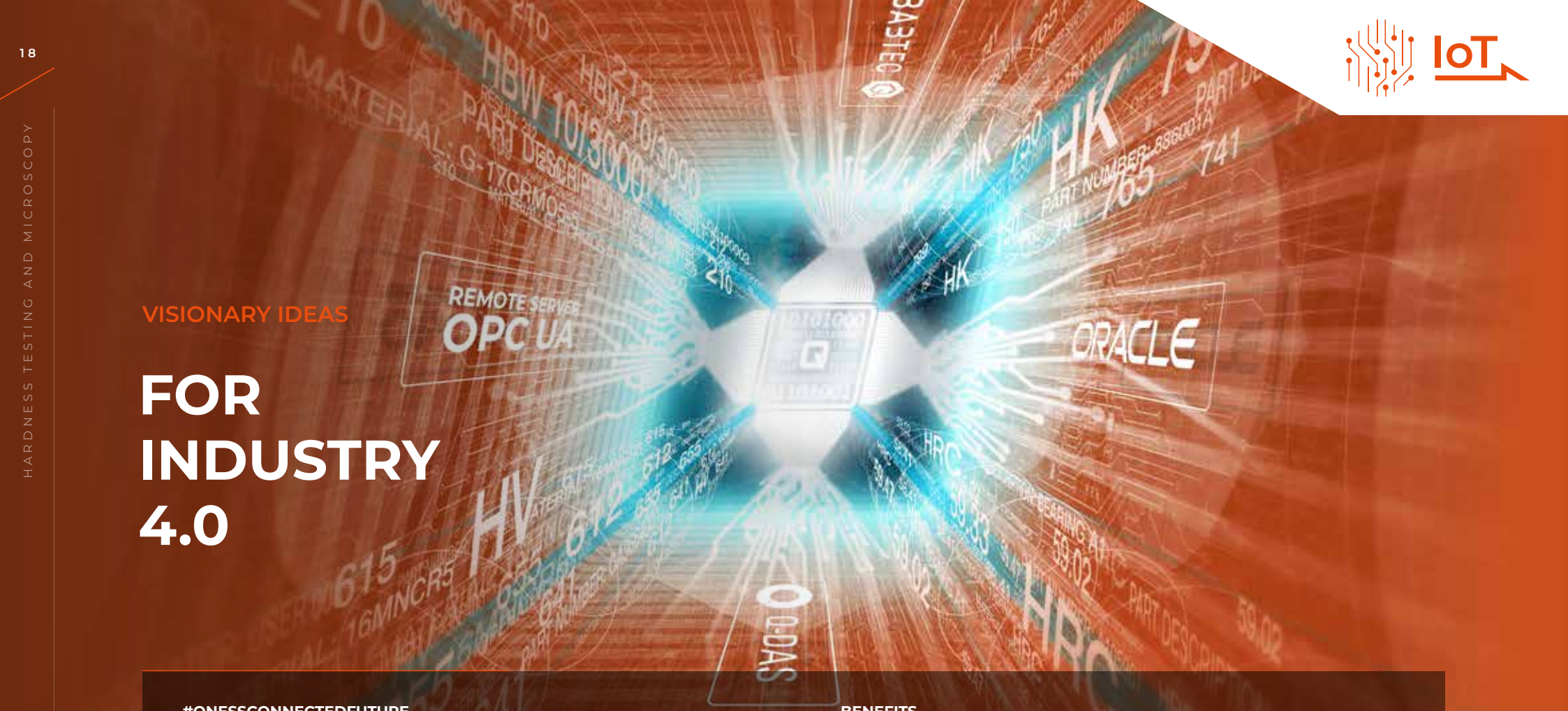


INSPECT WELD SEAM MEASUREMENT

- Standardised measurement and evaluation of weld seams
- Prefabricated templates with all relevant measuring tools such as throat thickness, weld reinforcement, penetration depth, etc.
- Automatic good/bad evaluation and report generation.

VISIONARY IDEAS

FOR INDUSTRY 4.0



#QNESSCONNECTEDFUTURE

Linking up production machinery, intelligent controls for production plants and automated data-sharing for work process planning, have become essential aspects of manufacturing operations over the past few years. Visionary ideas for the Internet of Things and Industry 4.0 now ensure we also offer interconnected test and result monitoring for quality assurance.

QATM HAS A CLEARLY-DEFINED GOAL

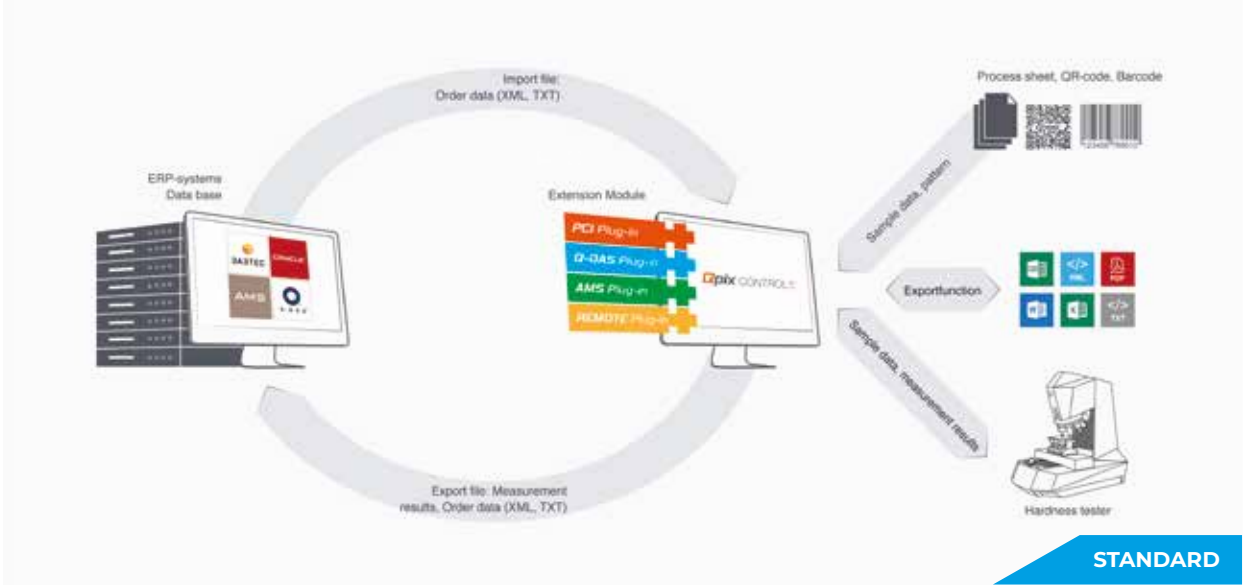
We aim to develop all the requisite technologies, processes and resources, and ensure that customers get 100% of the benefits from all the interconnected devices installed by QATM and to profit from optimized data management. All the steps, tools and developments this requires, are integral to our project: **#QnessConnectedFuture** We can already meet many of these requirements today!

BENEFITS

- Efficient documentation
- Reduced operation influence
- Minimization of error sources
- Faster and improved process monitoring
- Real-time results
- Reduced costs

INTELLIGENT DATA EXCHANGE SOLUTIONS TODAY

FOR CONNECTED TOMORROWS



QCONNECT

Qconnect is the interface in Qness Qpix Control2 software, providing customers with a full portfolio of inter-device connectivity - from serial production, open XML interfaces (bi-directional) and pre-specified plug-in solutions, such as the QDAS Plug-In+, through to customer-specific connectivity solutions implemented completely by Qness. We have a professional solution for every applicational requirement.

CALIBRATION MANAGER

This is a leap forward for calibration result management. The QATM Calibration Manager reminds operators of the necessary tests at freely definable intervals. Test results are added to the ongoing statistical record at the push of a button.

BARCODE/QR CODE/DMC READER

Qpix software platforms support barcode and QR code readers. Whether simply inserting header files (serial), managing the complete integration of reading devices for the automatic selection of templates, or calling up data from superordinate systems (optional) – barcode/QR code readers simplify work procedures for the tester, while also preventing operating errors.

IOT - INTERNET OF THINGS

Your virtual laboratory for managing, controlling and reporting of your QATM devices. Always keep an eye on the measurement progress of your hardness testers. Automatic software updates can be carried out and backups can be saved via the cloud. All settings are of course fully customizable.
iot.verder-scientific.com

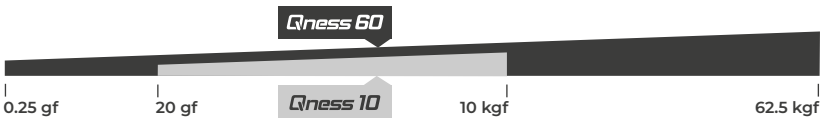
CONFIGURE HARDNESS TESTER

Online Configurator ›

1. MODEL

Qness 10/60 M		Qness 10/60 A+	Qness 60 A+ EVO
Semi-automatic	Semi-automatic incl. manual cross slide	Fully automatic	High-End fully automatic

2. LOAD LEVEL



3. VARIANT

4. TEST MODULES

5. INDENTER

6. LENSES

7. HQ LENSES

8. XY ACCESSORIES

9. SAMPLE HOLDER

◆ Accessories are included in the standard scope of delivery ◆ Possible options (1-4) ◆ Option is not possible

VICES

10.

Spannweite 32 mm

Spannweite 55 mm

3-fach Spanner

PRISMS & ANVILS

11.

ø 4-50 mm	ø 10-130 mm	ø 18-70 mm	ø 200 mm	ø 4-50 mm	ø 4-50 mm
					

SOFTWARE INCLUDED FEATURES

12.

- Auto Evaluation
- Auto Brightness
- Auto Focus
- Overview camera
- Picture in picture
- Stiching
- Dual System
- Project management
- User fields
- User management
- Collision avoidance (P)
- 3D Software (P)
- Sample holder
- Single testing
- Visual testpoints
- Series testing
- CHD testing
- SHD testing
- NHD testing
- Decarburisation depth test
- Autosnap (P)
- Templates
- Test point pattern
- Auto minimum distance
- Grid
- Group function
- Image capture
- Weld seam inspection
- Tooth flank inspection
- Force/time curve
- different sample heights
- Caliper
- Calibration
- Diagrams
- Statistics

SOFTWARE OPTIONS

13.

- IPC (P)
- NFC-Login
- Edge detection
- Contour scan
- 2D/3D Mapping
- Jominy
- K1C
- Sintering test
- Rings & tubes API
- Barcode

PC SYSTEM

14.

Customer PC	PC System	4K PC System	2. Monitor
			

MICROSCOPY & ANALYSIS

15.

- Geometric measurement
- Phase analysis
- Grain size measurement
- Layer thickness measurement
- Weld seam measurement

CONECTIVITY IMPORT & EXPORT

16.

REPORT | PRINT | PDF | XML IE | CSV | TXT | WORD | EXCEL

AUTO EXPORTER | MAIL | Q-DAS | AMS IE | IOT | LIMS | OPCUA

PCI IE (ERP, BABTEC, ORACLE, SAP, ...)

HARDNESS COMPARISON PLATES

17.

Vickers, Knoop, Brinell, Rockwell

ACCESSORIES

18.

Dust cover	Vibration-damped table top attachment	Laboratory benches with hard stone plate
		

CALIBRATION

19.

Accredited QATM DAkkS/ ASTM calibration	DAkkS or ASTM calibration for test methods	Factory calibration cross table/XY slide
		

P Patented

ACCESSORIES AND

INDIVIDUAL CONFIGURATIONS

EVEN LARGER WORK ROOM

The optional large slide doubles the test table surface area to 300 x 120 mm. If required, the test height can also be extended from 150 mm to 260 mm.

QNESS 60 A+ PORTAL VERSION

The Qness 60 EVO is a portal solution that offers unique movement flexibility, opening up new possibilities in micro and low load hardness testing.

Benefits:

- Test table dimensions/traverse path 500 x 500 x 300 mm
- Front-loading position – ideal for heavy test pieces loaded by cranes
- Accommodates up to 9 x 8-piece sample holders at once (72 pieces) and safety housing with a CE light grid
- Unrestricted operational convenience

PREMIUM HARDNESS TEST BLOCKS

Premium quality in comprehensive variety. Independent DAkkS (ISO/IEC 17025) calibration according to DIN EN ISO and ASTM including software for periodic norm-compliant tests.

DUAL SYSTEM

With the Qpix Control 2 software, several QATM devices (for example a Qeye 800 and a Qness 60 A+ EVO) can be operated with the same PC system. It is easy to switch back and forth between the two devices in the software.

Variant M

Variant A+ / A+ EVO

	Qness 10 M	Qness 60 M	Qness 10 A+	Qness 60 A+	Qness 60 A+ AVD
Test force range	20 gf - 10 kgf (0.196 - 98.07 N)	0.25 gf - 62.5 kgf (0.00245 - 612.92 N)	20 gf - 10 kgf (0.196 - 98.07 N)	0.25 gf - 62.5 kgf (0.00245 - 612.92 N)	0.25 gf - 62.5 kgf (0.00245 - 612.92 N)
Z-axis	Dynamic, automated (CAS-Technic), Travelling distance Z 150 mm (5.91“) (Option: 260 mm (10,2“)				
Tool positions	8-fold motorized tool changer (max. 3 hardness testing modules, max. 7 lenses)				
Camera system / image transfer	5 Mpixel - CMOS color, USB3.0				
Lenses	XLED 2x, 2.5x, 5x, 10x, 20x, 50x, 100x				
Lens types	Standard (Achromat) and High Quality (Semi-apochromat) for hardness testing and microscopy XLED for optimised Brinell hardness testing				
Sample image camera	-		5 Mpixel - CMOS color, USB3.0 52 x 39 mm (2.05 x 1.54“)		
Test anvil / XY cross slide	Option: manual cross slide**		Automatic cross slide		
Table size	Ø 100 mm (3.94“) (cross slide: 135 x 135 mm)		150 x 120 mm (5.91 x 4.72“)***		
Positioning accuracy	-		+/- 2 µm		+/- 0,2 µm
Traverse path	at cross slide: X 25, Y 25 mm (0.98 x 0.98“)**		X 150, Y 150 mm (5.91 x 5.91“)***		
Control elements	Emergency stop, Start button, Joystick Z*		Emergency stop, Start button, Joystick X/Y/Z*		
Max. workpiece weight	50 kg (110 lbs)		50 kg (110 lbs)		
Weight of basic device	55 kg (121.3 lbs)		60 kg (132.3 lbs)		
Software	Qpix CONTROL E M		Qpix CONTROL E		

KEY DATA

Test sequence	Fully automated / electronic force application
Hardness testing methods	Vickers, Knoop, Brinell, Rockwell (option)
Included basic equipment	Indenter Vickers ASTM + DAkkS, Lenses
Throat depth	170 mm (6.69“)
Optical system	Upright microscope with Koehler lighting
Aperture diaphragm	fix, motorized (option)
Interfaces	1 x USB 3.0
Field of view (acc. to equipment)	0.074 x 0.055 mm (100x) to 2.80 x 2.10 mm (XLED 2)
Power supply	100 – 240 V ~1/N/PE, 45-65 Hz

ONLINE PRODUCT CONFIGURATOR

Additional modules and accessories can be viewed using the online product configurator at **www.qatm.com**

Online Configurator ›

*Qness 10/60 M only Z-axis movement **Reduces test height by 20 mm, Option: X/Y 50 x 50 mm (1.97 x 1.97“) ***Option: X/Y 300 x 150 mm (11.8 x 5.91“), table size 300 x 120 mm (11.8 x 4.72“)

QATM®
QUALITY ASSURED

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PREMIUM QUALITY
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TEC HNO LOGY WIZ ARDS

VERDER scientific

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ENABLING PROGRESS.

Under the VERDER SCIENTIFIC umbrella, we support thousands of customers worldwide in realising a common goal.

As their technology partner behind the scenes, we deliver solutions that help them make progress that improves the daily lives of countless people. Together, we are making the world a healthier, safer and more sustainable place.

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ELTRA
Retsch
QATM
MICROTRAC
ERWEKA