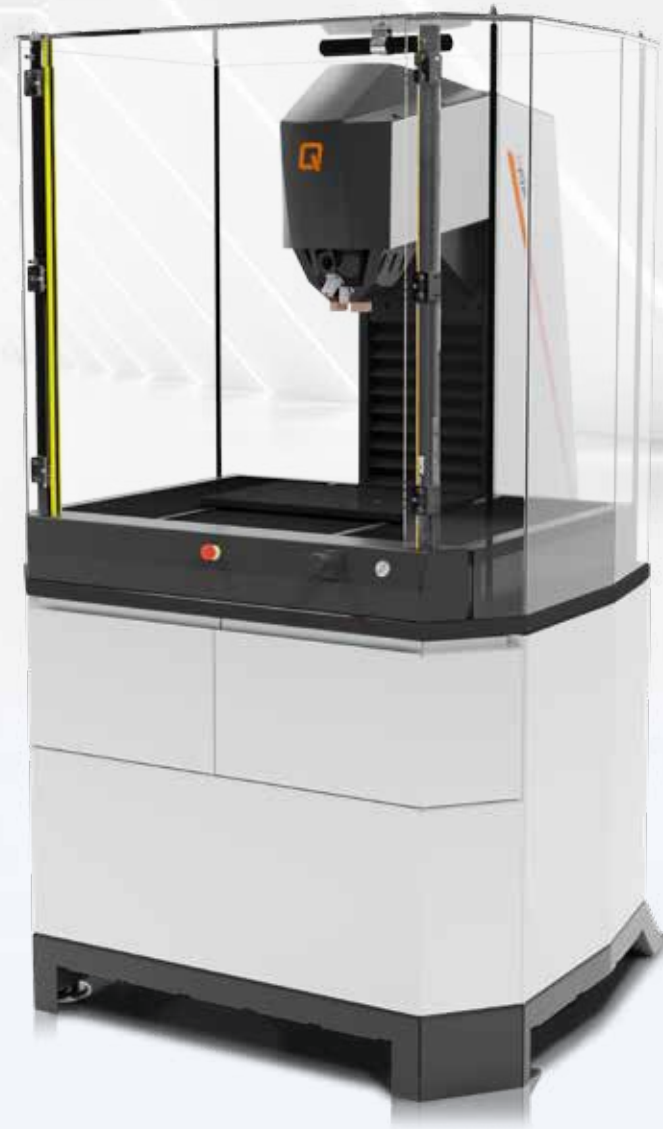


Qness 250/750/3000 A+^{EVD}

FULLY AUTOMATED UNIVERSAL HARDNESS TESTING

**CUSTOMIZATION STRAIGHT
TO THE POINT**



**FASTER
TEST METHOD CHANGE-OVER**

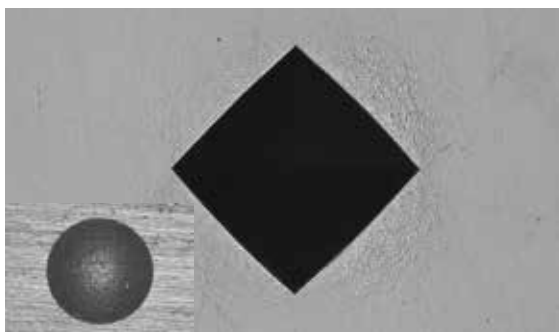
8-POSITION TOOL CHANGER

The easy way to serve universal applications: The sophisticated tool-changer concept with a rotational axis angle of 15° provides space for 8 tools in a uniquely compact unit. Downholder elements with a closed shape on three sides guarantee secure workpiece clamping around the test point – even for small test pieces.



EFFICIENT AND SUSTAINABLE

HIGHLY ACCURATE RESULTS IN ULTRA-SHORT TIME



EXCELLENT IMAGE QUALITY

The optics system of the new EVO series has been completely redeveloped. It was built on site in the cleanroom at the QATM plant and benefits from the company's comprehensive expertise. All the new devices share one universal microscope system covering all the necessary visual ranges between 0.1 mm and 8 mm in maximum clarity and contrast. The QATM system guarantees uniform illumination across the entire image, regardless of the degree of magnification, and without dark edges.



XLED BRINELL EVALUATION LENSES

XLED illumination modules revolutionize the analysis of Brinell indentations. Due to beading on commercially available lenses, soft Brinell indentations in particular can be subject to imprecise gauging results. In contrast, XLED lenses guarantee precise and repeatable measurements, regardless of material type and hardness, due to direct and wide-extension illumination.



ETHERNET INDUSTRIAL COLOR CAMERA

High-quality CMOS 5-megapixel cameras with Ethernet data transfer define the current industrial standard. Unlike other camera systems, a far higher transmission stability is possible here. Additionally, the PC and hardness testing device can be set up remotely at great distances from each other. This is ideal in manufacturing environments in which the control infrastructure is installed in external switch cabinets.

SUPPORTED TEST METHODS



BRINELL

DIN EN ISO 6506, ASTM E-10

HBW 1/1	1/2.5	1/5	1/10	1/30
2.5/6.25	2.5/15.6	2.5/31.25	2.5/62.5	2.5/187.5
5/25	5/62.5	5/125	5/250	5/750
10/100	10/250	10/500	10/1000	10/1500
10/3000	HBT (not acc. to standards)			



ROCKWELL

DIN EN ISO 6508, ASTM E-18

HRA - HRV	HR 15-N/T/W/X/Y
HR 30-N/T/W/X/Y	HR 45-N/T/W/X/Y



VICKERS

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

HV0.3	HV0.5	HV1	HV2	HV3	HV5
HV10	HV20	HV30	HV50	HV60	HV100
HV120	HVT (not acc. to standards)				



KNOOP

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

HK0.3	HK0.5	HK1	HK2
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PLASTICS TESTING

DIN EN ISO 2039

49.03 N	132.9 N	357.9 N	961 N
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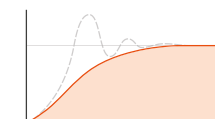
CARBON TESTING

DIN 51917 (optional)



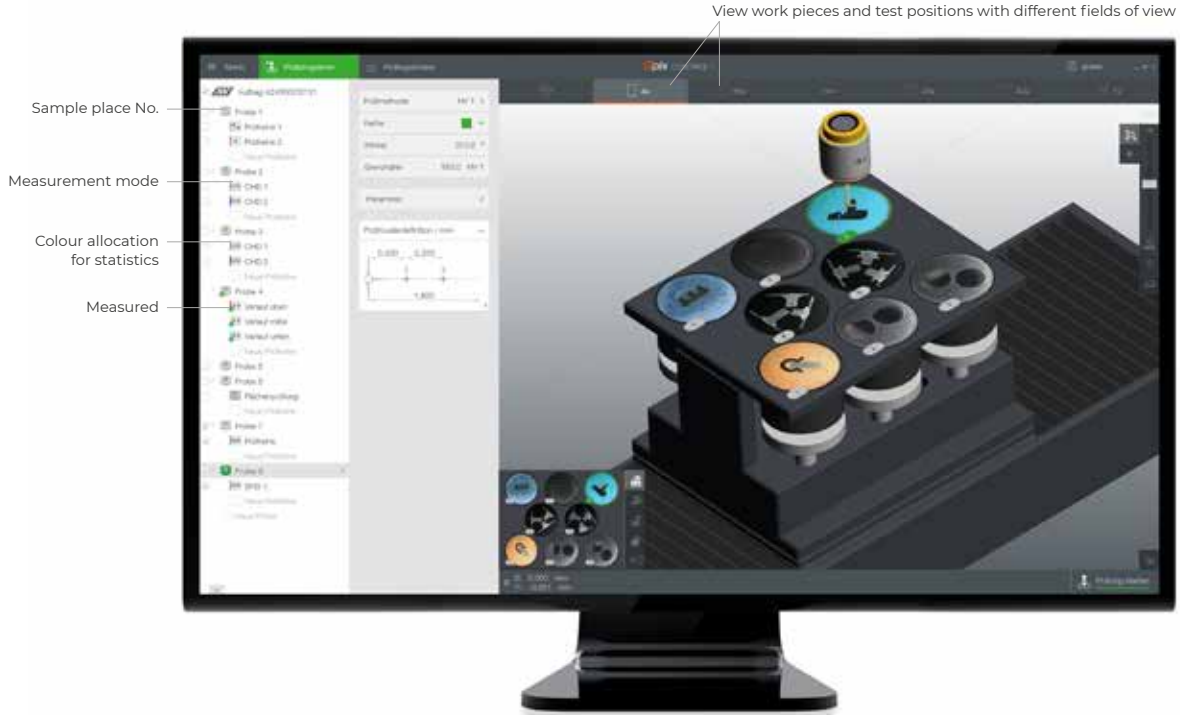
CONVERSION

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



FULLY AUTOMATED TEST CYCLE

With electronic weight application and closed-loop control



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.



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.

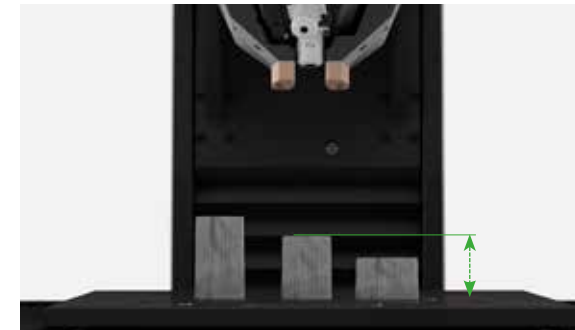
HIGHLY PRECISE AND
HIGHLY AUTOMATED

CUSTOMIZED FOR YOUR TEST REQUIREMENTS



FULLY AUTOMATED 3-AXIS CONTROL

Fully automatic and robust XY slide with high-precision positioning drive. Dynamic joystick to control all 3 axes (XYZ). Usable support surface 450 x 300 mm or, on request, larger travels and test tables available.



DIFFERENT TEST HEIGHTS

For each XY test point position the Z height can be individually selected. During automatic testing, the machine changes between specimens of different height or different test levels safely and fully automatically. Thanks to the innovative CAS technology, the unit is protected against collisions. When testing clamped samples, the patented QATM "workpiece recognition" reduces the approach speed of the test head automatically via sensor detection (preserves machine and sample).



MAXIMUM CLAMPING SAFETY

High-performance induction motor in the A+ version facilitates a workpiece clamping force of up to 3500 kg. Clamping power is adapted to the test method and is automatically set to be greater than the test force. Operators do not need to set levels and can rely on the device to guarantee safe, optimized adaption.



ELETRIC SWIVELING DOWNHOLDER

For hardness tests according to Rockwell or Brinell, parts securely fixed with the downholder are indispensable. For general processes, such as edge recognition or during the programming of test samples, however, the downholder is not required. Hence, the downholder clamp can be swivelled in or out by motor in a matter of seconds between different processes in the innovative EVO system. This improves operating convenience and further reduces cycle times.



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.

APPLICATION EXAMPLES

PERFECT SOLUTIONS FOR ANY APPLICATION



TEST PIECE CLAMPING AND SAMPLE HOLDER RECOGNITION

Switchable industrial magnets enable power- and time-saving loading and unloading of the test system and, at the same time, guarantee a secure hold during the test. In addition, all QATM fixtures can be equipped with a sample holder recognition: via integrated sensors, the fixture is automatically recognized by the testing device and only the appropriate test programs are loaded.



JOMINY SAMPLE TESTING

Up to 8 samples can be placed in the Jominy sample holder for testing with the additional Jominy test module. The testing cycle is fully automatic and executed according to the norm. Larger sample holders are available on request.



SWIVELLING TEST PIECE SUPPORT

The swivelling test piece support permits testing of samples even if the testing surface is not parallel to the support surface.



TUBE TESTING

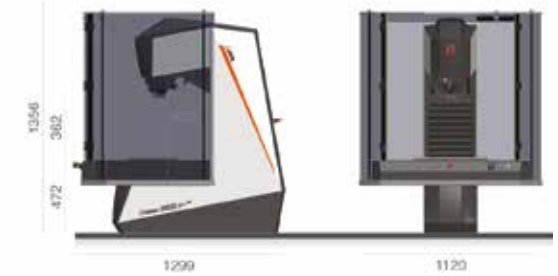
The Qness 250/750/3000 A+ EVO models allow testing tubes and tube segments fully automated and with maximum throughput according to valid standards.

CUSTOMIZED SOLUTIONS

IN LARGE FORMAT



Individual planning and professional project handling



TECHNICAL DATA

A+^{EVD}

Test force range	Qness 250 1 - 250 kg (9.81 - 2450 N) Qness 750 0.3 - 750 kg (2.94 - 7358 N) Qness 3000 0.3 - 3000 kg (2.94 - 29430 N)
Sample image camera	Resolution 5 megapixel
Height adjustment	electrical via Asynchron motor
Test height / Throat depth	362 / 320 mm
Test anvil / XY cross slide	Motorized 450 x 297 mm
Traverse path	X 460 / Y 350 mm
Max. workpiece weight	'unlimited'
Weight of basic device	695 kg
Test sequence	fully automatic / electronic force control
Camera system / Image transfer	5 MP Ethernet Industrial standard
Software	Qpix CONTROL^E
Interfaces	1x RJ45 (Ethernet)
Tool positions	8 (Tool Changer)
Power supply	230~1/N/PE (option: 110~1/N/PE)
Max. power consumption	~ 1680 W
Accessories and options	XLED1, XLED2, XLED5, 5x, 10x, 20x, 50x, 100x Indenters (Vickers, Rockwell, Brinell), fix or swivelling downholder, signal lamp etc.
Jominy	Jominy 8-position sample holder incl. test module (optional)

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PREMIUM QUALITY
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VERDER scientific

VERDER SCIENTIFIC

ENABLING PROGRESS.

Under the roof of VERDER SCIENTIFIC we support thousands of customers worldwide in realizing the ambition we share.

As their technology partner behind the scenes, we deliver the solutions they need to make progress and to improve the everyday lives of countless people. Together, we make the world a healthier, safer and more sustainable place.

