



**Qness 200 CS**  
**Qness 200 CSA+**

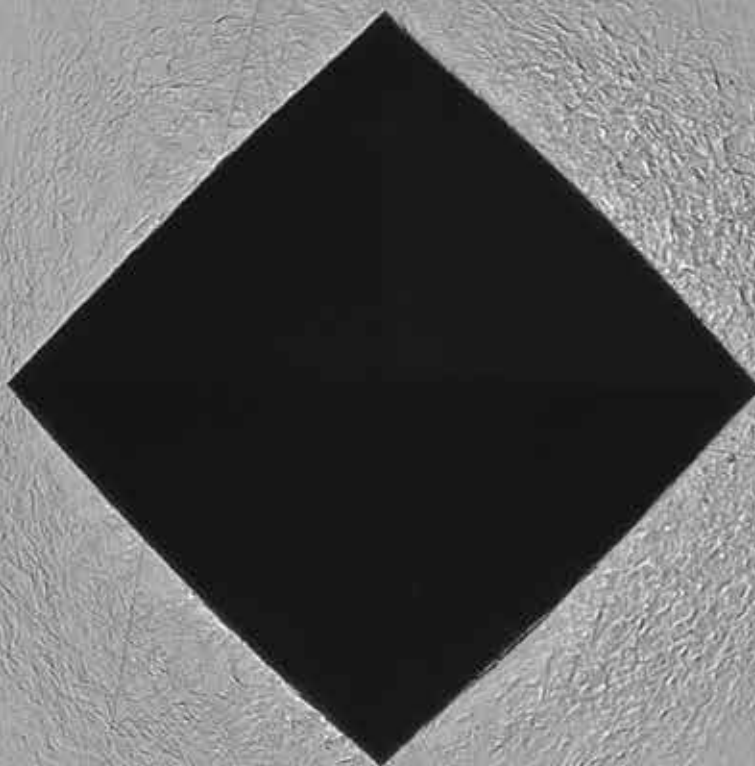
EFFICIENT AND SUSTAINABLE

**NEXT-GENERATION UNIVERSAL  
HARDNESS TESTING**

# EXCELLENT IMAGE QUALITY



The optics system of the new CS/CSA+ series has been completely redeveloped. It was built on site in the clean room at the QATM plant and benefits from the company's comprehensive expertise. The devices share one universal microscope system covering all the necessary visual ranges between 0.1 mm and 4,2 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.



EFFICIENT AND SUSTAINABLE

# HIGHLY ACCURATE RESULTS IN ULTRA-SHORT TIME



## MADE IN AUSTRIA

Unmatched in its class! We know how important a long-serving superior-quality device can be and guarantee excellent quality from our Qness 200 CS/CSA+ series. Developed and manufactured in Austria!



## COMPACT DESIGN - STATE-OF-THE-ART TECHNOLOGY

- Test force ranges 0.5 kg to 187.5 kg
- Two machine versions to serve all applications and test piece sizes
- Direct depth measurement system with a resolution of 0.05  $\mu\text{m}$
- Robust, welded steel frame and covers made of sheet steel



## 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.

## 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     | 10/100   |           |
| 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

|                             |      |      |       |     |      |
|-----------------------------|------|------|-------|-----|------|
| HV0.5                       | HV1  | HV2  | HV3   | HV5 | HV10 |
| HV20                        | HV30 | HV50 | HV100 |     |      |
| HVT (not acc. to standards) |      |      |       |     |      |



### KNOOP

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

|       |     |     |
|-------|-----|-----|
| HK0.5 | HK1 | HK2 |
|-------|-----|-----|



### PLASTICS TESTING

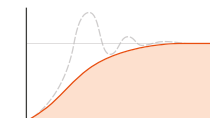
DIN EN ISO 2039

|         |         |         |       |
|---------|---------|---------|-------|
| 49.03 N | 132.9 N | 357.9 N | 961 N |
|---------|---------|---------|-------|



### CONVERSION

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



## FULLY AUTOMATED TEST CYCLE

With electronic weight application and closed-loop control

**FASTER  
TEST METHOD CHANGE-OVER**

# 5-POSITION TOOL CHANGER

Simply cover universal applications: the concept with horizontal rotary axis combines space for 5 tools in a uniquely compact design. Three-sided closed elements ensure secure workpiece clamping close to the test point, even with small components.



PROVEN UNIVERSALITY

# UNLIMITED SUITABILITY FOR INDUSTRIAL APPLICATIONS



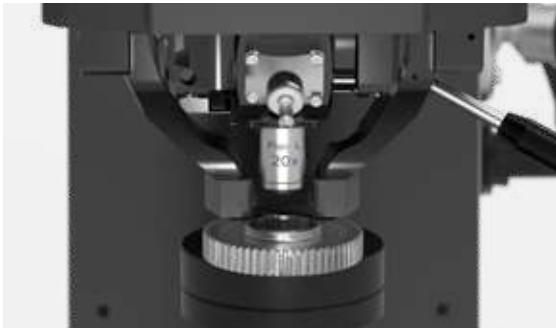
## ETHERNET INDUSTRIAL COLOR CAMERA

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.



## SWIVELING DOWNHOLDER

No long tool changeovers for inaccessible test positions. The downholder can be swiveled in and out via manual action. Furthermore, the clamping elements can be changed easily and adapted to suit the customer's component.



## OPTIMIZED TEST HEAD DESIGN

A range of clamping and holding elements can be configured to suit tooling requirements. An optional transparent collision guard can protect tools on the device from damage while ensuring an unrestricted view of the test cell interior.



## TEST TABLE HEIGHT ADJUSTMENT

Height adjustment via stable, ultra-precise roller-bearing spindle guide. Solid, no-maintenance structure. All devices are available with a Ø 25 mm table mount (optional ¾" adapter available) facilitating the use of a wide range of test tables and devices.



## RAPID INDENTER CHANGING SYSTEM

Uniquely simple, tool-free indenter changes due to indenter quick-release mechanism.

UNIVERSAL HARDNESS TESTING

# VERSION 200 CS

- | Redefined version of a reliable concept
- | Ideal for small workpieces





## VERSION CS

# FAST, QUIET AND UNIVERSALLY APPLICABLE



### FREELY ADJUSTABLE OPERATING DISPLAY

The 12" ultra flat, capacitive touch display can be raised, lowered and tilted smoothly via ball and socket joints for ergonomically optimized use.



### HIGHLY DURABLE, EXTREMELY PRECISE

As with the Qness 250/750/3000 C/CS and the Qness 150 CS machines, a ultra precise roller bearing spindle is used. All devices are available with a 25 mm table mount to provide the opportunity to mount a great variation of test tables.



### WIDE RANGE OF TEST TABLES AND PRISM ANVILS

The wide range of available test anvils and prisms enable hardness testing to be conducted on unusually large or spherical items, and on test objects with an uneven test surface.



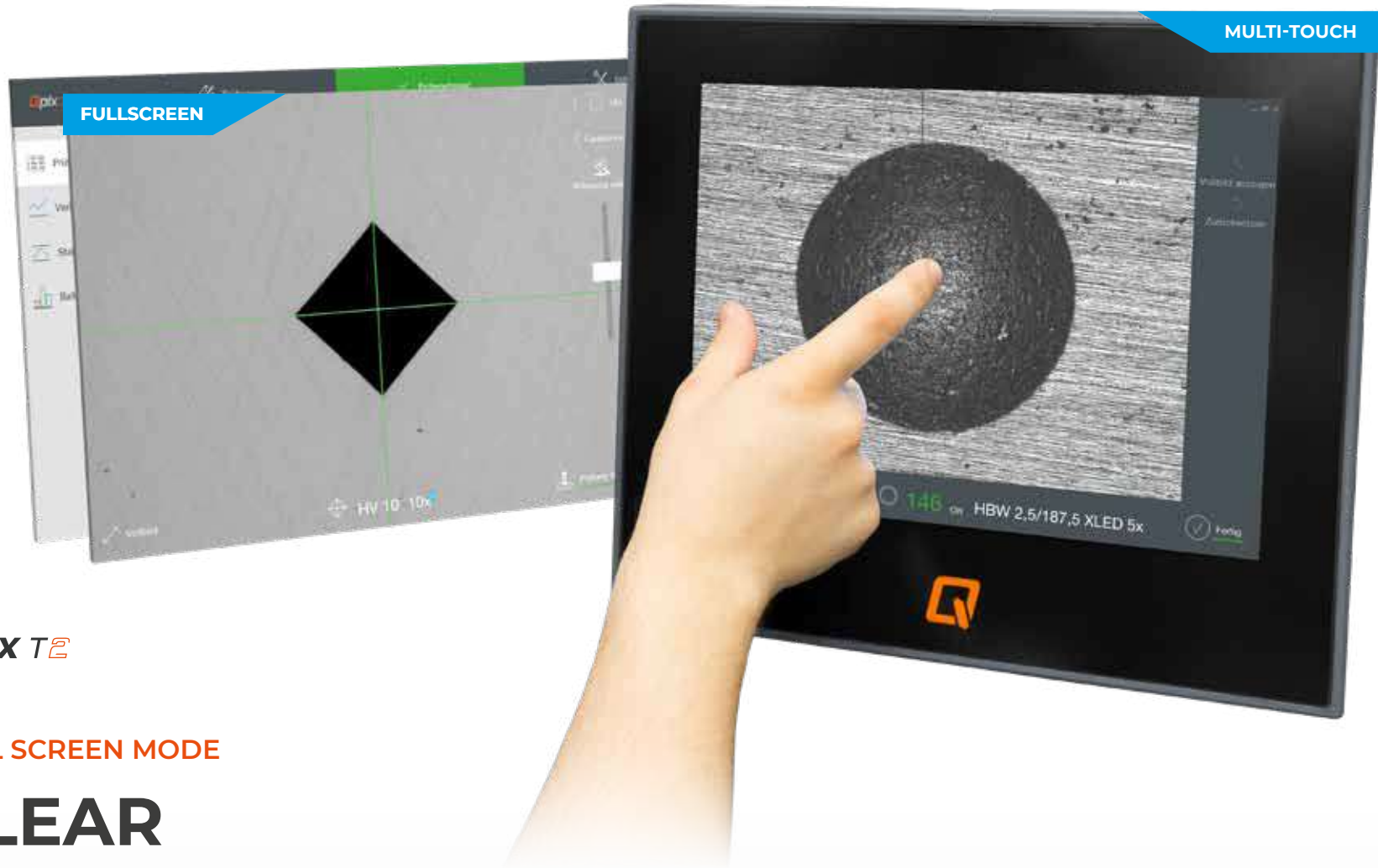
### BASIS FOR BI-DIRECTIONAL DATA LINK-UP

All machines of this series can, if required, be equipped with a desktop PC system. Customers can provide their own PC system and use it to control their hardness tester.



### WORKSPACE ILLUMINATION

The bright, uniform LED workspace lighting enables safe positioning of the test part. The workspace lighting is designed to illuminate the test area without disturbing shadows.



**Qpix T2**

**FULL SCREEN MODE**

# CLEAR FOCUS ON ESSENTIALS

## MULTI-TOUCH CAPACITY FOR ULTRA-SIMPLE OPERATION

Modern multi-touch operation for simple zooming and easy menu navigation.

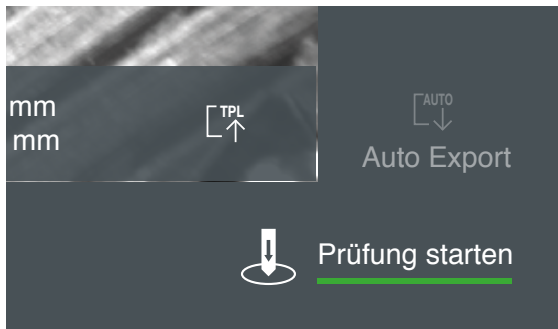
## FULL SCREEN MODE

A clear overview of all the most important functions on one screen guarantees user-friendliness and, most importantly, ensures test results are clearly prioritized.



## SOFTWARE QPIX

# A NEW DIMENSION OF EFFICIENT OPERATION



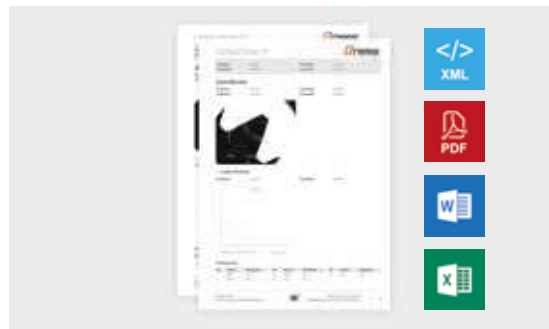
### SAVE, DELETE & EXPORT FUNCTIONS

Save, create and archive data protocols at the push of a single button. Ideal for serial tests or in-line integration.



### DATA ADMINISTRATION

- | Numerous statistical functions: Bar graphs, line graphs, histograms
- | Export test results as XML or CSV file
- | Detailed normed information on each indentation
- | Test report as Excel, Word, PDF or direct print
- | Automatic export and deleting functions for serial operation



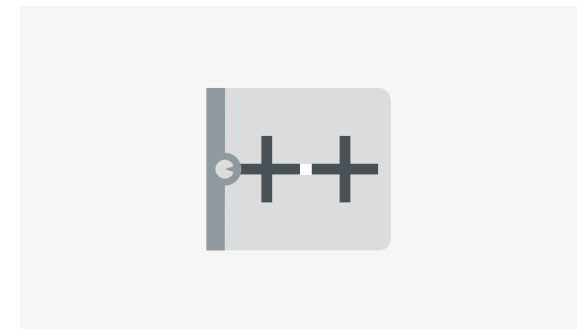
### PROTOCOL AND DATA EXPORT

Export formats also in Qpix T2 PDF, XLSX, DOCX, XML or CSV, plus direct release of results via RS232 or Ethernet interface.



### ONLINE SUPPORT

'Online Support Mode' links up the hardness testing device with the QATM service center. This allows user support and software updates to be provided as quickly as possible.



### ROW TEST SEQUENCE

Predefinition of test programs with a fixed number of test points is included as standard. Optional expandable with manual slide, digital micrometer spindle and position feedback.

FULLY AUTOMATED  
UNIVERSAL HARDNESS TESTING

# VERSION 200 CSA+

- | Proven concept - fully automated with high-precision XY slide
- | For applications with constant sample height



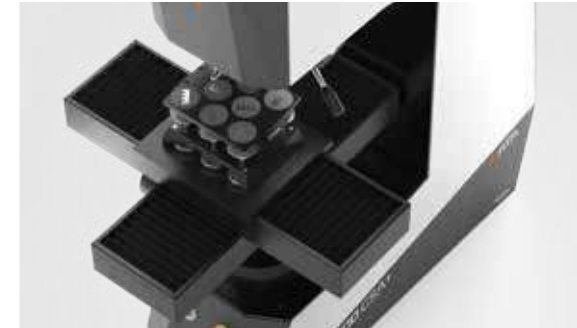
**FULFILLS CLEAR  
REQUIREMENTS**

## **SIMPLE AND RELIABLE**



### **TEST TABLE HEIGHT ADJUSTMENT**

The height of the test table is infinitely adjustable (position can be fixed) via the play-free roller-bearing spindle guide - ideal for fully automatic series and progression tests on parts with identical test height. The test sequence is performed without clamping. Individual tests can also be carried out with the patented, swivelling downholder clamp.



### **AUTOMATIC PROGRESSIONS**

The automatic XY slide with high-precision positioning drive enables extensive test series and hardness curves. External joystick for controlling the axis. Usable support surface: 180 x 200 mm, Traverse path: X 220 / Y 220 mm.



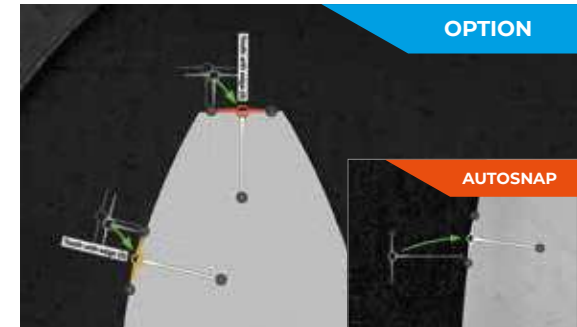
### **EMBEDDED SAMPLES**

QATM sample holders, with up to eight embedded samples, can be placed on the large workpiece support to be tested in one operation.



### **GRINDING PLATE**

Grinding, polishing and hardness testing - all in one work cycle. The machine is designed to be equipped with the grinding plates of the QPol machines, using a special contraption. This prevents the need to unclamp the samples in between steps.



### **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 Auto- Snap function.

**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 200 x 180 mm.



### **MAXIMUM CLAMPING SAFETY**

High-performance induction motor facilitates an ideal workpiece clamping force. 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.



### **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.



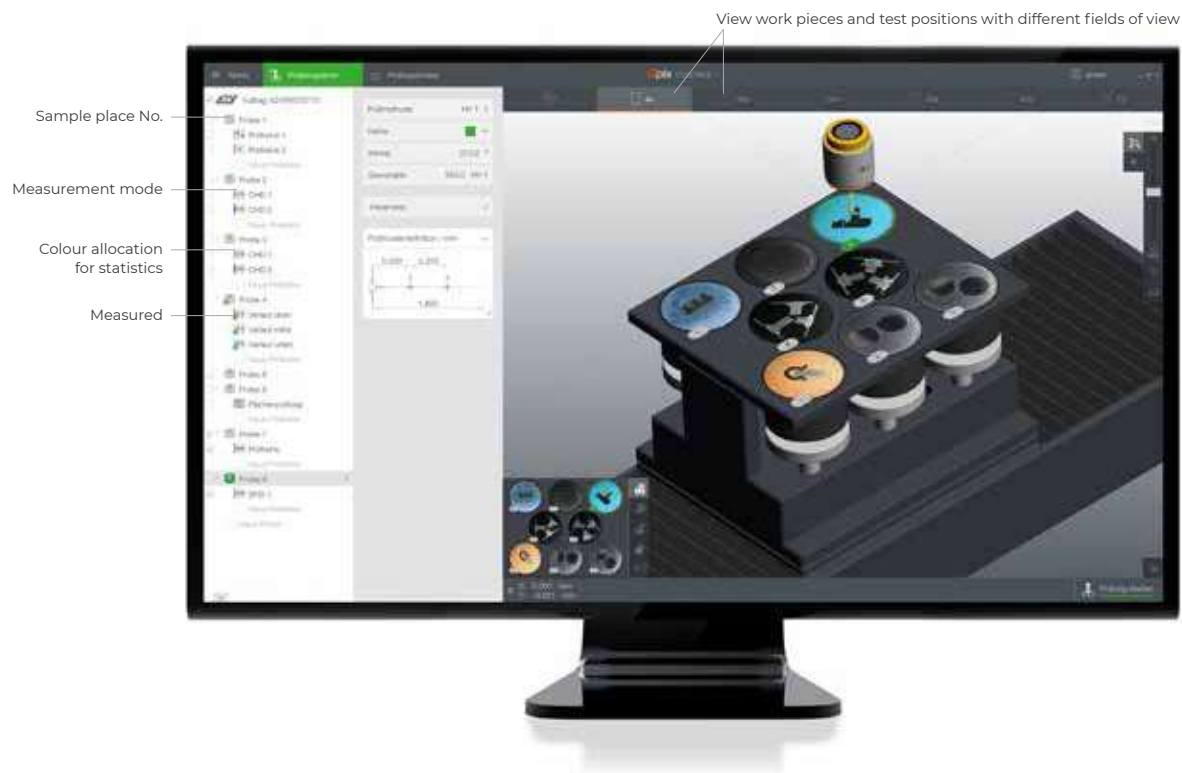
### **SAMPLE IMAGE CAMERA**

Ultimate ease of use with 5 megapixel colour camera for recording the entire sample for a perfect overview and documentation in the protocol. It is standard in the CA+ and A+ versions to record the entire table surface as sample image.



### **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 setup, matrices and cassette systems for every requirement.



**Qpix** CONTROL2

OPERATION VIA EXTERNAL PC SYSTEM

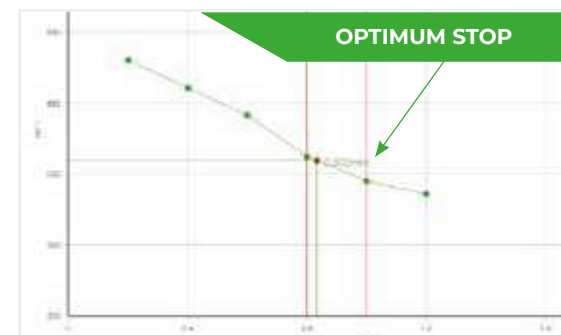
# REVOLUTIONARY 3D OPERATING CONCEPT

Intuitive, clearly organized and professional: Qpix Control2 next-generation hardness testing software, developed based on customer feedback and input for maximum user-friendliness. 3D imaging and a whole range of easily understood control elements and views included in the software set new standards in hardness testing.



## CUSTOMER-SPECIFIC SAMPLE HOLDER

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



## 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.

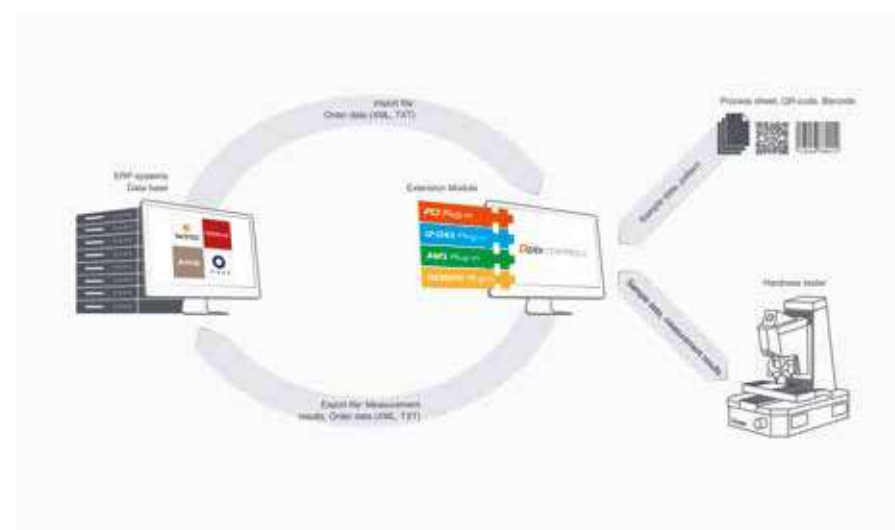
**PREPARED FOR  
THE PRESENT  
AND THE FUTURE**



Clearly structured batch management and effective use of templates from a wide range of test projects. Structured measurements with comprehensive background order information. Templates can be generated to contain all necessary information about test patterns, test methods, names and user field information.



Redefining calibration result management: The QATM Calibration Manager can be set up to provide users with reminders of necessary checks at selected intervals. Test results can be added to the ongoing statistical profile at the push of a button. A clearly comprehensible overview of permitted tolerance values and long-term tracing of trends derived from all results, for every device and every test block. QATM test block data can be called up conveniently online without the need to enter test plate details. Extremely simple protocol access for purposes such as audits.



Optionally completely interlinkable with databases, CRM systems and statistics programs via the PCI software module and with a direct link-up to production control systems - also for completely unmanned operation via the Qpix Remote Plug-In interface. The expert QATM team looks forward to helping you conceive the best possible solution for every link-up option.





### Qness 200 CS

|                        |                               |
|------------------------|-------------------------------|
| Test force range       | 0.5 - 187.5 kg (4.9 - 1839 N) |
| Tool positions         | 5 (toolchanger)               |
| Software               | <b>Qpix T2</b>                |
| Hight adjustment       | manuel / spindle              |
| Test height            | 250 mm                        |
| Throat depht           | 238 mm                        |
| Test table             | Ø 100 mm                      |
| Traverse path          | -                             |
| Max. workpiece weight  | „unlimited“                   |
| Weight of basic device | 132 kg                        |



### Qness 200 CSA+

|                        |                               |
|------------------------|-------------------------------|
| Test force range       | 0.5 - 187.5 kg (4.9 - 1839 N) |
| Tool positions         | 5 (toolchanger)               |
| Software               | <b>Qpix CONTROL2</b>          |
| Hight adjustment       | motorized                     |
| Test height            | 140 mm                        |
| Throat depht           | 238 mm                        |
| Test table             | 180 x 200 mm                  |
| Traverse path          | X 220 / Y 220 mm              |
| Max. workpiece weight  | „unlimited“                   |
| Weight of basic device | 174 kg                        |

|                                   |   |
|-----------------------------------|---|
| Test sequence                     | fully automated / electronic force application  |
| Camerasystem / Image transfer     | 5 MP ethernet industrial standard   |
| Operating system / Hard drive     | Windows 10 IoT / 128 GB SSD   |
| Ports                             | 1x USB (Front) 4x USB, 2x RJ45 (Ethernet), 1x DisplayPort, 1x RS232, 1x HDMI  |
| Lenses                            | XLED 2, XLED 5, 5x, 10x, 20x, 50x, 100x   |
| Field of view (acc. to equipment) | 0.113 x 0.084 mm (100x) to 4.24 x 3.18 mm (XLED2)   |
| Additional options                | QATM designer pedestal, collision protection, cross laser, test anvils, prisms, data connections, barcode/QR code reader etc. |

### ONLINE PRODUCT CONFIGURATOR

Additional modules and accessories can be viewed using the online product configurator at [www.qatm.com](http://www.qatm.com)



Pedestal (Option)



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### VERDER SCIENTIFIC

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