



OPTICAL ANALYZER • INVERSE MACROSCOPE

QEYE 200 / QEYE 800

qatm.com/products/analysis/qeye-800/

QEYE 200 / QEYE 800

OPTICAL ANALYZER • INVERSE MACROSCOPE

Weld seam analysis – precise, fast and standard-compliant.

The Qeye 200 and Qeye 800 optical analysis systems by QATM set new benchmarks in visual quality control. As inverse macroscopes, they enable high-resolution image capture and precise measurement of weld seams, solder joints and components – directly on the macro-section.

The Qeye 200 specialises in the analysis of demanding laser welds – ideal for the automotive industry, electronics, and research and development in joining technology. The Qeye 800 excels in series production and materials testing, for example in steel construction and plant engineering, where weld shape, penetration depth and potential defects need to be assessed reliably.

Both systems deliver reproducible results in accordance with international standards such as DIN EN ISO 5817, supported by Intelligent Area Illumination and the powerful Qpix Control2 software – for laboratories that make no compromises on quality or throughput.



QEYE 200 / QEYE 800

KEY FEATURES

- High-resolution image capture and precise measurement
- Qpix Control2 analysis software
- Reproducible results and detailed documentation
- Intelligent Area Illumination (IAI)
- Weld inspection according to DIN EN ISO 5817
- Inverse microscope design

QEYE 200 / QEYE 800

TWO SYSTEMS, ONE STANDARD OF PRECISION

QEYE 200 • COMPACT PRECISION

Quality inspection of laser welds in the automotive industry; inspection of delicate welded joints in electronics and precision engineering; analysis of narrow deep welds in series production; process monitoring and optimisation in manufacturing; research and development in laser welding processes.

- | 12 megapixel camera system · 4K Ultra HD
- | Zoom levels: 0.63x – 1x – 1.6x – 2x – 4x
- | Field of view: 23.7 × 17.8 mm to 3.7 × 2.8 mm
- | Integrated automatic brightness control; manual fine-tuning



QEYE 800 • QUALITY AND SAFETY

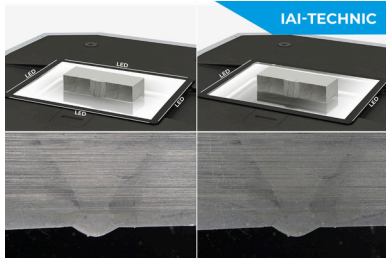
Quality control of welds in series production; material testing in testing laboratories; analysis of weld penetration, weld shape and potential defects; applications in automotive production, steel construction and plant engineering.

- | 8.5 megapixel camera system · 4K Ultra HD
- | Zoom levels: 1x – 1.5x – 2x – 2.5x – 4x – 5x
- | Integrated automatic focus and brightness control
- | Focus plane manually adjustable for non-planar components



INNOVATIVE OPERATION

CONVINCING BENEFITS



OPTIMIZED SPECIMEN ILLUMINATION

IAI = Intelligent Area Illumination. Four LED illumination profiles (right, left, front, rear) can be switched on or off smoothly and individually, enabling faster and more precise testing without the disturbance of light influences or grinding reflections.



TOUCH CONTROL PANEL

Freely programmable capacitive buttons can control LED illumination, zoom, field of view and brightness. The soft-touch panel is responsive even when used with gloves; the illuminated Q indicates status and triggers imaging.



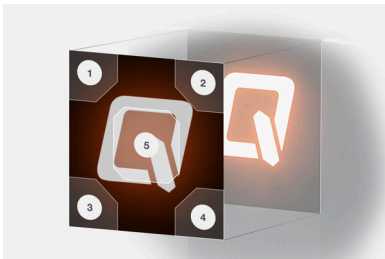
QPIX CONTROL2

Hardness testing and optical analysis in a familiar interface using one PC. Efficient weld specimen measurement in seconds, live image, 3D Smartview and a uniform reporting system for hardness testing and macro analysis.



FEATURES AND BENEFITS

Detailed analysis and accurate measurement, robust modern industrial design, easy replacement of the glass sample carrier and dust-tight assembly in a clean room.



PROGRAMMABLE TOUCH PANEL

Five programmable functions: zoom in, zoom out, turn all lights off, turn all lights on, and start analysis.

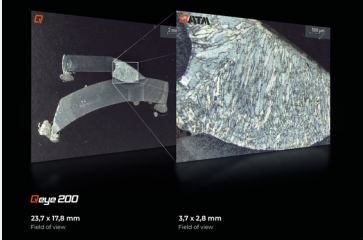
AREAS OF APPLICATION

INVERSE MACROSCOPY

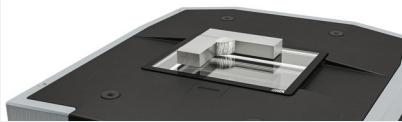
Areas of application	Qeye 800	Qeye 200
Macro welds	✓✓✓	✓
Laser welds	✓	✓✓✓
Visual inspection for surface defects	✓✓	✓✓
Visual inspection of components/PCB assessment	✓	✓✓✓



Macro weld evaluation



Laser weld inspection



Welding samples

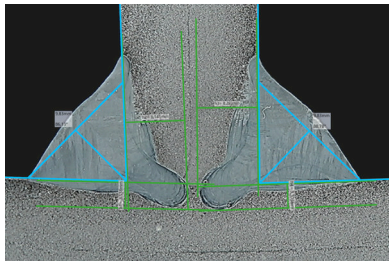
APPLICATIONS

BENEFITS OF PRACTICAL EXPERIENCE



MEASURING TOOLS

Lengths, angles, circles and polygons for area or perimeter calculations. Zoom and brightness can be calibrated individually.



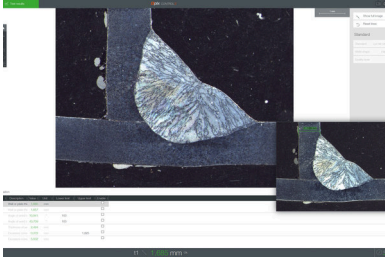
WELDING SEAMS

Fillet weld measurement with intuitive tools: easy adjustment of measuring lines, seam quality evaluation and recordable notes.

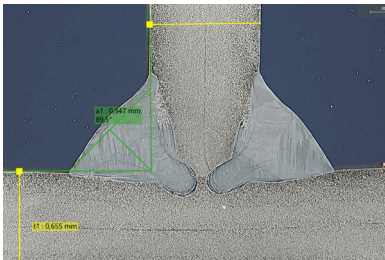
APPLICATIONS

STANDARD ASSESSMENT OF WELDS

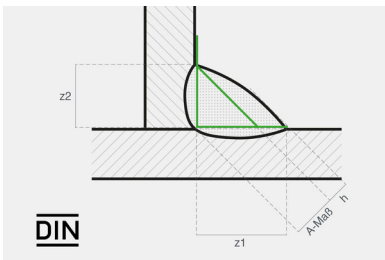
Standard-compliant weld evaluation – structured and fully documented. Qeye supports the inspection process: from configuration of inspection standards within the software, through identification of irregularities in accordance with DIN EN ISO 5817, to a complete, print-ready inspection report with evaluation groups.

**TEMPLATE MODE WITH REFERENCE IMAGE**

Customised client templates can be saved with a reference image and accessed at any time. Predefined survey elements and the QATM standard catalogue are pre-installed.

**SNAPPING MEASUREMENT LINES**

Measurement lines can be linked individually and aligned precisely, enabling structured, efficient complex measurement tasks.

**STANDARD-COMPLIANT TEST EQUIPMENT**

Software tools for inspections to DIN EN ISO 5817 include the A dimension, depth of burn-in, evaluation limits and a standard-compliant inspection report.

Customer Standard

DIN EN ISO 5817 2023-07 DE

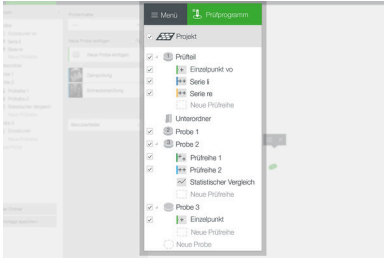
DIN EN ISO 5817 2023-07 EN

CREATE CUSTOM STANDARDS

Design standards directly within the software and adapt them flexibly to specific requirements.

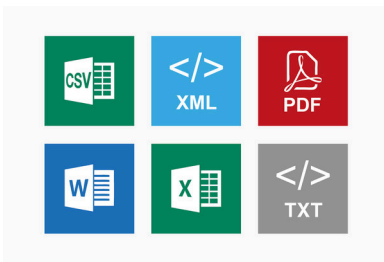
INDUSTRY 4.0

EQUIPPED FOR TODAY AND TOMORROW



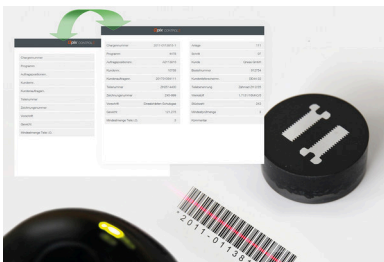
PROFESSIONAL DATA MANAGEMENT

Clearly structured batch management, project templates, organised measurement results and job information. Templates hold information about samples, test methods, designations and user fields.



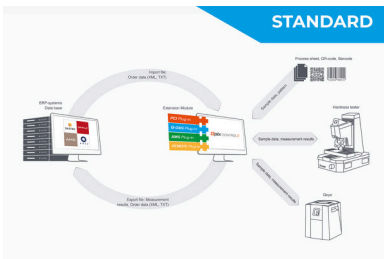
AUTOMATIC EXPORT FUNCTIONS

Raw data exports to CSV/TXT and XML; reports to MS Word, Excel, PowerPoint and PDF. Export configurations can be stored individually for templates.



BARCODE / QR CODE / DMC READER

Qpilot supports barcode and QR code readers to populate header data; optional full integration can select templates or retrieve data from higher-level systems.



QCONNECT

Inter-device connectivity through open, bi-directional XML interfaces and plug-ins including the QDAS Plug-In+, as well as customer-specific solutions.

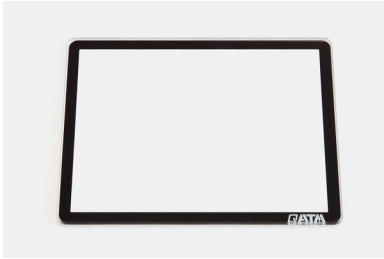
6520-1	Designation	Remarks	Illustration
5012	Intermittent undercut (short imperfection)	Smooth transition is required. This is not regarded as a systematic imperfection.	
503	Excessive convexity	Smooth transition is required between the cap of the weld and the plate surface and/or the adjacent welding beads	
505	Incorrect weld toe		

IDENTIFICATION OF IRREGULARITIES

After measurement, irregularities can be assessed in accordance with DIN EN ISO 5817; results can be included in a complete test report with evaluation groups.

ACCESSORIES & TOOLS

PRECISE, CLEAN AND UNCOMPROMISING



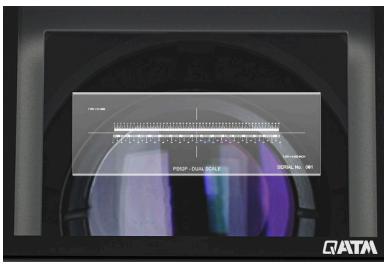
SAMPLE CARRIER

Sample holders are available in sets of five, made from aluminium silicate glass (Gorilla Glass).



QEYE COVER

The shielding hood absorbs extraneous light and eliminates reflections. Included as standard with every Qeye.



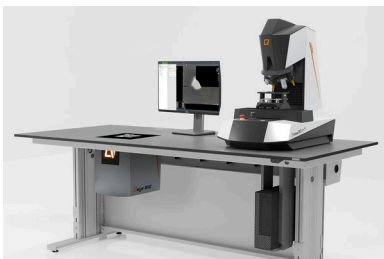
OBJECT MICROMETER

A 50 mm object micrometer with a resolution of 0.1 mm for accurate control of optical magnification; optionally available with a UKAS certificate.



QATM CLEANING MATERIALS

Microfiber cloths, cleaning cloths and special glass cleaners. QATM recommends its specially developed cleaning materials.



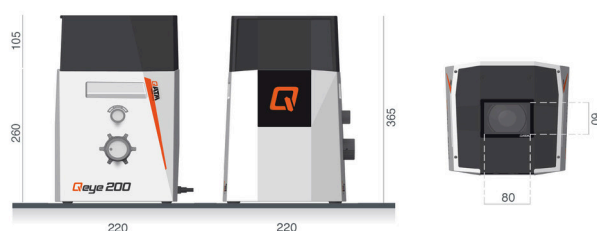
FULLY INTEGRATED SYSTEM SOLUTION

Qeye can be integrated into a height-adjustable test lab table, adapted to individual requirements and optionally available with a hardness tester.

QEYE 200

TECHNICAL DATA

Field of view	23,7 x 17,8 mm - 3,7 x 2,8 mm (0,933 x 0,7" - 0,146 x 0,11")
Zoom levels	0,63x - 1x - 1,6x - 2,5x - 4x
Camera	4K Ultra HD - 12 Megapixel - USB 3.0
Illumination	IAI - LED unit (Intelligent Area Illumination)
Software	Qpix Control2
Machine operation	external PC system (Windows 11 64-bit)
Dimensions glass sample carrier (L x W x H)	95 x 75 x 2 mm (3.7 x 3.0 x 0.08")
Max. sample weight	5 kg (11 lbs)
Interface	1 x USB 3.0
Power connection	100 - 240 V ~1/N/PE, 50 - 60 Hz
Power Consumption	Idle: ~35 W Operation: ~60W Max. ~100 W
Dimensions	220 x 220 x 260/365* mm (8.7 x 8.7 x 10.2/14.3") *inkl. Qeye cover
Space requirement	300 x 300 mm (11.8 x 11.8")
Weight	16 kg (35.3 lbs)
Ambient temperature	18 - 28 °C (64 - 82 °F)
Humidity maximum	maximum 70 % - non-condensing



QEYE 800

TECHNICAL DATA

Field of view	80 x 60 mm - 2.3 x 1.7 mm (3.1 x 2.4" - 0.091 x 0.067")
Zoom levels	1x - 1.5x - 2x - 2.5x - 4x - 5x
Camera	4K Ultra HD - 8.5 megapixel - USB 3.0
Illumination	IAI - LED unit (Intelligent Area Illumination)
Software	Qpix Control2
Machine operation	external PC system (Windows 11 64-bit)
Dimensions glass sample carrier (L x W x H)	95 x 75 x 2 mm (3.7 x 3.0 x 0.08")
Max. sample weight	5 kg (11 lbs)
Interface	1 x USB 3.0
Power connection	100 - 240 V ~1/N/PE, 50 - 60 Hz
Power Consumption	Idle: ~35 W Operation: ~60W Max. ~100 W
Dimensions	220 x 220 x 260/365* mm (8.7 x 8.7 x 10.2/14.3") *inkl. Qeye cover
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Weight	16 kg (35.3 lbs)
Ambient temperature	18 - 28 °C (64 - 82 °F)
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ORDERING INFORMATION

OPTICAL ANALYZER · INVERSE MACROSCOPE QEYE 800

QB0130101	Qeye 800
QB0130102	Qeye 800 - Table integration
QB0130201	Qeye 200

PC SYSTEM FOR MACHINE CONTROL

QA0057500	High-end PC system Full HD - Qpix Control2
QA0057600	2nd 24" Full HD UltraSharp monitor
QA0057501	High-end PC system Ultra HD (4K) - Qpix Control2
QA0057601	2nd 27" Ultra HD (4K) monitor

SOFTWARE MODULES

QSO013600	Qpix - Barcode / QR code scanner software module
QA0089600	Barcode/QR-Code 1D/2D Scanner Kit - Bluetooth
QA0071700	El. Measurement caliper - Qpix Control2 compatible
QA0108200	NFC Login Package QpixControl2
QSO213600	RFID Tag MIFARE, key chain gray 10 pcs.

QPIX CONNECT · DATA CONNECTION

QSO031600	Qpix Control2 - PCI plug-in
QSO013500	Qpix Control2 - AMS plug-in
QSO030400	Qpix Control2 - Q-DAS plug-in

ACCESSORIES

QA0095500	Glass sample carrier set of 5 - Qeye 800
QSO194400	Dust protection cap - Qeye 800
QA0099600	Cleaning kit Qeye
QSO197900	Glass scale 50mm, verification - Qeye 800
A7500500	Qeye table 1760x770x800 with stone plate
A7500501	Qeye table 1760x1000x800 with stone plate
A7500502	Qeye table 1760x770x800
A7500503	Qeye table 1760x1000x800
QA0048500	UPS - Uninterruptible Power Supply 900VA
QSO192600	Accessory box - Optical analyzer
QVV0030	Documentation

QEYE 200 / QEYE 800

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REQUEST A QUOTE →

qatm.com/products/image-analysis/qeye-200-qeye-800/order-data/

PRODUCT DATA SHEET →

qatm.com/files/450094/product-data-sheet-qeye-800.pdf



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