

The modular coating thickness measuring system
that is setting new standards.



Coating thickness
measurement
probes for specific
applications



QNix® 8500: The modular high precision measuring system meeting highest demands.

Working closely with users from small business, industry and services, we developed the latest generation of the modular gauge system QNix® 8500, one of the best worldwide.

Simply place, measure and read.

Just as all the QNix® coating thickness gauges, the modular QNix® 8500 system too is an example of the extremely simple yet safe operation allowing for rugged and reliable everyday use for varying and versatile applications.

Be it lacquer or corrosion protection on metals, be it iron, aluminium, copper, zinc or steel, simply changing the probes allows for highly accurate non-destructive measurements of non-magnetic layers on steel and iron as well as all types of insulating coatings on non-ferrous metals

Display

- High resolution graphic display
- All standard languages displayable
- Back lit display
- Flip-display by 180 degrees

Cross control key

- Highly ergonomic keys
- Simple menu navigation
- 2 colour LEDs for displaying measurements data transfer and limit setting





As a pioneer of hand-held measuring devices, our family business guarantees our worldwide customers success using our simply and safely operated innovative products, systems and individual services for the quality assurance of their coating surface and restoration technology. Values where the modular gauge system QNix® 8500 is setting new standards.

Germans finest.

We produce our gauges and systems using modern facilities in Germany exclusively. Many aspects of work are still done by hand. We test our gauges with particular care to ensure the best quality in their worldwide application.

Tell us your measuring problem and we show you a solution. As we develop our gauges and measuring systems in cooperation with users around the world, we know what “user-friendly” really means to our customers.

- Simple, convenient, safe operation
- No calibration*
- Broad, versatile, individual range of application
- Data storage and statistical analysis
- Quality and accuracy during rugged long-term use

We also use high-quality materials such as integrated rubies for our proven measuring heads. Therefore, QNix® coating thickness gauges have become a worldwide standard of user-friendliness and excellent quality “Made in Germany”.

Quality by excellence as proven by our 3 years warranty.

Documentation and statistics function for optimum quality management.

Using the QNix® software and the USB wireless interface adaptor, users can transmit measurements wirelessly for reliable and convenient documentation and analysis with the computer.

All data can immediately be structured, analysed or send to project partners via internet

Modular plug system

- Standard probes (Fe, NFe, Dual)
- Wireless probes (Fe, NFe, Dual)
- Pen-shaped probe (Fe)
- Adaptor cable (for all probes)

* not valid for the pen-shaped probe and for specific applications





Wireless probe: QNix® 8500 sat.

This miniature wireless probe allows simple safe and accurate one-hand measurements even in difficult positions.

To determine exact lacquer and corrosion protection measurements, the small dimensions of this wireless probe make new and crucial areas accessible to measurement where other gauges do not fit. Though, it is such critical spots of coating that are often concealed in difficult-access areas. In addition, the wireless probe facilitates taking measurements, for instance when measuring wide spreading surfaces and taking a vast number of measurements in various measuring spots.

The gauge, serving as storage device, display and charging station, easily fits into a pocket or can simply be fastened to the arm using the protective cover and the wristband.



Gauge

- Storage device, display and charging station for the QNix® 8500 sat wireless probe



Application examples

- Measurements at difficult-to-access and crucial spots, for instance during construction and renovation of planes, ships and bridges as well as related security projects.
- Control measurements on steel works in rough every day application with harsh and changing conditions
- Measurements of large surfaces in extreme heights, on scaffolding, façade lifts or ladders. In such situations the low weight and wireless transmission of measurements is an advantage

Product advantages

- Higher user safety and prevention of sources of errors
- Wireless data transmission between gauge and PC
- High efficiency accumulator allows up to 4000 measurements without recharging
- Charging via gauge
- Low weight of wireless probe (30 g)
- Wireless transmission range from probe to gauge up to max. 20 meters
- Unlimited wireless transmission worldwide via secure frequency band
- Confirmation of transmission with LED signal
- In combination with the QNix® software, the measurements can be documented and printed using a PC
- Selection of Dual, Fe and NFe wireless probes for various measuring ranges



Wireless probe

- Thumb-sized, weighing only 30 g
- Stable and safe one-hand measurements with safety cord
- Range up to 20 meters
- Up to 4000 measurements without recharging
- Confirmation of transmission with blue LED signal



Magnetic-inductive pen-shaped probe MI Fe 500 μm .

The pen-shaped probe is perfectly suited for quality controls where precision measurements on small parts or near edges are required.

Only the correct coating thickness on small parts such as screws or bolts ensures proper adhesion force and corrosion protection. The use of the optimized pen-shaped probe MI Fe 500 μm can significantly reduce interfering measurement effects near edges. This allows measurements much closer to edges and thus more precise results on small parts.

This interchangeable probe also allows for accurate measurements of thin, non-ferromagnetic metal coatings such as chromium, copper, zinc, etc and lacquer, enamel or synthetic coatings on ferromagnetic substrates.

Application examples

- Measurements of angles, washers, screws, bolts, nuts and friction-locked connections
- Ensures reliable protective coatings on steel bolts and nuts as used in rotor mountings for wind energy plants or bridges and window fasteners.
- Measurements of PVD coatings such as TiN, TiCrN, CrN and TiAlN

Product advantages

- Measurements taken manually or with stand equipment
- Magnetic-inductive and (optional) Hall-effect measuring method combined in one gauge
- Digital measuring electronics linked with probe to keep zero reference during probe change
- Rugged probe thanks to stainless steel design
- Easy adjustment thanks to probe's pen-shape

User software

- Wireless communication between PC and gauge
- Read-out of gauge memory
- Flexible analysis with Microsoft Excel





QNix® 8500 Basic/QNix® 8500 Premium: A perfect system.

The modular measuring system QNix® 8500 offers two different gauge versions (Basic and Premium). They particularly differ in functionality and storage capacity (see below).

Display of two coating thickness measurements.

The “combined measurement” mode allows the simultaneous measurement of galvanizing and epoxy based coating on steel substrate – in one single measurement process. The gauge then displays the coating of the zinc and the lacquer layers as two separate values (minimum thickness of the metallic non-ferrous inter-layer (zinc): 50µm).

Calibration options for special measurement conditions.

In addition to a (constant) factory calibration, the measuring system QNix® 8500 offers two calibration processes that are useful during specific measuring tasks such as measurement on curvatures or small parts.

- A one-point calibration can optimize the probe's measuring accuracy with an expected coating thickness
- A two point calibration can increase the probe's measuring accuracy in a certain coating thickness range.

Reliable measurements also on rough surfaces.

On rough surfaces, an average zero reference can be calculated and stored from a freely determinable amount of zero reference measurements.

Average of defined coating thickness.

On coatings of highly varying thickness or to comply with a certain inspection standard, set the gauge to calculate and display the valid thickness measurement from a previously defined amount of single measurements.

Measurement processing and documentation using Excel.

Using the QNix® software the measurements can be transmitted wirelessly into an Excel spread sheet. This documents all relevant statistical analysis required by a quality assurance system.

Menu structure	Gauge version QNIX 8500		BASIC	PREMIUM
Measuring Mode	Substrate selection	Fe-NFe FE/NFe automated Combined measurement	■ ■	■ ■ ■
	Measurements	Single measurements Continuous measurement	■	■ ■ ■
	Upper/lower limit Average		■	■ ■
Memory Capacity * max. 2000 measurements per batch	Amount of measurements Amount of batches Batch name – info – upper/lower limit		up to 100 1	up to 13000* 200 ■
Statistics	Average/standard deviation/ maximum/minimum - also for the relevant block/blocks		■	■
Calibration	Amount customized calibration (one-point/two-point) Average zero reference		1	100 ■
Settings	Display	Unit: µm/mil. Resolution coars/normal/fine Display light: auto/off Orientation: standard/switched	■ ■ ■ ■	■ ■ ■ ■ ■ ■
	Wireless: on/off Display system info Languages: up to 3 e.g. German, English, French Signal: on/off Date/time		■ ■ ■ ■	■ ■ ■ ■ ■ ■

Gauge	Qnix® 8500
Probe Type	Interchangeable
Units	µm/mil
Measurement Resolution	0.1 µm in the range below 100 µm, 1 µm in the range from 100 to 999 µm, 0.01 mm in the range from 1000 µm
Operation Temperature	0 to 50 °C
Storage Temperature	-10 °C to 60 °C

Interchangeable probes/Probe type	8500 Fe 2000 µm	8500 Fe 5000 µm	8500 NFe 2000 µm	8500 Dual Fe/NFe 2000 µm	8500 Dual Fe / NFe 5000 µm / 2000 µm
Measurement Method	Magnetic: Magnetic flux/ Hall effect Fe*	Magnetic: Magnetic flux/ Hall effect Fe*	Magnetic: Eddy current NFe*	Magnetic: Magnetic flux/ Hall effect Fe*/ Eddy current NFe*	Magnetic: Magnetic flux/ Hall effect Fe*/ Eddy current NFe*
According to Standard	DIN EN ISO 2808, DIN 50981, ISO 2178, BS 5411 (11), BS 3900-C5, ASTM B 499, ASTM D 1186, ASTM D 7091	DIN EN ISO 2808, DIN 50981, ISO 2178, BS 5411 (11), BS 3900-C5, ASTM B 499, ASTM D 1186, ASTM D 7091	DIN EN ISO 2808, BS 3900-C5, ASTM D 7091, DIN 50984, BS 5411 (3), ISO 2360, ASTM D 1400	DIN EN ISO 2808, DIN 50981, DIN 50984, ISO 2178, BS 5411 (3 & 11), BS 3900-C5, ASTM B 499, ISO 2360, ASTM D 1400, ASTM D 1186, ASTM D 7091	DIN EN ISO 2808, DIN 50981, DIN 50984, ISO 2178, BS 5411 (3 & 11), BS 3900-C5, ASTM B 499, ISO 2360, ASTM D 1400, ASTM D 1186, ASTM D 7091
Measuring Range	0 – 2000 µm	0 – 5000 µm	0 – 2000 µm	Fe: 0 – 2000 µm NFe: 0 – 2000 µm	Fe: 0 – 5000 µm, NFe: 0 – 2000 µm
Measuring Interval	1500 ms	1500 ms	1500 ms	1500 ms	1500 ms
Measuring Accuracy Regarding Automation-Standards	± (1 µm + 2% of the reading)	± (1 µm + 2% of the reading) in the range of 0.0 to 2.0 mm ± 3.5 % of the reading from 2.0 mm	± (1 µm + 2% of the reading)	± (1 µm + 2% of the reading)	± (1 µm + 2% of the reading) in the range of 0.0 to 2.0 mm ± 3.5 % of the reading from 2.0 mm
Minimum Measuring Surface	Diameter: 20 mm respectively radius 10 mm	Diameter: 20 mm respectively radius 10 mm	Diameter: 20 mm respectively radius 10 mm	Diameter: 20 mm respectively radius 10 mm	Diameter: 20 mm respectively radius 10 mm
Minimum Radius of Curvature	Convex: 5 mm, Concave: 30 mm	Convex: 5 mm, Concave: 30 mm	Convex: 5 mm, Concave: 30 mm	Convex: 5 mm, Concave: 30 mm	Convex: 5 mm, Concave: 30 mm
Minimum Thickness of Base Material	0.2 mm	0.2 mm	0.05 mm	Fe: 0.2 mm, NFe: 0.05 mm	Fe: 0.2 mm, NFe: 0.05 mm
Wireless Interface	No	No	No	No	No
Operation Temperature	0 to 50 °C	0 to 50 °C	0 to 50 °C	0 to 50 °C	0 to 50 °C
Storage Temperature	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C
Power Supply	From gauge	From gauge	From gauge	From gauge	From gauge
Dimensions (L x W x H in mm)	60 x 26 x 22 without extensions	60 x 26 x 22 without extensions	60 x 26 x 22 without extensions	60 x 26 x 22 without extensions	60 x 26 x 22 without extensions
Weight incl. Batteries	ca. 12 g	ca. 12 g	ca. 12 g	ca. 12 g	ca. 12 g

All interchangeable probes also available as wireless probes 8500 sat.

Wireless Probes Qnix® sat

8500 measuring probe MI Fe 500 µm

ISN Frequency Band	2.4 GHz	Measuring Method	Magnetic measuring method Fe: magnetic induction See (*Fe)
Radio Transmission Range	Max. 20 m		
Power Supply	Lithium-Ion accumulator, chargeable via QNix® 8500 gauge	According to Standards	DIN EN ISO 2808, DIN 50981, ISO 2178, BS 5411 (11), BS 3900 – C5, ASTM B499, ASTM D 1186, ASTM D 7091
Accumulator Capacity	Max. 4000 measurements		
Charging Time	approx. 5 hours	Measuring Range	Fe 0.0 – 500 µm
Dimensions	61 x 28 x 28 mm	Measuring Interval	1600 ms
Weight	ca. 30 g	Repeatability Regarding Automation Standads	± (0.1 µm + 0,8% of the reading)
		Accuracy Regarding Automation Standards	± (0.3 µm + 2% of the reading) after calibration
		Minimum Measuring Surface	Diameter: 7.0 mm or Measuring radius: 3.5 mm
		Minimum Radius of Curvature	Convex radius: 4 mm Concave radius: 5 mm
		Minimum Thickness of Base Material	Fe: 0.4 mm
		Operation Temperature	0 to 50 °C
		Storage Temperature	-10 to 60 °C
		Power Supply	from gauge
		Dimensions (L x W x H)	Probe without connecting cable 120 mm x 12 mm x 12 mm
		Weight	ca. 95 g

Fe* measurement of non-ferromagnetic and non-ferrimagnetic coatings on ferromagnetic substrate such as measurement on iron or steel substrate

NFe* Measurement of non-ferromagnetic and non-ferrimagnetic and electrically non-conductive coatings on non-ferromagnetic or non-ferrimagnetic and electrical conductive substrate such as measurement on aluminium, zinc, copper, brass and certain stainless steel substrates



Qnix® Software

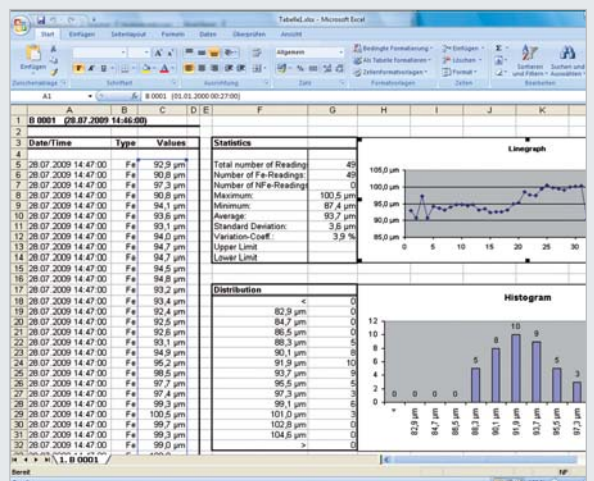
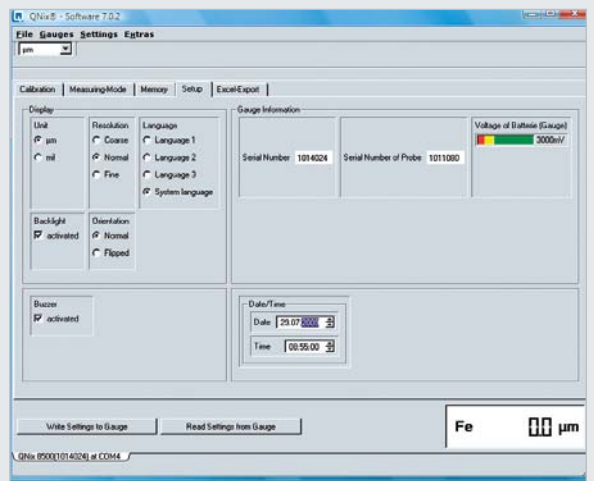
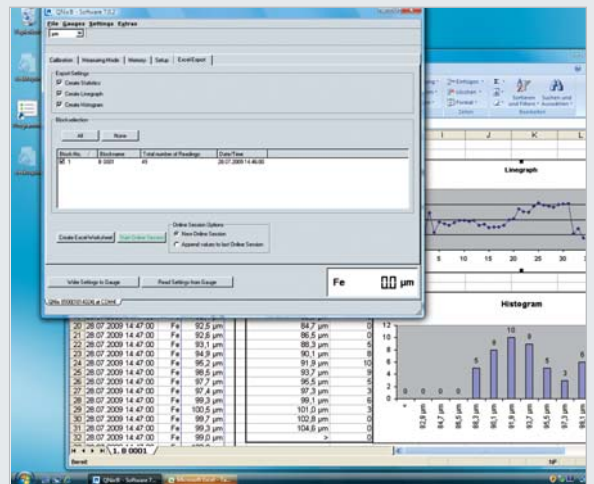
The Qnix® 8500 measuring system is supplied with user-friendly PC software providing various options for practical data analysis and configuration of the gauge. The Qnix® software enables the user to read-out measurements from the gauge's memory via the wireless interface included in every model. The export into a spreadsheet program gives the user access to all possibilities that statistical analysis and graphical presentation have to offer. This also provides new possibilities of documentation in quality assurance for expert opinions or other applications. The simple and intuitive operation yields the desired results quickly.

The software allows individual and extensive configuration of the gauge itself. Almost all gauge settings can be managed from the PC.

At the same time, the Qnix® software provides the base of customized applications to effectively support your quality assurance system.

Advantages with benefits:

- Wireless communication between PC and gauge
- Read-out of gauge memory
- Data export into a spreadsheet program
- Configuration of the gauge
- Online measurement
- Adjustment to customized analysis programs possible





QNIX® 8500



Standard scope of supply:

- Gauge with optional measuring probe
- 2 Mignon batteries 1.5V (AA) Alkaline
- Adaptor cable for external probe (not included with wireless probe)
- User manual
- Test certificate for optional measuring probe
- Soft pouch with belt clip
- Carrying case for transport and storage

Quality by excellence.

Worldwide, QNix® coating thickness gauges have become a standard for excellent quality "made in Germany". Quality that shows – in the simple, safe and convenient operation and the reliability of long-term functionality. All of our gauges and systems are manufactured according to strict quality standards exclusively in Germany. They are tested for rugged and safe application everywhere in the world.

We serve the customer.

For more than four decades AUTOMATION Dr. NIX GmbH & Co. KG have committed themselves to support users worldwide in creating and ensuring high quality coatings and surfaces using our innovative devices, systems and services. We help our customers to increase their added value by precisely measuring, checking and documenting quality and productivity of customer processes.

Options:

All measuring probes of the QNix® 8500 measuring system are interchangeable.

QNix® interchangeable probes

- Fe probe 2 mm
- Fe probe 5 mm
- NFe probe 2 mm
- Dual probe Fe 2 mm/NFe 2 mm
- Dual probe Fe 5 mm/NFe 2 mm
- Dual Probe Fe 5 mm/NFe 5mm

QNix® sat wireless probes

- Fe wireless probe 2 mm
- Fe wireless probe 5 mm
- NFe wireless probe 2 mm
- Dual wireless probe Fe 2 mm/NFe 2 mm
- Dual wireless probe Fe 5 mm/NFe 2 mm
- Dual probe Fe 5 mm/NFe 5 mm

QNix® MI Fe 500 µm

- Pen-shaped probe MI Fe 500 µm
- Carrying case
- 2 alignment rings
- Circular steel reference plate D = 25 mm
- Reference foils: ca. 6, 11, 24, 50 µm
- Certificate
- User manual
- Measuring stand
- Prism
- Positioning angle

QNix® software

- QNix® software for data transfer to and analysis with EXCEL and for configuration of the gauge
- USB wireless interface adaptor for bi-directional data transfer between gauge and PC

QNix® calibration foils

- Calibration foils, reference plates, also available as a complete set

Protective bag with arm fastener



* according to our terms of sale

AUTOMATION Dr. NIX
GmbH & Co. KG



Germany:

Robert-Perthel-Strasse 2 · 50739 Köln
Phone +49 (0) 221-917455-0
Fax +49 (0) 221-171221
E-Mail info@automation.de
www.automation.de