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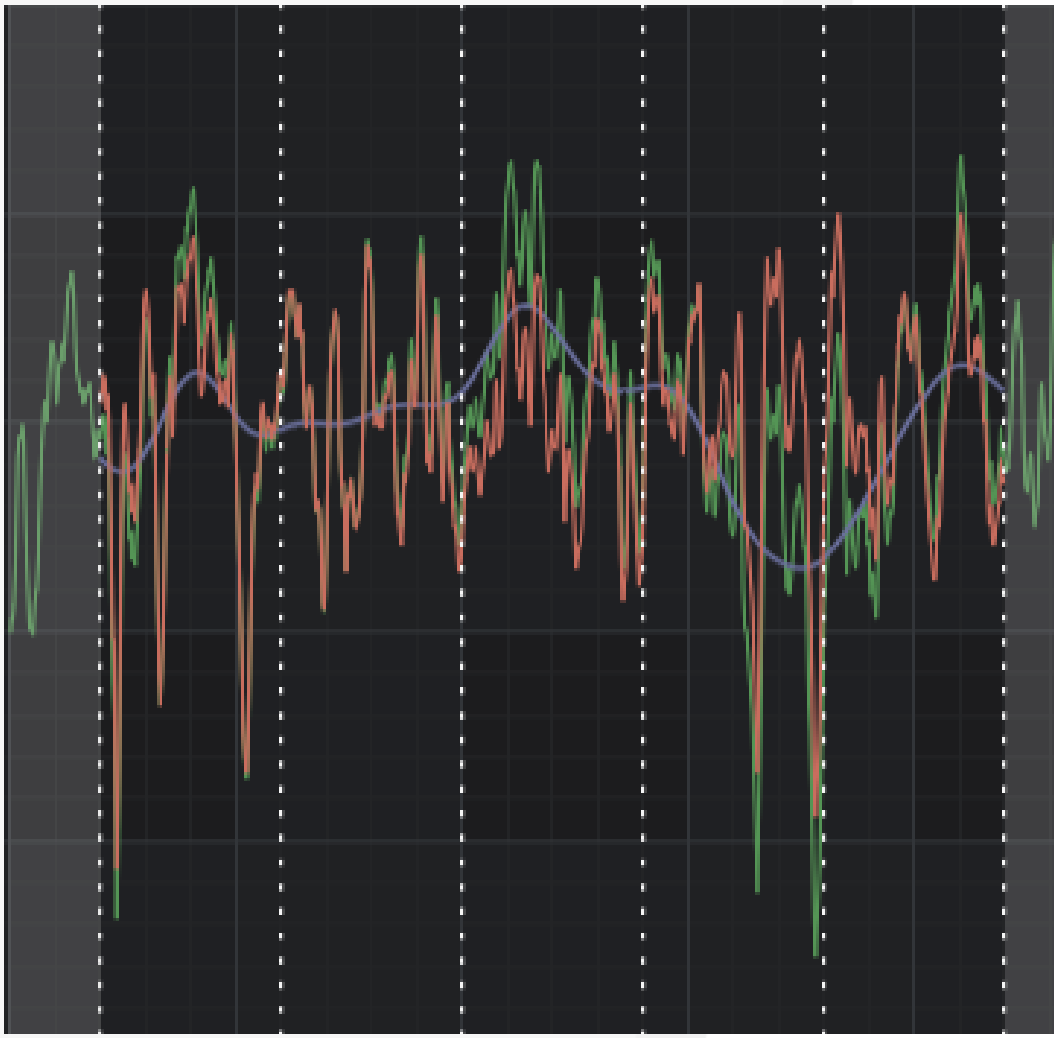
Surfynex



Industrial software for surface metrology

Roughness, waviness and profile analysis

Laboratory and Production

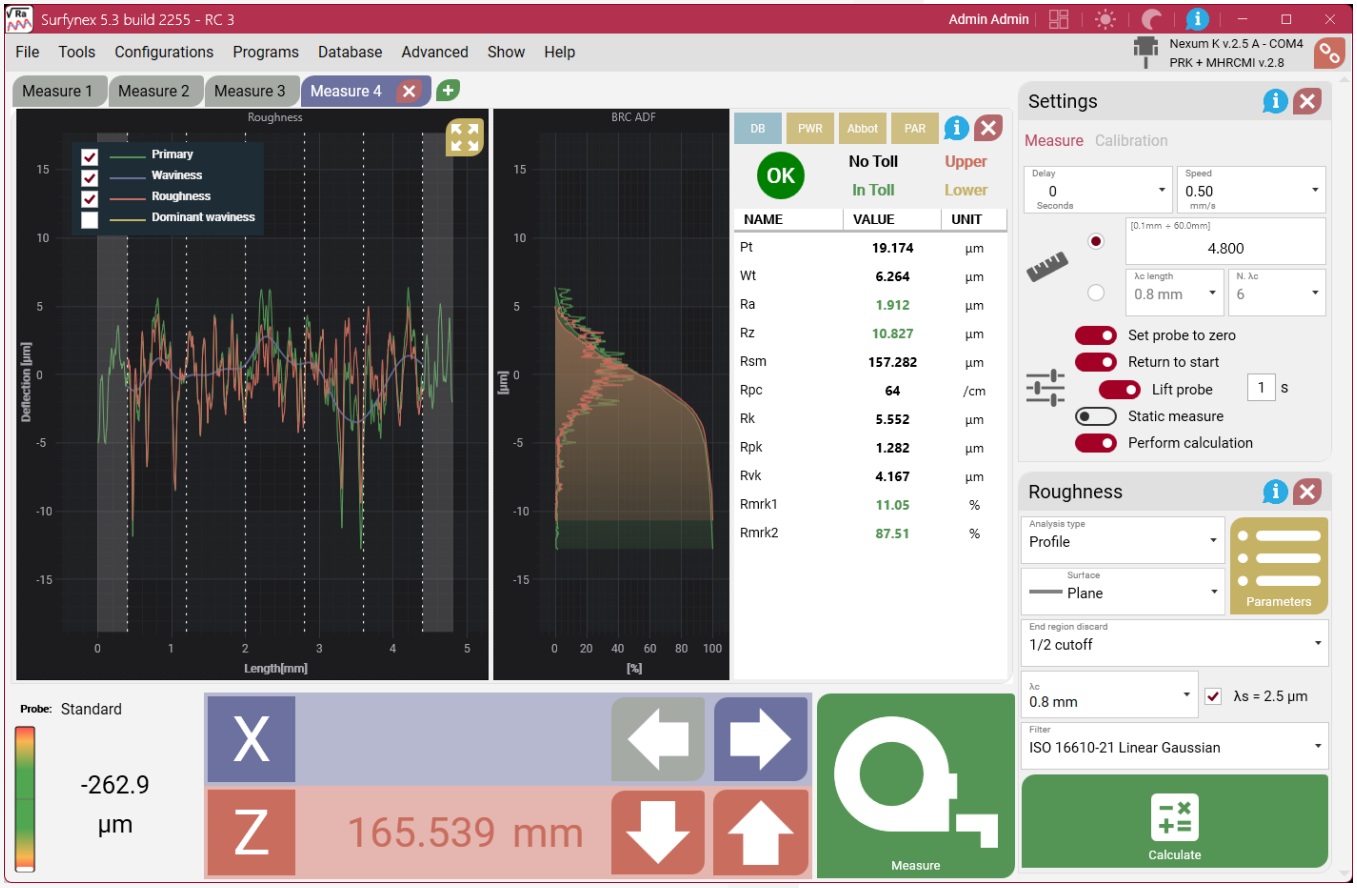
Surfynex is the MCM Technic software platform for surface metrology, designed for the analysis and control of profiles acquired through **OmniDrive** and MCM **retrofit** solutions for roughness measurement.

Developed for both laboratory and production environments, **Surfynex** standardizes the entire measurement process, reducing operator influence while improving repeatability and traceability.

With over 100 parameters for R, P, W and Core profiles, **Surfynex** supports the main ISO, JIS and ASME standards and integrates advanced tools for measurement comparison, project management, tolerance evaluation and reporting. Results can be exported in industrial formats (PDF, CSV, DXF, Q-DAS, Excel) for quality audits and seamless integration into company workflows.

Surfynex is designed for both modern and retrofit systems: it integrates with measurement systems and accessories such as motorized columns, enabling cycle automation and consistent control in production environments.

Key feature: simplified cycle programming through a guided assistant (learning mode), allowing users to quickly and safely create automatic sequences, making the system suitable for operators with different levels of experience.



Why Surfynex – Benefits for Modern Industrial Metrology

Surfynex is designed to meet the demands of contemporary industrial metrology, where precision, traceability and automation must seamlessly integrate with production processes and corporate quality systems.

Measurement Process Standardization

A single software platform for **OmniDrive** instruments and **retrofit** solutions, including equipment from different manufacturers.
This approach enables harmonized procedures, training and operational management, reducing variability between instruments and operators.

Reduced Operator Influence

Measurement cycle automation and guided programming allow repeatable and consistent sequences to be executed, minimizing the risk of human error and improving long-term result reliability.

Compliance with International Standards

Surfynex supports the main ISO, JIS and ASME standards for roughness, waviness and profile analysis.
Continuous updates ensure alignment with regulatory developments and the evolving requirements of corporate quality systems.

Advanced Data Management and Traceability

The integrated database enables structured measurement storage, long-term comparison and full result traceability.
Export in industrial formats (PDF, Excel, CSV, DXF, Q-DAS) facilitates integration with SPC systems and quality documentation.

Scalable and Integrable Platform

Surfynex can be used on portable and benchtop systems or integrated into automated instruments and production lines.

Compatibility with motorized columns and retrofit solutions allows existing equipment to be modernized without complete replacement.

Operational Efficiency and Investment Continuity

Thanks to its configuration flexibility and compatibility with existing systems, **Surfynex** extends the lifecycle of measurement instruments while enhancing performance, automation and data consistency.

Digital Integration and Industry 4.0

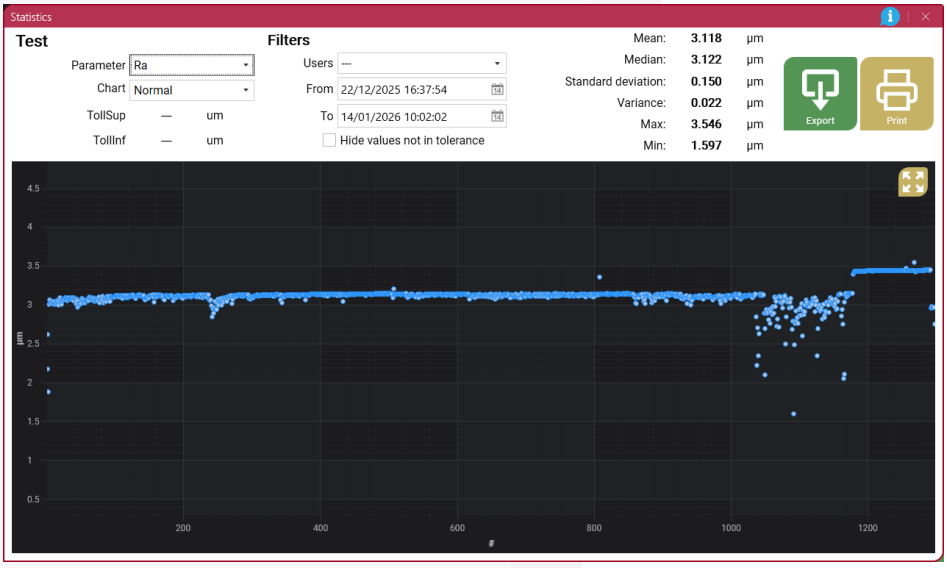
Surfynex is designed to integrate into modern digitalized production environments, supporting the transition toward interconnected and controlled measurement processes.

The software enables structured acquisition of measurement data, statistical analysis and long-term monitoring of surface characteristics, allowing continuous control of production process stability.

Through SPC analysis capabilities and data export in compatible industrial formats (Q-DAS, CSV, Excel), **Surfynex** can be integrated into corporate quality systems and statistical process control workflows.

The software architecture supports full measurement traceability, multi-level user management and procedure standardization, contributing to the implementation of Industry 4.0-oriented production systems.

Surfynex can operate either as a stand-alone platform or as part of automated systems and integrated measurement lines, ensuring data continuity, security and scalability.



Industrial Applications

Surfynex is designed for environments where surface quality is a functional requirement and measurement data must be repeatable, traceable and seamlessly integrated into corporate

Automotive and Powertrain

Roughness control on precision mechanical components, supporting process stability through statistical analysis and SPC functions.

Aerospace and High-Criticality Industries

Verification of functional surfaces and quality control of components with stringent requirements and standardized procedures.

Medical and Micro-Mechanical Applications

High-precision measurements, reduced operator influence, and structured data management for audits and traceability.

Precision Machining and Advanced Manufacturing

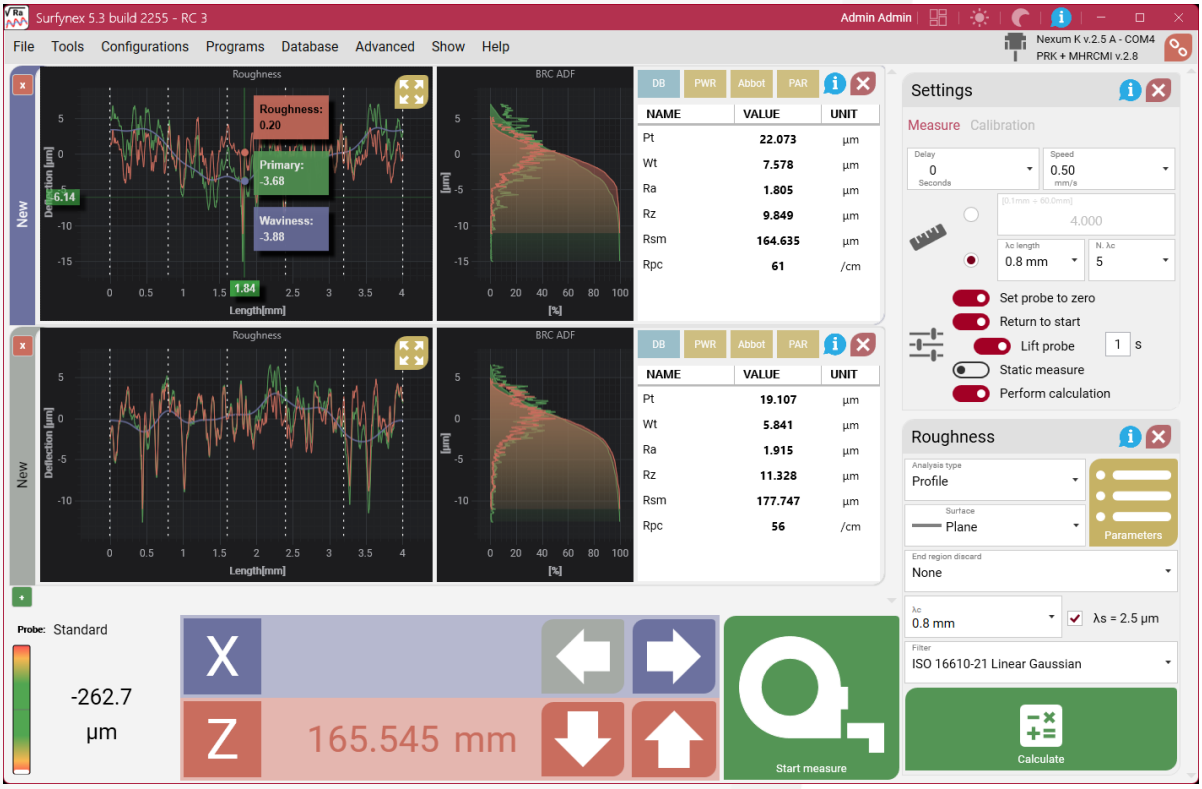
Use in laboratory and production environments to monitor surface quality, standardize measurement cycles and reduce scrap rates.

Surfynex solutions can be adapted to numerous other industrial sectors and metrological applications.

Immediate Measurement Comparison

Surfynex enables the simultaneous visualization of multiple profiles and results, allowing immediate comparison between different measurement conditions, batches or process parameters.

This function facilitates variation analysis, process validation and production stability monitoring, supporting fast decisions based on objective data.



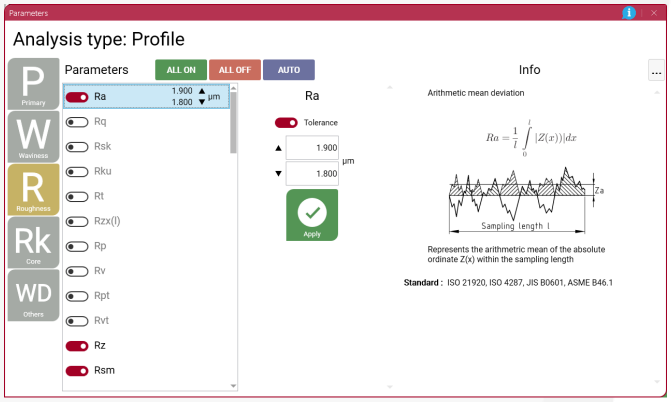
Operational Benefits

- Immediate variation analysis
- Batch and tool comparison
- SPC and quality support
- Faster decision-making

Supports fast, data-driven decision-making based on objective measurement results.

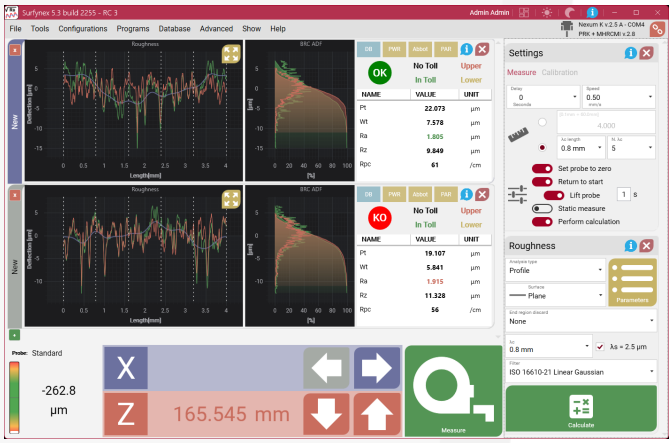
Immediate Tolerance Control

Tolerance limits can be defined for each measurement parameter, enabling immediate verification of result compliance.



The system automatically highlights OK/NOK conditions, supporting rapid decision-making and reducing the risk of interpretation errors.

This function strengthens quality control, standardizes evaluation criteria and facilitates monitoring of production process stability.



Operational Benefits

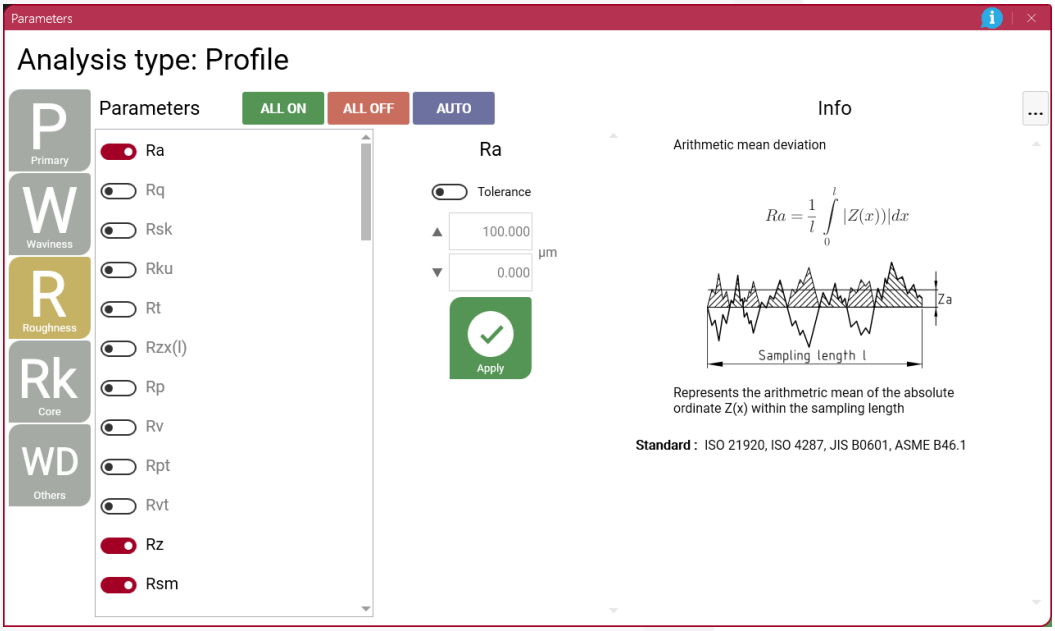
- Immediate OK/NOK verification
- Reduced operator errors
- Standardized evaluation criteria
- Process control support

Immediate Understanding of Metrological Parameters

Surfynex integrates descriptions and explanatory information for metrological parameters, facilitating result interpretation and reducing the risk of evaluation errors.

The system enables operators, technicians and quality managers to quickly understand the meaning of measured parameters, improving analysis consistency and standardizing control criteria.

This function supports multi-user environments and production contexts where clarity, traceability and uniformity of interpretation are essential.



Operational Benefits

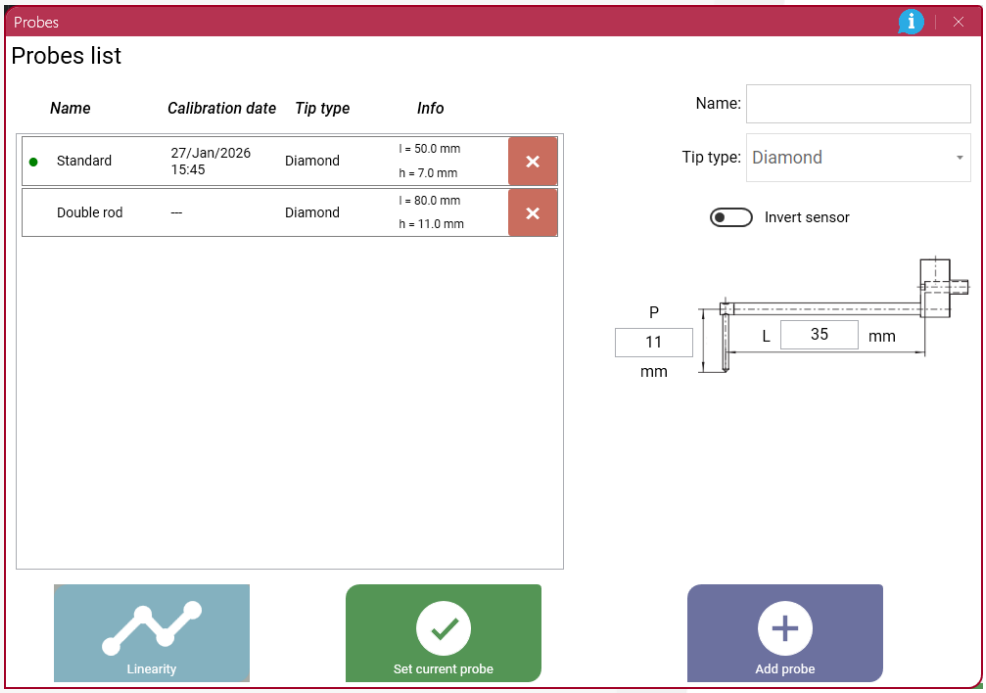
- Reduced interpretation errors
- Support for operators and quality teams
- Cross-departmental consistency
- Increased analysis reliability

Stylus Management and Traceability

Surfynex enables the integration and management of multiple styli, including storage of related calibration files and recording of verification dates.

The system ensures metrological traceability of the instruments used and supports proper management of periodic verification activities.

This function guarantees measurement reliability, result consistency and compliance with corporate.



Operational Benefits

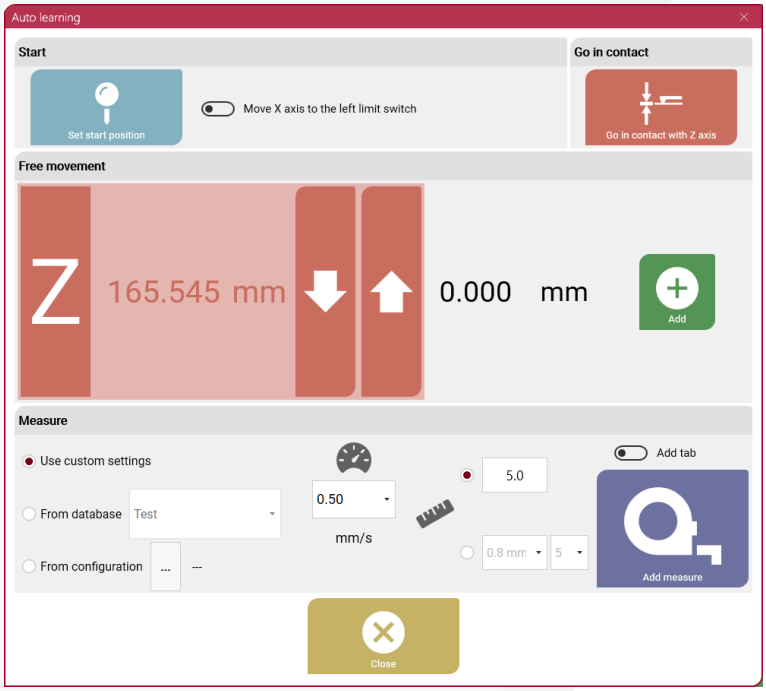
- Calibration traceability
- Reduced instrument-related errors
- Multi-stylus management
- Increased measurement reliability

Automation and Programming of Measurement Cycles

Surfynex enables the creation of customized measurement programs that automate operational sequences and standardize control procedures.

Cycle automation reduces operator influence, improves measurement repeatability and ensures consistency in repetitive production environments.

This function facilitates use in production and supports integration into automated systems and



Operational Benefits

- Reduced operator errors
- Repeatable and standardized measurements
- Ideal for production environments
- Ready for automated integration

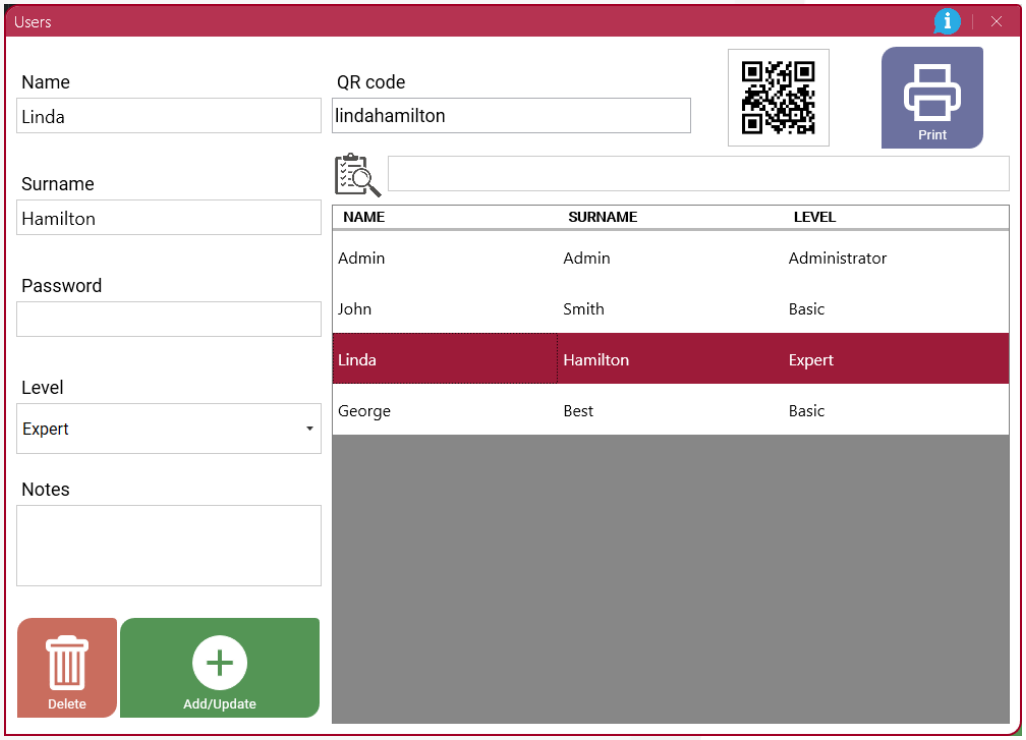
Sequence automation for repeatable, fast and operator-independent measurements.

User Management and Operational Security

Surfynex provides multiple access levels protected by passwords, allowing specific permissions to be defined for operators, technicians and administrators.

Multi-level user management reduces the risk of operational errors, protects measurement configurations and ensures compliance with corporate procedures.

This structure supports multi-operator environments and facilitates activity traceability, enhancing



Operational Benefits

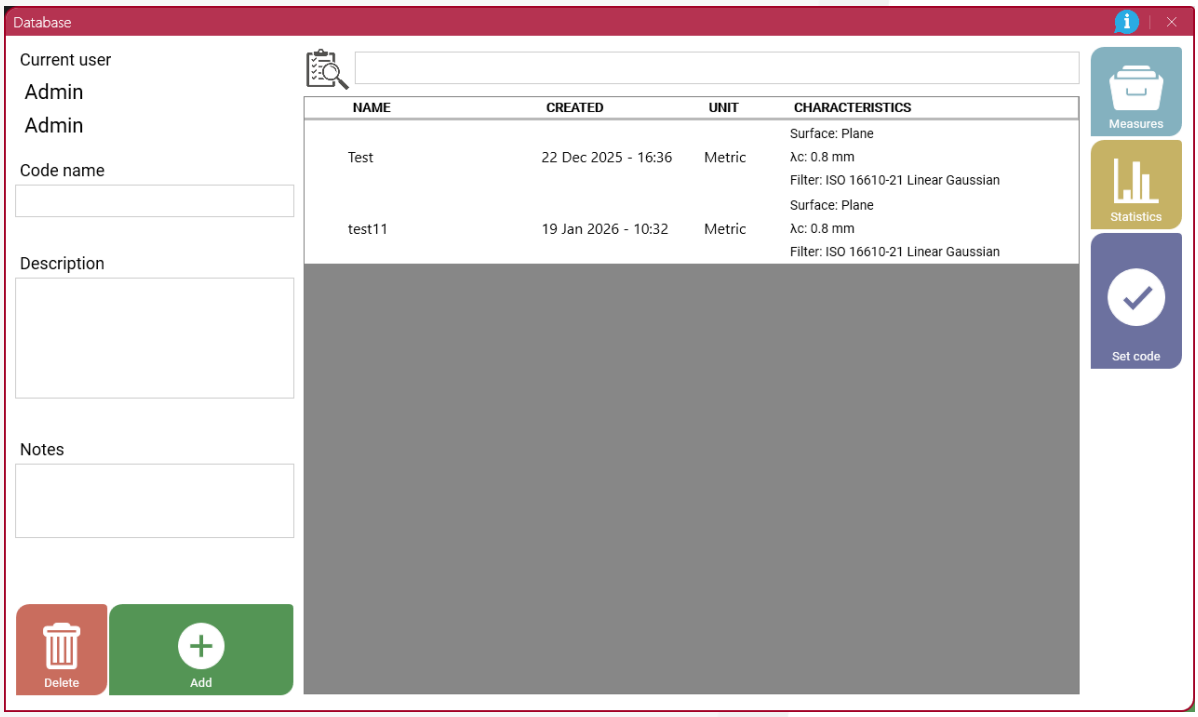
- Role-based protected access
- Reduced operator errors
- Protection of programs and configurations
- Quality audit support

Database, Traceability and Long-Term Analysis

The integrated database enables structured storage of measurement data and trend analysis of recorded parameters over time.

This function supports data traceability, production monitoring and evaluation of process stability.

Statistical analysis and historical result comparison allow rapid identification of variations, drifts or anomalies, contributing to continuous quality improvement.



Operational Benefits

- Complete measurement history
- Trend and variation analysis
- SPC and quality support
- Continuous process improvement

Continuous data monitoring to ensure production process stability and control.

Guided Interpretation of Drawing Requirements

In many industrial contexts, interpreting the roughness symbols shown on technical drawings can lead to uncertainty or incorrect measurement settings.

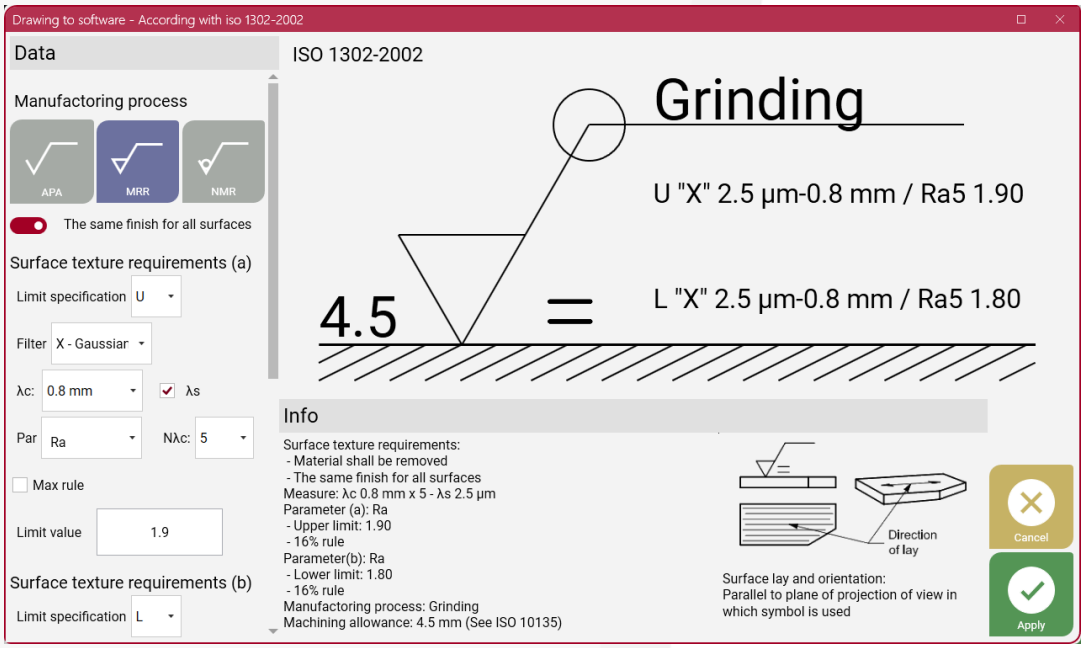
Surfynex integrates a dedicated tool that allows faithful reproduction of ISO surface texture symbols directly within the software.

Once the symbol has been recreated, the system automatically translates the information into measurement parameters:

- Upper/lower specification limits
- Required parameter (Ra, Rz, etc.)
- Evaluation length and cutoff
- Acceptance rules

In this way, the operator does not need to manually interpret the requirement; it is sufficient to select the generated configuration and start the measurement.

The result is a significant reduction in error risk, greater consistency between drawing and measurement, and standardized control processes.



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Technical specifications Surfynex

Units	Selectable: Metric / Imperial
Standards	ISO21920 ISO4287 JISB0601 ASMEB461 VDA2007 ISO13565 JISB0671 MBN31007 DIN4768 ISO12085 JISB0631
Profile Type	Primary (P), Waviness (W), Roughness (R), Dominant Waviness (WD), Primary Motif (P), Roughness Motif (R), Waviness Motif (B), Bearing Area Curve (BAC) / (ADF)
Filters	ISO 16610-21 Gaussian ISO 16610-22 Spline linear ISO 16610-31 Gaussian Robust ISO 16610-32 Spline Robust ISO 13565-1 Vally Suppression
Cutoff Length	0,008, 0,025, 0,08, 0,25, 0,8, 2,5, 8 mm
Number of Cutoff	Selectable from 1 to 20
Exclusion	None, 1/2 cutoff, 1 cutoff
LambdaS	Si
Parameters	Pa,Pq,Psk,Pku,Pt,Pzx(l),Pal(l),Psw,Pdq,Pda,Pdt,Pdl,Pdr,Pml(c),Pmc(c),Pcmp,Phd (c),Pvm(p),Pvv(p),Pmr(p,dc),Pdc(p,q),Pk,Ppk,Pvk,Ppkx, Pvkx, Pmrk1, Pmrk2, Pak1, Pak2,Ppq,Pvq,Pmq,Ppt, Pp, Pvt, Pv, Pz,Psm, Psmx, Psmq, Pc, Pcx, Pcq, Ppc,PSm, PPc, PΔq, PHSC, PLo, Plr. Wa, Wq, Wsk, Wku, Wt, Wzx(l),Wal(l), Wsw, Wdq, Wda, Wdt, Wdl, Wdr, Wml(c), Wmc(c), Wcmp, Whd(c), Wvmp, Wvv(p), Wmr(p,dc), Wdc(p,q), Wpt, Wp, Wvt, Wv, Wz, Wsm, Wsmx, Wsmq, Wc, Wcx, Wcq, Wpc, WSm, WPc, WΔq, WHSC, WLo, Wlr Ra, Rq, Rsk, Rku, Rt, Rzx(l), Ral(l), Rsw, Rdq, Rda, Rdt, Rdl, Rdr, Rml(c), Rmc(c), Rcmp, Rhd(c), Rvmp, Rvv(p), Rmr(p,dc), Rdc(p,q), Rk, Rpk, Rvk, Rpkx, Rvkx, Rmrk1, Rmrk2, Rak1, Rak2, Vo, Rpq, Rvq, Rmq, Rpt, Rp, Rvt, Rv, Rz, Rsm, Rsmx, Rsmq, Rc, Rcx, Rcq, Rpc, RSm, RPc, RΔa, RΔq, Rvm, Rpm, Ra75, Rmax, Rzjis, RzDIN, Ry5, RpASME, RvASME, PcASME, RHSC, RLo, Rlr, R3z, Rz1max, Htp, tp(p), Et, Ep WDc, WDt, WDSm Pt, PPc, R, Rx, AR, W, Wx, AW, Wte, Rke, Rpke, Rvke, Mr1e, Mr2e, A1e, A2e, Voe, Rpke*, Rvke*
Recalculation	Yes
Languages	English, Italian, Spanish, German, French (others on request)

For further information, please visit our website or contact us: we will be pleased to provide you with all the support you may need.

Strada Comunale da Bertolla all'Abbadia di Stura, 140 – 10156 Turin – Italy
VAT No.: IT12889640012 – Company Register: TO-1323714 – SDI: W7YVJK9
Email: info@mcmtechnic.com – Certified Email (PEC): mcmtechnic@pec.it – www.mcmtechnic.com