

LOTRIĆ | METROLOGY

YOU GROW.

WE MEASURE.



When you think of measurement,
you think of Lotrič Metrology.

WHY CHOOSE LOTRIČ METROLOGY?

What exactly makes companies choose Lotrič Metrology as their partners? Why do quality assurance managers, heads of production and CEOs say that working with us is synonymous with security? Why does the number of companies using our service keep increasing?

From The Little Prince, a story the whole world knows, we know that the essence of things cannot be seen with the naked eye. If you want to see, you have to look with your heart. The essence of Lotrič Metrology, however, is clearly visible: it lies in the people we employ.

Our dedicated team of 83 employees and more than 30 outsourced staff members is here for you every day. We love what we do. Providing you with solutions that exceed your expectations is what makes us tick. We are always ready to listen to the challenges you face and help you meet them.

We know how important your product is, and how important your production process, logistics and every link in the chain are. We understand how competitive the market is, and we are well aware that the quality of your product and your processes has to be superb. Our awareness of this shapes the values we bring to our collaboration.

Lotrič Metrology certificates are already internationally recognised as a guarantee of trustworthiness in 26 countries. The services we offer are based on 25 years of experience working with more than 10,623 companies. We invest heavily in knowledge, which we share through our own M&Q Academy and through cooperation with research institution and universities and contribute to the development of metrology.

Companies entrust responsibility for their metrology needs to us. This allows them to focus on their core business and its dynamic development, crucial in today's market where not only growth but also the speed you develop at plays a crucial role. Lotrič Metrology gives a boost to your development by providing you with excellent metrology solutions. We measure — you grow!

Our measure of excellence is the trust we gain.

Marko Lotrič, director



METROLOGY WITH LOVE



TRADITIONAL VALUES FOR DYNAMIC GROWTH

We have been calibrating and testing with a love for metrology for nearly three decades. We develop state of the art, highly perfected, but easy to use metrology products and services. We transfer knowledge, represent top Slovene and foreign producers of measurement, pharmaceutical and laboratory equipment, and are at the same time a driving force for progress of the field of metrology.

INTERNATIONALLY ACCLAIMED



With certificates in 26 countries and the qnet network of international partners, LOTRIČ Metrology ensures services in the CEE region and beyond. By using the qnet approach we guarantee the highest level of responsiveness – 24 hours. We boast over 10,623 companies among our references.

QUALITY, EXCELLENCE, GROWTH



LOTRIČ Metrology stands for quality and excellence. We operate according to ISO 17025 and ISO 17020 standards and the EFQM model of excellence. In 2012 we received the highest national award for business excellence, as well as the European 5-STAR Recognition Award. In the same year we also received the national award for the best among fastest growing companies (bronze Gazelle). We have also been named Employer of the year and have received the local Golden Thread Award.

A FAMILY COMPANY



LOTRIČ Metrology is a family company with 83 employees. We have been developing and offering metrology solutions for 25 years. Our roots go back to the first laboratory in Kranj in 1923. Today, the LOTRIČ Metrology consists of a number of partners who develop metrology solutions together.

WE ARE TRENDSETTERS



We have a reputation for developing state-of-the-art unique solutions. We cooperate with 16 research institutes and universities and hold 4 patents. We are co-founders of NELA, the main regional R&D centre for electronics and the electronic industry. Together with the research institute Jožef Stefan we received the TARAS award for our smart system of health care laboratories — iLAB — in 2011. Our project was recognised as the most successful collaboration of business and research institutions in the fields of innovation, development and technology.

LEADING 'ALL IN ONE' PROVIDER



We are the leading provider of all-in-one metrology solutions. We select and represent 21 suppliers of instruments of the highest quality.

GROWING WITH US



DROGA KOLINSKA, ATLANTIC GRUPA
Enzo Smrekar, member of the management board

"We have been working with LOTRIČ Metrology for over 20 years. They ensure regular and timely checks of our measuring equipment, advise us on using it, and keep us informed and up to date within the framework of the M&Q Academy so we can focus on the development and growth of our company without having to worry. They are always kind, responsive and ready to help anytime. That is why we number them among partners who regularly receive the best marks during evaluations. Together we have established a system of managing our measures but also a firm bond of trust, which is growing stronger and stronger each year."



DANFOSS TRATA
Aleksander Zalaznik, managing director of Danfoss Trata and Senior Vice President Commercial Controls at Danfoss Heating Segment

"Amazing responsiveness, flexibility, expertise and adapting their calibration schedule to our needs are the LOTRIČ Metrology qualities which impress us the most. They make production planning easier, and help us keep customers happy by remaining reliable. Taking care of our customers is one of our core virtues here at Danfoss, and LOTRIČ Metrology helps us achieve that. Through the years we have created an encouraging professional atmosphere of trust together."



KNAUF INSULATION, ŠKOFJA LOKA
Tomaž Lanišek, General Manager

"With their expertise, individual approach and respect for agreed deadlines LOTRIČ Metrology improves how our company works. What we have come to appreciate the most during our long-lasting partnership with them is the quality and reliability of their service. Their employees are always highly professional, quick to respond and to adapt to our needs."



A PLUS IN THE EYES OF YOUR CUSTOMERS

LOTRIČ METROLOGY CERTIFICATE — A DOCUMENT THAT COUNTS

Is quality crucial for your organisation and your customers? Then Lotrič Metrology is the right partner for you. Choose us: we measure so you can grow.

We have decades of experience with calibration, testing and conformity assurance and are recognised as a reference partner. With Lotrič Metrology your measures are calibrated and processes verified just like your customers want them.

Lotrič Metrology certificate testifies to your quality which has the following advantages:

Traceability: for all measurements we guarantee traceability to national or international etalons and thus towards internationally recognised definitions of SI-units.

Express certificate: we deliver your certificate in the shortest possible time. 82% of certificates are issued within 1 work day after the completed measurements, thanks to our own QTree software.

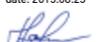
Your e-certificate is available in printed or electronic format and a back-up copy is stored by the laboratory for at least 10 years.

24/7 availability: through the web application meOL certificates and sample history are always at your fingertips. You will never have to worry about keeping sample records or searching for certificates again.

"We are especially pleased by the fact that the team at LOTRIČ Metrology brings its excellence into play both when working with equipment or with people. They offer us reliable expert support also when we need advice outside of planned calibration dates. With their knowledge and their passion for doing the best they can they contribute to our success. Their support is important to us as they are aware that by cooperating well and openly we can create added value for both our companies. We have decided to do cooperate with them mostly on the base of good references and our cooperation has proved that their excellent reputation is well deserved."

Frenk Smrekar, PhD Senior Director of Process Development and Manufacturing, Amplphi d.o.o.



LOTRIČ [®] METROLOGY		Številka certifikata certificate number 270-129-13-2	
CERTIFIKAT O KALIBRACIJI CALIBRATION CERTIFICATE			
naročnik applicant	COMPANY Ltd., Metrology Square 1, 1000 Ljubljana		
lastnik owner	COMPANY Ltd., Technical street 79, 4000 Kranj		
lokacija location	LOCATION CELJE Environmental Square 45, 3000 Celje		
oddelek department	QUALITY		
merilo measure	Thermometer Thermometer		
proizvajalec manufacturer	KIMO		
tip type	SPG 150 SP		
merilno območje measuring range	od from - 50 °C	do to 250 °C	
serijska številka serial number LT-1467	inventarna številka inventory number CE 967	evidenčna številka evidence number TERM-12	koda na merilu code on measure 
naravnajanje adjustment	je bilo izvedeno was performed	povzetek rezultata result summary	ustreza meets
Podrobnosti so podane v poglavju Stanje pred naravnajanjem Details are given in chapter Measure status before adjustment		Podrobnosti so podane v poglavjih Rezultati in Izjava o skladnosti Details are given in chapter Statement of compliance	
datum kalibracije date of calibration 25. 8. 2015	datum odobritve date of approval 25. 8. 2015		
izvedel performed by Devis Martinčič internal digitally signed 	odobril approved by Primož Hafner digitally signed date: 2015.08.25 		
			
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LOTRIČ Merostvoje d.o.o., Selca 163, 4227 Selca, T +386 4 517 07 00, F +386 4 517 07 07, E info@lotric.si, W www.lotric.si			stran page 1 / 4

Personalised certificate issued in one or more languages of your own choosing.

You will receive the desired ID sample numbers. The statement of conformity is issued in accordance with the standards and requirements of your processes.

Graphic display: graphs, charts and photos give you a quick overview of the results and suitability of the sample.

e-signature: enables simple authentication and integrity check of the document and identification of the document's signatory.

Accredited procedures in accordance with ISO 1702 and 17025 standards. Over 160 internationally recognised and comparable methods.

CALIBRATION FOR ALL YOUR NEEDS

The LOTRIČ Metrology Group performs calibrations for the widest possible range of needs. Measurements are conducted by qualified experts using state-of-the-art equipment on location or at our accredited laboratories.

After every calibration you receive a certificate, which ensures traceability of measures for establishing and maintaining management systems, technical recommendations, and specific requirements, such as GMP in the field of pharmaceuticals.



Mass & Pressure

- Weighing instruments;
- Weights and objects of any other mass;
- Manometers and barometers.



Volume & Density

- Volumetric apparatus — pipettes;
- Cylinders, bottles and vessels;
- Areometers.



pH & Gas analysers

- pH, conductivity and salinity meters;
- Gas analysers;
- Refractometers.



Flow & Velocity

- Gas flow meters;
- Liquids flow meters;
- Anemometers.



Electricity & Photometry

- Multimeters (A, V, Ω);
- Wattmeters;
- Luxmeter.



Time & frequency

- Stopwatches and timers;
- Tachometers;
- Speedometers.



Acoustics & Vibrations

- Sound level meters — fonometers;
- Accelerometers;
- Vibration meters.



Temperature & Humidity

- Thermometers;
- Hygrometers;
- Chambers, Rooms, Enclosures, Baths and Dry blocks.



Force & Torque

- Force measuring machines, force transducers;
- Torque wrenches, torque transducers;
- Roll brake testers.



Length & Form

- Gauge blocks, rings and plugs;
- Callipers, micrometers, dial gauges;
- Length machines.



Angle & Inclination

- Angle gauges blocks;
- Spirit levels, inclinometers;
- Protractors.



Hardness & Roughness & Toughness

- Hardness testers, hardness blocks;
- Instruments for toughness measurement, roughness plates;
- Pendulum impact machines.



Acceleration & Mass Balance

- Decelerometers;
- Wheel balancing machine;
- Wheel alignment machine.

YOUR PRODUCTS WITHOUT COMPLAINTS

TESTING OF PRODUCTS AND MATERIALS: FAST AND IN ACCORDANCE WITH INTERNATIONAL STANDARDS

We are an accredited testing laboratory in accordance with ISO 17025. Testing is conducted according to international standards and in compliance with your customers' requirements. We work with you to develop our testing procedures and adapt to your needs and wishes.

We perform testing through the entire life-cycle of your sample — from raw material to material, half-product, or product and waste. On the basis of acquired testing results we offer expert counselling to help you optimise your processes and sales.

Regular periodic testing of samples reduces your risk of complaints. This allows you to:

- keep your customers happy;
- maintain your company's good reputation;
- improve cost-effectiveness.

In the case of complaints we join forces and find an appropriate solution to optimise your processes or identify irregularities of supplied goods.

Choose from our wide range of testing:

Testing	Field	Testing method/testing samples
Environmental parameters	Temperature & relative humidity & pressure	Measurement of chambers, rooms, enclosures and samples
Dimensional	Dimensions & angle	Measurement of samples on lineal, optic and coordinate measuring machines
	Roughness	Surface roughness
Mechanical	Hardness	Hardness according to HR, HV, HB, Shore, IRHD
	Strength	Tensile, compressive, flexural, shear stress — force measuring machines
	Impact strength	Measurement with Charpy and Izod machine
	Force	Various force measuring on tensile machine
	Torque	Torque measurement of samples
Cleanliness	Clean rooms & filters	Classification of air cleanliness, the velocity and flow of the air stream visualization of the air flow, permeability and classification of filters, recovery test, illuminance and noise, testing of the differential pressure, temperature and relative humidity of air
	Technical Cleanliness	Cleanliness determination of the sample: the mass and size of particles, number of particles in each size class and the content of metallic and non-metallic particles
Microscopic	Metallography	The measurement of porosity, thickness of electrochemical coatings, determination of surface treatments and fabrication, identification of errors at the intersections, depth and cemented nitride layer, compound analysis zones and print board circuits
Thermal	Temperature	A glass transition, crystallization of the polymers in the DSC machine, heat resistance after VICAT
	Flammability	Test with a glowing wire, self-extinguishing, burning rate
Electrical	EMC	Electromagnetic compatibility in the development phase
	Parameters	Electrical and mechanical life expectancy of devices, the mechanical properties of terminals, short-circuit tests, electrical and other transients, permittivity, leakage currents, insulation resistance, current warming, the contact reliability, leakage currents, dielectric strength
Chemical	Waste & Process waters	Analysis of wastewater according to national legislation, the analysis of supply, boiler and deionized water and degreasing and galvanic baths
	RoHS	Determination: Hg, Pb, Cr6+, Cd, PBDE, PBB
	Analyses	Analyses of IR, UV-VIS, IC, ICP, AAS, titration, oxygen content, conductivity, density, viscosity, refractive index, viscosity number, MVR, MFR
Environmental testing	Surface protection	Samples exposition to environmental air conditions in climatic chambers (°C, % RH), pressure chambers (bar), condensation chambers, salt chambers (corrosion resistance: NSS, CASS), SO ₂ chambers and UV chamber (suntest)
	IP protection	Water resistance of the housing (X1 – X10)
Identification	The polymers, fillers, fats, oils	IR spectrometry



CONFORMITY AND RESPONSIBILITY



CONFORMITY ASSESSMENT FOR MOST OF YOUR NEEDS

Being up to speed with the requirements of national and European legislation. Respecting international standards. Caring for the health and safety of people and animals. Protecting the environment. Accountability to consumers. These are the requirements your customers and clients expect of you. We help you meet their requirements and exceed their expectations.

At LOTRIČ Metrology we ascertain the conformity of a wide range of legal measuring instruments, equipment under pressure, health and safety regulations, fire regulations, concordance of vehicles with ATP, good practices in the pharmaceutical industry, and technical specifications of producers.

Field	Services	Scope of Services
* Measures	Initial, periodic and extraordinary legal verifications	Weighting instruments, construction hopper weighing instruments, Checkweighers, gravimetric filling weighting instrument, weights, exhaust gas analyser, sphygmomanometers, tire pressure manometers, roll brake testers, machines for cable and wire length measurement
Sterilizers	Initial, periodic and extraordinary inspections	Steam sterilizers, autoclaves
* Equipment under pressure — PED	Initial, periodic and extraordinary inspections	Steam Sterilizers, Autoclaves, fired or heated pressure equipment, pressure vessels, pipings, safety valves
* ATP Agreement	Ensuring the validity of the classification of vehicles and trailers: FRC, FRB, FNA, FRCX, FNAX ...	Periodic controls of isolated cooling / heating devices mounted on vehicles and trailers – FRC, FRB, FNA, FRCX, FNAX ...
Good practices — GxP	The quality management system	of GMP, GDP, GLP, GSP, GPP
Pharmaceutical and laboratory equipment	The standard operation procedures – SOP (IQ, OQ, DQ, PQ)	Centrifuges, mixers, thermomixers, thermal cyclers, shakers, unguators, scales, disolutors, tapped density volumeter, media preparation device, evaporator, photometers, biophotometers, water activity testers
Carbon footprint	Measurement and determination	Production line, event, product
* Safety at work and fire safety	The risk assessment	Examination of the working environment, work equipment safety, construction safety plan, evacuation plans
	Education	Safety at work, fire safety, dangerous chemicals, drivers of forklifts and crane operators
	Supervision	Coordination of safety on construction sites
EMAS ISO 14001	The quality management system	Environmental management system in organizations
ISO 9001 / ISO/TS 16949	The quality management system	Industrial plants, manufacturing, laboratories, shops, service outlets
ISO 17020 and ISO 17025	The quality management system	Calibration and testing laboratories, inspection bodies, Named persons, conformity assessment bodies
ILC & PT	Interlaboratory comparisons	In the field of calibration, testing, inspection, examinations, qualifications and measurement in production lines

* Conformity assessment is based on national legislation of individual country.

"All your services in one place, punctuality and responsiveness, precision and a highly perfected system of measure maintenance, expertise, flexibility and a willingness to work with the clients' needs and find a suitable solution: these are just a few of the advantages of working with LOTRIČ Metrology. The information gained with measurements is the basis for di-

agnosing and treating our patients — with LOTRIČ Metrology, the reliability of measures and proper functioning of equipment is guaranteed."

Franci Galjot, MSc, P. Eng, Head of Technical Maintenance, Jesenice General Hospital

WE CHOOSE THE BEST



REPRESENTING LEADING GLOBAL PRODUCERS

At Lotrič Metrology, we select and represent among over 20 suppliers of measures of the highest quality for you. Our team of experts keeps up to speed with what is on offer globally and checks for any new metrological developments. Carefully selecting our suppliers continually adds to our extensive range of products and services. We also advise you on selecting the right measure for you and help you maintain it.

Besides numerous global producers we also have our very own products and services developed at Lotrič Metrology, such as Exactum, Trames and QTree Box.

BALANCES AND WEIGHTS



PHARMACEUTICAL, LABORATORY AND MEDICAL EQUIPMENT



ENVIRONMENTAL CONDITIONS T, RH, P, V, Q, CO₂ ...



LENGTH, ANGLE, MACHINES, CAMERAS, CLAMPS, HARDNESS



TECHNICAL TESTING AND CAR DIAGNOSTICS



CLEAN ROOMS



Representation can vary from country to country. Please find information on companies we represent at www.lotric.si.

Trames length measurement system: easy to use, fast, flexible

The system for measuring length samples allows you to establish conformity of your products according to specifications. Trames is an award-winning innovation. The software and hardware were developed at LOTRIČ Metrology. Compared to other measures, Trames will save you time, due to its many innovative functions and features and its user-friendly approach.

Advantages of the Trames length measurement system:

- user friendly;
- quick upgrade to measure different samples;
- mobility;
- connectivity through USB without additional adapters;
- easily import measurements into Excel;
- uses the Windows operating system.

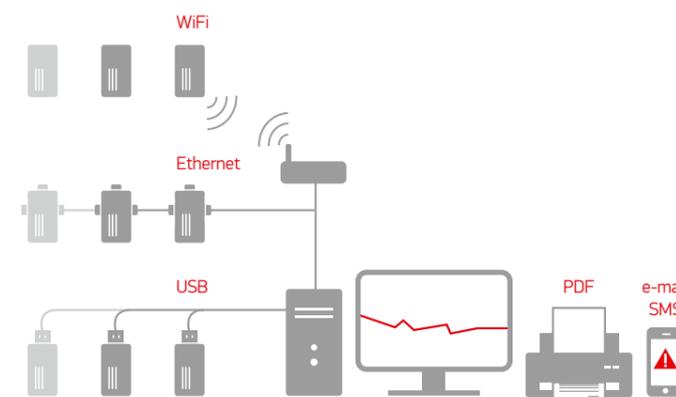


"As one of the development centres of the CABLEX Group, a well-known producer of cable sets and sets for the automobile industry, household appliances and other professional equipment, we want the best for ourselves and our customers. That is why we took our problem of measuring our samples, which usually aren't straight and tend to be long, and decided on LOTRIČ Metrology in 2013. We were thrilled with their solution for measuring cables and conductors of varying lengths quickly and easily. They developed the prototype of a device for measuring length — Trames 1002. We were immediately able to measure ten times more accurately, with greater repeatability and, above all, with much greater speed. After initial testing, the measuring device's software has been improved and it has become indispensable in our day-to-day process of quality control, manufacture of measurement templates and working etalons, and analysis of capabilities of all other measuring systems."

Dane Alič, Quality Control, Cablex d.o.o.

Exactum®: smart sensor hub

The state of the art solution Exactum automatically monitors your processes and products and helps you meet standards and requirements. The innovative solution enables efficient monitoring and recording of temperature, humidity, illumination, CO₂ levels and other parameters.

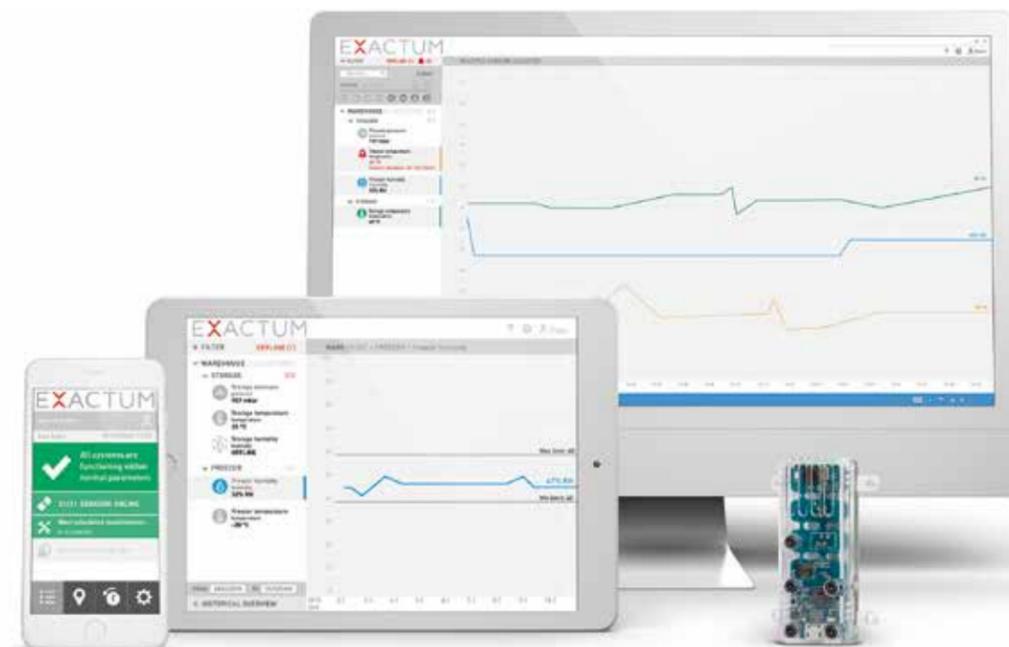


QTree Box: simplifying calibration

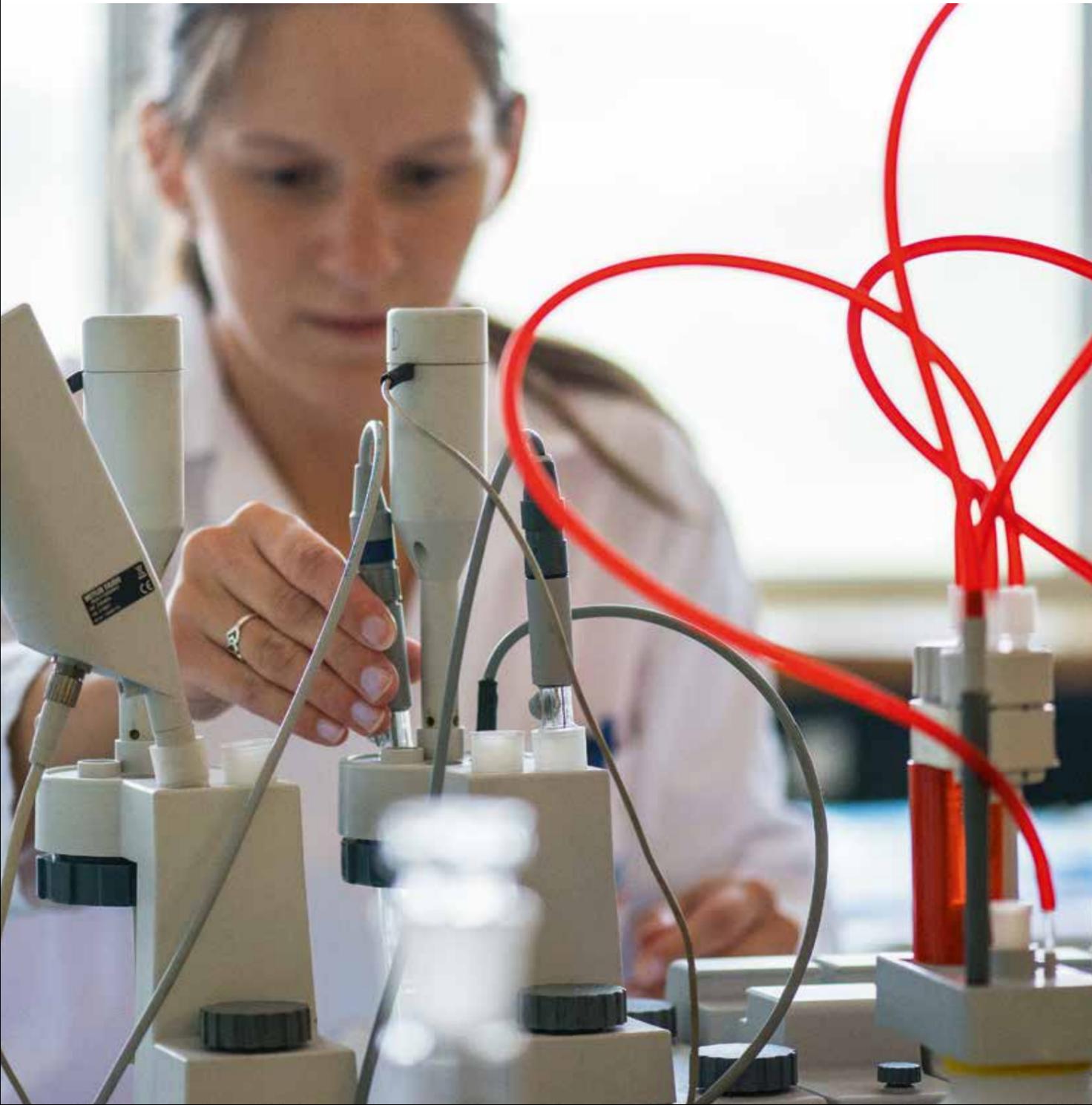
Why waste time and energy when performing calibrations? QTree Box is a custom-designed box containing all the tools you will need. In the package, put together by the know-how, experience, and familiarity with your needs which is typical of the dedicated team at LOTRIČ, you will get exactly what you need, including reference etalons, software, training, and instructions with standardised procedures of calibration of various measures. And you are ready to start your calibration!

Advantages:

- user friendly assistant; the system guides you through standardised calibration;
- your existing equipment can be upgraded and used;
- automatically generates certificate and prints labels.



PARTNERSHIP FOR GROWTH



METROLOGY SOLUTIONS: ENABLING YOU TO FOCUS ON YOUR CUSTOMERS

Quality is crucial for you. Would you like to save 1FTE (man-day) per 500 pieces of equipment? To work with a partner that offers know-how and 24/7 availability, as well as support when and how you need it? While at the same time optimising your supply chain, increasing equipment use efficiency, and using all the advantages of automation, thus gaining more time to spend on your core business and products?

The users of LOTRIČ Metrology solutions swear by one of these three options of collaboration.

ORDERLY MEASUREMENT: LOTRIČ Metrology takes care of all your measurements. This all-inclusive solution offers:

- Checks of measuring, laboratory and pharmaceutical equipment:
 - calibration, evaluation, verification, control, qualification;
 - planning the next date of equipment checks;
 - assuring conformity of equipment for further use.
- Control of products and production:
 - measurements to assure products meet requirements — statement of conformity;
 - monitoring of environmental conditions and ergonomics of the work environment;
 - workplace safety and fire safety.
- Education and training at M&Q academy:
 - correct use of equipment and performance of measuring;
 - quality management, management of measurements;
 - keeping equipment in order and under control.

READY TO USE PROJECT: together we plan and prepare, you execute. LOTRIČ Metrology helps you with:

- Measure calibration processes:
 - etalons, hardware and software for calibration processes;
 - instructions for performing and calculating measurement uncertainty, label and certificate;
 - training of technicians for performing the process of calibration.
- Quality assurance for your products:
 - measuring methods for establishing your products' conformity;
 - custom-made etalons and devices for final product control;
 - reference sample and method for checking your devices.
- Establishment of a ready-made laboratory:
 - preparation of a purchase plan for equipment with a complete list of methods and standards;
 - planning, laboratory architecture, and overseeing of building processes;
 - launch and first check of all hardware and software.

PREVENTATIVE MAINTANCE: for better management for your measures and devices!

- Managing the life cycle of measures, laboratory and pharmaceutical equipment:
 - regular periodic maintenance and replacement of parts;
 - adjustment to re-establish accuracy of the device;
 - servicing and equipment repairs and spare parts.
- Optimisation of measurement using existing equipment:
 - upgrades or improvements to your existing equipment;
 - software for more efficient use of your equipment;
 - automatization of equipment and measuring processes.
- Equipment for storage and transport:
 - purpose-built devices for proper storage equipment in place of use;
 - custom-made packaging and purpose equipment cases for transport;
 - servicing and reinforcement of equipment packaging.

Preventive maintenance is included in our contractual and project-based partnership.

THE TRIUMPH OF AUTOMATISATION



For Lek Pharmaceuticals, a member of the Sandoz Group, we developed an innovative system of measuring the force needed to close the cap on a bottle. They came to us with a problem they encountered in automated bottle filling and placement of caps. Because of varying force they had problems assuring the quality of the seal. This sometimes resulted in a broken cap or a broken bottle. They had a clear set of requirements for a system to measure force:

- testing performed on the machine itself, to establish the "actual" force of capping;
- testing performed while the machine is in operation to establish dynamic force;
- easy to use so that every employee can perform the measurement;
- fast and not requiring major preparation of system;
- accuracy within 10%.

We were able to meet all their requirements with a simple system, which mimics the functioning in practice and enables them to establish the amount of force at capping and to adjust this amount before the actual capping takes place. On the basis of the measurement data anyone anytime can adjust the force and therefore assure that capping takes place with adequate force. Thus, in just five minutes, the user can prevent irregularities before the bottle reaches the consumer.

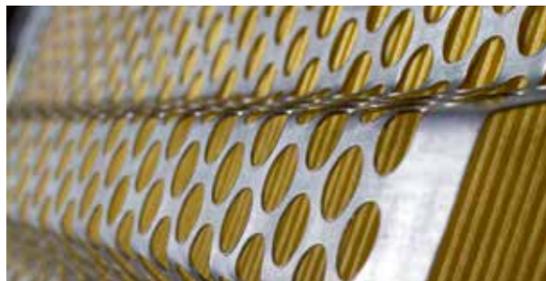


član skupine Sandoz

"The system for measuring the force of closing at the packing machine is built according to traits we value here at Lek: speed, simplicity, consumer focus and orientation toward quality, trust, and efficiency. It enables us to quickly and efficiently identify the source of the problem when bottles break and also provides confirmation of correct settings for our machine. By developing and using these systems, we are setting new benchmarks in quality for our consumers."

Marko Scortegagna, Pharm. Process Engineer Packaging, Site Solids Ljubljana, Lek Pharmaceuticals d.d.

LABORATORY ENTRUSTED TO THE CARE OF LOTRIČ METROLOGY



Sogefi Filtration, a member of Sogefi Group, the leading producer of original parts for the automobile industry, ensures the quality of its products with the help of Lotrič Metrology. The Slovene member of the international group, where quality is crucial for meeting international standards, realised that it must invest in its own laboratory in order to keep assuring quality to its customers.

Investment in an in-house laboratory with all the necessary expert personnel and equipment proved less economic than outsourcing. Through a year-long period we devised together an efficient way to meet the everyday metrology needs at our laboratory. This ensures:

- daily sample measurements and reports on results on the production line;
- a special method of sampling, method of testing and keeping track of measurements using barcodes;
- storing and forwarding/sharing documents on measurements through the MeOL web application.

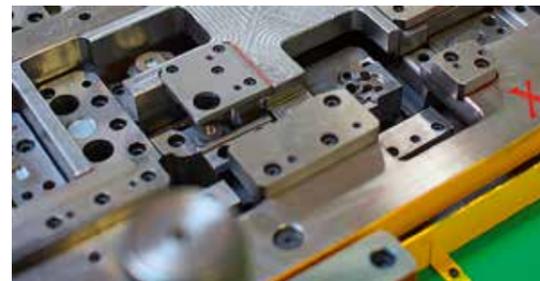
Methods and protocols of measurements have been developed together with the partner and their client. By incorporating the MeOL web application into our solution we saved Sogefi the trouble of sending e-mails or making phone calls. Data is available immediately at any given moment, whenever they might need it.



"Lotrič Metrology has proved to be a very reliable partner, providing strong professional support to our buyers in the most demanding markets. With the solution we devised together we are able to satisfy the requirements of the German market, in particular automobile giants such as Volkswagen with more ease and more efficiently. We especially appreciate their availability — they are there for us 24/7."

Dagmar Kogej, Quality Engineer Project, Sogefi Filtration d.o.o.

WE MANAGE OVER 1000 MEASURES



Gorenje Orodjarna, the subsidiary of internationally known Gorenje group has entrusted Lotrič Metrology with managing over 1000 measures and other equipment. The custom-made solution developed over a three year period includes: a unified base and record of measures, specially designed cases to transport measures, accredited calibration of measures and devices performed by Lotrič Metrology, organising and finding appropriate calibration of other measures in different laboratories, education and training of staff on the correct use of measures and equipment, monthly pickup and delivery of measures, maintenance and repair of measures and packaging, informing users of due dates of checks, advice and sale of new equipment, cooperation in development of new custom made control devices and checking for possible upgrades to the system every three months.

In one of Slovenia's biggest toolmaking company the properties and requirements of every measure and data on standards and tolerances are available quickly and efficiently through an innovative intertwining of two software tools:

- **QTree** enables the person managing the measure to access and order samples, change calibration due dates, and enter new measures;
- **MeOL**, internet software tool that enables those responsible to access data at any time.



Gorenje Orodjarna, d.o.o.

"We chose Lotrič Metrology because of accredited and certified procedures and suitable cost analysis. Now we no longer have to keep track of legislation in the field of metrology and familiarize ourselves with ever-changing standards. The team at Lotrič Metrology helps us with their advice and suggestions, is always open to new suggestions when it comes to the process of managing measures, and is always available to resolve any queries."

Jože Ošlak, Head of Quality Control, Gorenje Orodjarna d.o.o.

KEEPS TRACK — SO YOU DON'T HAVE TO



EXACTUM®: SMART SENSOR HUB

Why risk the consequences of unmonitored, inaccurate or incomplete measuring of environmental conditions? The cost of these can easily climb to a few thousand euros. And why battle with parameter records in several locations and various archives which can take up to 11% of your time? Use our new and efficient system to automatically control parameters.

EXACTUM

The innovative solution automatically protects your processes and products and helps you meet standards and requirements. With the Exactum system you decrease the chance of product loss and the risk of regulative non-conformity. Exactum is intended for companies and institutions in the field of:

- the automobile industry;
- medicine;
- pharmaceutical industry;
- agronomy;
- warehouses;
- distribution;
- greenhouses;
- laboratories
- museums.

Advantages of **Exactum®**:

- Continual on-line measurements in real time instead of less reliable periodic measurements.
- Automatic alarm system reduces the chance of human error. Settings are adaptable for every parameter and can be suited to daily personnel schedules.
- Reports are generated automatically — so you don't have to worry about them. Parameter records are set according to your needs.
- Simple, user-friendly way of adding, removing and joining measuring locations.
- Lower costs due to fewer delayed reactions and time savings.
- The mobility of the application.
- Compatible with existing systems.

Exactum® is the right choice for:

1. Laboratories and work environments;
2. Ensuring:
 - cold chain,
 - HACCP,
 - good distribution practice,
 - good production practice;
3. Production and storage of foodstuffs.

With Exactum® you get rid of:

- untimely reaction;
- high costs due to values outside of allowed parameters;
- searching for records in several different locations.

TO MEASURE IS TO KNOW

M&Q ACADEMY: KEEP IN TOUCH WITH THE LATEST IN METROLOGY AND TRENDS

Every two days humans generate 5 trillion bites of information. Technological progress develops at the exponential rate of 2^n . Every day metrology gains a new innovation!



We share our knowledge and the development of metrology with you. M&Q academy brings the participants important industry content, which enables you to use the latest know-how and the most efficient approaches in your line of work. With M&Q you keep in touch with expert knowledge and new trends.

M&Q conferences: biannually with more than 20 experts and over 200 participants

At our one- to two-day event we change uncertainty into certainty by transferring our knowledge, swapping opinions among experts, research and presentation of good metrology practice. We solve complex metrology problems and inform participants on the latest changes in legislation. The conference brings together numerous international experts from various fields of metrology and quality control: laboratories, auto industry pharmaceuticals, health, industry. **Participants gain a certificate of participation** with which you satisfy the requirements for education on standards in the field of quality control ISO 9001, ISO 14001, ISO 17020, ISO 17025, OHSAS 18000, ISO/TS 16949 and model of excellence EFQM.

All you need to know: from 1 to 8 hours of incredibly useful theory and practice!

In our short and highly informative "everything you need to know about" sessions you will gain insights into specific fields of metrology:

- scales and balances;
- pipettes;
- pressure;
- temperature and humidity;
- length;
- roughness;
- hardness;
- sound;
- measurement uncertainty;
- quality management systems;
- environmental legislation for companies;
- managing your measures.

Metrology in practice: the practical part of the seminar involves a tour of accredited metrology laboratories, testing of measures, performing measurements, and comparing your results to the results of the expert.

What all of our seminars have in common is that we encourage an open discussion in a friendly environment and the exchange of opinions and experiences. We also make sure that after completing the seminar you receive your certificate of technical competences and an invitation to contact us in the event of additional questions.

More than 45 meetings per year

We take part at more than 12 expert panels every year, lecture at 30 expert events, publish over 25 texts and organise at least 5 metrology day events. At these metrology days we introduce metrology to the younger population and raise the level of technical education in schools.

"I have been attending M&Q conferences on technical testing for several years. I like the fact that participants can also offer their suggestions for lectures by various experts and we are therefore included in the preparation of these conferences. I also like how useful the information is — I have no trouble putting what I heard into practice."

Valter Kocjančič, Head of Technical Testing, Avtoplus d.o.o.

"At the school for higher technical education at Ptuj School Centre, Metrology Days have become a tradition. Students are always excited and eager to hear interesting presentations and gain practical experience in metrology. The added value of these lectures is practical presentation of measures and actual demonstration of calibration and its meaning."

Robert Harb, Headmaster of School for Higher Technical Education Ptuj

"Interesting subjects, useful information, a range of new knowledge, excellent lecturers, an inspiring exchange of views and experiences, careful organisation, and a warm welcome. A great experience and a team who always knows how to show that everyone counts."

Lidija Matičič, Project Co-worker,, National Institute of Biology, Department of Biotechnology and Systemic biology

IN SAFE HANDS

YOUR MEASURES: WE TREAT THEM AS OUR OWN!

We treat the measures entrusted to us for calibration and testing with the utmost care. Our employees treat them so well that they can even increase the lifespan of your measures — in some cases even by 200%!

All measures here at Lotrič Metrology are carefully protected and properly tempered to get precise measurements. After calibration or testing we personally check the records. This helps us maintain standards of the highest possible accuracy of measurement and service provision at Lotrič Metrology. With us your measures are in safe hands. You can also track the entire process through the meoL application.

We treat your measures like our own. Our process guarantees:

- safety;
- traceability;
- longer life span of measures;
- cleanliness of measures.

Track the path of your measure once it reaches Lotrič Metrology

RECEPTION → LABELLING → CLEANING → TEMPERING → CALIBRATION → CERTIFICATE → APPROVAL → DOCUMENTATION → RETURN



Reception

We take over your measure personally: at your location, at our reception office, or by post.



Labelling

We label every measure with a 2D code, which makes traceability possible and ensures safe passage through the process.



Cleaning

By carefully preparing and cleaning your instrument we improve results and increase life span of your measure.



Tempering

Cleaned measures are placed in a specially designated area for temperature adjustment.



Calibration

Instruments are calibrated by trained experts who regularly attend training seminars at home and abroad.



Certificate

After calibration process is completed, a free software runs calculations and generates a certificate.



Approval

The certificate is checked and approved in accordance with the management system and the measure is marked with a label.



Documentation

We attach appropriate documents to your measure and prepare it for transport.



Return

You can pick up your measure yourself or have it delivered to your location either by post (labelled as "fragile") or by us personally.





LOTRIČ METROLOGY

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