SOLMAN SOLUTIONS FOR MANUFACTURING

PRESENTATION



SOLMAN HUNGARY KFT. · ENGINEERING SERVICES

OUR SERVICES

ENGINEERING SERVICES IN QUALITY MANAGEMENT, METROLOGY AND DESIGN & MANUFACTURING

AUTOMOTIVE · AEROSPACE · DEFENCE

OUR SERVICES

SOLMAN SOLUTIONS FOR MANUFACTURING

QUALITY MANAGEMENT

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The customer has blocked it. The truck is waiting.

Interim manager / engineer 04
The key person is gone. The deadline is not.

Process improvement 05
The machine is there. Where does the time go?

Training / Workshop 06
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Click a service to jump to its page.

QUALITY INSPECTION

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QUALITY MANAGEMENT

THE CUSTOMER HAS BLOCKED IT. THE TRUCK IS WAITING.

As an independent third party we sort, inspect and rework blocked parts: at your site, at your customer's site or in our warehouse in Kecskemét, in Hungary and abroad. It is credible towards your customer too, because the manufacturer is not checking itself. We work with a permanent, trained sorting team and engineering coordination, start at a new location within 2–4 weeks, and the data are always visible on the free INFOWALL customer portal. Triple guarantee: a trained team, quality expertise and liability insurance of HUF 50 million in total. The service can be booked as an expense.

WHEN TO CALL US?

- Customer complaint and firewall: CSL 1, CSL 2, Qhelp 1 or Qhelp 2
- Serious internal quality issue where camera or automated inspection would be too expensive
- New product ramp-up when the customer requires 100% inspection (GP12, SLC)
- Sorting and visual inspection with a clear OK/NOK decision for every part
- Rework and disassembly to the customer's specification, so the blocked lot does not sit in the warehouse
- Own warehouse in Kecskemét: truck loading, forklift, storage and picking in one place

More Information

INTERIM MANAGER/ENGINEER

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THE KEY PERSON IS GONE. THE DEADLINE IS NOT.

A new project is starting and you need an experienced engineer or manager, but only for a short time, up to three months? Who would take that on?

There is a hiring freeze, you cannot take on new staff, yet the workload keeps growing with new products and lines?

Your best person has left, and it will take two or three months until the successor arrives and starts? The work has to be done now.

WHICH ROLES CAN WE FILL?

- Our experts bring 8–20 years of automotive experience from multinational manufacturers: immediate start, fast integration, system knowledge
- Quality manager and engineer: Core tools and G8D in practice, not just in theory
- APQP project manager: new product, new line, under control from day one
- Logistics engineer: internal material flow, warehouse, inbound supply
- Metrology technician, backed by our accredited laboratory
- Lean and production line improvement: the line ramps up, waste goes down
- Off headcount: the cost can be booked as a project cost
- Backed by Solman’s quality, metrology and process improvement team

More Information

PROCESS IMPROVEMENT

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QUALITY MANAGEMENT

LEAN-BASED PROCESS AND SYSTEM IMPROVEMENT

- Ideal workstation, motion planning, motion kaizen
- Material flow and layout planning, spaghetti diagram
- Takt time measurement and line balancing: a balanced line, less waiting
- Changeover (SMED) and TPM: shorter changeovers, less downtime
- 5S, visual management, andon
- Value stream map: current and future state on one page
- Waste hunting, one-piece or batch flow
- Kanban, poka-yoke, quick-change fixtures from our own production
- PFMEA on the gemba, San Gen Shugi
- 10+1 step improvement model, together with your team, on the line
- Measurable results: at the end we show in numbers what has changed

QUALITY MANAGEMENT AND IATF 16949

- IATF 16949 preparation with GAP analysis, building the system on the gaps found
- Tailor-made quality management system, set up and improved
- Internal audit and layered process audit (LPA) system
- Customer complaint handling system
- Supplier quality management system
- QRQC system
- Setting up a measuring laboratory
- Setting up a training system
- Quality strategy and concept
- Project management and custom IT systems
- Audit-ready all the time, not just the week before the audit

More Information

TRAININGS AND WORKSHOPS

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WHAT WE TEACH

- Core tools: APQP, PPAP, FMEA, SPC, MSA
- Audits and systems: IATF 16949, VDA 6.3, VDA 6.5
- Complaints, problem solving, quality inspector
- Coordinate metrology: CMM, measuring arm, GD&T
- Gauge manager and metrologist, on-site and custom workshops

HOW WE TEACH

Every hour spent on training must pay off quickly. That is why our experienced specialists clarify your team's challenges before the training, and we build the material on the case studies gathered. Participants feel that the training is about them, and it sticks much better.

From our existing courses we keep exactly what is necessary and sufficient. Every training is at least 40% practice, with examples from your own products and drawings, in a training room or next to the production line. Stories and humour, not slides read aloud.

Trainings last 2–6 days, on-site groups have at most 10 participants, and most courses end with a written exam and a numbered certificate in the participant's name. Behind us: 25+ years in automotive, 4000+ projects and an accredited calibration laboratory.

Adult education registration number: B/2020/007025

More Information

MEASUREMENT PROGRAM CREATION

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METROLOGY

IS YOUR CMM WAITING FOR A MEASURING PROGRAM?

New products are coming and first article inspection (PPAP/ISR) needs many new measuring programs. But when?

Without an offline module the program has to be written on the machine, which cannot measure in the meantime. Writing a program is a one-off job, but it always takes longer than the measurement itself, and that time would have to be taken from in-process and SPC measurements.

This is when we take over programming: CMM programs for your CNC-controlled machine, offline programming from the CAD model, measuring and evaluation programs for measuring arms and 3D scanners.

We do not hand over a file but a working program: proven on the part, fine-tuned, in the report format you need, backed up, with your colleagues trained.

Our five metrology specialists work in several programming languages. The quotation goes out on the day of your enquiry, and we work in 1–3 shifts or at weekends at no extra charge.
We were the first in Central and Eastern Europe to become an official PolyWorks service provider partner.

OUR MEASURING SOFTWARE PROGRAMMING SKILLS

- HEXAGON PC-DMIS
- ZEISS CALYPSO AND CALIGO
- MITUTOYO MCOSMOS
- POLYWORKS AND GOM INSPECT
- ZEISS PIWEB AND Q-DAS

More Information

CONTRACT MEASUREMENT

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METROLOGY

CONTRACT MEASUREMENT IN AS LITTLE AS 1 DAY? WITH US, YES!

No measuring machine is free and the PPAP is due tomorrow? In-process and SPC measurements leave no capacity?

After relocating a line or a tool, a full or partial layout inspection would tie up your own lab for weeks?

There is no capacity for the annual requalification of products, or the annual measurement of fixtures, holders and containers?

A dimensional error means every part of the series would have to be measured 100%?

This is what our 420 m² site in Kecskemét with a climate-controlled lab is for, or we come to you with portable equipment. The quotation goes out the same day, measurement runs in 1, 2 or 3 shifts, even at weekends, at no extra charge. The report is made in your format and uploaded to the protected customer portal. Behind it: a NAH-accredited calibration laboratory (NAH-2-0343/2023) and 8–20 years of automotive metrology experience.

THE EQUIPMENT WE WORK WITH

- 2 Hexagon Global B coordinate measuring machines (1000 × 700 × 660 mm)
- Trimos C4 portable CMM (720 × 720 × 250 mm)
- Baty 3030 optical measuring machine (300 × 300 × 250 mm)
- Measuring arms: Trimos A5-2500, A5-4000 and Romer 7525
- Scanology 3D scanners: 2 NimbleTrack and one KSCAN-Magic
- Trimos V4-700 height gauge (1024 mm)
- T&S contour gauge, Taylor Hobson roughness tester, 3D surface topography
- Software: PC-DMIS, Calypso, Caligo, MCOSMOS, PolyWorks, GOM Inspect
- Evaluation also in ZEISS PiWeb and Q-DAS format

More Information

MEASURING DEVICE CALIBRATION

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METROLOGY

ACCREDITED CALIBRATION OF CMMS, MEASURING ARMS AND FIXTURES BY YESTERDAY? WITH US, YES!

The calibration has expired and the CMM is down? The customer audit is coming and they want the report of the master container too? Accredited calibration within 3 working days at most? With us, yes!

As a NAH-accredited calibration laboratory since 2018 we calibrate, independent of brand:

- Coordinate measuring machines (CMM), with correction on Coord3 and LK machines where needed
- Measuring arms, with correction on Trimos and Tomelleri arms where needed
- Height gauges including maintenance, with correction on Trimos height gauges
- Inspection fixtures, holders, tools and master containers with CMM and measuring arm. For measuring arms we are the only accredited laboratory in Hungary.

Three free accompanying services: gauge management on the solmangauge platform, the report on your phone by tapping the device, and free calibration if the correction may only be carried out by the manufacturer’s representative.

Within 3 working days of the order at most, in our laboratory or at your site!

NAH registration number: NAH-2-0343/2023
Download accreditation document

More Information

SALES OF MEASUREMENT EQUIPMENT

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METROLOGY EQUIPMENT WITH KNOW-HOW AND SERVICE

We represent six internationally renowned manufacturers in Hungary as exclusive distributor or reseller: Trimos, Scanology, PolyWorks, Renishaw, MetrologyWorks and AESUB.

We do not sell a box, but a solution for your measuring task:

- Selection for your measuring task, even with a trial measurement on your own part
- Installation and training, workshop style, on your own parts
- Domestic and international service with original parts, within and beyond warranty
- Annual accredited calibration in our own laboratory (NAH-2-0343/2023), even at your site
- Styli, accessories and scanning sprays straight from our webshop.solman.hu online shop

TRIMOS

SCANOLOGY

PolyWorks®

RENISHAW®

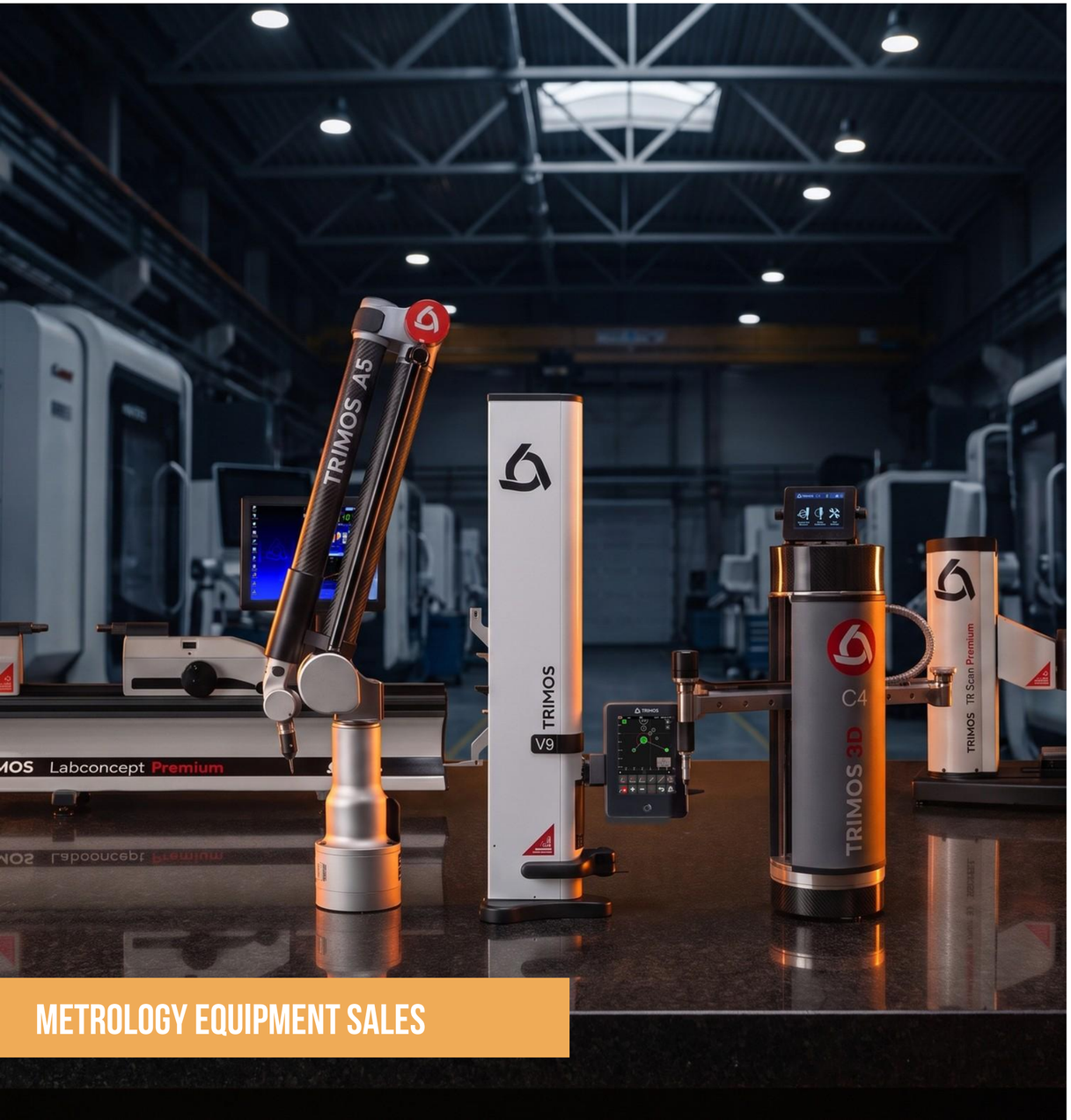
METROLOGYWORKS®

AESUB
STATE OF THE ART SCANNINGSPRAY

More Information

DISTRIBUTION OF TRIMOS PRODUCTS

SOLMAN SOLUTIONS FOR MANUFACTURING



METROLOGY EQUIPMENT SALES

PRODUCTS AND SERVICES

Founded in 1972, the Swiss company Trimos SA is a market leader in height gauges, length measuring machines, measuring arms and portable coordinate measuring machines. Its products are developed and manufactured in-house with Swiss precision. What most users love about them: they can do a lot, yet they are easy to use. PolyWorks software runs on the measuring arms, so the evaluation is professional too.

TRIMOS

- Measuring arms: the A5 from 1.8 to 9 m, even next to the production line
- C series portable CMM: a full coordinate measuring machine, manual and CNC mode
- Height gauges and accessories, for the shop floor and the lab
- Length measuring machines for manufacturers and calibration laboratories
- 3D surface analysers, when the surface matters as well as the dimension

More Information

SALES OF SCANOLOGY PRODUCTS

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METROLOGY EQUIPMENT SALES

PRODUCTS AND SERVICES

Scanology (formerly Scantech) scanners are in the top class of 3D laser scanners, and in our experience they outperform optical systems based on other principles in capability and speed. Combined with PolyWorks software they deliver fast and accurate surface scanning, dimensional inspection and colour map analysis. The manufacturer verifies accuracy according to ISO 10360-13 in an accredited laboratory.

SCANOLOGY

- Handheld laser scanners: SIMSCAN, and the KSCAN Magic hybrid scanner with photogrammetry
- Tracking scanning without markers: TRACKSCAN and NIMBLETRACK
- iREAL handheld scanner for coloured, free-form surfaces
- AM-DESK automated scanning station around a cobot or robot

More Information

SALES OF POLYWORKS METROLOGY SOFTWARE

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METROLOGY EQUIPMENT SALES

PRODUCTS AND SERVICES

InnovMetric's PolyWorks software from Canada connects to almost any device using a 3D coordinate system: coordinate measuring machines, portable CMMs, measuring arms and laser scanners. One software for everything, so you only have to learn it once. It is used by 26,000 customers in 103 countries, and it is no coincidence that we chose it for the Trimos measuring arms too.

PolyWorks®

We were the first in Central and Eastern Europe to receive the OFFICIAL SERVICE PROVIDER partner title from PolyWorks Europa.

It is awarded to companies that meet the highest requirements in software knowledge and quality of service.

What do you get from us with PolyWorks?

We put together the package your measuring task needs and teach it to your colleagues with tailored training and workshops, even on your own parts.

- PolyWorks Inspector and Inspector Premium: dimensions, tolerances, colour maps, reports
- PolyWorks Modeler: reverse modelling from point clouds
- Specialist modules and CAD translators (Catia V4, V5, V6)
- DataLoop: central data management for measurement results

More Information

SALES OF AESUB PRODUCTS

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METROLOGY EQUIPMENT SALES

PRODUCTS AND SERVICES

The German AESUB scanning sprays make reflective, dark and transparent surfaces scannable. The sublimating version evaporates without residue in 3–4 hours, so parts do not need cleaning after scanning. It is applied in a thin, homogeneous layer and makes scanning faster. With structured-light scanners it is often the difference between an unusable and a good scan, while Scanology laser scanners rarely need it. The manufacturer was a scanning service provider itself, which is why it developed its own spray.

AESUB
STATE OF THE ART SCANNINGSPRAY

- Vanishing (blue, orange) and permanent (white) scanning sprays, AESUB green and yellow for large surfaces and the most accurate measurements, reference targets

More Information

SALES OF RENISHAW PRODUCTS

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METROLOGY EQUIPMENT SALES

PRODUCTS AND SERVICES

The British company Renishaw, inventor of the touch-trigger probe in 1973, is one of the defining manufacturers in precision metrology. Most coordinate measuring machines work with its probe heads, modules or styli. If a stylus breaks or a new configuration is needed, it has to be sourced quickly, because measurement stops until then. Common items can be ordered immediately in our webshop; for special configurations we send a quotation.

RENISHAW®

- Sensors, interchangeable modules, ruby and special styli
- Probe heads, controllers, stylus change racks and the REVO 5-axis system
- Modular fixturing kits for optical and coordinate measuring machines

More Information

SALES OF METROLOGYWORKS PRODUCTS

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METROLOGY EQUIPMENT SALES

PRODUCTS AND SERVICES

The American MetrologyWorks brand is synonymous with professional accessories for measuring arms and laser trackers. Its products fit Faro, Hexagon, Romer and Trimos arms as well as Leica and API laser trackers. We are their official distributor in Hungary.

METROLOGYWORKS®

- Styli for Faro, Romer and Hexagon arms
- Tripods, rolling stands and tables
- Mobile measuring stations with granite plate
- Magnetic bases and fixture kits
- Calibration spheres, cones and verification tools
- Laser tracker SMRs, reflectors and nests
- Hundreds of items in the webshop, filtered by arm type

More Information

REVERSE ENGINEERING

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DESIGN AND MANUFACTURING

NO DRAWING, NO CAD. BUT THE PART IS HERE.

An old tool, machine part or holder that never had a drawing? The supplier is gone and the new one wants a CAD model? A worn or broken part has to be replaced, or the tool was modified over the years and the documentation did not follow?

We 3D scan the physical part into a point cloud and turn it into a surface model that you can take further in your own CAD system. The geometry is captured with a 3D laser scanner, measuring arm or CMM, in our lab or at your site.

We are not a scanning service but a metrology company: we measure the finished model back against the real part and show the deviation on a colour map. Measured, not estimated accuracy.

You receive the STEP model, 2D assembly drawings, the BOM and the measurement documentation, with a waiver of intellectual property. On request also a measuring program or an inspection fixture, from the same team.

WHAT WE WORK WITH

- Scanology 3D scanners: 2 NimbleTrack and one KSCAN-Magic
- Measuring arms: Trimos A5-2500, A5-4000 and Romer 7525
- 2 Hexagon Global B CMMs, Trimos C4, Baty 3030 optical machine
- PolyWorks: point cloud processing, surface model, evaluation
- AESUB scanning spray for reflective, dark or transparent surfaces
- Solman 3D Viewer: the finished model in a browser, no CAD licence needed

More Information

DESIGN AND MANUFACTURING OF FIXTURES

SOLMAN SOLUTIONS FOR MANUFACTURING



DESIGN AND BUILD OF FIXTURES AND SPECIAL MACHINES

- From a simple go/no-go gauge through a DTI fixture with many measuring points to a production cell, we design and build any of them
- DTI fixtures: critical dimensions next to the line, without a CMM, in seconds
- Inspection fixtures and RPS-based CMM holders: repeatable measurement
- Rotating and clamping fixtures for CMMs: several sides, one clamping
- Large parts: bumpers, free-form surface inspection
- Test benches and poka-yoke, including software
- Special machines and production cells
- Accredited measurement: we are the only laboratory in Hungary accredited for measuring fixtures and holders with a measuring arm

WHAT WE DO FOR YOUR SATISFACTION

- **FAST QUOTATION:** quick concept and a quotation within 1–5 days depending on complexity, because speed matters from the start.
- **INTERACTIVE 3D DESIGN:** a rotatable model with hideable elements, plus a project schedule.
- **IN 1-2-3 SHIFTS** or at weekends when it is urgent, without any extra costs.
- **DESIGN AND MEASUREMENT IN ONE PLACE:** the same team designs, builds and measures the fixture in our accredited lab.
- **BACKUP AND CUSTOMER PORTAL:** we keep a backup of the design documentation, and every project document and the current project status are available on the customer portal.
- **MAINTENANCE:** we maintain the finished fixture and calibrate it every year.

More Information

CONTAINER DESIGN AND MANUFACTURING

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DESIGN, DEVELOPMENT AND MANUFACTURE OF CONTAINERS

We design and build custom metal containers (racks, in German Sonderladungsträger), JIS and part-specific containers and paint jigs in series, so that the painted surface does not get scratched on the way. Quick concept as an interactive 3D PDF, quotation usually within 1–5 days, 3D CAD model and 2D assembly drawings, a prototype tested with the real part, then series production in 1–3 shifts.

On request we only create the concept with full design documentation, and you or your supplier manufactures it.
We have developed and built containers for Audi, Skoda, Volkswagen, Mercedes and Seat/Cupra parts.

STANDARDISED MAINTENANCE AND MEASUREMENT OF CONTAINERS

- Standardised maintenance system since 2016 according to IATF 16949 and VDA requirements, preventive and reactive
- The life history of maintained containers can be tracked, in software or on the customer portal
- Certified welders and toolmakers with forklift licences, engineering coordination
- Measurement of finished and master containers with CMM and measuring arm, accredited as the only lab in Hungary for the arm
- We recommend at least 10% spare containers, because forks and moving parts wear them out
- A clean, tidy “A” category hall: your customer’s audit is welcome

More Information

GAUGE MANAGEMENT

SOLMAN SOLUTIONS FOR MANUFACTURING



ADDITIONAL SERVICES

EVERY GAUGE AUDIT-READY? WITH US, YES!

An audit never fails because a gauge is missing, but because nobody can show when a device was calibrated and where its certificate is.

We take this burden off you: we keep the register of your gauges, watch calibration due dates, carry out or organise calibration, and the documents are in one place, ready at any time.

Tracking runs on our own solmangauge.hu platform: a company account with your own users, in Hungarian, English and German. Tracking comes free with calibration, without any software fee.

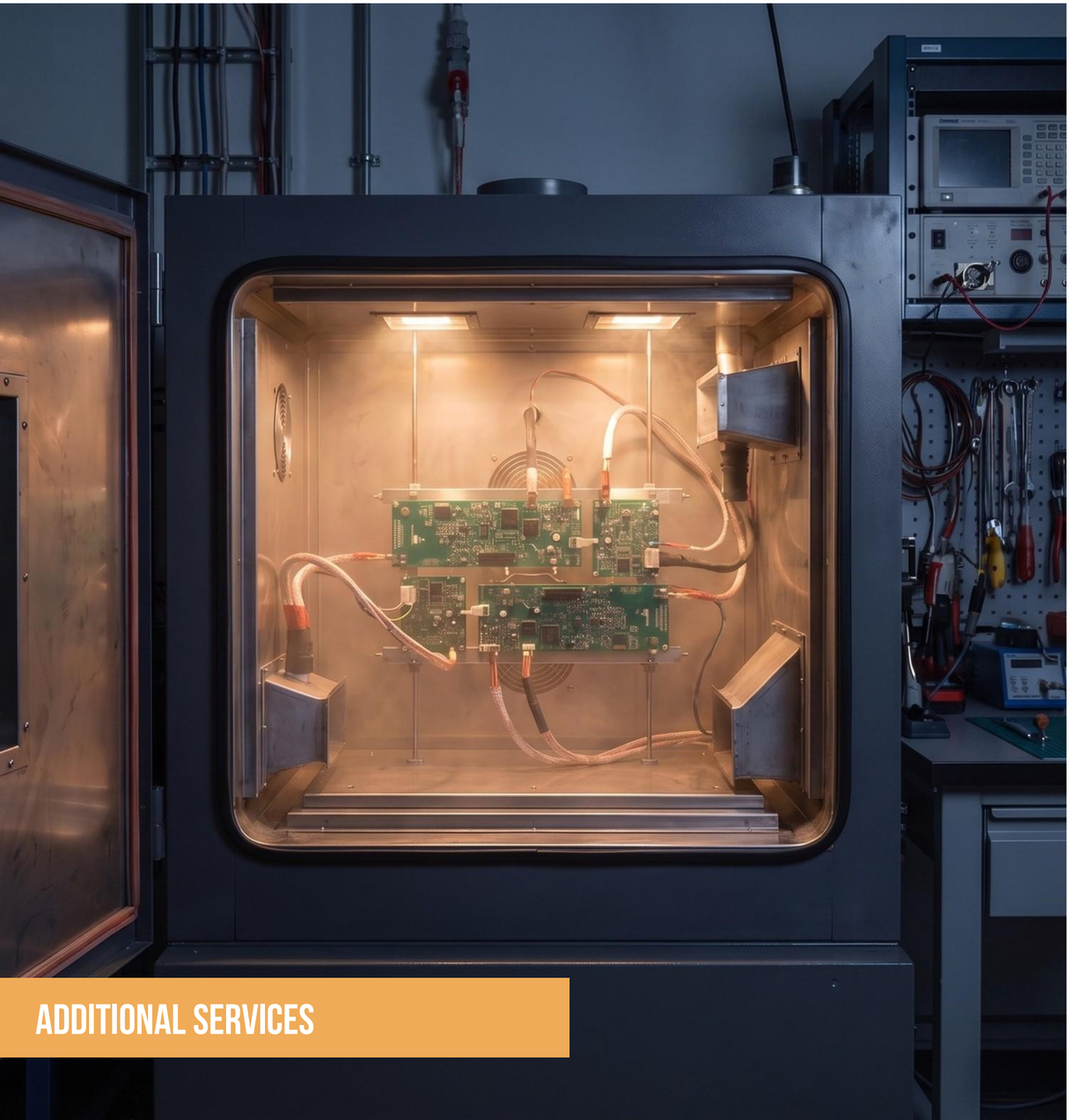
WHAT DOES IT INCLUDE?

- Gauge inventory, unique ID and barcode label
- Annual calibration plan, “due soon” status 30 days before expiry by default
- Monthly calibration basket with the devices that are due
- Accredited calibration (NAH-2-0343/2023) in our lab or at your site
- Digital reports, retrieved from the device with a phone
- Your existing Excel list imported in one go; Excel list and ZIP for the audit
- Audit-ready all the time, not just the week before the audit

More Information

TEST LAB SERVICES

SOLMAN SOLUTIONS FOR MANUFACTURING



ADDITIONAL SERVICES

NEED A TEST BUT HAVE NO LAB? WITH US, YES!

A complaint has arrived and there is no evidence? A new product is starting and validation is missing? The product is going to a foreign market and needs CE marking and EMC testing?

We organise more than 60 test types in eleven test areas through our network of accredited partner laboratories. One quotation, one contact, one invoice, with most tests covered by an accredited report.

We put the test plan together, handle sample logistics and scheduling, and if there is a deviation you will not hear about it on the deadline day. At the end you get an OK/NOK assessment and a recommendation for the next step along with the report.

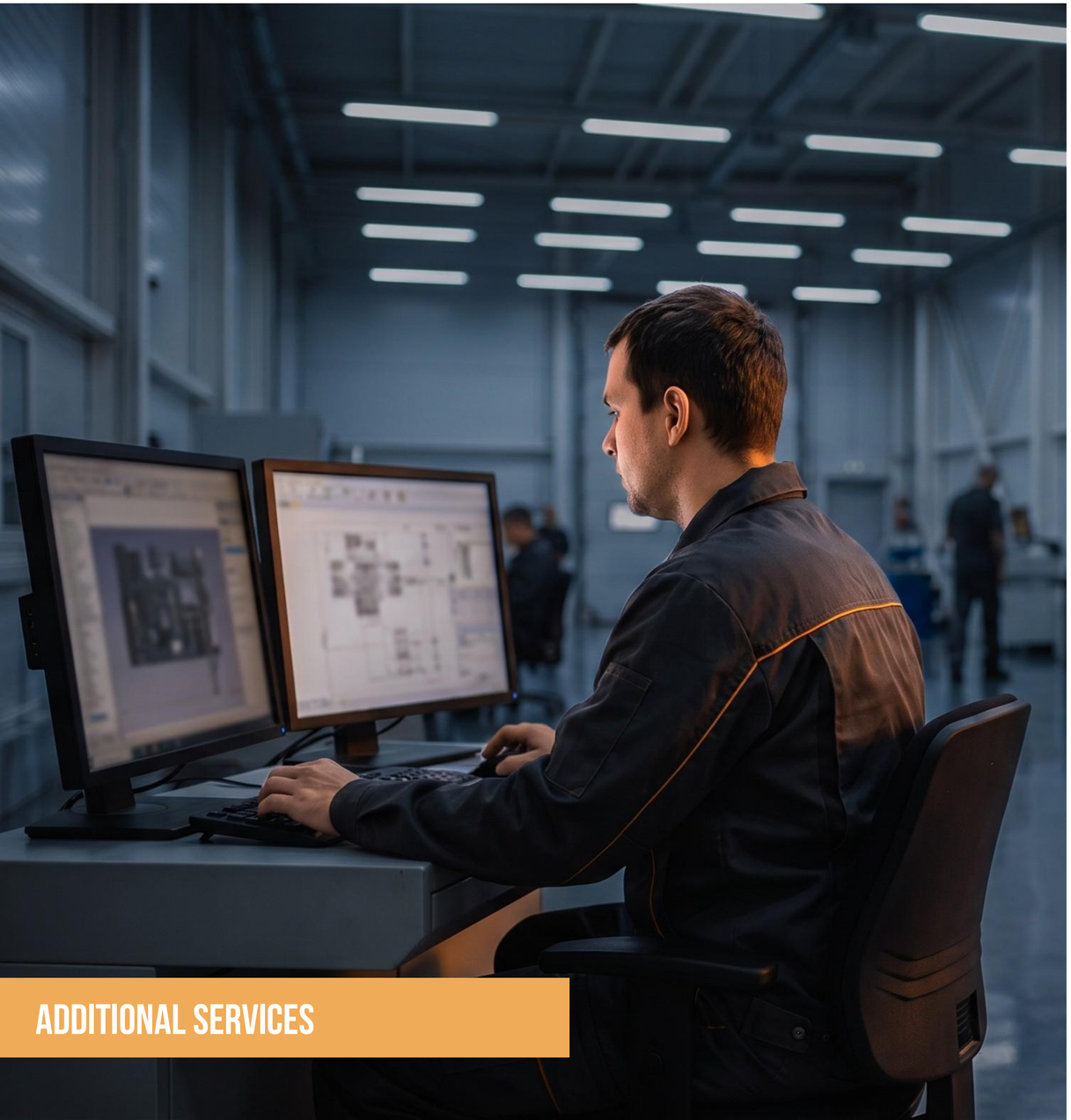
OUR TEST AREAS

- Non-destructive testing and destructive mechanical tests
- Material testing, analytics and failure analysis
- Technical cleanliness according to VDA 19.1 and ISO 16232
- Climatic, atmospheric, corrosion, chemical and oil resistance tests
- Mechanical environmental tests, lifetime, emission and odour tests
- Colour measurement, surface and durability tests
- EMC and market access compliance: CE, LVD, RED, RoHS, REACH, FCC, NRTL, CB

More Information

FAILURE ANALYSIS (CT AND X-RAY)

SOLMAN SOLUTIONS FOR MANUFACTURING



ADDITIONAL SERVICES

FLAWLESS OUTSIDE. WE LOOK INSIDE.

The casting leaks, the moulded part breaks, the customer wants an 8D, and the cause is inside? Before first article or a tool change you need to know whether there is a shrink hole in a critical wall? The assembly sticks or rattles?

We look inside the part with industrial CT and microfocus X-ray in our lab in Kecskemét, next to our measuring lab. CT returns the full volume in 3D, can be sectioned in any plane, and the part stays intact. You can only cut it open once.

We evaluate with a metrologist's eye and do not hand over a pile of images, but an answer to the question the part came with: images, colour maps, tables and an engineering conclusion. Then we can also handle sorting, measurement or rework.

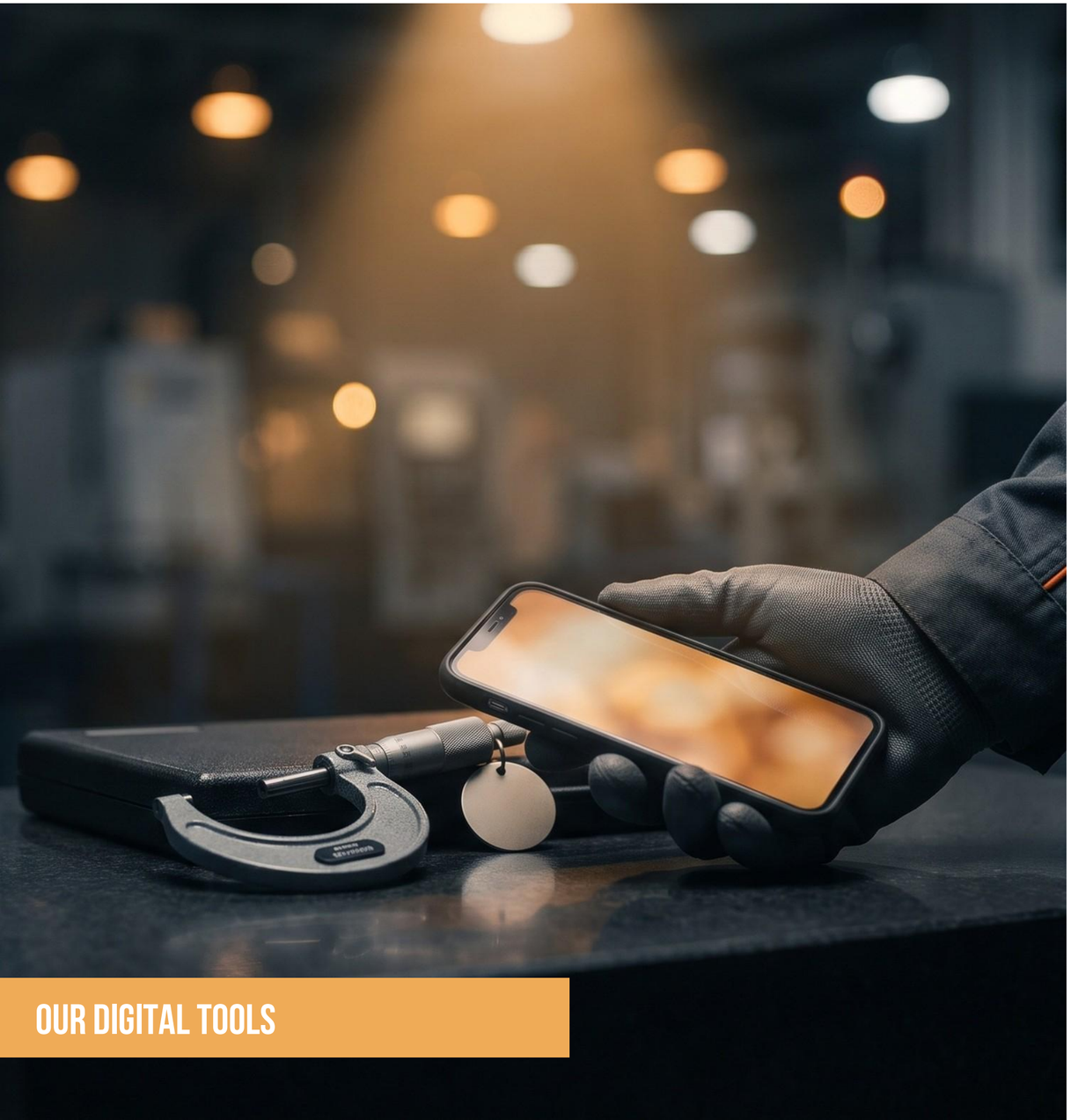
OUR FAILURE ANALYSIS TESTS

- Industrial CT scanning: a complete 3D model, outside and inside
- Porosity and inclusion analysis: shrink holes, inclusions, gas pores on a colour scale
- Function check in assembled state: clearance, angular position, fit
- Dimensional inspection with CT where no probe can reach
- CAD comparison with colour map
- Electronics X-ray (2D): BGA, QFN, solder joints, voiding
- Metals, plastics, composites, ceramics, even assembled

More Information

SOLMANGAUGE PLATFORM

SOLMAN SOLUTIONS FOR MANUFACTURING



OUR DIGITAL TOOLS

INSTEAD OF EXCEL: IN ONE PLACE, AUDIT-READY

solmangauge.hu is our own online platform that runs our gauge management. Every customer gets a company account and sees its own gauges: what is registered, what expires when, and where the matching report is.

It works on desktop and phone, in Hungarian, English and German. Development and support are in-house, not at a foreign provider.

Tracking comes free with calibration and gauge management, with no software fee. Your existing Excel list can be imported in one go, and old reports are matched to the devices by file name.

WHAT DOES THE PLATFORM DO?

- Company account, your own users, every action logged
- Full gauge list: ID, photo, location, owner, cycle, MSA, status
- Calibration status: valid, due soon (30 days before by default), expired
- Reports linked to each calibration, one click away
- Calibration basket: devices going to an external lab in one list
- Uncertainty trend relative to the tolerance limit
- Retrieval by phone: tap the device and its report appears

More Information

CAD VIEWER

SOLMAN SOLUTIONS FOR MANUFACTURING



OUR DIGITAL TOOLS

OPEN A STEP FILE WITHOUT A CAD LICENCE

Solman 3D Viewer is made for quality engineers, buyers, project managers and production planners who receive models every day but do not work in CAD, and for engineers who only need a quick look.

It runs in your own browser: the opened model is not uploaded to any server, we do not store it and cannot see it. So it can be used for customer models under NDA, and it works offline too.

It also works the other way round: before sending us a model you can check that it really is the right version with the complete geometry. If the model turns into a job, we measure in our accredited lab, or design the fixture, holder or container from the same model.

Free to use, no registration: solman.hu/cad-megjelenito

WHAT CAN IT DO?

- STEP, IGES, STL, OBJ, PLY and 3MF formats
- Real CAD surfaces, edges and part tree, not just a triangle mesh
- Measurement: point to point and between parallel faces, X, Y, Z deviation
- Parts can be shown or hidden, exploded view, section plane
- Import check: how many surfaces, what was skipped, is the model closed
- Hungarian, English and German interface, light and dark theme

More Information

SOLMAN SOLUTIONS FOR MANUFACTURING

WHY SOLMAN?

25+
years in automotive

4000+
successful projects

500+
satisfied customers

98%
customer satisfaction

SOLMAN HUNGARY KFT.

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info@solman.hu
www.solman.hu
webshop.solman.hu
Tax number: 25176553-2-03
Company reg. no.: 03-09-137569

CERTIFIED MANAGEMENT SYSTEMS

NAH-2-0343/2023
KALIBRÁLÓLABORATÓRIUM

KEY REFERENCES

ABB · ACPS · ADIENT · ADMATIS · AGC · AMAZONE · ANTOLIN · AQ INDUCTIVES · AUTOFLEX-KNOTT · BMW · BORGWARNER · BOSCH · BRIDGESTONE · BSM · BYD · CATERPILLAR · CIE SALGGLAS · CLARION · DUVENBECK · ECKERLE · ELRINGKLINGER · FEHRER · FLABEG · FLAMESPRAY · GE · GE AVIATION · GESTAMENARM · GESTAMP · HAJDU AUTOTECHNIKA · HANON · HBPO · HI-LEX · HILTI · IBV · JOYSON · KIRCHHOFF · KÉSZ CSOPORT · KNIPPING · KNORR BREMSE · KÖNIG · KÖRBER · KUKA · LOTTE · MAGNA · MAGNUS AIRCRAFT · MAGYARMET · MAHLE · MERCEDES · MOTHERSON · MUSASHI · NIDEC · OERLIKON · PLASTIC OMNIUM · PRIDGEON&CLAY · Q AUTOMOTIVE · SAMSUNG · SANOH · SIIX · SIMON PLASTIC · SISECAM · SMP · STADLER · STANLEY · STEELFLEX · SUPRAJIT · THYSSENKRUPP · TOYO SEAT · VAMAV · VIDEOTON CSOPORT · WAREMA · WERNERCO · WOCO · XYLEM · YANFENG · ZARGES

OUR SERVICES

QUALITY MANAGEMENT

- QUALITY INSPECTION
- INTERIM MANAGER / ENGINEER
- PROCESS IMPROVEMENT
- TRAINING / WORKSHOP

METROLOGY

- CONTRACT PROGRAMMING
- CONTRACT MEASUREMENT
- GAUGE CALIBRATION
- METROLOGY EQUIPMENT SALES

DESIGN AND MANUFACTURING

- REVERSE ENGINEERING
- FIXTURE DESIGN AND MANUFACTURING
- CONTAINER DESIGN AND MANUFACTURING

ADDITIONAL SERVICES

- GAUGE MANAGEMENT
- TEST LABORATORY MANAGEMENT
- FAILURE ANALYSIS (CT AND X-RAY)

ENGINEERING SERVICES IN QUALITY MANAGEMENT, METROLOGY AND DESIGN & MANUFACTURING

AUTOMOTIVE · AEROSPACE · DEFENCE