microservice

3D Metrology Solutions

Products & Services

The ideal metrology partner for
your company

OUR COMPANY

MICROSERVICE was born in 1997 by current funding members, with huge experience in Coordinate Measuring Machines.

Thanks to the competence and the experience of the staff, MICROSERVICE was able to extend and diversify his customering offering.

The company today offers a wide range of high quality services for all applications of dimensional controls, in the field of industrial metrology.

MICROSERVICE partnership approach, rather than a simple supply one, inspires constantly his corporate governance based on attention to customer needs.

Measuring Systems and Accessories

In-field Inspection

Technical Service

In-house Inspection

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Please refer to technical data sheets for product detailed information

MICROSERVICE COORDINATE MEASURING MACHINES

The range of Coordinate Measuring Machines proposed by MICROSERVICE covers the most varied needs in terms of metrology applications and features to be inspected. Equipped with contact probes or scanning, they are provided as standard solution with **CAPPS DMIS** Metrology Software and **PANTEC** electronic controller, as later described, or with personalized configurations tuned on customer needs.

Micro 3D

Granite Technology - Thermal stability

Micro 3D A / HA

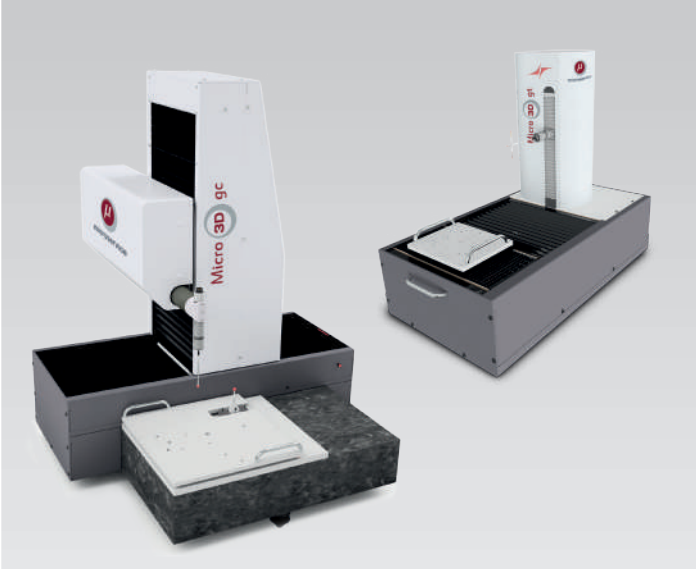
Aluminum Technology - Dynamics

Micro 3D G

Gantry machines, ideal for measuring large components, combining accuracy with maximum accessibility.

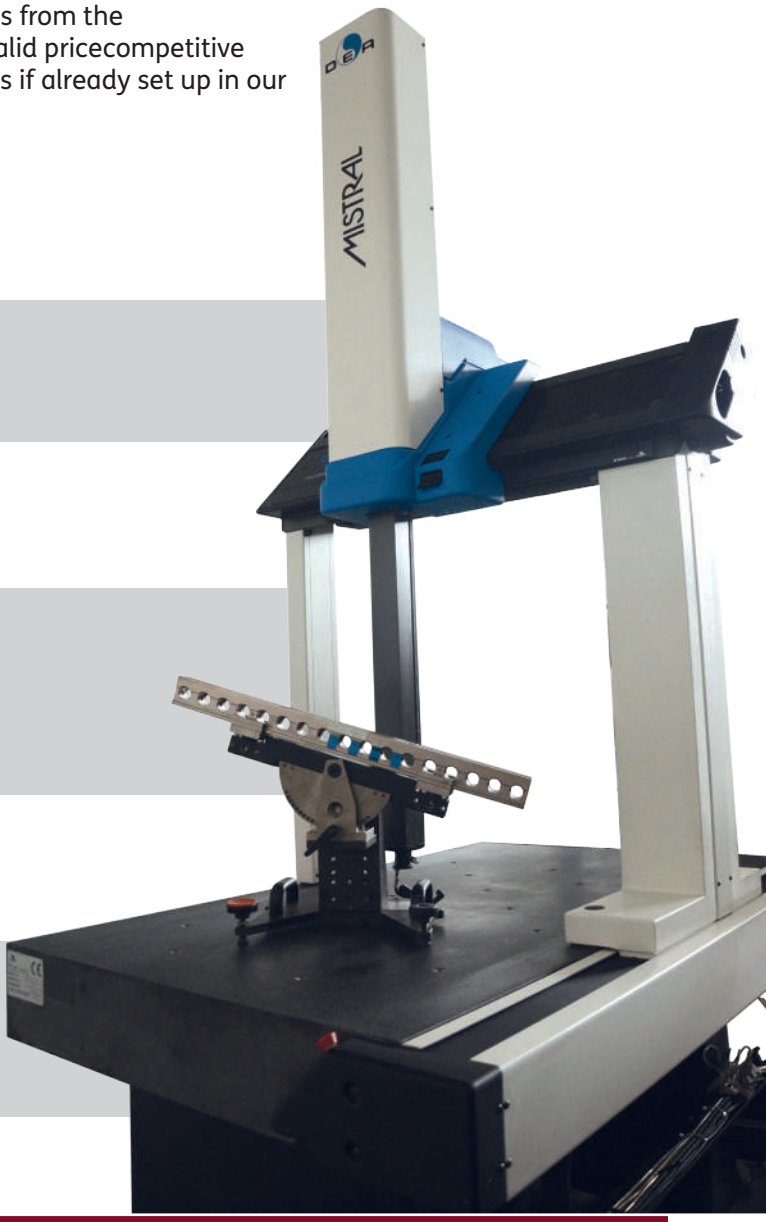
Micro 3D gt / gc

The ideal solution for measuring in harsh shop floor conditions little & long size components, like racks, and components with cylindrical simmetry, like bars, broaches.



RECONDITIONED COORDINATE MEASURING MACHINES

MICROSERVICE collects used coordinate measuring machines from the market, and after a deep reconditioning proposes them as valid pricecompetitive alternatives to new ones. Available in a short time (2-3 weeks if already set up in our shop floor), they are covered by a 6 months/one year warranty, depending on their type and conditions.



How machines are chosen

MICROSERVICE selects the best machines available on the market on the basis of criteria consolidated by twenty years of experience. The quality of the refurbished machine starts here.

How machines are refurbished

MICROSERVICE checks the main machine components, as pads, transmissions, counterbalance cylinders, electrical and pneumatic wiring, and, if necessary, replaces them with new or reconditioned spare parts. The same care is given to the visible parts like covers, for inspiring in the customer a true “like new” feeling.

How machines are verified

MICROSERVICE checks each machine by severe functional tests and verifying its performance according ISO 10360-2 international standard. All subsequent phases are planned and executed according internal procedures, for providing final customers with expected lead times, quality and costs.

Plenty of available reconditioned machines in MICROSERVICE shop floor

Renting services available

RETROFIT OF COORDINATE MEASURING MACHINES

MICROSERVICE consolidated its growth in the field of industrial metrology offering and successfully executing retrofits and upgrades of coordinate measuring machines. Relying upon MICROSERVICE, customers have the assurance of being served by experienced service engineers, and of MICROSERVICE committment for interventions in case of any problem.

CAPPS DMIS

MICROSERVICE proposes **CAPPS DMIS** as standard Software solution for the retrofit of coordinate measuring machines. Being powerful, easy-to-use, available in different versions, and adaptable to customer needs, CAPPS DMIS has the best quality/price ratio.

µS-3NC controller for CNC machines

µS-3NC controller is ideal for little-medium size Coordinate Measuring Machines equipped with trigger probes. **µS-3NCPRO** e **PRO/HP** controllers drive respectively machines equipped with scanning probes, and large machines. **EAGLE™ Pad** is the basic standard wired jogbox solution: **EAGLE™ Pad RC** is the wireless one ideal for large machines.

µS-3MC controller for manual machines

µS-3MC is compact, easy to install: can be interfaced to different scales, and available at a very competitive price.

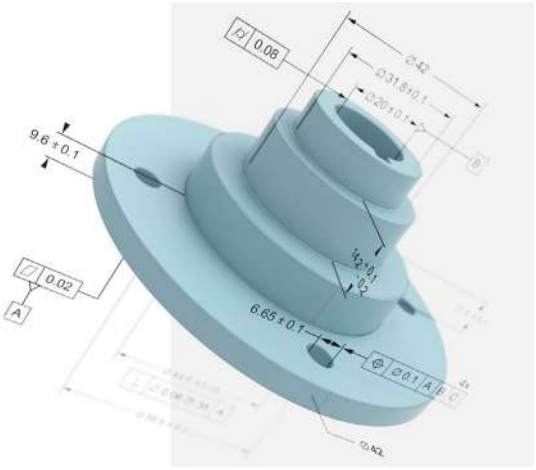
RSF Elektronik

MICROSERVICE provides RSF ELEKTRONIK as standard solution for the retrofit of obsolete coordinate measuring machines scales.
Our product portfolio includes steel transducers, with graduated scale applied to the structure by adhesive or by a strip, or glass ones, for very high performance machines.

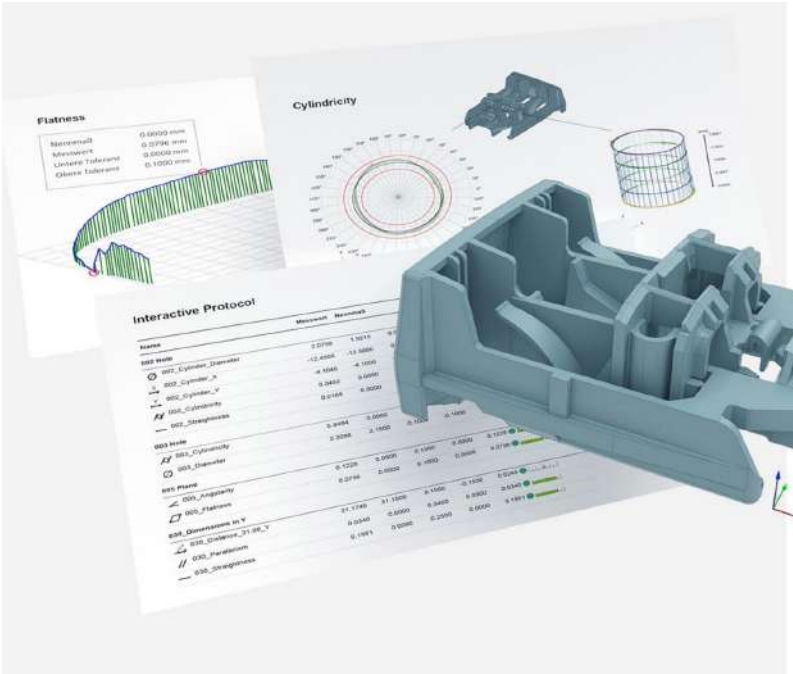
A guarantee of the quality promoted by MICROSERVICE in the area of retrofits on coordinate measuring machines is the partnership with the **ZEISS** brand, synonymous with excellence in the international metrology context.
The partnership with **ZEISS** enables the retrofit of CMMs, integrating them with the renowned CALYPSO software, thus offering measurement solutions of the highest quality.

CALYPSO

CALYPSO SW is synonymous with efficiency and performance in industrial metrology. Its CAD-core architecture allows all conceivable measurements to be performed quickly and intuitively, saving time when programming and measuring prismatic components.
Through customization of software packages, targeted solutions and specific measurement tasks can be achieved.



Comprehensive graphical support, visualization of measurement strategies and input data, low margin of error due to automatic recognition of measured items and automatic generation of CNC measurement programs, possibility of importing 3D CAD drawings in SAT or SAB format for optimal graphical representation, and off-line programming of CNC measurement cycles.



RENISHAW Controller

The process of upgrading coordinate measuring machines is accomplished by implementing the **RENISHAW** numerical control, for which an optimized interface has been developed that ensures perfect compatibility with the complex functionality offered by Zeiss Calypso software.

MICROSERVICE OPTICAL MACHINES

MICROSERVICE Multisensor Optical Machines meet the need for speed and accuracy for inspection of critical components - like rubber or thin plastics ones - for which contact measurement is a problem. MICROSERVICE optical machines can be equipped also with a trigger probe so assuring high operating flexibility.

Micro 3D vis AC

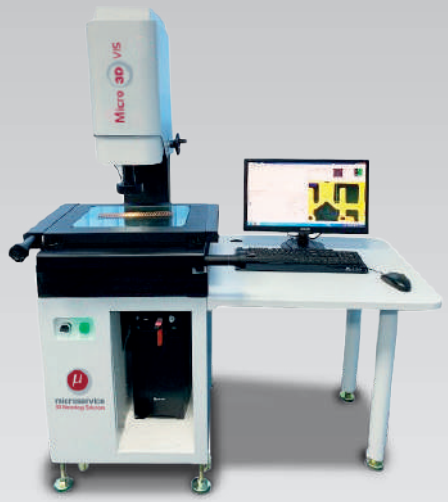
Accurate and fast machine, easy to access and to install. The ideal solution for batch inspection of medium-small pieces.

Micro 3D vis AM

Our top-of-the-range solution, based on bridge architecture and granite base, for measurement of large pieces or palletized small pieces.

Micro 3D vis E

Manual gooseneck machine with movable table, providing extreme accessibility, robustness and compactness.



Software

The machines are equipped with a dedicated software solution fully supported by MICROSERVICE (problem solving, upgrade, application, training).

Application examples

MICROSERVICE is the **PMT** distributor in Italy. **PMT** company is focused since many years on the engineering and sale of measuring arms. MICROSERVICE, in addition to new systems, proposes multi-brand reconditioned portable 3D measurement contact and non-contact systems, for quality control and reverse engineering.

ARTICULATED ARMS

The **PMT** articulated arms **GAMMA E**, **GAMMA M** and **GAMMA P** are characterized by a carbon fiber modular structure. Being reliable and ergonomic, they are able to operate in harsh thermal conditions. Different probing configurations - contact and non contact by **laser scanners** - are available for matching all possible application needs.

LASER SCANNERS

PMT laser scanners are the solution for fast and accurate scanning of surfaces. They save time for the inspection of medium to large parts, without physically touching the components.
PMT's 3D scanners can detect the geometry of complex shapes such as curved surfaces, details and internal structures.

Reconditioned Systems

MICROSERVICE can provide refurbished articulated arms and demo systems at favourable prices. All reconditioned systems are severely controlled and all their functionalities fully recovered.

Renting services available

LASER TRACKERS & INTERFEROMETERS

API invented laser trackers (the first device was supplied to BOEING in 1988). MICROSERVICE is an **API** authorized distributor since many years, and contributed to API success on the Italian market with plenty of effective installations and service support, providing both new and refurbished systems.

LASER TRACKERS & ACCESSORIES

RADIAN laser trackers provide a superior performance both on surface scanning and on feature inspection. RADIAN trackers are reference devices on the market for tactile measurement by **vSCAN** or **iScan 3D** probing systems and by traditional SMR retroreflectors. The new **DYNAMIC 9D LADAR** is the first system on the market able to acquire surface and features within the range of 25 m and with accuracy within +/- 25 microns.

RADIAN LASER TRACKERS

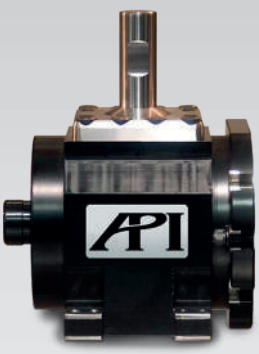
DYNAMIC 9D LADAR

CALIBRATION SYSTEM FOR MACHINING CENTERS AND COORDINATE MEASURING MACHINES

MICROSERVICE supplies and supports API system for machine calibration. The **LASER XD** system is able to acquire rotation, horizontal and vertical straightness, position errors by just a single run, without optics repositioning and adjustment. **SWILVELCHECK** is a device based on precision inclinometers focused on the verification of rotating axes like rotary tables and indexing heads. **SPLINDLECHECK** is a device focused on dynamic verification of machine tools spindles. **BALLBAR** is a device for the quick check of machine tools geometry.

LASER XD

SWIVELCHECK



SPINDLECHECK

BALLBAR

Renting services available

FORM, CONTOUR & ROUGHNESS MEASUREMENT SYSTEMS

MICROSERVICE is authorized distributor of **ACCRETECH** for the supply of from, contour and roughness measurement systems. Operating since 1962, **ACCRETECH** is a market leader and worldwide recognized for its superior quality.

FORM MEASUREMENTS - RONDCOM SYSTEMS

RONDCOM provides a full range of devices for form and position measurement. TOUCH is first level device requiring manual alignment. **CREST** can offer instead a full automatic inspection. **RONDCOM NEX Rs** can measure both form and roughness by a full automatic process.

RONDCOM TOUCH

RONDCOM CREST

RONDCOM NEX Rs

Contour Measurement Systems - SURFCOM

SURFCOM systems measure angles, radius, distances and single point coordinates, operating by full automatic mode, minimizing vibrations and with very low resolution: they can provide superior reliability, minimum maintenance, and long operating life, and are equipped with a complete series of accessories for measuring various features including the ones difficult to be reached.

ROUGHNESS MEASUREMENT SYSTEM

ACCRETECH provides several roughness measurement systems suitable for all type of needs, from the 5 axes fully automatic system **SURFCOM c5** to the manual ones **HANDYSURF +** e **SURFCOM** serie **TOUCH**.

SURFCOM c5

OPTSCOPE

PORTATILE HANDYSURF +

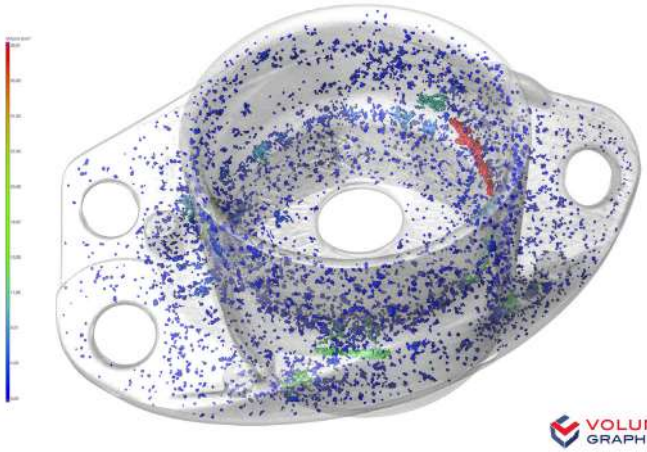
Renting services available

COMPUTER TOMOGRAPHY SYSTEMS

MICROSERVICE is authorized distributor of **RX SOLUTIONS** computer tomography systems. By a single scan, computer tomography systems can inspect single and assembled components verifying their geometry and structural integrity without need of destroying samples.

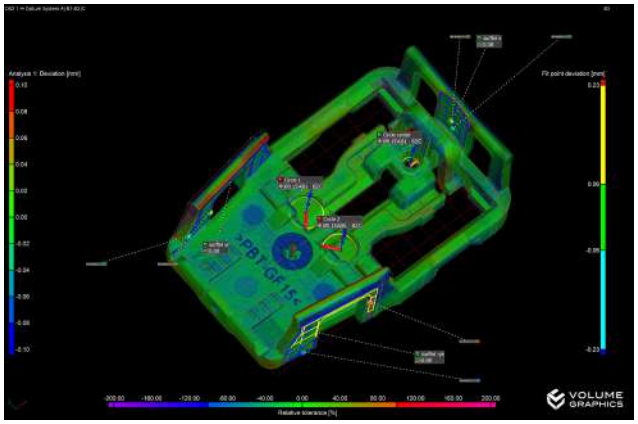
EasyTom e UltraTom

Easytom is a tomographic system with inspection volume of Ø 320 mm and power up to 230 kV.
UltraTom is based on a modular concept that can handle a combination of 3 high-power sources.



VOLUME GRAPHICS

VOLUME GRAPHICS SOFTWARE



MARKING MACHINES

MICROSERVICE is official distributor of **PRYOR**, market leader in laser, dot peen, scribing and chemical etching marking machines. **PRYOR** is active on the market since 1894 and has 170 years experience in the specific marking sector. MICROSERVICE, besides the sale support, provides technical service on all the **PRYOR** product range, and in-house marking services.

PRYOR TECHNOLOGY

BENCHDOT

BENCH LASER

PORTADOT 60-30 TOUCH

Renting services available

HEIGHT GAUGES

MICROSERVICE has many years experience in sale, technical service, performance verifications and calibration of height gauges of various manufacturers.

TRIMOS

MICROSERVICE offers **TRIMOS** height gauges, equipped by an air bearing by which it is possible to make them accurately slide with mininum effort. Long stylii and automatic trigger force increase their operational flexibility.

Height gauges maintenance

MICROSERVICE checks carefully the whole guiding mechanism, the position transducer, the motion transmission components, and the trigger probe. Only original spare parts are used just in case, and calibration report is provided.

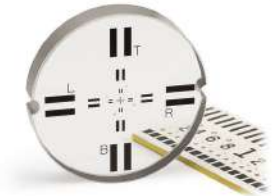
Horizontal measuring instructments

MICROSERVICE offers technical service including maintenance and calibration of horizontal measuring instruments.

BRUNSON TELESCOPES

MICROSERVICE is a **BRUNSON** partner for the supply of telescopes, products that are caraterized by elvated quality, robustness, accuracy and variety in models and accessories. Brunson, thanks to its expertise that dates back to 1927 and its constant state-of-the-art technological development, is a guarantee that its precision optical instruments are the best on the global market.

DIAMETER MIRRORED



ALIGNMENT TELESCOPE

TELESCOPIC TRANSIT SQUARE

ACCESSORIES FOR MEASURING INSTRUMENTS

MICROSERVICE is partner of BRUNSON, US company market leader manufacturer of accessorie for laser trackers and articulated arms, and operating in the optical instruments sector since 1927.

Tripods

MICROSERVICE provides a full range of tripods for industrial metrology applications (the largest one in the world). **BRUNSON** tripods distinguish themselves for stability and lightness. Available BRUNSON tripod solutions starts with entry level products like **TETRALOCK** and arrive to the special largest automatic ones able to reach 11 m height.

SMR optics support

MICROSERVICE provides a complete range of accessories for making laser tracker measurements faster and more accurate, like **SMR** seats, sliding brackets, for alignment and longitudinal measurements, centering devices, tool kits and many more.

Scanning spray

AESUB
STATE OF THE ART SCANNINGSPRAY

MICROSERVICE is distributor of **AESUB** products in Italy. **AESUB** matting sprays allow optical sensors, such as Laser Scanners used with measuring arms, to work with the optimal reflectance avoiding the problems generated when it is excessive or poor. **AESUB** sprays vanish without leaving halos on the material with different timings and not influence the features of the piece to be inspected. They are applicable with easy-to-use spray cans or dedicated spray guns.

CMM MEASURING HEADS, PROBES, STYLI, CALIBRATION SPHERES

MICROSERVICE is the **distributor for the Italian market** of **ITP** products.
In the field of accessories it can supply, from the main manufacturers and with immediate availability, measuring heads, probes, extensions, qualification spheres, styli and many other accessories for dimensional metrology.

CAPPS DMIS, THE UNIVERSAL, PERFORMING AND EASY-TO-USE SOFTWARE

CAPPS DMIS by **AAT3D** is a dimensional metrology software application developed to be scalable upwards. The advanced and modern graphic interface includes a powerful, easy-to-use CAD model with extended capability, and a programming language based on DMIS. CAPPS DMIS can import a wide variety of CAD formats, and provides a flexible reporting environment tunable on customer needs.

During the long-time cooperation with AAT3D, MICROSERVICE costantly supported CAPPS DMIS product evolution and consolidation.
Based on 35 years of continuous growth, CAPPS DMIS pioneered CAD plugin metrology softwares.

CAPPS DMIS
UNIVERSAL METROLOGY SOFTWARE

ADVANCED

GEO CAD +

GEOMETRIC +

POLYWORKS, THE POWERFUL AND VERSATILE MEASURING SOFTWARE

INSPECTORis a software solution for 3D dimensional analysis and quality control of components or tools, able to diagnose and prevent production and assembly problems.

PolyWorks

VERISURF, THE REFERENCE SOFTWARE FOR PORTABLE APPLICATION AND REVERSE ENGINEERING

VERISURF is an American company active since 1998, which started its business providing solutions for the control of aerospace equipment to BOEING. VERISURF was one of the first metrology software to interface Laser Trackers, and subsequently it has progressively developed by extending its application base.

VERISURF
3D Measurement Solutions

TECHNICAL SERVICE & SPARE PARTS

Technical expertise, competitive prices, a relevant spare parts warehouse, top quality equipment and speed of interventions: these are the 5 pillars that make MICROSERVICE **TECHNICAL ASSISTANCE** an unparalleled service that is second to none.

Our care for people and equipment

MICROSERVICE trains constantly his service personnel for providing customers with the highest service quality . MICROSERVICE works with quality equipment: **KOLB & BAUMANN** gauge blocks and step gauges, interferometric lasers API and RENISHAW.interferometrici **API** e **RENISHAW**.

Our mainteinance contracts

Mainteinance contracts allow to grant perfect machinery functionality and efficiency. Careful checks of of the main machine components and safety devices, calibrations, remote assistance, reduced intervention times, consistent discounts for the supply of spare parts and accessories, are the main cornerstones of our mainteinance contracts.

Relocation machine service

MICROSERVICE costantly feeds its warehouse with many items for assuring prompt delivery of spare parts for measuring machines and instrumentation of different brands. We work with suppliers guaranteing short lead times to minimize downtime.

Our spare parts warehouse

MICROSERVICE costantly feeds its warehouse with many items for assuring prompt delivery of spare parts for measuring machines and instrumentation of different brands. We work with suppliers guaranteing short lead times to minimize downtime.

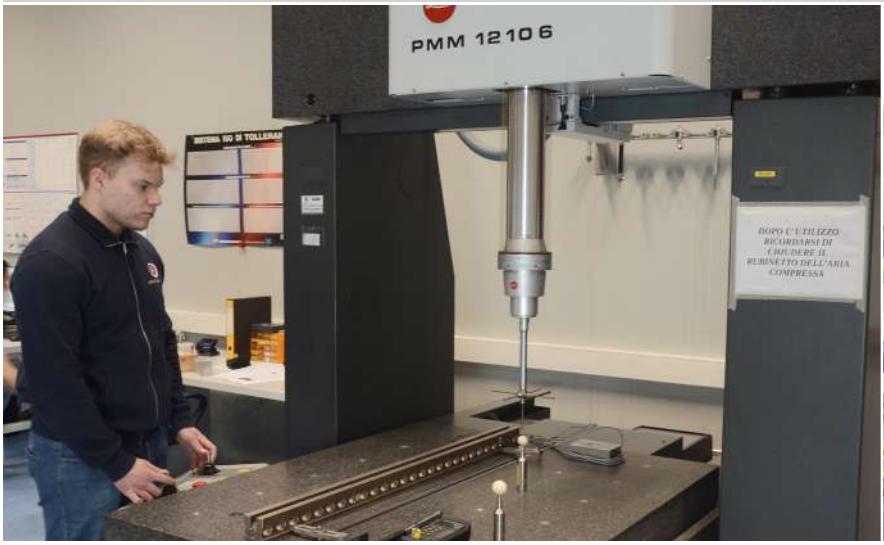
Technical service for Laser Trackers and Articulated Arms

Microservice provides technical services on laser trackers and articulated arms: performs accurate diagnostics, manages the technical relationship with the manufacturer, and ensures customer a perfectly operative tool.

ACCREDIA is the sole national accreditation body appointed by the Italian government attesting the competence, independence and impartiality of certification, inspection and verification bodies, as well as testing and calibration laboratories.

MEASUREMENTS TRACEABILITY

Calibration allows to determine the error of indication of instruments and measuring systems in order to guarantee more accurate and reliable measurements. The calibration process of instruments and reference gauges by accredited laboratories according to **ISO/IEC 17025** standard consists in the comparison with a higher level reference gauge: by this way allows the measurements they produce to acquire the fundamental property of metrological traceability to national or international standards.



ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAT n° 206

MICROSERVICE Accreditation

If requested, MICROSERVICE performs the performance verification providing the related accreditation certificate according ACCREDIA strict rules. For Coordinate Measuring Machines, the **UNI EN ISO 10360-2** standard is applied, and for Articulated Arms the **UNI EN ISO 10360-12**.

ACCREDIA

CERTIFICATO DI ACCREDITAMENTO
Accreditation Certificate

206T REV. 04

DIPARTIMENTO LABORATORI DI TARATURA

Microservice s.r.l.

Laboratorio di taratura (LAT)
Calibration laboratory (CAT)

PERFORMANCE VERIFICATIONS & CALIBRATIONS

By **performance verification** of the measurement system, a snapshot of its metrology performance is provided without acting on any functional parameter of the system itself. By **Calibration**, mechanical interventions, or more generally on error compensation maps, are performed to bring the performance of the measuring system within targeted specifications.

MEASUREMENT SERVICES, APPLICATION SUPPORT & TRAININGS

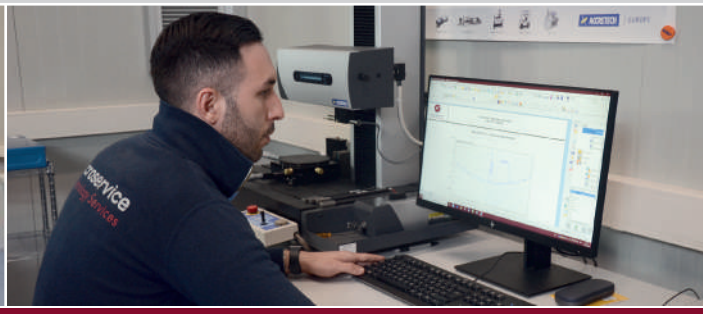
MICROSERVICE is able to provide third party **Measurement Services** for every dimensional control need and for the most varied applications, to all companies that do not intend to purchase of Measuring Machines and reserve related dedicated personnel. The success of this Measurement Service in MICROSERVICE is based on two pillars:

- The application experience of the staff, able to use most of the **Metrological Softwares** used on the market
- The **important investment** made over the years in the Metrological Laboratory, one of the best equipped in Italy today, provided by the most varied metrology instrumentation and **Coordinate Measuring Machines** of different size and types.

OUR METROLOGY LAB

APPLICATION SUPPORT & PART-PROGRAMMING

For customers owning Coordinate Measuring Machines, and needing a top quality **application support**, MICROSERVICE has many years of experience in driving customers in critical phases: can provide skilled people advice and advanced equipment from Metrology Laboratory to help in any situation, as remote part-programming, work alongside customer staff, also during extended time.

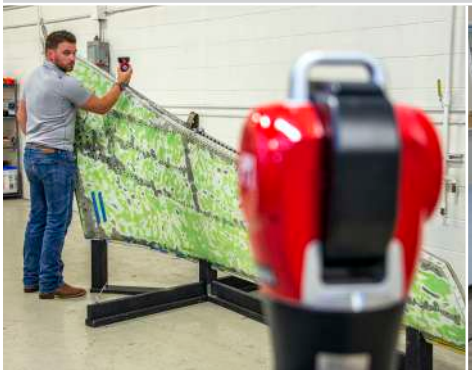


COMPUTER TOMOGRAPHY

MICROSERVICE provides **Computer Tomography services** for analysis of complex assembled components and singles ones for which traditional machines suffer accessibility problems.

IN-FIELD MEASUREMENT SERVICES

- MICROSERVICE offers **Measurement Services** for which the use of a **Laser Tracker** or **Measuring Arm** is required, directly at the customer's premises. Some examples:
- On-site measurements of large components
- Validations
- Measurements of components during their manufacturing process
- Verifications of large structures during assembly operations.
- Verifications of layout of manufacturing lines during their setting-up.
- Reverse Engineering of manufacturing environments and of components



TRAINING

MICROSERVICE makes its expertise in industrial and coordinate metrology available to clients. Courses are administered in three different modes (remotely, in-person at own site, in-person at customer site).

MICROSERVICE has ISO9001 sector EA37 certification for the delivery of training courses. Thanks to this certification, clients who conduct courses with MICROSERVICE can therefore verify that they have the possibility to access subsidized financing funds dedicated to such activities.

Software training

MICROSERVICE can directly support customers in the use of Measurement Software, providing specific courses.
With MICROSERVICE courses, customers' staff can face the world of dimensional metrology knowing that they can count on a partner who can follow them in their full learning curve.

Metrology training

MICROSERVICE Metrology courses allow customers to base dimensional checks on solid regulations and to manage disputes and quality problems with objective methods. With our courses, even small companies are able to process their quality control and face the most demanding customers.

microservice

3D Metrology Solutions

The ideal metrology partner for
your company

micro3d.it

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ISO 9001

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