



coordinate measuring machines

**COORD**<sup>3</sup>  
INDUSTRIES



Coord3 Industries returns to direct market sales with three decades of experience in the design, production and sale of coordinate measuring machines.

Since 1973, the Coord3 name is synonymous with measuring machines of superior mechanical construction, serviced by an efficient organization that can ensure assistance and technical support.

Coord3 Industries designs, builds and distributes directly the entire range of Coord3 measuring machines, from small bridge systems to large gantry systems.

A total of over 2,400 measuring machines installed all over the world is proof of our position of excellence in Italian CMM production.



Some of Coord3 industries main Customers:

- ALCOA
- ALENIA
- ALFA LANCIA INDUSTRIALE
- ALLGAIER WERKE
- AMADA LTD.
- AUDI
- BERTONE
- BMW
- BOSCH
- CAGIVA
- CARROZZERIA BERTONE
- CATERPILLAR
- CENTRO RICERCHE FIAT
- CHARMILLES TECHNOLOGIE
- CHERY AUTOMOBILE CO. LTD.
- COMAU
- DALMINE
- DONGFENG MOTOR CORP.
- EATON
- EMARC
- ENEA BRASIMONE
- FAGCC
- FASA-RENAULT
- FATA ALUMINIUM
- FAW HAINAN
- FERROVIE DELLO STATO
- FIAT AVIAZIONE
- FIAT AUTO
- FORD
- G. AGUSTA
- GOODYEAR
- HI-TECH MOLD
- IDEA
- ITALDESIGN
- IVECO
- JOBS
- KARMAN STAMPOSTECH
- KIKUCHI
- LAMIER
- LANDRA
- LEAR CORPORATION
- MAGNA
- MAGNETI MARELLI
- MAKINO
- MATRA MARCONI SPACE
- NUOVO PIGNONE
- PEUGEOT CITROEN AUTOMOBILE
- (DONGFENG)
- PIAGGIO
- PININFARINA
- RANGER ITALIANA
- RENAULT
- SAFILO
- S.C.M. GROUP
- STOLA
- SWAROVSKY
- TELCO
- TEXTRON AUTOMOTIVE
- TRW AIR BAG SYSTEMS
- UTIL INDUSTRIES
- VOLKSWAGEN
- WHIRLPOOL EUROPE
- ZDAS



Coord3 Industries supplies OEM to Metris, EROWA AG, ZEISS





## CMM Bridge

The perfect type of CMM in the small-to-medium size segment. The bridge system is the optimal solution for smaller volumes, guaranteeing an excellent cost/performance ratio with the undeniable advantage of an incorporated work surface. Coord3 Industries offers a complete range of bridge CMMs, from the "small" Eos (also available in a manual version) to the "large" Kronos series.

All Coord3 Industries Bridge CMMs are built using the most avantgarde construction technology and can be fitted with a vast range of probes (point-to-point, contact probes and laser scanners) as well as manually and motorized fixed indexable probe heads.

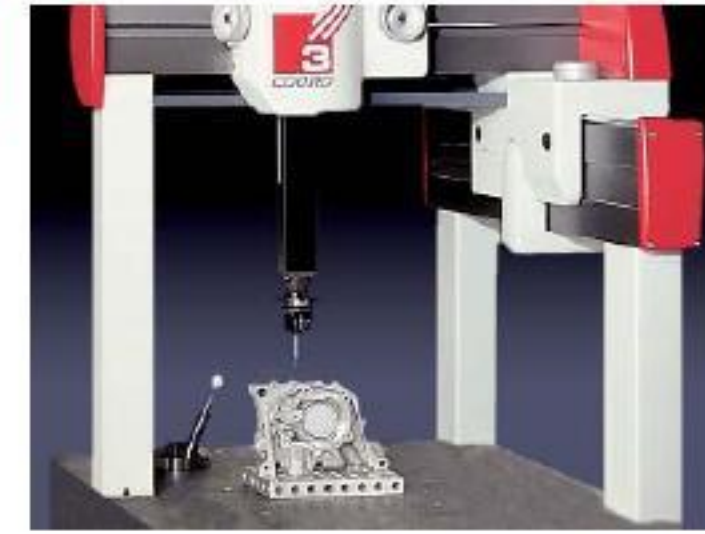
Model	Measuring strokes (mm)		
	X Axis	Y Axis	Z Axis
Eos	500, 600	400, 500	440
Ares	700, 1000	650	500
Hera	700, 1000, 1200, 1500, 1800, 2000	700, 850, 1000	500, 700, 850
Kronos	2000, 2500, 3300, 4000	1300, 1500, 2000	1000, 1300, 1500



Eos

The Eos series is the "baby" of the Bridge CMM range. Available both in a motorized and a manual version, it is notable for its sturdy build and its ergonomic design, which helps both installation and operation. The Eos series is the ideal solution for measuring small mechanical parts, plastic components and complex mechanical components, and has a presetting for EDM.

- Portable semi-gantry structure with granite surface incorporated.
- Large Z axis ram in light aluminum alloy.
- Mobile bridge in light and sturdy aluminum alloy for greater and more flexible performance.
- Zero hysteresis friction drive for smooth and repeated movements.
- Measurement system using high resolution transducer lines with a purpose-built retaining substrata system to avoid distortions caused by machine expansion.
- Also available in manual version or version with unlocking independent axes for both manual and motorized use.



Ares

The Ares series is Coord 3 Industries' entry level bridge CMM. "Ares" systems are automatic, flexible and compact measuring instruments that can be fitted with manual and automatic probe heads.

The Ares series is equipped with point-to-point probes which can be used in various applications, both for a final examination, for the inspection of production equipment and production process testing.

- Portable trolley shape with granite work surface incorporated.
- Large Z axis ram in light aluminum alloy.
- Mobile bridge in light and sturdy aluminum alloy for better and more flexible performance.
- Zero hysteresis friction drive for smooth and repeated movements.
- Measurement system using high resolution transducer lines with a purpose-built retaining substrata system to avoid distortions caused by machine expansion.

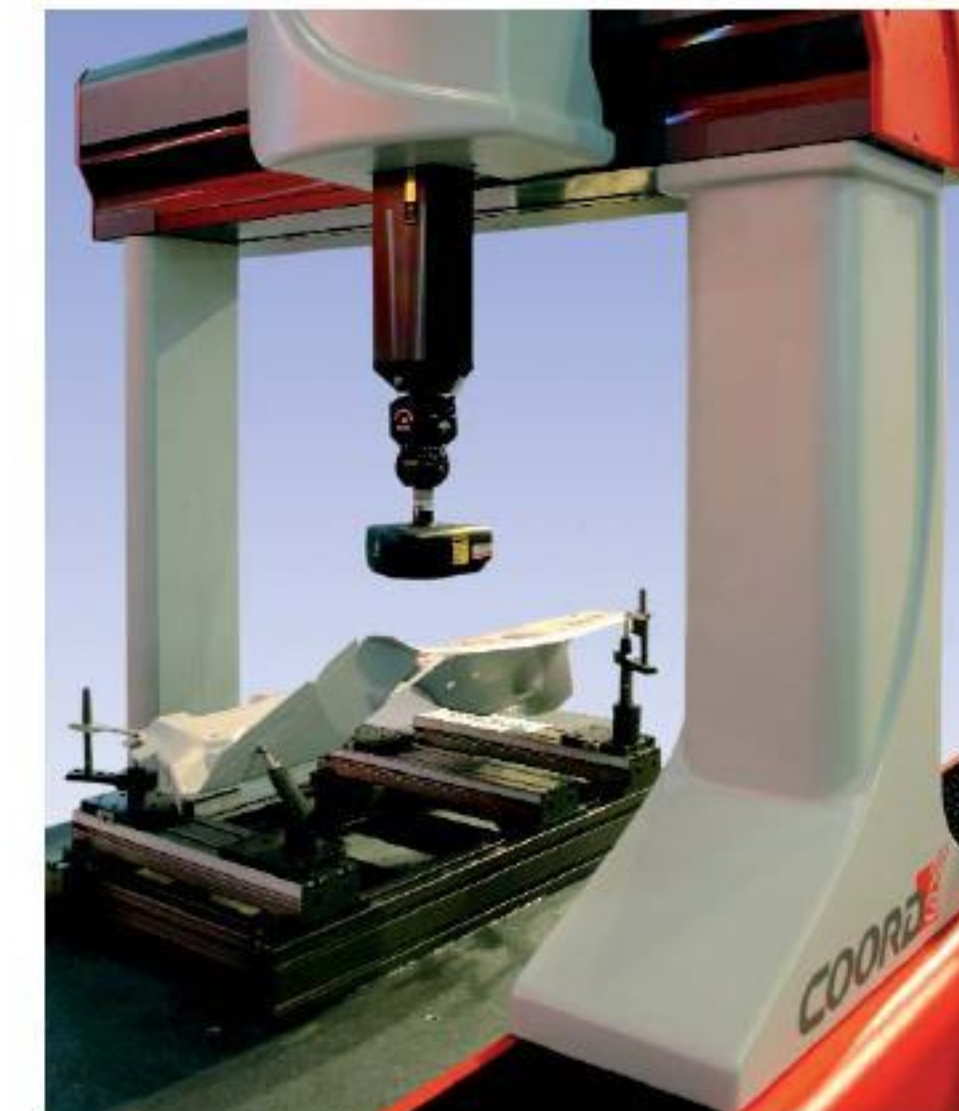


Hera

The Hera series is at the core of Coord3 Industries' bridge CMM range.

Hera systems, designed with the most advanced CAD design techniques, are flexible and precise instruments, able to carry out measurements both in point-to-point mode as well as continuous measurements with contact sensors and lasers. The Hera series has a wide range of measurement sections, with multisensor temperature compensation for use in manufacturing environments.

- Worktop structure with granite work surface incorporated, three ground supports.
- Large Z axis ram in light aluminum alloy.
- Mobile bridge in light and sturdy aluminum alloy for greater and more flexible performance.
- Combined toothed belt and zero hysteresis friction drive operating system for smooth, repeated movements.
- Measurement system using high resolution transducer lines with a purpose-built retaining substrata system to avoid distortions caused by machine expansion.
- Multisensor temperature compensation, with part temperature probe.
- Available both with point-to-point probes or analog contact probes, as well as analog and digital laser scanners.



Kronos

The series of bridge CMMs designed to measure large-scale objects.

An alternative to traditional Gantry machines for high precision measurement of mechanical parts, without the need of specially constructed foundations.

Its robust construction and its complete safety system, with guards and bellows, ensure that the Kronos series can operate in various different types of production environments, from Metrology Rooms to manufacturing areas.

- Worktop structure with granite work surface incorporated, three ground supports.
- Large Z axis ram in light aluminum alloy.
- Mobile bridge in light and sturdy aluminum alloy for greater and more flexible performance.
- Combined ratchet pinion and zero hysteresis friction drive operating system for smooth, repeated movements.
- Measurement system using high resolution transducer lines.
- Multisensor temperature compensation, with part temperature probe.



## CMM Gantry

Gantry Coordinate Measuring Machines guarantee excellent metrological performance when measuring large-scale objects. Gantry machines are notable for their unique build.

The main structure (pillars and longitudinal guideways) remains stationary and fixed to the foundation basement, while only the main carriage moves.

Gantry architectures minimize errors of inertia and distortions in shape, guaranteeing excellent metrological performance even when large volumes are measured.

Gantry CMMs allow operators to have total accessibility to the work area both during loading and unloading of parts, as well as during the programming process.

Gantry CMMs are ideal precision tools for the aeronautical, aerospace and automotive sectors.



Coord3 Industries offers a complete range of Gantry CMMs, based on three product lines, each designed to guarantee the best price/performance ratio:

**Athena:** a compact, simple and precise Gantry system

**MCT StarLight:** an all-round higher performance Gantry system

**MCT Plus:** a Gantry system designed for very large objects

Model	Measuring strokes (mm)		
	X Axis	Y Axis	Z Axis
Athena	3000, 4000, 5000, 6000	2000, 2500	1000, 1500
MCT Star Light	2500, 3000, 3500, 4000, 5000, 6000 <sup>*)</sup>	1500, 2000, 2500	1000, 1300, 1500, 1800, 2000
MCT Plus	5000, 6000, 7000, 8000 <sup>*)</sup>	2500, 3000, 3500	2000, 2500

<sup>\*)</sup> extended X stroke available on request



Athena

A medium-sized Gantry CMM, designed to combine measuring capabilities, operating reliability and reduced maintenance requirements.

The Athena range is a flexible system, created for the inspection of large casts and large-scale mechanical parts. The Athena series is also available in a version equipped with a "Dual Reader" on the X longitudinal axis.

- Guards and bellows on longitudinal (X) and transversal guideways (Y) protect the system from possible contamination present in the installation site.
- X axis slides on air bearings and linear motion guide with circulating ball pads .
- X strut with large transversal section made of stabilized steel and equipped with pillar support system which allows its linear expansion without risking stress or distortions.
- Multiprobe temperature compensation system, including manual part probe (optional).



MCT StarLight

MCT StarLight is the range of medium-to-large Gantry CMMs, notable for its excellent structural stability and its flexibility, in that it can be configured according to the requirements of specific applications.

The MCT StarLight series is also available in versions with "Dual Reader" systems on the longitudinal X axis and in a "Monolithic" version. The "Dual Reader" system guarantees excellent metrological performance even in the case of large transversal strokes (up to 3000 mm). In the case of the "Monolithic" version, as the pillars are supported by a sturdy steel base, this allows installation without the need for purpose-built foundations.

- Generous distance between bearings for optimum mechanical rigidity.
- Guideways with air bearings for precise and smooth movement.
- X struts with large transversal section in stabilized steel, equipped with pillar support system which allows linear expansion without risking stress or distortion.
- Main Y carriage with high rigidity and exclusive tubular steel structure.
- Z ram in extruded aluminum alloy guarantees stability and minimizes inertia.
- X/Y guideway axes in ground high resistance epoxy resin (roughness 0.4 µm).
- X and Y axes with ratchet/pinion scanning system for precise and repeated movement.
- Measuring system with high resolution linear transducers (0.1 µm).
- "Dual Reader" system on longitudinal X axis.
- Multiprobe temperature compensation system, including manual part probe (optional).



MCT plus

MCT Plus is a large-scale Gantry CMM created for industrial measuring applications. Its special structure, the "Dual Drive" operating system and "Dual Read" system on the struts limit structural distortion during movement, guaranteeing metrological performance to the highest standards in its class.

"MCT plus" systems excel when inspecting large-scale components, such as ship engines and transmissions, aeronautical structures, rotors and components for nuclear and thermal power plants and wind turbines, as well as turbines that require the use of open and custom-built structures as required by the Customer.

- Wide distance between bearings for optimum mechanical stability.
- Guideways with air bearings for precise and smooth movement.
- X and Y axes with ratchet/pinion scanning system for efficient movement of the main axes.
- X struts with large transversal section in stabilized steel, equipped with pillar support system which allows linear expansion without risking stress or distortion.
- Measuring system with high resolution linear transducers (0.1 µm).
- "Dual Reader" system on longitudinal X axis.
- "Dual Drive" system on main X carriage.
- Multiprobe temperature compensation system, including manual part probe (optional).



## Horizontal Arm



Horizontal arm CMMs are the ideal solution to measure thin-walled components, such as car bodies, panels, doors, vehicle glass, dashboards and for the inspection of mechanical parts such as engine blocks, gearboxes, casts, and aeronautical and automotive components. All horizontal arm systems are available both in single and dual arm versions.

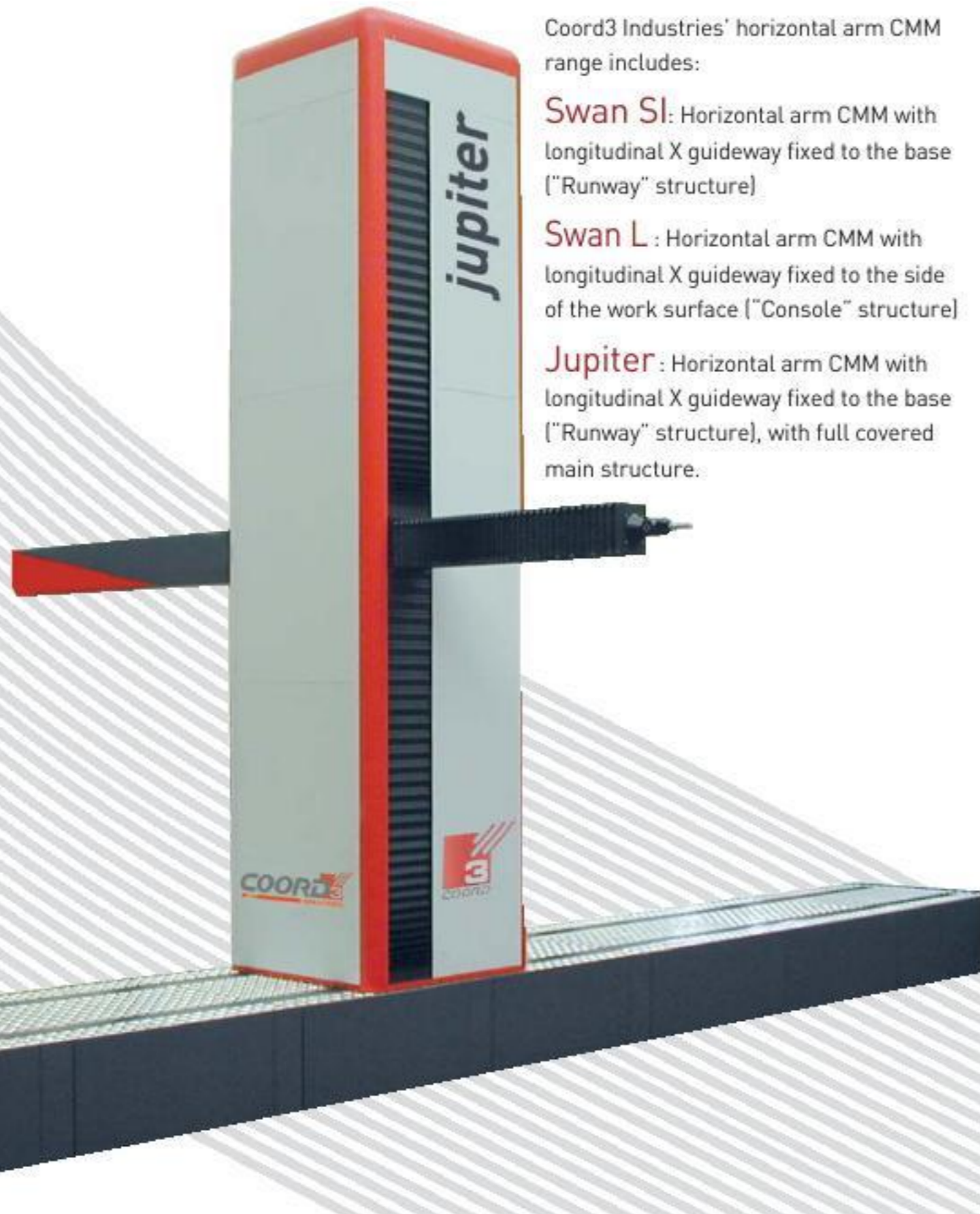
Model	Measuring strokes (mm)		
	X Axis	Y Axis	Z Axis
Swan SI	3000, 4000, 5000, 6000 <sup>1)</sup>	1200, 1500, 1600	1200, 1500, 2000, 2500
Swan L	2000, 3000, 4000, 5000, 6000	1200, 1500	1500, 1800, 2000
Jupiter	5000, 6000, 8000 <sup>1)</sup>	1400, 1600	2000, 2500, 3000

Coord3 Industries' horizontal arm CMM range includes:

**Swan SI:** Horizontal arm CMM with longitudinal X guideway fixed to the base ("Runway" structure)

**Swan L:** Horizontal arm CMM with longitudinal X guideway fixed to the side of the work surface ("Console" structure)

**Jupiter:** Horizontal arm CMM with longitudinal X guideway fixed to the base ("Runway" structure), with full covered main structure.



Swan SI

The Swan SI series is available in a "Runway" structure, with the main guideway attached to the floor. Runway structures are extremely modular and simple to operate, guaranteeing all the flexibility and programmability of CMM machines, as well as speed and the intuitive use of traditional measurement gauges. The light and robust carriage, built entirely of light aluminum alloy, as well as the double mechanical guideway with air bearings on the X strut, guarantee reliability, precision and quick measurement.

The Runway structure with separate X strut and protective walkable covers ensures easy installation at ground level, creating a perfectly clear workspace which helps access to the work in hand by operators. Swan SI machines are equipped with independent disengageable axis motors and breaks with manual movement mechanism.



Swan L

The Swan L series is available in a "Console" structure, where the main guide is attached to the side of a sturdy cast iron work surface, incorporated in the machine. "Console" systems, with work surface incorporated, are extremely modular and simple, guaranteeing all the flexibility and programmability of CMMs, as well as speed and intuitive use of traditional measurement gauges.

The light and sturdy movable carriage, entirely built of light aluminum alloy, and the double mechanical guideway with air bearings on the X axis, guarantee reliability, precision and quick measurement. The Console structure with incorporated work surface often avoids the need of costly foundation construction.



Jupiter

The Jupiter series is available in a "Runway" structure, with the main guide fixed to the floor. Jupiter range systems are horizontal arm CMMs notable for high performance, designed to tackle efficiently and solve the challenges posed by industrial measurement.

The open structure, which can be installed at flush-floor level, the walkable covers which protect the X guideways, as well as the entirely insulated structure, guarantee maximum accessibility of the measurement space and simplify loading and unloading operations, and allows its use directly in manufacturing areas. The sturdy mobile carriage, entirely built of light aluminum alloy, the double mechanical guideways with air bearings on the X axis guarantee reliability, precision and quick measurement.





## Services

Coord3 Industries offers a wide range of pre-sales and after-sales services, in order to guarantee as much as possible the optimum operation of our customers.

- **SIT CENTER:** calibration services and SIT certification, in line with ISO 10360-2
- **RETROFIT:** electronic, mechanical and software upgrades
- **MAINTENANCE:** maintenance contracts and constant inspections
- **MEASUREMENT:** measurement, digitizing and reverse-engineering services
- **RELOCATION:** movement and relocation of CMMs

### SIT CENTER N.138

Coord3's SIT (Italian Calibration Service) CENTER is qualified to carry out performance tests on all types of CMM, in line with international ISO 10360-2 standards.

A correct metrological calibration of measurement equipment guarantees:

- The possibility of referring measurements to national samples
- Evaluation of measurement variables
- The possibility of repeating and reproducing results
- The compliance of data with SIT standards

### RETROFIT

Upgrading an existing CMM system means reducing maintenance costs and prolonging its use, safeguarding the original investment. Given the constant improvement in electronic components, the updating or replacement of the control system can significantly improve the performance of a CMM, as well as reduce the costs incurred when machines break down. Moreover, upgrading software makes the most recent developments in measurement programs available (graphic reports, CAD data import/export, offline programming, the latest in heads and measurement sensors), guaranteeing a noticeable improvement in productivity and a greater flexibility of the CMM.

### MAINTENANCE

Modern quality standards require that testing and measurement instruments must be subject to constant and in-depth maintenance and calibration work. Timely maintenance work allows an accurate inspection of the main components in a CMM, guaranteeing its correct functioning. Coord3 Industries offers a whole range of maintenance contracts and constant inspections, worked out according to the specific needs of our customers, guaranteeing reliability and the maintaining of optimal performance.

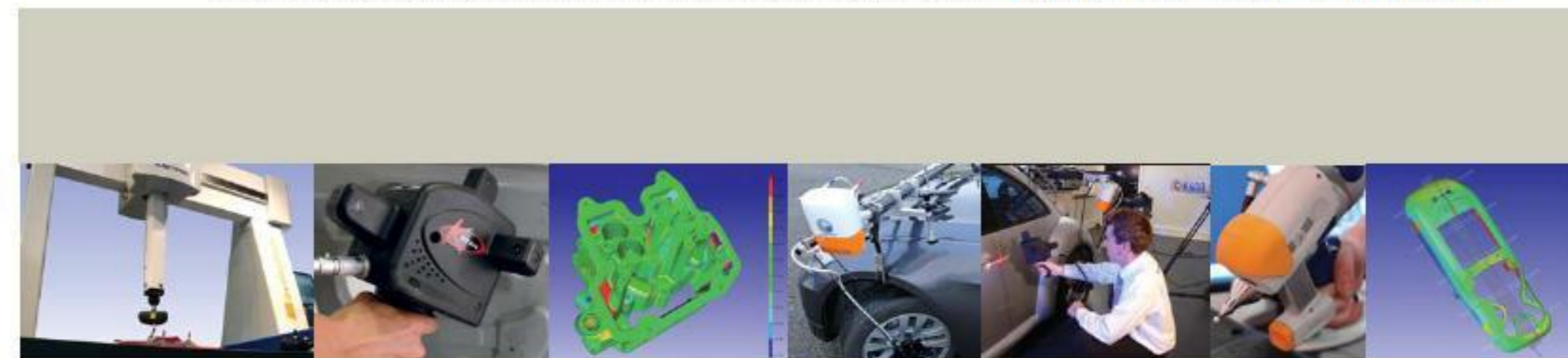
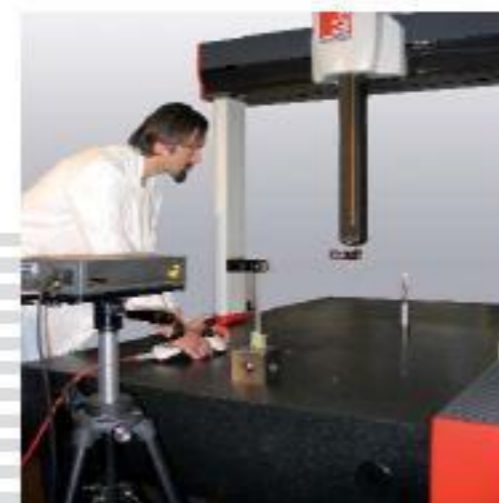
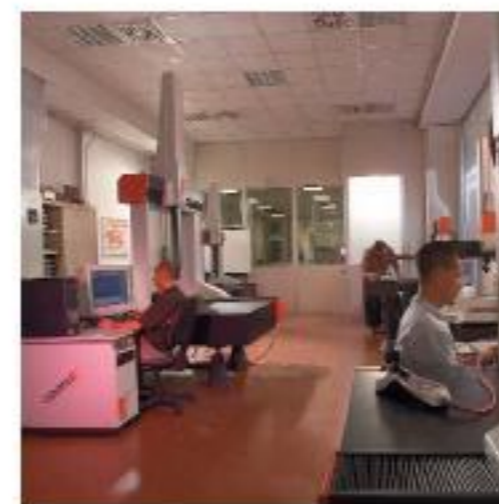
### RELOCATION

A CMM is a technologically complex system which requires extra care and attention when being moved or relocated. Incorrect packing or an unsteady clamping down system can cause serious (and costly) damages, such as the breakage of buffers, bearings, distortion of guides and oxidation of exposed surfaces. Coord3 Industries, wherever necessary, takes care of dismantling the machine, its correct packing and protection from the elements, the correct clamping down of movable parts and suggests the most appropriate procedure for moving the machine.

### MEASUREMENT SERVICES

Coord3 Industries offers the following services in its workshops:

- Inspection of the first set of samples
- Digitization of unknown sculpted surfaces
- Comparison of mathematical models and real objects, and issue of an inspection report
- Reconstruction of mathematical models using point clouds and reverse-engineering
- Measurement on behalf of a third party, and issue of an inspection report
- Training courses in CMM metrology and programming
- Programming on behalf of third parties



Metris designs, develops and markets a unique range of 3D hardware and software inspection systems servicing design and manufacturing industries. The company's reliable and innovative metrology solutions cover the full range of measurement volumes required by automotive and aerospace customers, in both fixed and portable configurations and with optical and touch sensors.

Metris provides best-in-class precision equipment and metrology solutions for precise measurements featuring classical CMMs and articulated arm CMMs. Metris is the market leader for CMM based laser inspection, with the Metris LC and XC laser scanners offering full surface and feature measurement.

Metris Optical CMMs are portable, handheld coordinate measuring machines, with a proven track record in engineering, pre-production and quality control applications. The Optical CMMs can also be used in motion analysis and robot calibration applications.

Metris ModelMaker 3D scanners are the best-in-class articulated arm scanners for inspection and reverse engineering.



The Metris Laser Radar is the top solution available to the manufacturing industry that provides a fully automated, noncontact measurement and inspection capability for large-volume applications of up to 60 meters.

The Metris iGPS is a modular, large volume tracking system enabling factory-wide localization of multiple objects with metrology accuracy, applicable in manufacturing and assembly.



Metris also provides a full range of complementary software solutions for CMM and point cloud based inspection and reverse engineering applications.

Metris headquarters are located in Leuven (Belgium) with production and development sites in the United Kingdom (Derby, London), in Italy (Verona), in the USA (California, Detroit, Virginia), China, Russia and Bulgaria.

Metris offers an international sales and service network, with offices in Europe, Asia and the United States.

RELIABLE AND INNOVATIVE METROLOGY SOLUTIONS



Full list of Agents & Distributors available at [www.coord3.it](http://www.coord3.it)

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WITH QUALITY SYSTEM  
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=ISO 9001/2000=

**COORD**<sup>3</sup>  
INDUSTRIES



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