



Brown & Sharpe GLOBAL Silver  
Coordinate Measuring Machines

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brown & sharpe



**HEXAGON**  
METROLOGY









## VISIBLY PRODUCTIVE

When you invest in a coordinate measuring machine, the crucial factors are high accuracy and productivity. With the new Brown & Sharpe GLOBAL Silver edition you can scan up to 35% faster than with previous generations of Brown & Sharpe GLOBAL models. At the same time, the Brown & Sharpe GLOBAL Silver makes no compromises in matters of accuracy.

Experience the higher throughput of the Brown & Sharpe GLOBAL Silver edition! It has been achieved through optimised motion algorithms, enhanced software and a new electronic controller. The result: smoother and faster scanning measurements.

The new electronic controller sets the pace: state-of-the-art hardware and firmware technologies guarantee faster computation and data transmission as well as more efficient multi-tasking processing – for top machine performance.

Scanning made easy with PC-DMIS Adaptive Scanning

The enhanced productivity of the Brown & Sharpe GLOBAL Silver also relates to part programming. The new function PC-DMIS Adaptive Scanning allows you to reach best scanning performance – easy and efficient. Simply enter the tolerances of the features of your part into the PC-DMIS form and leave the software work it all out. PC-DMIS Adaptive Scanning calculates the optimum scanning parameters all by itself – even for complex measuring processes. Make measurement programming easy with PC-DMIS Adaptive Scanning.

Productivity through automation  
Manual and automatic loading and unloading systems or handling robots can be combined effortlessly with the Brown & Sharpe GLOBAL Silver. Whether it's simply a matter of improving measurement operations between the production cycles or fully integrating a CMM into the manufacturing process, a team of highly experienced engineers is at your service to work out the optimum solution according to your application.



### Inspection without interruption

Make full use of the enhanced throughput and versatility of the Brown & Sharpe GLOBAL Silver right on the production floor: The new laser scanners Safety-Kit maximizes system efficiency and ensures safety during unmanned measuring processes. The system manages two different areas: it slows down the CMM when anyone enters a predefined warning zone. The Brown & Sharpe GLOBAL Silver returns to full speed automatically as soon as the area is free again – without any intervention by the operator. Vice versa, the CMM immediately stops when the so-called safety area is entered by anyone.



## BROWN & SHARPE GLOBAL SILVER SF: WHERE THE ACTION IS

Brown & Sharpe GLOBAL Silver SF proves its flexibility in any environment. Neither rapid temperature changes, vibrations nor dirt can degrade the reliability of this CMM. This model offers you the best accuracy even in harsh production environmental conditions.

The Brown & Sharpe GLOBAL Silver SF ensures accurate results even in a temperature range of 15 to 30 °C. The concept: A network of thermal sensors precisely detects the temperature on the CMM frame and on the workpiece. Advanced structural thermal compensation algorithms compensate in real-time for temperature-induced machine and part deformations. CTE-certified optical scales minimize measuring errors in temperature conditions far from 20 °C by determining sensitive improvements in machine metrology performance.

In addition, the Brown & Sharpe GLOBAL Silver SF provides extra protection against dirt and dust by means of bellows and guards on the X and Y axes. Various options are available to ensure the CMM is fit for even the most demanding conditions on your shop-floor. These include for example active vibration dampers to enhance the protection of the measuring system from vibrations. To shield electronic devices, PCs and peripherals against environmental influences industrial cabinets can be used.



### PC-DMIS STI+

The suitability of the Brown & Sharpe GLOBAL Silver SF for the production floor is also backed up in the software: PC-DMIS STI+ (Single Touch Interface) greatly simplifies production floor inspection as it allows adding simplified custom front ends to PC-DMIS. PC-DMIS STI+ can make your measuring machine as simple as a go/no go dedicated gage while still keeping the flexibility and the capabilities of a sophisticated CMM. It allows even less experienced CMM users to execute measuring programs quickly and easily, generate graphical reports etc. without interacting with the complete PC-DMIS software.



## MEASURE IN COMFORT

As well as performance we also have your comfort in mind in our development of the new Brown & Sharpe GLOBAL Silver. We have made the way to obtaining meaningful measurement results as comfortable and convenient as possible for you.

The new Brown & Sharpe GLOBAL Silver therefore comes equipped with the new Universal JogBox (UJB). It has been designed to withstand the rigors of industrial use with improved resistance to drops and shocks.

**Ergonomic and intuitive**  
Thanks to its ergonomic design and intuitive-to-use colour touch screen the UJB offers flexibility and multiple configurations. Self-explanatory symbols make the UJB a suitable tool across many

languages. The touch screen layouts have been developed to best suit your need for ergonomics during extensive CMM usage. For example, we designed special screen pages with more widely spaced buttons for gloved-hand operations.

The PC-DMIS-capable version of the UJB interacts directly with the PC-DMIS software via Bluetooth. This way the need to move back and forth between CMM, computer screen and keyboard is considerably reduced, workflow operations are highly optimised.



### Technical Highlights

- 3.5" LCD colour touchscreen
- Protection class IP54
- Right- and left-handed operation
- Open F/W architecture for high flexibility

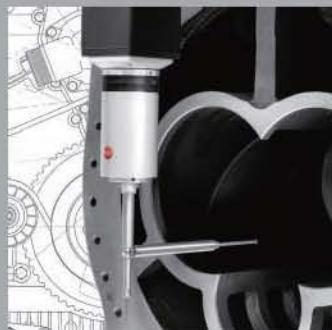


## THINK GLOBAL: HEXAGON METROLOGY PROBING SYSTEMS

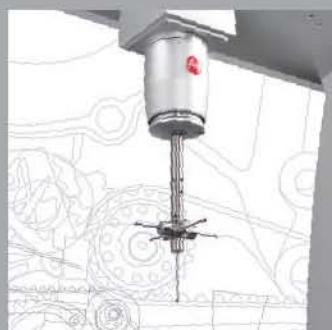
Would you like to measure parts using tactile scanning? And do it right on the production floor? Do you manufacture parts such as plastic or soft components, for which only laser sensors could be used? Then the Brown & Sharpe GLOBAL Silver is the answer.

Touch-trigger TESASTAR probes or High-Speed-Scanning Leitz sensors – the application determines the sensor. The latest new member of the Hexagon Metrology sensor family, the CMS106 laser sensor, opens up further fields of application for the Brown & Sharpe GLOBAL Silver.

### FIXED SCANNING PROBE HEADS



The LSP-X5 from Leitz is a 3D fixed scanning probe head. Even with extremely long probe extensions and heavy stylus configurations – up to 500 mm in length and up to 500 g in weight – very high accuracy and repeatability is guaranteed. The LSP-X5 features a proprietary anti-collision system for extra protection of the probe head. It is the ideal tool for verifying high accuracy mechanical parts and complex geometries.



The LSP-X3c is a compact, cost-effective but extremely accurate 3D scanning probe head. It can carry up to 360 mm long probe extensions and stylus configurations.



The LSP-X1c represents the next step in the miniaturization of the proven Leitz scanning technology. It allows for flexible and accurate measurements in an extremely broad range of applications. The LSP-X1c supports all standard probing modes such as Single Point Probing, Self-Centering as well as Continuous High-Speed-Scanning for fast and accurate form and profile measurements.



## INDEXABLE PROBE HEADS



TESASTAR-m and TESASTAR-sm are motorized indexable probe heads, capable of indexing in 5° increments. This translates to a total of 2.952 positions in the measuring volume. These probe heads also feature high speed indexing - faster than similar products. The version TESASTAR-sm can be mounted inside the Z-ram of the CMM.

## TOUCH-TRIGGER PROBES



TESASTAR-p and TESASTAR-mp are compact 5-way touch-trigger probes. You can choose from four trigger forces: low, standard, medium or extended force. TESASTAR-mp consists of two parts: the sensor body and the stylus holding module. The modules can be quickly changed in manual or automatic mode through a highly accurate and repeatable magnetic isostatic clamping system – without the need for requalification.

## ANALOGUE PROBES



LSP-X1 is a highly accurate 3D scanning probe and compatible with indexable probe heads such as the TESASTAR-m. The probe offers both Single Point Probing and Continuous Scanning. There are different versions available suitable for various stylus lengths.

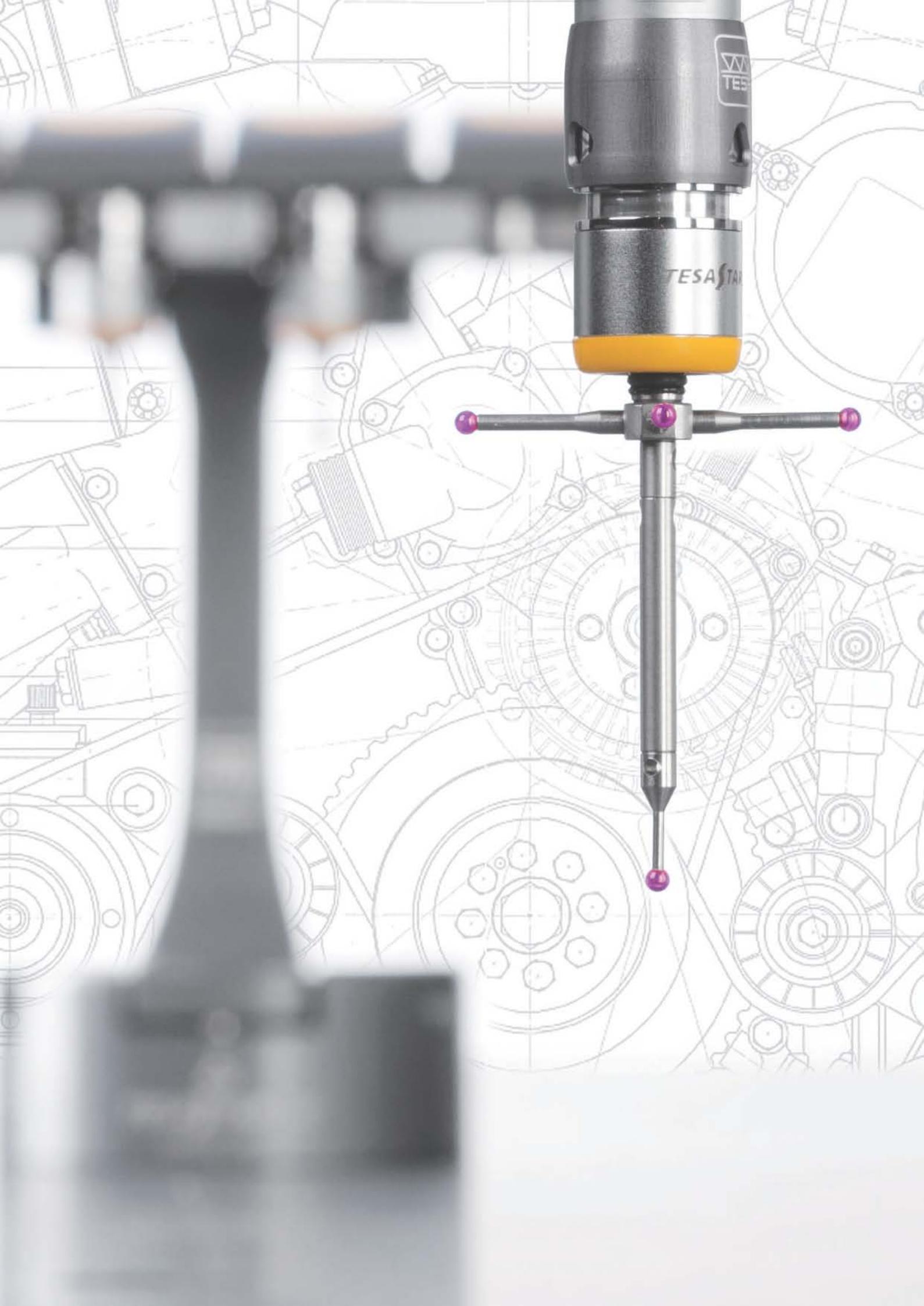
## LASER SENSOR

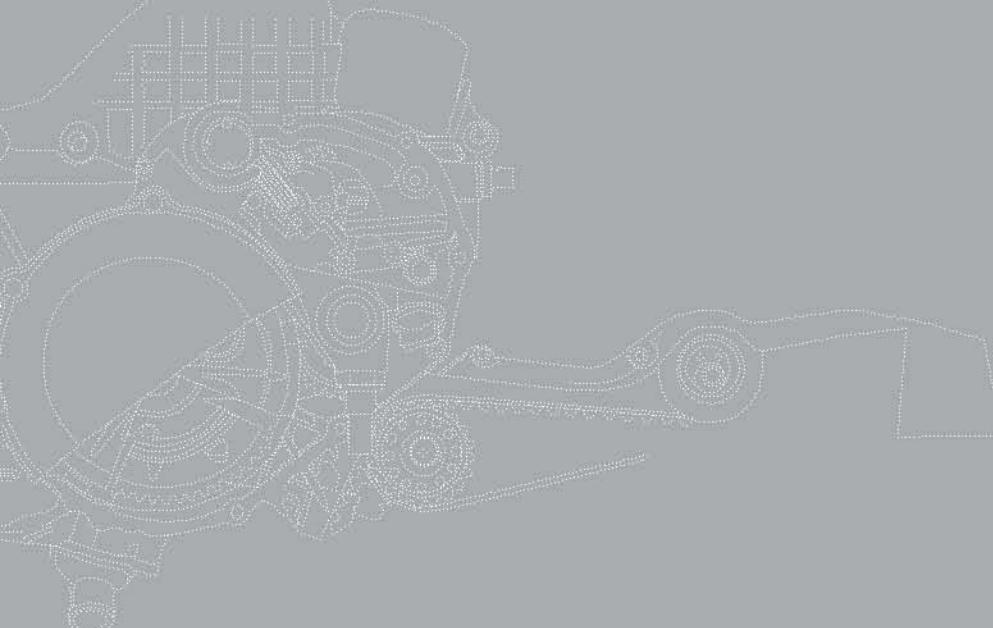


The CMS106 is a high-precision fully automatic laser line sensor. The highlights:

- Three level zoom with a laser line of either 24, 60 or 124 mm
- Automatic, real-time laser power adjustment

This laser sensor provides more measuring data in less time, reliable and reproducible results plus a high measuring acceptance angle of +/- 60° even on machined surfaces. It is suitable for measuring almost any material, including machined, semi-finished, stamped, forged, cast, painted metals, sand cores, carbon fibre, plastics, clay, rubber, wood and ceramics.





## UNIQUE FLEXIBILITY

With various probe and software configurations, models for the measuring room as well as for the production floor, and a variety to suit a broad palette of applications – the choice is yours with the Brown & Sharpe GLOBAL Silver.

### Brown & Sharpe GLOBAL Silver Classic



Cost-effective solution for standard measurement and inspection applications

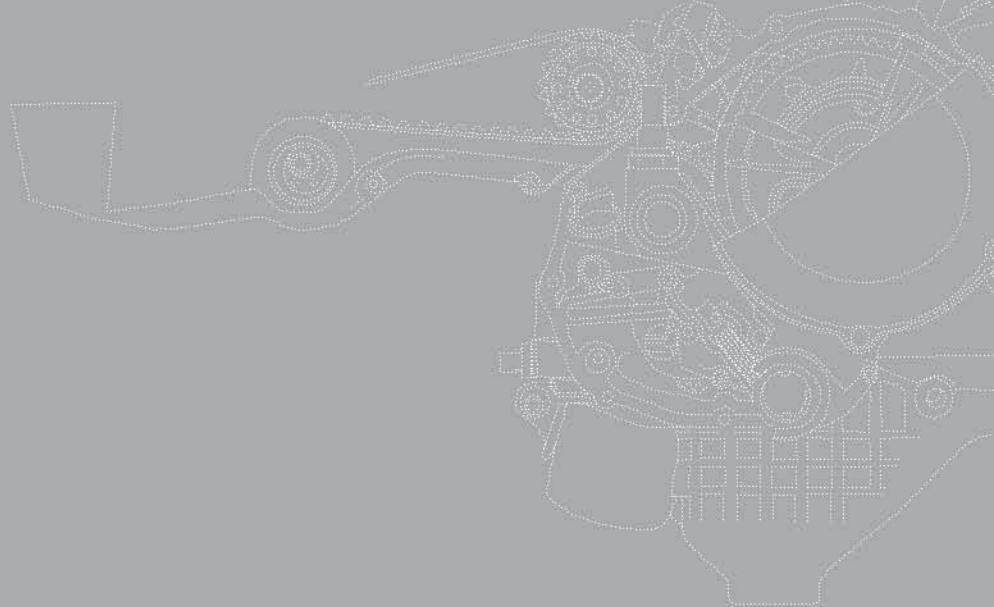
- General mechanical and prismatic parts
- Initial-sample tests, process checks, inspections of fixtures
- Point-to-point and optional scanning configurations
- Optional: CLIMA temperature compensation

### Brown & Sharpe GLOBAL Silver Advantage



Highest throughput and accuracy without compromise

- For any measurement and inspection task: dimensional check of high-precision prismatic parts, inspection of complex geometries such as turbine blades, gears and screw-type compressors
- Top level dynamics and accuracy
- Multi-sensor technology: full range of tactile and non contact sensors, high accuracy fixed scanning probe heads, also for long extensions and complex stylus configurations
- Models up to 15xx:14 and 20xx:18 for inspection of very large parts
- Optional: Safety-Kit
- CLIMA temperature compensation



## Brown & Sharpe GLOBAL Silver Performance



Enhanced flexibility and metrology performance at an affordable price

- Wide range of measurement applications, from prismatic to complex geometries or free-form parts
- Multi-sensor technology: touch-trigger, scanning and non-contact sensors, fixed scanning probe heads for high-precision form error measurements
- CLIMA temperature compensation

## Brown & Sharpe GLOBAL Silver SF



The ideal solution for dimensional inspection in production environments

- General measurement applications on the shop-floor, including production start-up checks, feature-oriented process control, inspection of fixtures etc.
- Top level accuracy in temperature ranges of 16-26 °C and 15-30 °C
- Structural multi-sensor temperature compensation
- Protection bellows on the X and Y axes
- Optional:
  - PC-DMIS STI+ interface for simplified handling
  - Active vibration dampers
  - Safety-Kit
  - Cabinet for electronics, PCs and peripherals

## THE MINI-TO-MAXI-CMM



No matter how small or big your work-piece is: Brown & Sharpe GLOBAL Silver accommodates them all with measuring volumes as small as 500 x 500 x 500 mm up to very spacious models.

New to the line: the 20.xx.18 models which enhance the range of the 15.xx.14 and 20.xx.15 models. They accommodate large and heavy work pieces. Special foundations are not required.

All models feature multi-sensor technology: They allow the use of touch-trigger probes as well as analogue or laser scanning sensors in the same measuring cycle. For unlimited access to hard-to-reach features, these multi-purpose CMMs can also be equipped with Brown & Sharpe's exclusive CW43L-mw servo wrist that supports probe extensions up to 570 mm of length.





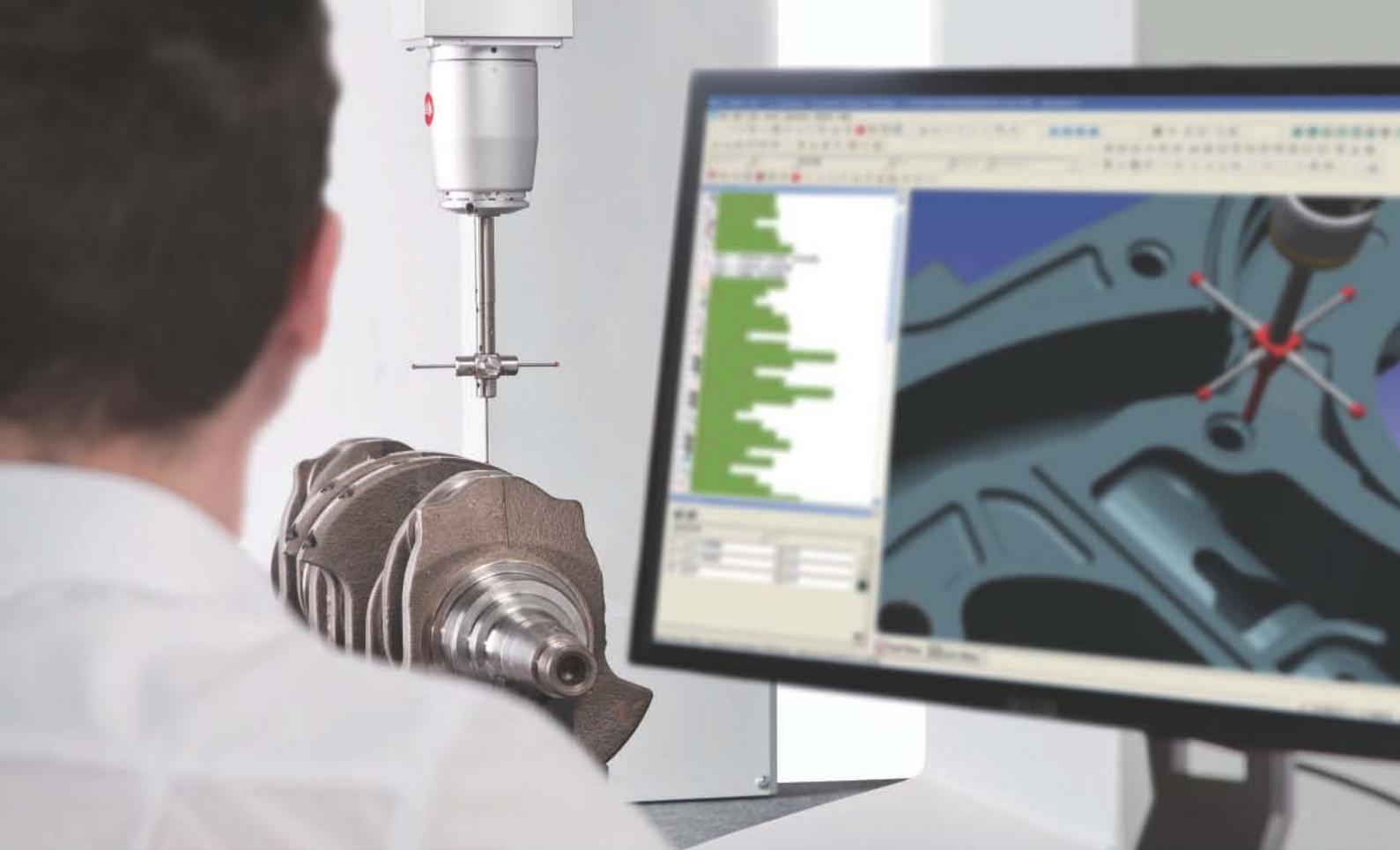
## SOFTWARE FOR ANY REQUIREMENT

Select from three different versions of PC-DMIS metrology software:

PC-DMIS PRO works with a graphical, easy-to-understand basic user interface, without CAD data. A series of assistants help you to become familiar with and master the important inspection functions. The right software package for simple inspection processes.

### Functions:

- Complete programming environment, including high-level programming functions
- Customisable menus
- Quick-start routines for probe calibration, parts alignment and hyper-reporting functions
- Customised reporting tools and advanced hyper-reporting tools
- Intuitive Probe and Go to automatically recognise feature types and create interactive graphical part representations



PC-DMIS CAD brings CAD models into metrology. It includes all the functions of PC-DMIS PRO and some further features:

- Full 3D animation capability, including digitised images of parts and fixtures: operators can verify the set-up and program in a virtual environment prior to actual part inspection.
- Unknown part documentation to generate computer models for reverse engineering applications
- Improved import of native formats such as VDAFS, IGES, DXF, DWG, STEP, XYZJK, STL, DES and DMIS
- A Direct CAD Interface (DCI) option to create part programs directly from CAD models utilising the native CAD system algorithms and tools
- A Direct CAD Translator (DCT) option allows the use of a native CAD model, even if it is not available to you on your CAD system.

PC-DMIS CAD++ offers additional measuring functions, with respect to PC-DMIS CAD, that allow fast and efficient measurement of complex shapes such as turbine blades, cast parts, models, sheet metal components and other curved shapes.

#### Functions:

- Rotary, patch, linear open and closed loop scanning
- Perimeter, section, UV and edge point scanning
- Complete probe simulation
- Full thin-wall feature measurement suite





Models	Strokes (mm)			Classic	Performance	Advantage	SF
	X	Y	Z				
05.05.05	500	500	500	✓	✓	✗	✗
05.07.05	500	700	500	✓	✓	✓	✗
07.07.05	700	700	500	✓	✓	✓	✓
07.10.05	700	1000	500	✓	✓	✓	✓
07.10.07	700	1000	660	✓	✓	✓	✓
09.12.08	900	1200	800	✓	✓	✓	✓
09.15.08	900	1500	800	✓	✓	✓	✓
09.20.08	900	2000	800	✓	✓	✓	✓
12.15.10	1200	1500	1000	✗	✓	✓	✓
12.22.10	1200	2200	1000	✗	✓	✓	✓
12.30.10	1200	3000	1000	✗	✓	✓	✓
15.20.14	1500	2000	1350	✗	✗	✓	✗
15.26.14	1500	2600	1350	✗	✗	✓	✗
15.33.14	1500	3300	1350	✗	✗	✓	✗
20.33.15	2000	3300	1500	✗	✗	✓	✗
20.40.15	2000	4000	1500	✗	✗	✓	✗
20.33.18	2000	3300	1800	✗	✗	✓	✗
20.40.18	2000	4000	1800	✗	✗	✓	✗



Brown & Sharpe

The Brown & Sharpe brand name has been synonymous with quality for more than 150 years. Once a stand-alone company, today Brown & Sharpe is a flagship brand of the Hexagon Metrology group. Brown & Sharpe brand Coordinate Measuring Machines (CMMs), optical measuring systems, 1D, 2D and 3D benchtop measuring machines and precision hand tools represent the highest quality in design, construction and performance.

Hexagon Metrology

Hexagon Metrology is part of the Hexagon group and brings leading brands from the field of industrial metrology under one roof.

[www.hexagonmetrology.asia](http://www.hexagonmetrology.asia)



**Full Bright.**

**福富通商股份有限公司**

總公司:新北市 235 中和區連城路 258 號 3F-3

(遠東世紀廣場 I 樓)

Tel: 02-82271200 Fax: 02-82271266

[Http:// www.fullbright.com.tw](http://www.fullbright.com.tw)

E-mail : [sales@fullbright.com.tw](mailto:sales@fullbright.com.tw)

台北 Tel: 02-82271227

Fax: 02-82271191

台中 Tel: 04-24736300

Fax: 04-24734733

高雄 Tel: 07-5567600

Fax: 07-5590064

昆山 Tel: 512-57751291

Fax: 512-57751293

東莞 Tel: 769-85847220

Fax: 769-85847229

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