

SHOP FLOOR CMMS

PRODUCTIVE MEASUREMENT SOLUTIONS FOR THE SHOP FLOOR





QUALITY INSIGHT AT THE POINT OF PRODUCTION

PRODUCTIVITY INSPIRED BY YOU

The Shop Floor series was designed with you in mind. As an expert in industrial manufacturing, with quality control in mind, you require a machine that is designed to surpass the demanding requirements of day to day shop-floor use.

Due to the machine's robust nature it can excel in harsh environments, such as machine shops and manufacturing cells, giving you the actionable information you need, where you need it—the shop floor. Its hard bearing design eliminates the need for shop air, while providing you the confidence needed to take measurements right on the shop floor. Advanced parametric thermal compensation, covered ways, built-in vibration resistance, cutting edge software and shop-hardened design are just some of the many features that enable operators to perform measurements more efficiently.

Managers can rest easy knowing their Operators can run inspection programs on the shop-floor with minimal training using Hexagon Manufacturing Intelligence's PC-DMIS software. Gaining immediate insight into quality control helps you react quickly to process variations, reducing scrap and increasing productivity.

Powered by one of the most advanced, renowned and agile metrology software packages in the industry, PC-DMIS, the SF Series will empower your operation to deliver confident results.

7.10.7 SF CMM

LARGEST HARD BEARING Shop Floor CMM on the Market



Every square inch of your shop floor counts, and for this reason we have designed the **7.10.7 SF** to occupy as little space as possible. Creating the ultimate user experience, the computer, controller and interface boxes are housed in one self-contained unit. The **7.10.7 SF** integrates LED lighting which illuminates the workspace. This feature further enhances your ability to be productive by enabling you to focus on those hard to define geometric characteristics, such as hidden surfaces or non-line of sight features. An optional integrated part fixture system provides you flexibility by enabling you to locate a variety of fixture plates on the table for multiple part inspection.

The **7.10.7 SF** provides you with accuracy and throughput, as well as the needed confidence to validate your process before you deliver your final product.

4.5.4 SF CMM

**HOLDS 60%
MORE WEIGHT**
than competition
**USING LESS
WORKSPACE**



The **4.5.4 SF** shares many of the unique user-experience benefits as the 7.10.7 SF such as accuracy, extended temperature range and weight support; however, the most notable benefit of the **4.5.4 SF** is its flexibility. The compact footprint and roll-around stand, specifically designed to fit through a standard door, lets you easily relocate the **4.5.4 SF** anywhere in the shop where a 110V outlet is present and precise dimensional inspection is required.

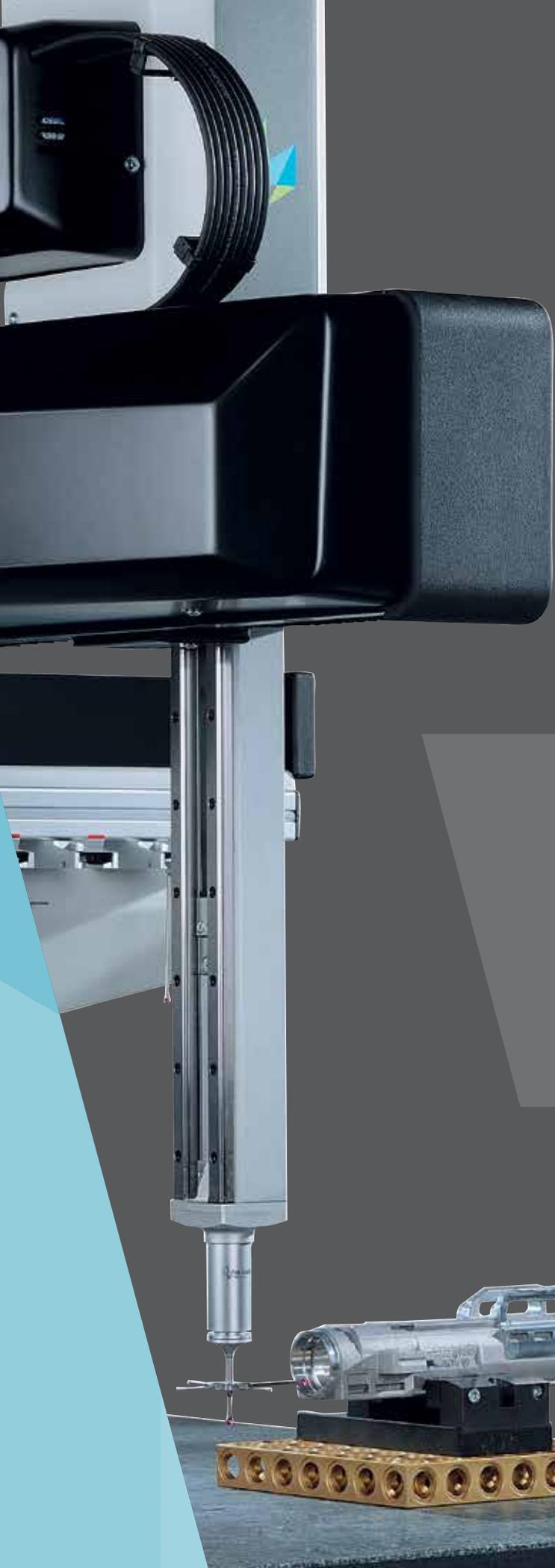
TIGO SF CMM

A STEP TOWARD AUTOMATION



In production you are aiming at a constant flow from milling, drilling, threading, and grinding, all the way to final inspection. **TIGO SF** is the most accurate measurement tool to include quality assurance seamlessly in your production line. A robust design combats challenges CMMs are faced with on the shop floor. The intuitive operating system opens up the world of metrology to everyone. With **TIGO SF** you are able to measure accurately where it matters most in terms of quality: directly in production. **TIGO SF** brings sophisticated measurement technology to the shop floor.

Open access to the measurement range allows for loading from all three sides, giving you the flexibility to load components manually or automatically in the production line. With enhanced user options such as data exchange capabilities, a protective machine stand for easy shop floor integration, message lighting and Eco Mode the **TIGO SF** allows for easy integration into automated inspection cells.



MEASURE THE TIGO SF WAY

Open design from three sides is not the only difference that separates the TIGO SF from its shop floor family. The integrated styli, LSP-X1 scanning probe, aims to eliminate the need for stop and go probe changes. Specifically designed covers protect the LSP-X1 styli from dust and dirt giving you the ability to take shop floor measurements without compromising performance.

ADDITIONAL BENEFITS EXCLUSIVELY FOR TIGO SF

- High-speed scanning with LSP-X1 sensor or touch-trigger probing with the indexable HH-AS probe head
- Measurement At the Touch of A Button: Touchscreen included in the standard configuration
- Additional keyboard for conventional interaction with the CMM

INLINE TO SAVE TIME

In a growing industry where quality control becomes ever more important, the SF series can help reduce your manufacturing cycle time by allowing you to execute quality control at the point of production.

As space becomes limited and accuracy requirements increase, you need the flexibility to compensate for these demands. The Shop Floor Series is up for the task.

ADDITIONAL BENEFITS OF THE SHOP FLOOR SERIES INCLUDE:

- Speed-up inspections by eliminating the need to travel to a climate controlled lab
- Perform real-time adjustments to equipment on the production floor
- Reduce cycle times between production and quality control
- Reduce scrap and rework
- Improve confidence in your manufacturing process
- Operational ease, designed to optimize the user experience at the operator's point of execution



SMALL
FOOTPRINT



THE SHOP FLOOR EDGE



NO MORE CONTAMINANTS

Bellows and covers reduce cycle times by avoiding the need to have to take trips to a separate environmentally-controlled quality lab located somewhere else in your facility.



THERMAL SWINGS MANAGED

Temperature compensation ensures accuracy is maintained in changing shop-floor temperatures, where thermal gradients occur often as a result of manufacturing operations and climate changes.



CONTROL AT YOUR FINGERTIPS

A newly designed, robust, user-focused jogbox and holder make interacting with the machine more intuitive and easy to use. Its smaller size means users have an ability to walk up and measure with ease.



CONFIDENCE IN YOUR ACCURACY BY ISOLATING VIBRATIONS

The standard elastomeric vibration isolation provides you the confidence of measurements in the face of on-going vibrations commonly found across shop floors because of manufacturing processes or environmental conditions, such as rail or heavy shop traffic.



SEE YOUR WORK EASILY

This simple workspace lighting detail greatly enhances the user experience. Cool LED lights brightly illuminate the measurement volume, which allows you to identify the tough geometric features easily.



NO MORE SECOND GUESSING

Granite etching defines the measurement envelope in the X- and Y- axes. This is a feature which allows you to easily place a fixture or a part to be measured within the workspace, saving you time and money.



EASY PART LOAD/UNLOAD

Our optional kinematic integrated fixturing supports screw into specially located table hole locations to receive kinematic fixture plates for easy part load/unload.



WALK AWAY WITH CONFIDENCE

Optional integrated red and green LED lights on the Z-axis allow SF operators to quickly view the CMM status from across the shop floor. This provides you with peace of mind when walking away and multi-tasking. The second the SF has something to say, it will let you know.

FLEXIBILITY FOR PRECISE MEASUREMENT



HP-T-LF/SF/MF/EF TOUCH TRIGGER PROBES

The HP-T is a highly versatile touch trigger electronic ball probe for fast and repeatable 3D measurements. The benefits: long life, accuracy, ease of use, comparatively low cost and excellent access to difficult to reach measuring points. Their M8 connection makes them compatible with both manual and automatic probe heads.



HP-S-X1 SCANNING PROBES

The HP-S-X1 scanning probes offer the accuracy characteristics of a fixed head but can also be fitted to HH-A and HH-AS automatic indexable wrists capable of measuring both in point to point and in continuous scanning mode. Available on both the TIGO SF and 7.10.7 SF models.



HH-MI MANUAL PROBE HEAD

The HH-MI is a probe head with an accurate indexing probe stylus by turning to 168 positions and swivel in 15° increments without the need for recalibration. The angular movements A and B are clearly indicated in separate windows on the probe head, so that the precise angle can be viewed at a glance. Tactile and visual feedback lets the user know the angular position of the probe at all times.



HH-MI-M INDEXABLE PROBE HEAD

The HH-MI-M is a probe head with an accurate indexing probe stylus. It can accept all probes and accessories with an M8 connection. HH-MI-M can be disengaged by hand. Tactile and visual feedback lets the user know the angular position of the ball probe at all times. The assured repeatable precision means you can carry out highly accurate measurements with considerable time savings.



HH-A | HH-A-M5 MOTORIZED PROBE HEADS

This fully motorized, highly accurate probe head is a 2-axis wrist providing indexed orientations. It can be used with extension bars up to 300 mm long. Sensors can be connected to the Probe Head with a kinematic joint (HH-A-T7 and HH-AS-T) or a M8 threaded connection (HH-A-M and HH-AS-M). The sensors are capable of indexing either in 7.5° (720 positions) or 5° (3024 positions) increments.



HEXAGON

MANUFACTURING INTELLIGENCE

Hexagon Manufacturing Intelligence helps industrial manufacturers develop the disruptive technologies of today and the life-changing products of tomorrow. As a leading metrology and manufacturing solution specialist, our expertise in sensing, thinking and acting – the collection, analysis and active use of measurement data – gives our customers the confidence to increase production speed and accelerate productivity while enhancing product quality.

Through a network of local service centers, production facilities and commercial operations across five continents, we are shaping smart change in manufacturing to build a world where quality drives productivity. For more information, visit HexagonMI.com.

Hexagon Manufacturing Intelligence is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technologies that drive quality and productivity across geospatial and industrial enterprise applications.



COORDINATE MEASURING MACHINES



3D LASER SCANNING



SENSORS



PORTABLE MEASURING ARMS



SERVICES



LASER TRACKERS & STATIONS



MULTISENSOR & OPTICAL SYSTEMS



WHITE LIGHT SCANNERS



METROLOGY SOFTWARE SOLUTIONS



CAD / CAM



STATISTICAL PROCESS & CONTROL



AUTOMATED APPLICATIONS



MICROMETERS, CALIPERS AND GAGES