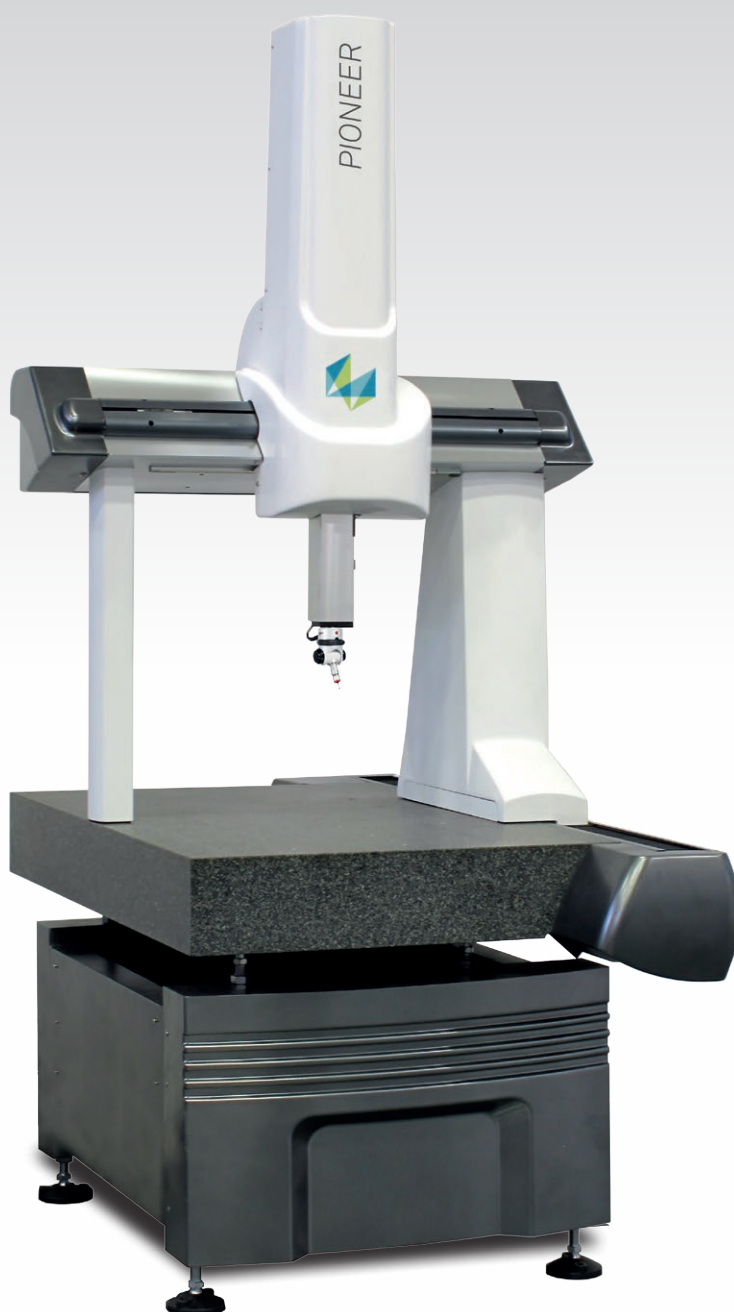


PIONEER

THE AFFORDABLE QUALITY COORDINATE MEASURING MACHINE



PIONEER

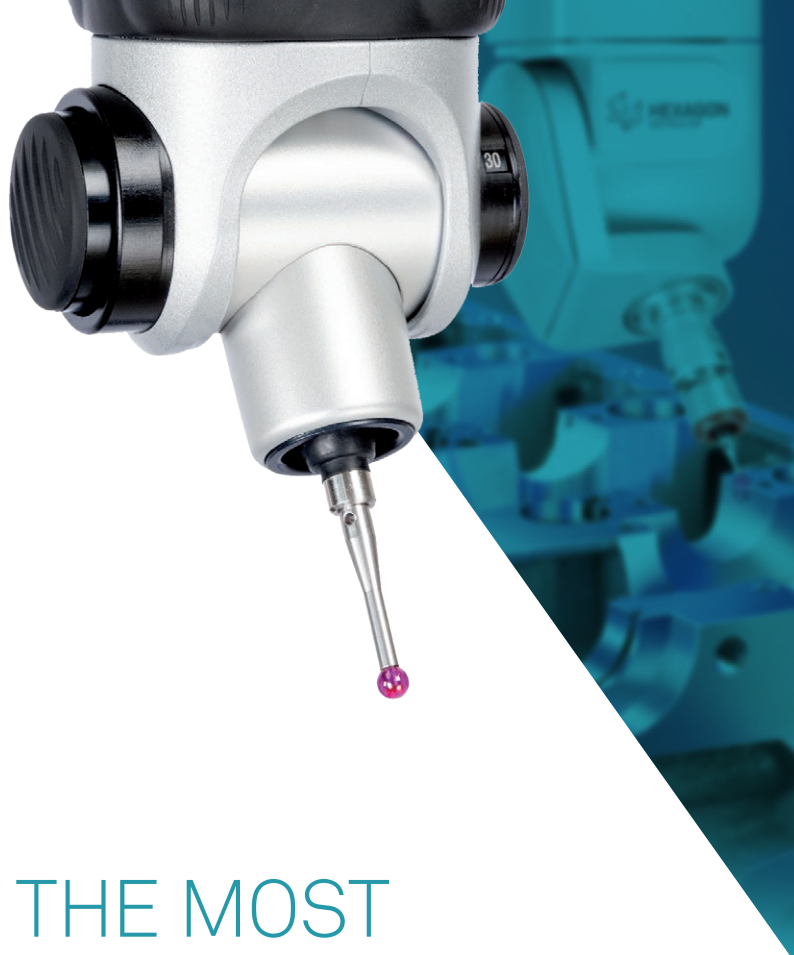
PIONEER is the perfect fit for manufacturers purchasing their first coordinate measuring machine, and for large manufacturing operations needing multiple CMMs with maximum price-to-performance ratio.

PIONEER CMMs are used in quality inspection for first and final part acceptance, fixture qualification and process control. PIONEER is the ideal measurement system for handling a variety of dimensional inspection tasks on general mechanical and prismatic components.

PIONEER combines breakthrough design, proven construction and controller technology, and today's most advanced measurement software and touch probe systems to give you the accuracy, throughput and rugged reliability you need in an extremely cost effective inspection package.

Each PIONEER CMM is checked and certified meeting the most rigorous application test procedures required by ISO standards. Just as importantly, PIONEER machines are backed by Hexagon Manufacturing Intelligence, the world's largest manufacturer of coordinate measurement systems.





A NEW DIMENSION IN PROBE TECHNOLOGY

You can tailor your PIONEER CMM with a complete range of Swiss-made touch probes, probe heads and probe accessories.

Choose from probes with a trigger force as low as 0.05 N and commonly used M8 threads. Integrated probe/probe head combinations provide features including adjustable trigger force and indexing capability that allows the stylus to swivel through 168 positions without the need for recalibration.

Motorised probe heads offer high speed indexing in 5° increments and can accept extension lengths up to 300 mm.

THE MOST POPULAR AND POWERFUL INSPECTION SOFTWARE

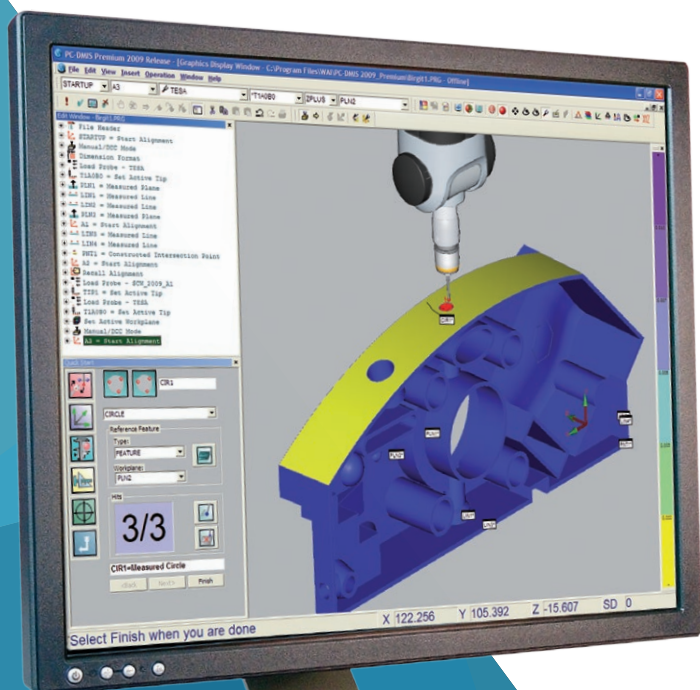
PC-DMIS, today's most widely used metrology software, features an intuitive graphic user interface that easily guides users through part programming, setup and inspection. Users of all skill levels can measure everything from simple prismatic parts to complex geometries quickly and accurately.

PC-DMIS BASIC is the new entry level package that allows you to drive a PIONEER CMM without the CAD support.

PC-DMIS PREMIUM is the new entry level module provided with the CAD support. It offers the same BASIC capabilities plus the powerful CAD tools.

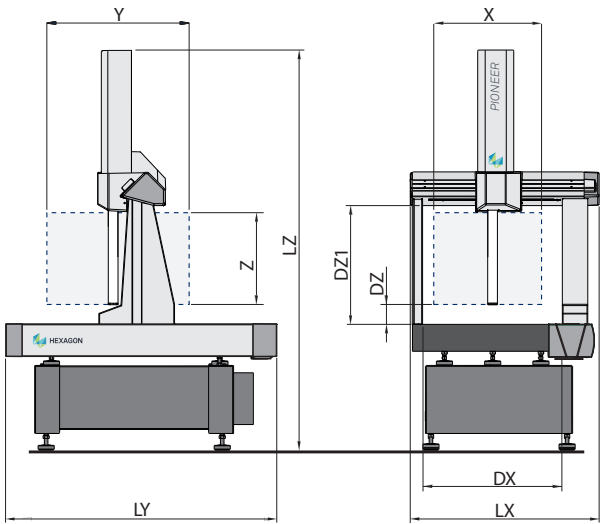
Both PC-DMIS BASIC and PC-DMIS PREMIUM inspection software allow you to reach your quality goal in a short time, with less complexity and less training.

*Machine movements on all axes
are monitored by Heidenhain high
resolution METALLUR® scales.*



TECHNICAL SPECIFICATIONS

| Model | Measuring Strokes (mm) | | | Maximum Permissible Error (µm) | | Max. 3D Speed (mm/s) | Max. 3D Acc. (mm/s²) | Daylights (mm) | | | Overall Dimensions (mm) | | | Max. Part Weight (kg) | Machine Weight (kg) |
|----------|------------------------|------|-----|--------------------------------|------------------|----------------------|----------------------|----------------|-----|-----|-------------------------|------|------|-----------------------|---------------------|
| | X | Y | Z | MPE _E | MPE _P | | | DX | DZ | DZ1 | Lx | Ly | Lz | | |
| 05.06.04 | 500 | 600 | 400 | 2.8+3.5 L/1000 | 3.0 | 520 | 1732 | 634 | 144 | 594 | 1050 | 1535 | 2247 | 300 | 590 |
| 06.10.06 | 600 | 1000 | 600 | 2.8+4.0 L/1000 | 3.0 | 520 | 1732 | 734 | 144 | 794 | 1063 | 1825 | 2658 | 300 | 890 |
| 08.12.06 | 800 | 1200 | 600 | 2.9+4.0 L/1000 | 3.1 | 520 | 1472 | 934 | 144 | 794 | 1236 | 2025 | 2658 | 500 | 1196 |



This size drawing fits for all series 05.XX.04, 06.XX.06 and 08.XX.06 of PIONEER.

Stated accuracy performance specifications are subject to the following conditions

Thermal requirements

Ambient temperature: from 18°C to 22°C

Maximum temperature rates of change: 1 K/h and 2 K/24h

Maximum spatial thermal gradients: 1 K/m

Probe and stylus configurations

With standard force module, stylus length 20 mm, stylus tip diameter 4 mm.

Measuring accuracy performances are expressed according to the ISO 10360-2 international standard. MPE_P is the maximum permissible probing error and MPE_E is the maximum permissible error of indication for size measurement, where L is the length of the measurement in mm.

Air Supply

Minimum air supply pressure: 0.5 MPa

Air consumption: 120 NL/min

Standard system package

PIONEER metrology frame

DC241 control system

Jogbox remote control

Head and probe

Hexagon basic styli kit

PC-DMIS BASIC inspection software

Probing Options

Integrated Probe/Head:

Probe Head

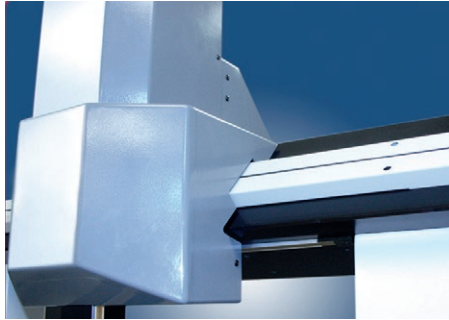
Touch Probe or

Styli Kit: kit #7

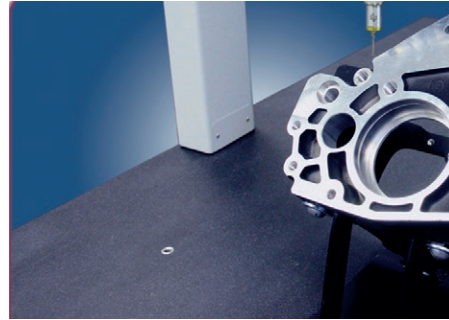
Software Options

PC-DMIS PREMIUM inspection software

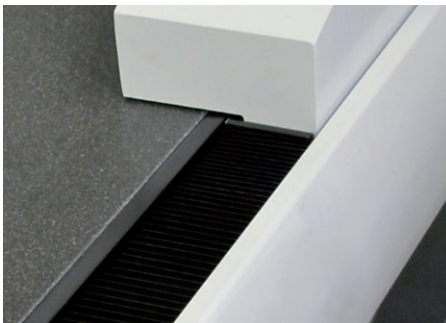
... COST-EFFECTIVE, PROVEN QUALITY



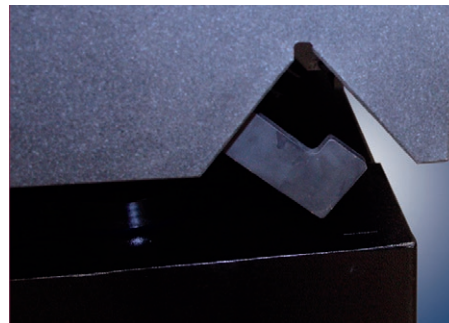
The Y axis beam and Z axis ram are constructed of micro-machined aluminum alloy for a higher strength-to-weight ratio.



One-piece granite worktable provides a solid, stable work surface. The table is provided with M8 threaded inserts for part fastening.



Aluminum orifice air bearings offer unsurpassed reliability and optimum stiffness.



A precision-machined dovetail cut into the granite worktable improves accuracy and repeatability.



The patented TRICISION™ bridge, with wider bearing separation, a lower center of gravity and lighter weight than a conventional bridge, has a better rigidity-to-mass ratio for higher accuracy, speed and reliability.



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 centres, 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 GAUGES