



COORD³



UNIVERSAL

The Ultimate Performance CMM

UNIVERSAL 3D Coordinate Measuring Machine

The Ultimate Performance CMM

COORD3 presents the ultimate performance UNIVERSAL CMM. Its high technology alloy bridge CMM provides advanced dynamic performance and accuracy while achieving outstanding thermal stability. The UNIVERSAL provides a flexible coordinate measuring platform allowing point-to-point probing, analogue contact scanning plus laser scanning. The UNIVERSAL's high structural rigidity makes an ideal platform for full 5-axis scanning, and gear measurement applications.



Renishaw 5-Axis Revo Tactile Scanning Probe Head

The UNIVERSAL has an isostatic design for each axis, providing optimum geometrical alignment during both CMM manufacture and ongoing field calibrations. Combined with its monolithic base plate, inverted dovetail air-bearing guideways and its generous 90mm section Z Ram, the UNIVERSAL provides outstanding metrology performance. Direct axis drives using toothed belts provide vibration free motion with zero hysteresis. This efficient CMM design minimizes total part count, reducing complexity and improving long-term reliability and cost-of-ownership.

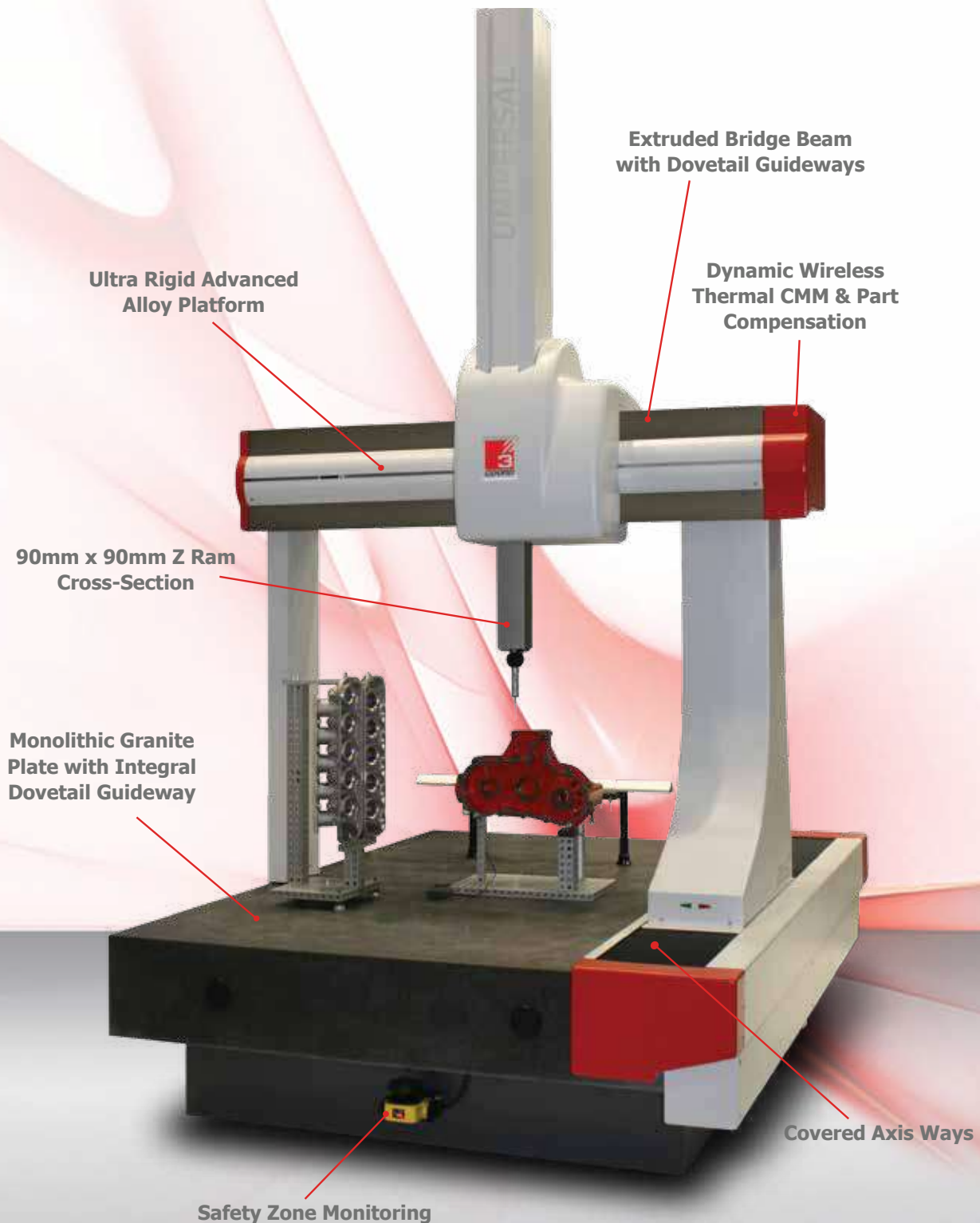


Universal with Renishaw 5 Scanner

The COORD3 UNIVERSAL introduces a CMM industry first by incorporating a Bluetooth wireless thermal compensation system for both machine and part. This allows the system to automatically and dynamically compensate for changes in CMM operating environment, yielding its stated measuring accuracy between 16°C and 26°C. In addition, the Gold plated 0.1µm Measuring Scales are free-floating in support tracks, preventing CMM structural changes from influencing measurement accuracy.



TouchDMIS Measuring Software Offering One-Touch Performance



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The Ultimate Scanning CMM

The UNIVERSAL represents the best CMM technology, designed at the COORD3 Italy studio by renowned engineers having more than three generations of CMM design expertise. Their accomplishments have been recognized around the world.

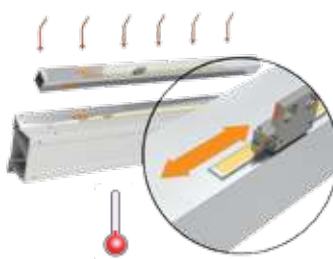
Increasing further the COORD3 UNIVERSAL CMM performance, the NT version incorporates a Silicon carbide Z Ram with enhanced measuring scales. These combine to provide higher scanning speed, enhanced accuracy plus a 0.3µm improvement in measuring uncertainty.

Due to the high dynamics achieved by the UNIVERSAL, the optional safety zone monitoring system (SZM) can be added. It incorporates laser scanners to establish a defined protection zone while the CMM is in high-speed automatic measuring mode. The SZM reduces the CMM speed upon intrusion into the safety zone by an operator. It automatically returns the CMM to its full measuring speed only after the zone intrusion has been cleared. The SZM allows safe use of a CMM in a production, shop-floor and fully automated applications.

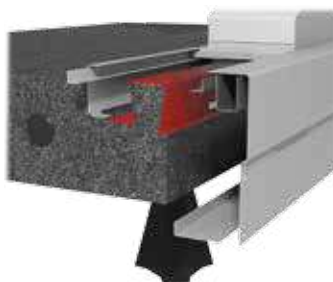
Key UNIVERSAL Design Features



Toothed drive belts on all axes for vibration free motion.



Latest generation of high resolution (0.1 micron) measuring scales mounted in free floating carriers to minimize thermal effects on CMM accuracy.



One-piece granite table with integral X-axis dovetail guide-ways, supported by an isostatic system to maximize precision.



Bridge Beam (Y-axis) is machined from special extruded aluminum alloy for optimum weight, stiffness, and metrology performance.



Wireless multi-sensor temperature compensation for scales and part.



Safety Zone Monitoring System provides programmable security perimeter that automatically decreases CMM speed without cycle interruption.

The Ultimate CMM

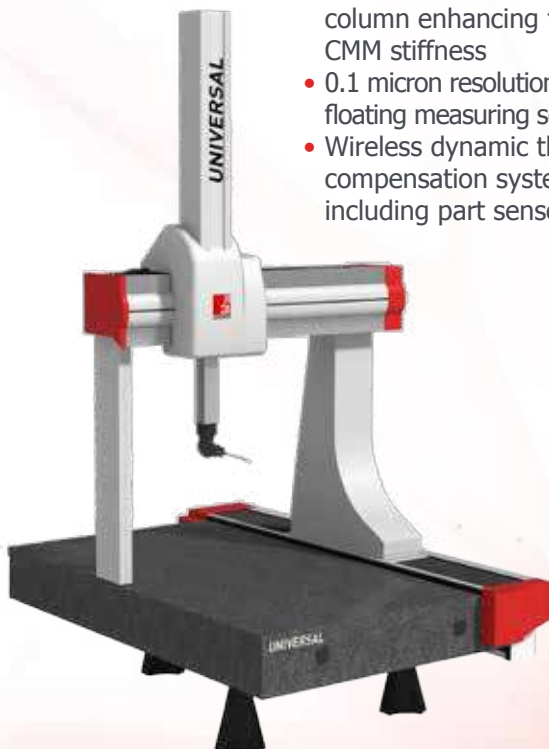
Features & Benefits

- Ultra rigid alloy CMM platform provides maximum stiffness for scanning applications
- 90mm Z Ram cross-section provides enhanced rigidity
- Rapid thermal diffusion by CMM frame when environment conditions change
- FEA designed bridge beam extrusion provides optimum moment of inertia for minimum deflection operating at high accelerations
- Monolithic granite base plate with integral dovetail guideway improves repeatability and accuracy
- M8 threaded table inserts in generous grid pattern
- Rigid air bearings to all axes with wide bearing spread ratios with 3 point isostatic design on all axes
- Pneumatic Z-axis counter balance
- Free floating 0.1 micron resolution measuring scales incorporating dynamic signal processing
- Full digital motion control with probe path blending for optimized CMM performance
- Zero hysteresis toothed belt drives to all axes
- Passive vibration damping system
- Open access to measuring area from all sides
- Maximum positioning Speed *866mm/sec
- Maximum acceleration *1500mm/sec²

*See Technical Datasheets for values specific to machine model sizes

COORD3 NT Model Enhanced Features

- Silicon carbide Z-axis column enhancing further CMM stiffness
- 0.1 micron resolution free floating measuring scales
- Wireless dynamic thermal compensation system including part sensor



Environment

- Nominal Temperature 20°C
- Allowable Temperature Range: 18 – 22°C (Extended Range 16 – 26°C)
- Temperature Gradient: 0.5°C/hour – 2°C/day (Extended Range 5°C/day)
- Operating Temperature Range: 15 – 35°C
- Relative Humidity 40 – 80% (non condensing)
- Acceptable Vibrations: 30mm/sec² 1-10Hz | 15mm/sec² 10-20Hz | 50mm/sec² 20-100Hz

Services

- Minimum Air Supply 5 Bar -72PSI
- Air Consumption 100NI/min
- Power Supply Voltage 230v 50Hz or 110v 60Hz
Maximum Power Consumption 10A 1200W

Performance Data

- All COORD3 CMM products are factory evaluated for accuracy using the ISO10360 standard.

Options

- Dynamic Wireless Thermal Compensation of Machine and Part (Standard on NT Model)
- Laser based Safety Zone Monitoring System
- Pneumatic Vibration Isolation System
- Air Drier
- Modular Part Fixturing Kits
- CMM Modular Enclosure

Models & Sizes

COORD3 UNIVERSAL Vertical Bridge CMMs are available with the following measuring strokes:

All measuring strokes shown in mm.

	Y	X	Z
7.7	700	700, 1000	700
9.8	900	1200, 1500, 2000	800
10.8	1000	1200, 1500, 2000	800
10.9	1000	1500, 2000, 2500	900
10.10	1000	1500, 2000, 2500	1000
12.10	1200	1500, 2000, 2500	1000
15.10	1500	2000, 2500, 3000	1000
15.13	1500	2000, 2500, 3000	1300



About Perceptron:

Perceptron (NASDAQ: PRCP) supplies a comprehensive range of automated industrial metrology products and solutions to manufacturing organizations for dimensional gauging, dimensional inspection and 3D scanning. Products include 3D machine vision solutions, robot guidance systems, coordinate measuring machines, laser scanners and advanced analysis software. Globally, automotive, aerospace and other manufacturing companies rely on Perceptron's metrology solutions to assist in managing their complex manufacturing processes to improve quality, shorten product launch times and reduce costs. More than 900 systems, 12,000 Perceptron measuring sensors and over 3,000 COORD3 coordinate measuring machines are in active daily use worldwide. Headquartered in Plymouth, Michigan, USA, Perceptron operates worldwide with subsidiary operations in Brazil, China, Czech Republic, France, Germany, India, Italy, Japan, Singapore, Slovakia, Spain, and the UK.

Your
Metrology
is our
Focus

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