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INSIDE: YOUR MUST-SEE EXHIBITORS...

HAM 9-13 APRIL

Okuma 5-axis model

NCMT (stand H19-640) will showcase the new Okuma M460V-5AX vertical machining centre (below), the latest model in the Genos series and the first 5-axis one in this range. Machining volume is 762 by 460 by 460 mm.



It is designed to make high precision parts at impressive metal removal rates in a compact space.

Emco machines on display

Emco (stand H17-525) will be showing: a **MaxMill 350** 5-sided vertical milling centre; an **E25** diameter 25 mm and below CNC lathe with C-axis; a **Concept Turn 105** CNC lathe centre with Embo's interchangeable CNC system; the **new Emco S85** CNC lathe centre with 65 mm bar capacity and C-axis; an **FB450** programmable milling machine; and an **Emcomat 200** manual centre lathe.

Standard components

Standard component specialist Norelem (stand H20-236) is bringing some of its **38,000** products to MACH, to demonstrate how manufacturers can **cost-effectively create complex machines and systems** to improve production efficiency and performance. At MACH, design engineers and automation professionals will be able to talk to Norelem experts about combining standard products to solve manufacturing problems and **turn ideas into reality**.

Cutting tool innovation promised by Quickgrind

Quickgrind (stand H7-101) will be giving a MACH debut to a complete range of new milling innovations, including "the ground-breaking" new **Mirage**, **QPlus**, **Delta** and the **Spectre**. The company's **QuickEdge** re-grinding service, the **QuickLab** process analysis and improvement service, the **QuickVend** tool management solutions and **QuickCAM**, the CAM assessment service that optimises the complete machining process, will also be promoted.

The new **Spectre** solid-carbide end-mills offer **feed rate increases up to six times** and are ideal for rough-machining operations such as slotting, pocket milling and contour machining.



Quickgrind's new **Mirage** Series of solid carbide, four-flute end-mills are said to be capable of outperforming competitor products on stainless steel, super-alloys and a selection of non-ferrous, high temperature alloys and cast iron. They can be applied to roughing, finishing, slotting and profiling, as well as trochoidal milling and HSM processes. This extensive capability **reduces tool inventory and costs**. Diameters of from 3 to 20 mm are available.

The new **Qplus** has been developed to be the industry's "most universal tooling series yet". The **four-flute end-mill** offers high performance levels on steel and cast

iron, whilst the hard-wearing **MX** coating makes the **Qplus** ideal for high temperature alloys, hardened steels and non-ferrous materials. The **Qplus** series can support rough to finish machining, slotting, profiling, trochoidal milling and much more, so **machine shops can use a single tool for a multitude of applications and materials**.

Delta Series three-flute end-mills offer extended reach, a unique geometry and Quickgrind's **Xred** coating that all culminate to deliver a high performance end-mill suitable for a **variety of materials**.

In addition to its tooling, Quickgrind experts will be on hand to discuss **process improvements, vending and inventory management, as well as training and support packages** for educational establishments.

Scanning is challenging traditional routes, says MSL

Measurement Solutions Ltd (MSL) will focus on **portable metrology** and **automated quality control (AQC)**, using industrial robots.

The company's new **Portable Metrology Division**, which focuses on portable hand-held measuring systems, will be showing the latest **Creaform 3D** measurement and scanning systems. In particular, the **MetraSCAN 3D**, which is proving to be the **fastest and most versatile portable scanning system available**, is able to scan parts from, typically, 300 mm up to 10 m in size. When paired with the hand-held **HandyPROBE** arm-free portable CMM, the combination provides **everything a metrology engineer needs**, in terms of dimensional inspection, it is claimed.

In addition, the **HandySCAN 3D**, which is still proving to be "the leading hand-held 3D scanner for metrology applications", will be present. No other scanner can come close to the accuracy, speed and, in particular, portability of this "amazing

hand-held and arm-free scanning technology", it is stated.

The firm will show that **portable scanning technologies are now rivalling traditional measurement methods**, with high speed data acquisition of around **500,000 points/second** and accuracies of tens of microns possible.

MSL's new Metrology Integration Division is dedicated to providing metrology solutions based on **automated quality control** applications. Irrespective of whether the requirement is for a traditional CNC CMM or for an in-process industrial robot, the division's engineers have the knowledge and software tools to 'make it happen'. Using the latest **Metrolog X4 i-Robot** software as the common

software platform, **any robot and any scanning device can be combined to create a high speed 3D scanning solution** (below). With offline programming and simulation available, plus PLC integration with device interfaces to directly drive and control the robot and measuring equipment, the team is able to offer the only 'all-in-one' measuring solution for **automated quality control**, it claims.

As part of the division's launch at MACH, **MSL will be showing an automated robot cell with a 3D scanner**, fully programmed and directly operated through **Metrolog X4 i-Robot**.

