

## The need for speed

**Renishaw is focusing on speed of manufacture at JIMTOF 2008, with a range of new products that will help businesses to manufacture profitably, by reducing process times and minimising the cost of poor quality for a wide range of machining and measurement applications. The JIMTOF 2008 show takes place at the Tokyo Big Sight exhibition centre from 30th October to 4th November and Renishaw's stand is located in West Hall 3, stand W3040.**

This contribution to speed of manufacture and performance is perfectly demonstrated by two applications within sports where speed and reliability are vital. At the Italian factory of world-renowned motorcycle manufacturer Ducati, the machining of valuable camshafts for its 'Desmodromic' engines is carried out on two machining centres that run non-stop, carrying out hundreds of thousands of tool changes every year. The process must be carefully controlled and Renishaw's innovative non-contact laser tool setting technology is used to check each tool for breakage before machining starts, avoiding costly damage to the components and the machine, and keeping the automated production process up and running.



In drag bike racing, reaction times are measured in milliseconds and at Salakazi Racing, Renishaw's rotary magnetic encoders with their ability to monitor up to 30,000 rpm are used to check the position of the crankshaft in the engine, and to measure the clutch speed. The vital data collected and compiled by the Renishaw RM22 encoder after every run makes it possible to program the controller for as close to optimum clutch engagement as possible. This provides

maximum speed and acceleration with minimal wheel spin during the vital first few fractions of a second, enabling the 1,500 horsepower bike to cover a quarter of a mile in 6.7 seconds at a terminal velocity of 316 km/h.



At JIMTOF 2008 a range of new products is being shown that contribute towards speed of manufacture. For visitors looking to reduce inspection times by measuring complex 3D part geometries, Renishaw's new RMP600 compact, high accuracy touch probe with radio signal transmission is a powerful solution for all sizes of machining centres, whilst for users of grinding machines, the new Renishaw MP250 touch probe allows high precision measurement on contoured surfaces such as gear teeth and cutting tools.

For CMM users, the revolutionary REVO™ five-axis measuring head and probe system can improve inspection throughput levels by up to 900% on machines previously fitted with three-axis scanning systems. The Renishaw XL-80 compact laser interferometer measurement system is a powerful tool for visitors to JIMTOF 2008 who are looking to optimise machine performance, as it combines portability, performance and ease of use for calibration routines.

For machine designers who are visiting the show, TONiC™ is Renishaw's new super-compact non-contact optical encoder that offers speeds up to 10 m/s and resolutions down to 5 nm for both linear and rotary applications. Offering significant enhancements to Renishaw's existing range of high speed non-contact optical encoders, TONiC™ also gives improved signal stability and long-term reliability, low cost of ownership and unrivalled simplicity.