

New metal-free dental CAD/CAM system launched by world leader in measurement technologies

Renishaw, a world leader in industrial measurement and CAD/CAM technologies, has announced the UK introduction of its incise_{TM} metal-free dental CAD/CAM system, the only process available to the dental market that will certify the quality of fit for manufactured ceramic restorations. The new system can be seen at the London Dental Showcase, taking place at the ExCel centre from 5th to 7th October 2006, where Renishaw is exhibiting at stand N14.

The development of the incise_{TM} process has drawn on Renishaw's 33 years of experience in precision measurement, 3D digitising and machining, plus pioneering research into the relationship between the clinical impression and the master model. This has resulted in a system that focuses on the accuracy of crown and bridge framework manufacture at every stage of the process, with a set of incise_{TM} clinical guidelines helping to eliminate the errors that can arise during the impression and die process.



A key benefit of this emphasis on accuracy is the achievement of improved marginal fit, leading to shorter chair-times for patients and dentists during the final fitment of the crown or bridge, and giving increased resistance to tooth decay and staining, resulting in a longer lasting restoration.

Renishaw's incise_{TM} process uses zirconia, a strong ceramic material, that also has the key benefit of biocompatibility, avoiding the

problems that can occasionally arise with metal crowns whereby reactions with oral tissues cause gum recession and expose unattractive metal collars that are prone to decay collection and staining. Without a metal core, the incise TM frameworks also benefit from a more natural, translucent appearance.

At the heart of the process is the incise_{TM} dental contact scanning system, which a dental laboratory uses to digitise a stone model, which has been formed from an impression of the patient's bite taken by the dentist. Unlike laser and camera-based systems, the incise_{TM} scanner is validated to BS EN ISO10360 part 4, an international standard relating to the accuracy of contact scanning systems, giving added confidence in the process.

Data from the scan is then sent electronically to Renishaw's milling centre in Gloucestershire, UK, where the zirconia framework is manufactured. It is then returned to the laboratory for the application of porcelain and colour-matching, before final fitment by the dentist. All incise_{TM} restorations are produced under a BS EN ISO13485 quality system, and every framework is supplied with a certificate of conformance, showing an analysis of fit to the original stone model.

Speaking about the new incise_{TM} process, Bryan Austin, Director and General Manager of Renishaw's Dental Products Division said, "Using Renishaw's technology, experience and expertise, our new incise_{TM} process minimises or even eliminates the errors normally associated with the manufacture of frameworks. Our overriding aim is to supply our customers with precision fit frameworks that eliminate remakes, guaranteeing an easier life for patients, dentists and dental technicians."