SICAT FUNCTION & CEREC

Individual functional prosthetics
INDIVIDUAL FUNCTIONAL PROSTHETICS

THE DIGITALIZATION of treatment procedures based on 3D X-ray data is progressing quickly. What has been successfully established with SICAT Implant – diagnostics and planning in 3D and implantological implementation with surgical guides – is now reaching new dimensions with a further application.

THE COMBINATION of SICAT Function, SICAT JMT+ and CEREC allow for the first time the fabrication of prosthetic restorations based on the patient-individual lower jaw movements.

HOW YOU BENEFIT: Automatically adjusted restoration proposals lead to patient-individual functional prosthetics.
DIAGNOSTIC PATIENT INFORMATION from a 3D X-ray system, a Jaw Motion Tracker (SICAT JMT) and optical surface scan data (CEREAL, Dentsply Sirona) are merged in SICAT Function.

FOR THE FIRST TIME, the real patient-individual movement of the mandible can be visualized true to anatomy and in 3D.

THE INTEGRATION OF jaw movement data in CEREAL, allows a restoration design that takes the actual dynamics of the lower jaw into account.

- Automatically adjusted restoration proposals
- True patient-specific dynamics in CEREAL
- 3D visualization of the jaw in motion
X-ray scan with a Dentsply Sirona 3D X-ray system. The patient wears the SICAT Fusion Bite during the scan for the precise fusion of 3D X-ray and JMT data.

Lower jaw movement data such as opening movements, protrusion, and laterotrusion are recorded with the SICAT JMT + and imported into SICAT Function.

Optical surface scan of the patient with CEREC and subsequent merger with the 3D X-ray data directly in SICAT Function.

Integration of jaw movement data into the CEREC software for automatic adjustment of restoration proposals based on the patient-individual lower jaw dynamics.
**PROGRAMMING THE VIRTUAL ARTICULATOR IN CEREC**

**SICAT FUNCTION ALLOWS** the calculation of all necessary parameters to program the virtual articulator in the CEREC software, taking the anatomical and kinematic factors into account for the first time.

**THE NECESSARY** articulator parameters such as the sagittal angle, Bennett angle and Balkwill angle, can be directly measured in SICAT Function patient-individually.

**FOR EXAMPLE,** the sagittal angle is determined in SICAT Function and the corresponding parameters can be easily transferred into the CERECE software’s virtual articulator.
AFTER INTEGRATING the movement data into the CEREC software, the restoration proposals can be optimized by using the Functionally Generated Path (FGP).

THE CONTACTS are automatically optimized to the patient-individual lower jaw dynamics, without the need to program the articulator. This enables the creation of individual functional restorations for the first time.

EVEN WITHOUT A 3D X-RAY SCAN OF THE PATIENT you can fully take advantage of SICAT Function’s and CEREC’s benefits:

- As an alternative to a 3D x-ray scan of the patient, the SICAT Fusion Bite is placed between the stone models of the upper and lower jaw. Next, the stone models are placed on a base and subsequently scanned with a Dentsply Sirona 3D X-ray system.

- The following capture of the lower jaw movement data with the SICAT JMT †, as well as the optical surface scan data with CEREC, are performed directly on the patient, according to the regular SICAT Function workflow.
SUPPORTED BY THE HIGHLY PRECISE and contact-free recording of all degrees of freedom and movements of the mandible with the SICAT JMT⁺, the path is clear for the transfer, display, and diagnosis of real patient-individual movements in 3D.

THE SICAT JMT⁺ includes a facebow with integrated receiver modules as well as a perfectly balanced mandibular sensor.

THE MANDIBULAR SENSOR is extremely light-weight and is attached to a paraocclusal T-Attachment by means of a magnetic fastener.

THE SICAT JMT⁺ SOFTWARE enables the doctor to easily register any of the patient’s lower jaw movements and jaw relations.

DEPENDING ON THE EXISTING INDICATION, various jaw movements can be integrated into the treatment protocol and stored for further processing.

SICAT FUNCTION, SICAT JMT⁺ AND CEREC: Individual fitting accuracy for each prosthetic restoration right from the start.