PLANNING

PRINTING

THERMOFORMING

TREATING

SMART FLOW®
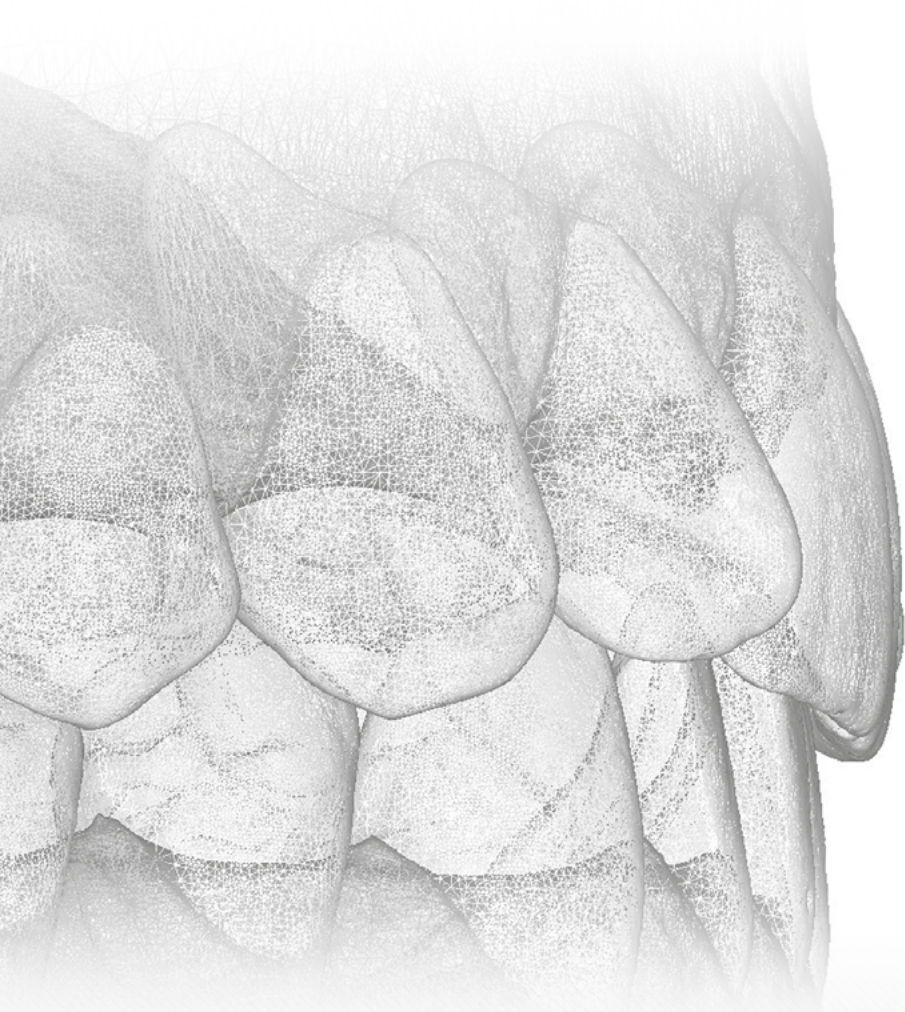
Only with SCHEU-DENTAL:

SMART FLOW – the digital process chain for orthodontic practices and laboratories from a single source.

SCHEU
Dental Technology

CA
DIGITAL

A complete digital process chain

We are still fascinated by the dynamics replacing long proven manual working steps by digital ones, as it brings about significant changes to our professional world and offers possibilities to develop new competences.

Our vision is to contribute to and to shape this exciting development so that you, the user, can benefit from the efficient work processes that are made possible by these new technologies.

SMART FLOW offers you the option to complement proven treatment approaches with innovative technologies – at your own pace and according to your personal preferences. You can get started with the digital work flow at any point. After the scanning process we offer the entire product range for each step, beginning with the digital tooth transposition, 3D printing and thermoforming to patient treatment.

It's up to you to decide about the individual level of your digitization. Join us in the digital workflow.

We will support you.

CA DIGITAL

SCHEU
Dental Technology

Digital process chain from a single source.

PLANNING

① OnyxCeph3™ CA® SMART D3:
Transposition and planning.

Scanning:
The entry portal to the digital work flow. Our cooperation partners are DENTSPLY SIRONA, 3Shape and DENTAURUM.

scan data

Application video:

Watch and experience SMART FLOW.

TRE

PRINTING

STL data

3D Printing:
2 Digital printing in high definition.

print objects

BIOSTAR® / MINISTAR S®:
3 The easy way of precise
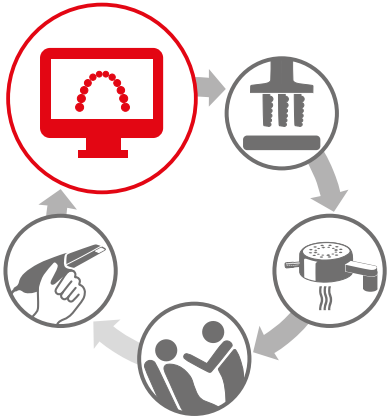thermoforming.

THERMOFORMING

treatment devices

Patient treatment:
4 CA® CLEAR ALIGNER,
INDIVIDUA® or MEMOTAIN®.
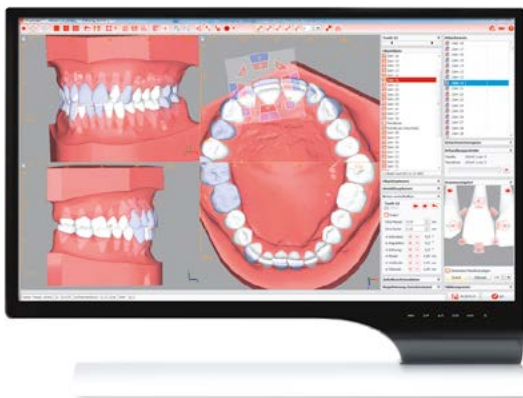
EATING

STEP 1 – PLANNING

The OnyxCeph3™ CA® SMART 3D is a software for planning, transpositions and control in the context of the aligner therapy.

- // Processing data sets
- // Cephalometric measurement
- // Virtual teeth segmentation
- // Transpositions/set-ups controlled by the CA® philosophy defined in the software
- // Creating and exporting print data
- // Generating 3D reports
- // Directly exporting data to the Asiga Composer software

Once the scanning process using a model or intraoral scanner has been completed, the data from the patient management software is imported via interface to the OnyxCeph3™ CA® SMART 3D. In this context it is crucial that only closed STL data is imported. In the next step, the imported data can be repaired and aligned for further processing. Before starting the set-up transposition the scanned jaw models have to be trimmed and a model base has to be selected.

The software carries out an automatic control of transpositions during the set-up that is based upon the CA® CLEAR ALIGNER treatment philosophy of Dr. Pablo Echarri. Throughout the flow of all involved treatment steps, control and value creation are all in one hand.

The OnyxCeph3™ CA® SMART 3D software is available as clinic or lab version with license for up to five work stations on the network, including a one-day software training.

System requirements

|	
Network server	Intel 2.3 GHz (or higher)
Storage	8 GB of RAM, 64 bit system, 200 GB HD space
Operating system	Windows 7 (or higher)
Server	OS, 1000 Mbps Ethernet
Graphic card	NVIDIA, GeForce GTX	GTS (or equivalent)

	REF
// OnyxCeph3™ CA® SMART 3D – laboratory version	6513
// Module CA® SMART 3D – (laboratory) for OnyxCeph3™	6513.002
// OnyxCeph3™ CA® SMART 3D – clinic	6512

Purchase of the OnyxCeph3™ CA® SMART 3D software is subject to a certification.
For training dates and further information please visit **www.scheu-dental.com/en/scheuacademy/seminars.**

STEP 2 – PRINTING
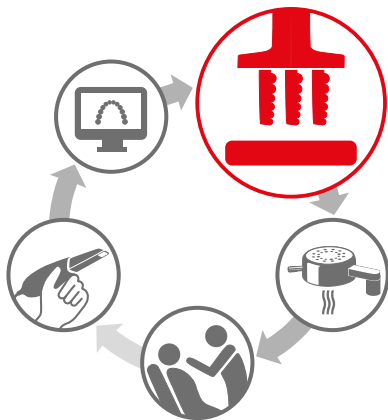
3D-printers for beginners, advanced users and experts:
- // Compact, quiet and fast: 2.5 cm/hour using the printer resin IMPRIMO® LC model
- // simple start-up
- // Validated process for the use of a large range of consumables
- // SPS®: Smart positioning system for precise printing results
- // Matching material portfolio for all applications in laboratory and practice
- // Equipment for curing and cleaning

For model printing with a 3D printer STL data is required. With one click, the OnyxCeph3™ CA® SMART 3D software generates STL data in the export module and transfers it to the 3D printer. The printer software Asiga Composer positions the imported model data on the build platform in the build space. Asiga Composer is a mere nesting software designed for positioning data and creating support structures to stabilize the objects. The printing software does not process STL data.

Once the objects are finally aligned, the corresponding material is selected, e.g. IMPRIMO® LC Model for models. The final step before starting the print job is to determine the layer thickness. Using the slicing function, the print object is sliced into layers and the images for projecting are calculated.

The material parameters that are stored in the software ensure that the resin polymerizes properly in the corresponding layer thickness. Once printing has been completed, the objects are removed from the build platform and cleaned – for example in the cleaning unit IMPRIMO® Clean – before being cured in a light oven.

Curing requires a light oven with a wavelength of 365 nm + 405 nm and using protective gas, such as IMPRIMO® Cure. The models are now ready for thermoforming.

	REF
// Asiga MAX™ (385 nm)	6501
// Asiga MAX™ LCD (405 nm)	6530
// Tray 1 liter	6516
// Tray 2 liter	6515
// Tray 5 liter	6517
// Tray 10 liter	6518

STEP 3 – THERMOFORMING
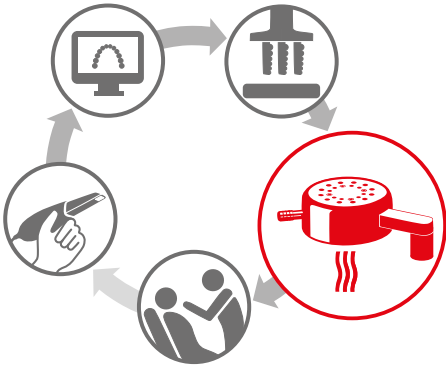
The pressure moulding units BIOSTAR® and MINISTAR S® stand for maximum performance when it comes to any thermoforming application in practices and laboratories:

- Working temperature is reached in just one second
- Scanning technology for simple programming
- Patented thermostatic radiator control
- Clearly structured display
- Acoustic and optical user prompting
- Ergonomic pellet receiver
- Superfluous pellets fall back into the container to be reused
- MINISTAR S®: 4 bar working pressure
- BIOSTAR®: 6 bar working pressure, data base on scanned material and indications, application instructions and video animations

BIOSTAR® and MINISTAR S® are validated for the digital work-flow.

These pressure moulding devices guarantee extremely accurate moulding results. Current models are equipped with scanning technology and a patented radiator control. The BIOSTAR® library is accessible via a large format display and leads you through the single working steps.

The CA® CLEAR ALIGNER splints for the set-up are thermofor-med one after the other using CA® foil in the corresponding thickness (soft, medium, hard) with the printed model (dental arcade model) being placed on the model platform. Prior to the first thermoforming process the model should be insulated using ISOFOLAN® foil. The exact procedure can be found in the BIOSTAR® library.

	REF
BIOSTAR®, 230 V	3001
BIOSTAR®, 115 V	3011
BIOSTAR®, 100 V	3021
MINISTAR S®, 230 V	3501
MINISTAR S®, 115 V	3511
MINISTAR S®, 100 V	3521

STEP 4 – TREATING

For patient treatment, you have a variety of products to choose from, depending on the therapeutic progress.

/// CA® CLEAR-ALIGNER: Invisible and gentle teeth correction
/// INDIVIDUA®: Precise indirect bonding system
/// MEMOTAIN®: Retainer stabilizing the current teeth alignment

The digital work flow ends exactly where it has begun - in the dental chair. Depending on the current therapeutic state, various treatment devices can be used. The first choice for invisible and gentle correction of malocclusion is the CA® CLEAR ALIGNER technology with its clinically proven 3-splint system.

INIDVIDUA®, the transfer mask for the indirect bonding technique, is best suited for quick and easy bracket positioning.

MEMOTAIN®, the retainer made from Nitinol®, maintains and stabilizes the current teeth alignment once treatment has been completed. Computer-controlled production guarantees high precision fit to the individual teeth alignment of the patient.

INDIVIDUA® and MEMOTAIN® are available exclusively through CA DIGITAL.

Your notes

DIGITAL ORTHODONTICS

For a wide range of applications:

Working /study models
Material: IMPRIMO® LC Model ivory

Material: IMPRIMO® LC Model beige

Material: IMPRIMO® LC Model grey

Occlusal splints
Material: IMPRIMO® LC Splint

Transfer masks
Material: IMPRIMO® LC IBT

CA® CLEAR ALIGNER
Material: CA® Foil

**INDIVIDUA®
Transfer masks***
Material: INDIVIDUA® Foil
*exclusively available with CA DIGITAL

MEMOTAIN® Retainer*
Material: Nitinol®
*exclusively available with CA DIGITAL.