Compartis®

integrated systems

Bar and bridge superstructures for implants

DeguDent

A Dentsply International Company

An implantological vision becomes reality

In the past few years we have been witnessing highly dynamic developments in oral implantology. Increasing interdisciplinary collaborative efforts by surgeons and prosthodontists will strengthen this trend over the next few years. Patient acceptance of oral implants is on the rise, a development driven mainly by a promise of improved quality of life.

Dental technology, too, has felt the reverberations of this trend: With the advent of **CAD/CAM** systems and solutions in the dental laboratory, implant-supported restorations have increasingly become a focal product segment. Bar-supported structures and bridge frameworks can now be fabricated more economically, more quickly and more accurately.

Compartis® ISUS
powered by ES Healthcare

Thanks to the integration of the **CAD/CAM** specialist ES Healthcare N. V., Belgium, into the Dentsply group, DeguDent is now in a position to add a new and attractive module to its range of **CAD/CAM** offerings: central production of implant superstructures to industrial standards – ISUS.

Compartis® ISUS lets you concentrate on preparing the cast and on the prosthetic reconstruction proper, making the time requirements for these restorations and the cost more predictable. This will greatly assist you in scheduling your work.

The ISUS production process also offers you great flexibility when it comes to superstructure design. You decide whether the superstructure is connected directly to the implant (without abutments) or at abutment level.

So do not wait to look into the benefits of the innovative Compartis® network production process by DeguDent for your CoCr or titanium superstructures!

Compartis® ISUS-Indikation

- Compartis® ISUS bar designs and bridge frameworks are suitable for 2 to 10 implants per jaw
- Vertical inter-implant distance: min. 2 mm
- Inter-arch distance: min. 7 mm

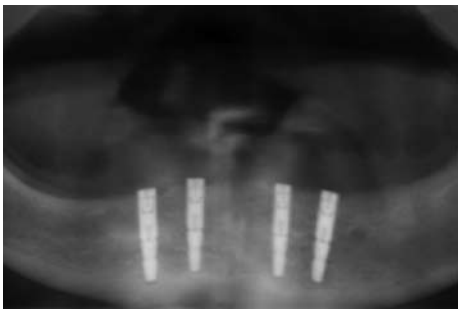
Compartis® ISUS bar-supported structures

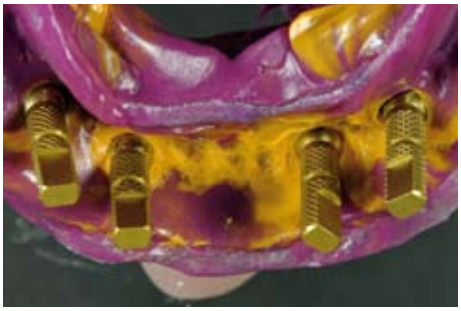
Implant-supported overdentures are a clinically proven treatment modality in implant prosthodontics. Implant-supported fixed-removable superstructures offer much better denture retention. A firm seat and improved masticatory function improve the patient's quality of life. Bar-supported structures (whether bar joints or individually milled bar attachments) have been particularly successful. Structures of this type have been primarily made from precious-metal alloys thanks to their ease of processing and proven biocompatibility.

Innovative **CAD/CAM** dimensions now enable us to produce screw-retained implant-supported frameworks from CoCr alloys or titanium.

A computer-controlled milling process avoids the all-too-familiar technical problems that all too often arise from casting CoCr alloys or titanium. The milled superstructure has excellent material properties. The stresses or distortions inside the material such as those that can develop during the casting process simply do not occur with **CAD/CAM**. And there will not be any solder or laser-welded connections to the abutments supporting the bar, safely eliminating corrosion and fracture hazards. **CAD/CAM**-produced bar attachments allow active retention elements to be directly integrated into the design.

Compartis® ISUS bar-supported structures – at a glance
- Made of a cobalt-chromium alloy or titanium
- Bar attachment system
- Resilient bar
- Bar attachment systems with distal extensions
- For direct screw retention on implants
- For connection to abutments





Compartis® ISUS bridge frameworks

The ISUS production technology also facilitates the fabrication of centrally screw-retained bridge frameworks supported by 2 to 10 maxillary or mandibular implants. Like the abutments, the bridge frameworks are produced without any internal stresses. The CoCr or titanium frameworks can be veneered in ceramics or in composite resin – your choice.

Compartis® ISUS bridge frameworks – at a glance
- Made of a cobalt-chromium alloy or titanium
- Can be veneered in ceramics or composite resin
- For direct screw retention on implants
- For connection to abutments

We would like to thank Dr. med. dent. Sven Rinke, Hanau Klein-Auheim, Germany, for these cases.

We will be happy to pick up your Compartis® ISUS orders

Simply call our Service Centre at **+ 49 180 2324555.**

Your selected Compartis® ISUS planning centre will be executing your order to your specifications:

Zahntechnik van Iperen
Compartis® ISUS planning centre, Wachtberg
ISUS@vaniperen.de

DeguDent GmbH
Compartis® ISUS planning centre, Hanau
compartis-isus@degudent.de

The production process, step-by-step

Dental office
An impression is taken as usual.

Laboratory
The necessary models are fabricated complete with a wax-up/mock-up.

Dental office
The impression is checked with the transfer index.

Laboratory
The prepared model with implant analogues and the wax up/mock up and gingival mask is picked up by us, along with your design specifications on our order form.

Compartis® ISUS planning centre
Your design is realized using a highly performance software at our Compartis® ISUS planning centre – exactly to your specifications.

Laboratory
The laboratory receives a virtual 3-D representation of the design by e-mail for inspection and approval. At this point of the process it is still possible to request changes from the Compartis® ISUS planning centre – the changes will be implemented and the design data once again returned by e-mail for inspection and approval.

Compartis® ISUS production centre
The approved virtual design is forwarded to the Compartis® ISUS production centre where the actual framework is fabricated.

Laboratory
The individual bar-supported denture or bridge is finalized.

Dental office
A custom Compartis® ISUS restoration is delivered to a satisfied patient.

Benefits of Compartis® implant-superstructures

- Compatible with many implant systems
- Suitable for any number of supporting implants
- May be combined with attachments
- Can be veneered with dental ceramics (such as Duceram® Kiss or Duceratin® Kiss)
- Can be veneered with composite resin (such as in:joy)

- Economical: No framework design steps
- Economical: No try-on on the master cast
- Economical: No abutments
- Economical: No solder and no additions

- Biocompatible materials
- New materials used exclusively
- Highly precise production process

- Passive fit

Materials used

	Cobald-Chromium	**Titanium**
Composition		Type: Grade 2*
	Cobalt 54.1 %	Titanium
	Chromium 20.0 %	as well as
	Tungsten 16.4 %	Nitrogen 0.01 %
	Niobium 0.2 %	Carbon 0.02 %
	Iron 7.5 %	Hydrogen 0.004 %
	Silicon 1.5 %	Iron 0.03 %
	Manganese 0.3 %	Oxygen max. 0.31 %
	(total: 100%)	(total: 100%)
Alloy type	IV, extra hard	IV, extra hard
CTE (25-500 °C)	14.6 $10^{-6}K^{-1}$	9.6 $10^{-6}K^{-1}$
CTE (25-600 °C)	14.9 $10^{-6}K^{-1}$	–
Melting interval/range	1,390 °C – 1,410 °C	1,670 °C
Density	9.1 g/cm³	4.5 g/cm³
Elongation at fracture	12 %	23 – 27 %
Elastic modulus	200 GPa	110 GPa

* For reasons of stability, we use Grade 5 titanium for more delicate designs.

For veneering the frameworks, we recommend the following veneering ceramics:

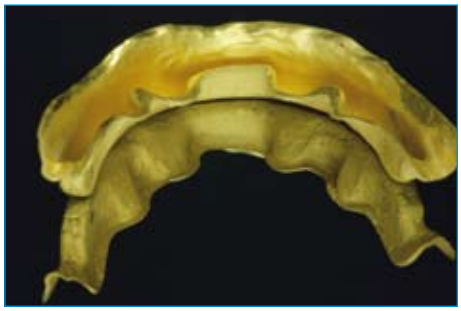
Duceram® Kiss	**Duceratin® Kiss**

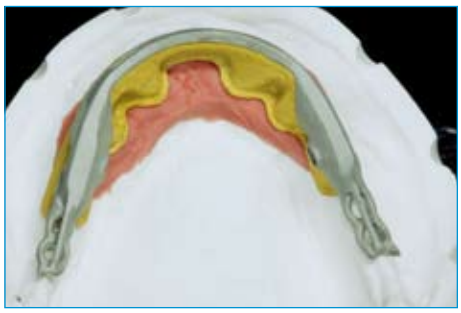
Exciting views

Various aspects of a complete maxillary and mandibular implant-supported rehabilitation.

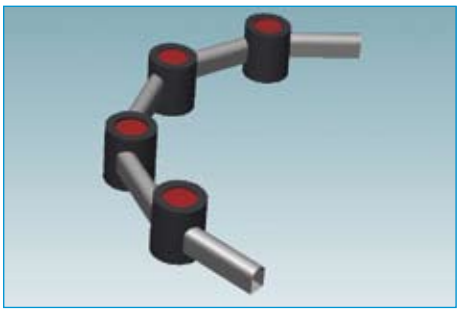
Mandibular implant-supported rehabilitation: Compartis® ISUS bar-supported structure with electroplated superstructures and two locking retainers for firm seating.

We would like to thank Bernhard Saneke, Dr. med. dent. and Philip von der Osten, MDT, Wiesbaden, Germany, for these cases.

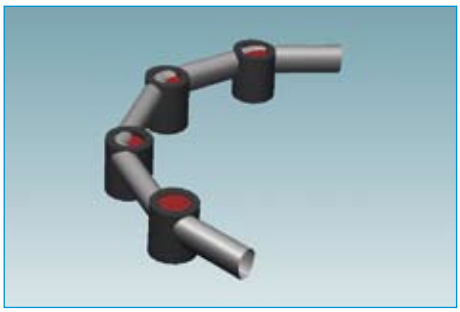




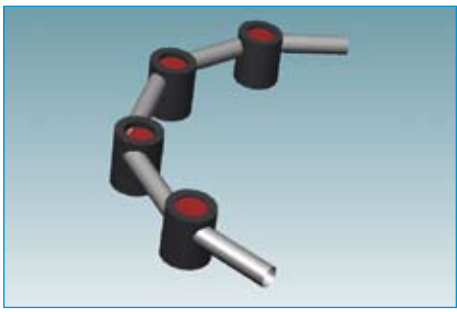
Proposed designs for bar-retained constructions



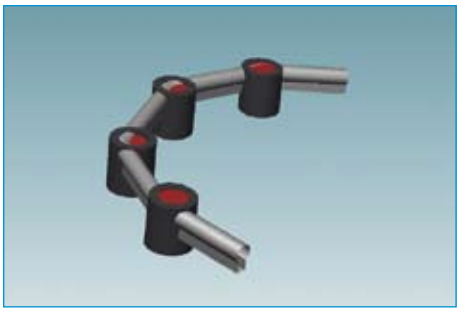
Bar attachment, Dolder



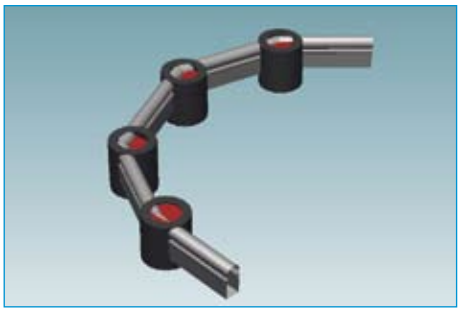
Bar joints, Dolder



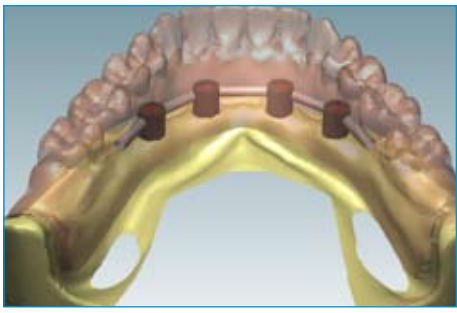
Round bar attachment, Ackermann



Bar with retention for Preci Horex

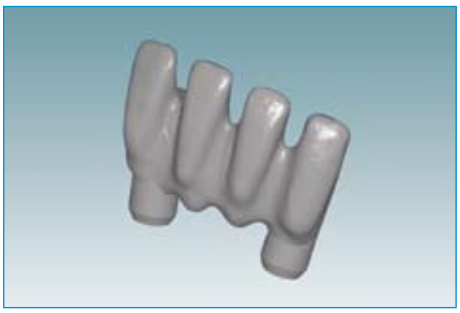


Bar with retention for VSP-FS

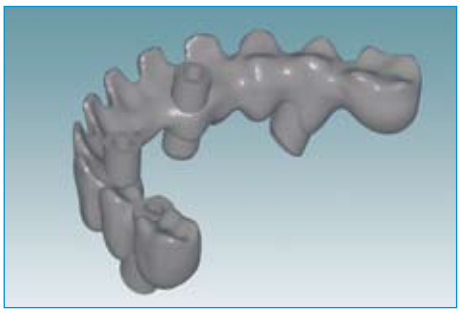


Simulated case

Proposed bridge designs



... for ceramic veneering



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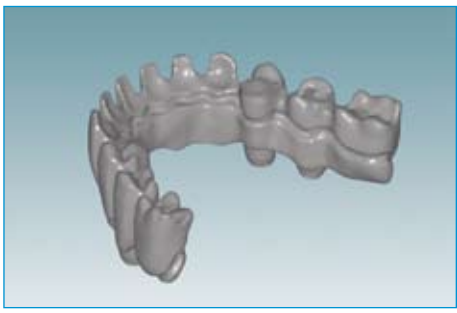
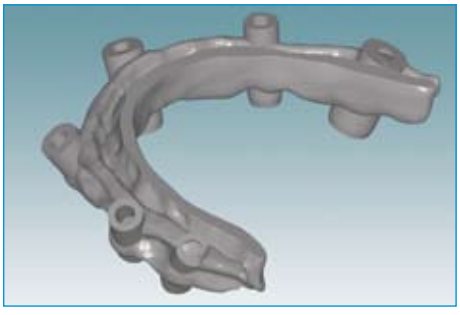


... for composite veneering



... for a complete rehabilitation

31007/0903/DB
Stand: 03/2009

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