



# SIC

The individual approach

SIC invent  
**Smart Guide**

**SMART GUIDE**





**Dear Valued Partner,  
Welcome to SIC invent!**

### **Our company**

In 2003, I founded SIC invent together with a group of experienced and technology-enthusiastic doctors and engineers in Basel.

Development and production are located in Germany and Switzerland. Today, SIC invent has subsidiaries and highly-qualified distribution partners worldwide. In addition to our high-tech and high-quality products, the success model of our globally-operating group of companies is based on our outstanding employees. We are passionate about providing you and your team with the best products and solutions to care for your patients.

### **The individual approach**

Fulfilling your very personal and individual requirements for products, service and training is our highest priority.

### **Our history**

One of the pioneers in the development of osteosynthesis screws for craniomaxillofacial surgery as well as dental implants and their applications, is my father **Professor Dr. Wilfried Schilli**. His experience of more than 60 years in this field of medicine, dentistry, research and teaching is the cornerstone and foundation for the SIC "Schilli Implantology Circle". It was only through his fundamental and broad knowledge that I was then able to start this venture which is now being carried on by many worldwide practicing colleagues together with the highly professional and dedicated SIC invent team. The SIC "Schilli Implantology Circle" is an international network of key opinion leaders (KOL) and clinicians using the SIC system. We continually organize Task Forces in research and training of physicians and dental technicians to ensure the highest level of technology, scientific evidence-based background and patient outcomes.

All of our systems and components have been created in collaboration with the members of the SIC "Schilli Implantology Circle". Prior to being incorporated into our implant systems, they receive the necessary evidence through studies and application observations at leading universities, clinics, practices and dental laboratories both within and outside the

SIC network. The members of SIC and the team of SIC invent AG stand for the highest degree of innovation and quality of our product lines as well as supply concepts worldwide. At this point, I would like to express my gratitude to all of our SIC members. Without this “think tank”, it would not be possible to attain our product and training portfolio at such a premium level.

### **In equal mission**

In 2018, SIC invent AG acquired the P-I | Developed by P-I Brånemark implant system. P-I product lines are produced in a high-quality in-house manufacturing facility and were developed by **Professor Per-Ingvar Brånemark**, jointly with experienced clinicians and scientists, reflecting the pinnacle of his research and knowledge over many years.


P-I solutions contribute to the SIC invent Group by addressing selected markets, complementing portfolios and further expanding presence and growth. **Professor Per-Ingvar Brånemark** and **Professor Wilfried Schilli** had the same vision and mission for over 50 years, and it gives me great pleasure to provide, through the SIC invent Group, a singular platform for continued developments.

### **Our philosophy and task**

Our mission is to offer top of the line products and solutions for all indications by providing a simplified system with less components, with the ultimate goal of reducing the time and thus treatment costs for the patient while maintaining outstanding clinical outcomes.

Thank you for the confidence and trust you have placed in us, and I look forward to our continued collaboration in the future.

Sincerely  
Georg Schilli



President of the Supervisory Board  
Chief Executive Officer  
SIC invent AG



***In commemoration:***

*Prof. Dr. Wilfried Schilli (1928 – 2019) founding member of the SIC - Schilli Implantology Circle - has summed up the tasks and goals of SIC as well as implantology in general in a convincing manner in his welcoming words.*

**Dear Partners and Friends,**

Implantology has changed dentistry. It is, like the surgical joint replacement, a product of modern bone surgery. In 1958, this was completely restructured by the Arbeitsgemeinschaft für Osteosynthese (AO = Association for the Study of Osteosynthesis). Their rules also apply to us: the biomechanical principles of function provide orientation, the vitality of the bone must be preserved. The aim is the most atraumatic surgical procedure possible.

Incorporation of an implant is a biological process, and we must provide the requirements for it to take place smoothly. Every detail of our approach is therefore important. The procedure is optimised and errors are avoided by providing clear surgical protocols. But despite all the schematic optimisation every case remains an individual case. This in particular applies to the subsequent prosthetic restoration. When prosthodontics cooperates with surgery, prosthodontics dominates as it determines the function and aesthetics.

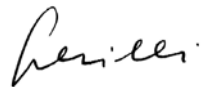
The implant system plays a major role in this process which is influenced by the individual factors of the patient. It is a standard product not only from a technical point of view but also for legal reasons. In this case, continuous optimisation is also a prerequisite for lasting success.

This is one of the tasks of the SIC "Schilli Implantology Circle". The international, interdisciplinary discussion forum integrates current theoretical and scientific research results in the implementation of practice-relevant systems and synchronises them with practical experience.

Another function of the SIC "Schilli Implantology Circle" is also to pass on this success in the form of continuous training.

We are, as are the members of the circle, very enthusiastic about implantology and want to improve the process and product through discussions with competent specialists. Disadvantages and faults as well as possible improvements and prospects are discussed at regional and an international level and scientific investigations and checks are initiated. Organisation and trust are therefore prerequisites for ensuring that everyone profits from this approach and that we can provide our patients with even more reliable and better help.

Sincerely  
Prof. Dr. Wilfried Schilli

A handwritten signature in black ink, appearing to read 'Schilli', written in a cursive style.

Founding Member Schilli Implantology Circle

# Why choose Implants from SIC invent?

## A swiss company with the headquarters in Basel – with a global network

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Necessary education and training needed for the safe application of the SIC invent implant system is a major part of our corporate philosophy.

## Lifetime guarantee on all original SIC invent components

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## Schilli Implantology Circle

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SIC is a global team of oral and maxillofacial surgeons, doctors, dentists and dental technicians who are active in the area of oral implantology.

## Scientific studies performed at the Universities of Berne, Switzerland, and Freiburg, Germany

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The studies verify that SIC invent implants belong to the safest in the world.



# SIC invent AROUND THE WORLD



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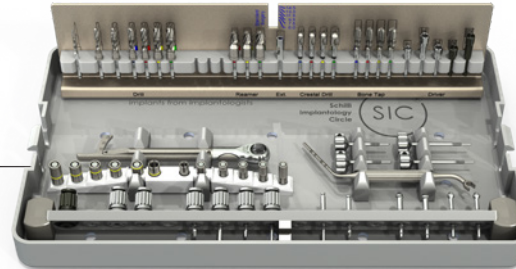


OVERVIEW

# System Overview

1

One single surgical set-up



2

Two different  
Implant-Abutment Connections



3

Three complementary implant solutions  
for high chairside flexibility

SICace®  
(Hex only)



SICmax®  
SICvantage max®



SICtapered  
SICvantage® tapered

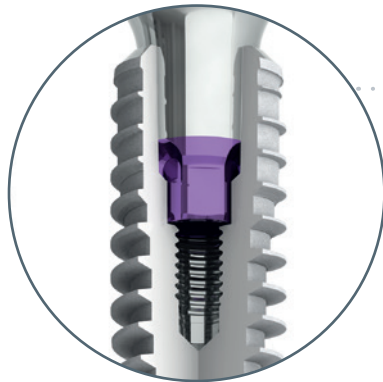


# Interfaces



## ⬡ Internal Hex

- High precision internal hex – for minimizing micro-movements
- Long guided HEX surfaces - for high mechanical stability
- Innovative screw interface offers a reliable retention of the abutment with highly protection against continuous overloading
- Uniform tightening torque of 20 Ncm for all retention screws
- Platform switching – for better crestal bone preservation



## ⊗ Conical

- Self-locking “cold welding” internal Morse Taper connection with a cone angle of 2.8° – outstanding mechanical stability and “close to zero” micro-movements
- Prosthetic restoration retained with or without a fixation screw – simplified prosthetic restoration
- Better aesthetic results
- SICvantage® “Swiss Cross”: 4 groove index – for safe implant placement, abutment positioning and taking a precise open or closed impression
- Outstanding mechanical stability also with 3.0 mm implants – for a safe clinical result
- Simple and safe abutment removal from the implant cone with an extractor – for easy handling
- Platform switching – for better crestal bone preservation

# The new freedom

One drill two implant shapes  
Highest surgical flexibility

Define the final  
implant type during  
osteotomy preparation.



# Drilling Protocols

Drill	2.0 mm	2.8 mm	3.1 mm	3.25 mm	3.75 mm	4.25 mm	4.6 mm	Crestal Drill	optional Bone Tap
Implant			○	○	○	○	○	N H	H
○ 3.0 mm	✓	✓							3.0 mm
○ 3.4 / 3.7 mm	✓	✓ S	N	H				3.3 mm	3.4 mm
○ 4.0 / 4.2 mm	✓	✓	✓ S	N	H			3.75 mm	4.0 mm
○ 4.5 / 4.7 mm	✓	✓		✓ S	N	H		4.25 mm	4.5 mm
○ 5.0 / 5.2 mm	✓	✓		✓	✓ S	N	H	4.75 mm	5.0 mm

S Soft

N Normal

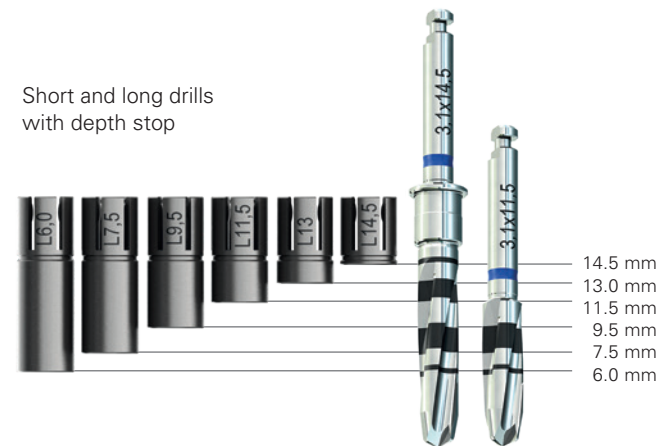
H Hard

## Drilling Protocol for SiCace 6.0 mm Short Implants

Drill	2.0 mm	2.8 mm	3.1 mm	3.25 mm	3.75 mm	Reamer
Implant			○	○	○	
○ 4.0	✓	✓	✓			✓ 4.0
○ 4.5	✓	✓		✓		✓ 4.5
○ 5.0	✓	✓		✓	✓	✓ 5.0



Short and long drills with depth stop



The background is a solid light gray. It features several abstract geometric elements: a series of concentric circles and arcs on the left side, some solid and some dotted; a thick dark gray arc in the center-left; and a long, thin dotted arc on the right side. The word "SURFACES" is written in a large, white, sans-serif font at the bottom left, partially overlapping the geometric patterns.

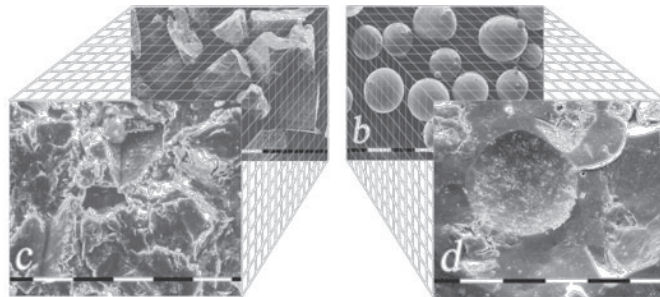
**SURFACES**



# Surface

The microstructure and degree of purity of the "SiCmatrix" SiC surface ensure secure and lasting osseointegration.

## SiCmatrix Surface Treatment



### Regular SLA

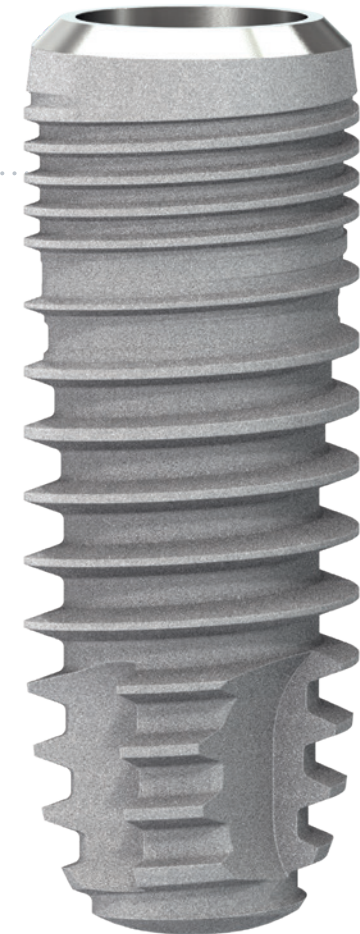
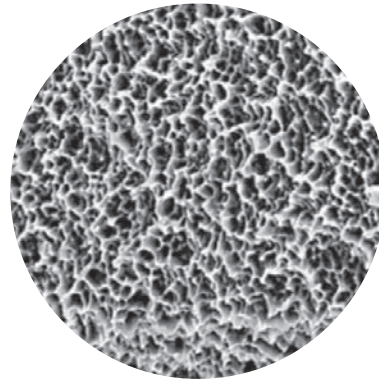
Blasting Procedure with alumina particles

### SiCmatrix

Blasting Procedure with round zirconia particles

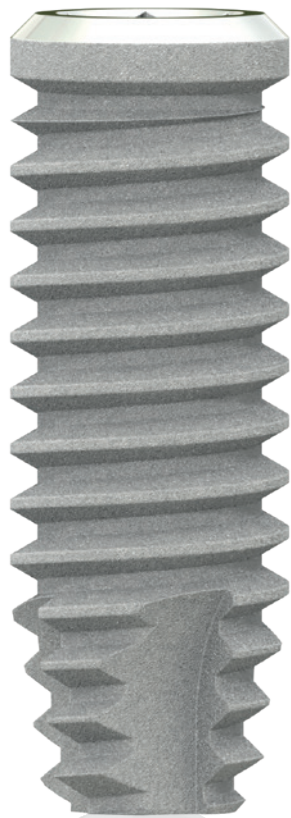
After the blasting process with zirconia beads and acid cleaning, no residuals on the surface are discernible. The level of abrasion is lower than blasting with alumina – this is called surface conditioning with a moderate roughness.

The average roughness is  $SA = 1.0 \mu m$



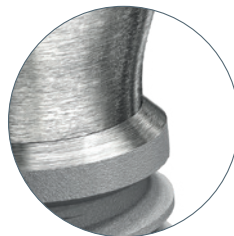
# SiCace®

## Implant System



SiCace® is the allround implant with outstanding long-term clinical results

- Self-tapping screw design for all indications in oral implantology.
- SIC drill system for an atraumatic preparation of the implant site.
- Basic cylindrical shape with apical conical taper for easy insertion of the implant.
- High precision internal Hex with long guide surfaces for maximum stability of the implant-abutment connection and a innovative screw interface highly protected against overloading.
- Flexible and precise prosthetic components for all indications.
- Use of the SiCace® implant can be recommended unreservedly in bone of D1 to D3 quality.



- Integrated "platform switch" for convenient prosthetic handling



6.0 mm Short  
Implants available

*"Short Implants as strategic implants in the lower jaw" Norbert Enkling, Associate Professor, Berne*

# SiCmax<sup>®</sup>

## Implant System

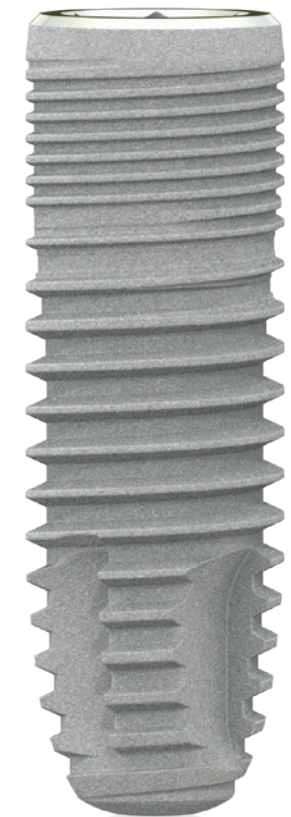
### The solution in soft bone

- Implant specially designed for use in “soft bone”. It is therefore to be used preferably for bone qualities D2 to D4.
- Basic cylindrical shape of the implant with crestal micro thread guarantees great primary stability. As a result, the implant is also suitable for immediate implantation.
- Greatly rounded implant tip without a direct thread cut for use in the upper posterior region, especially with all forms of sinus lift.
- Integrated “platform switching” for convenient prosthetic handling.
- Internal precision hexagon with long parallel-walled guide surfaces for maximum stability of the implant-abutment interface and a screw connection protected against continuous loading.



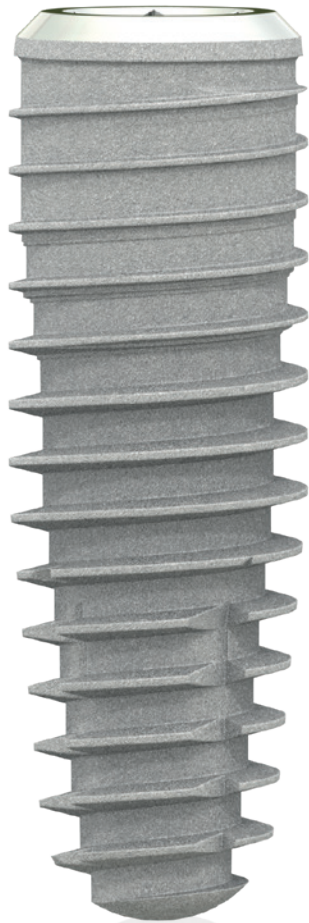
6.0 mm Short  
Implants available

*“Short Implants as strategic implants in the lower jaw” Norbert Enkling, Associate Professor, Berne*



# SlCtapered® | SlCvantage® tapered

## Implant System



for SlCvantage®  
tapered

### Higher primary stability in most bone types

- Overcomes compromised anatomical situations such as narrow ridges, converging root tips and anatomical undercuts
- Ideal for immediate placement with temporary restoration
- Sharper threads
  - for safe cutting of hard bone and reduction of bone compression
- Slightly more tapered core in the middle of the implant
  - for adjusting the bone compression according to the drilling protocol
- Improved flute design
  - for better cutting performance
- More tapered core and threads in the apical partition
  - for deeper initial insertion



With Internal Hex and Conical  
Interface Available

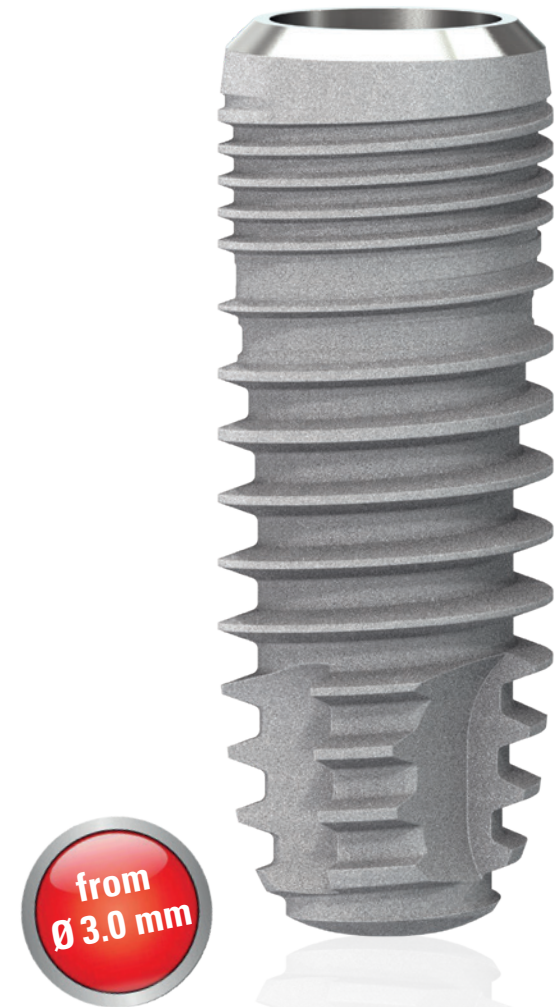
# SICvantage® max

## Implant System

SICvantage® max and SICvantage® tapered implants are setting a new safety standard, starting with a super narrow implant abutment connection.

SICvantage® max offers the same design features as SICmax®.

- Self-locking inner “Morse taper” connection with a cone angle of 2.8°.
- SICvantage® “Swiss Cross”: 4 groove index
- Outstanding mechanical stability
- Prosthetic restoration possible with and without a fixation screw.





The background is a solid light gray. It features several abstract geometric elements: a series of concentric circles and arcs on the left side, some solid and some dotted; a thick dark gray arc in the center-left; and a long, thin, dotted arc on the right side. The word "PROSTHETICS" is written in a large, white, sans-serif font at the bottom.

PROSTHETICS



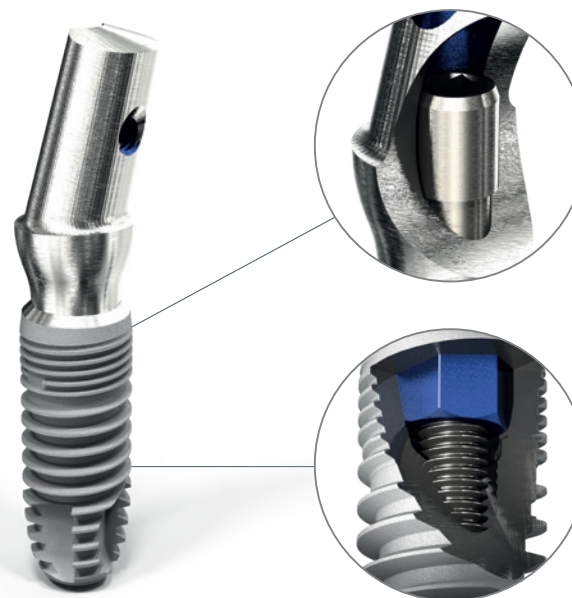
# **Internal Hex** Surgical / Prosthetic Concept

The inner geometry of the implant is designed as a **precision inner hex** for fitting the abutment components and other system components. The hex features long guide surfaces and the ultimate in manufacturing precision. Another feature is the comparatively long retention screw with a diameter of 1.6 mm. The high, flexible initial tension of the screw reliably prevents it loosening and, combined with the quality characteristics of the hex, ensures reliable retention of the abutment components with outstanding long-term stability. The uniform tightening torque for all retention screws is 20 Ncm.







2-part SIC implants have **platform switching** in the form of a 45° angled, conical implant shoulder. The abutment components are fitted in the prosthetic implant connection diameter.

The correlation between implant and prosthetic diameter is illustrated in the overview on the right.

Instructions for Use for prosthetic abutments are available for downloading in the internet at [www.sic-invent.com](http://www.sic-invent.com).



**SICace<sup>®</sup>, SICmax<sup>®</sup>  
SICtapered**

Implant	Prosthetics
 3.4/3.7 mm	 3.3 mm
 4.0/4.2 mm	
 4.5/4.7 mm	 4.2 mm
 5.0/5.2 mm	



# **Conical Interface** Surgical / Prosthetic Concept

Development of the SICvantage® max implant system had three priorities: maximum mechanical stability, ideal handling and a full indication range.

Motivated by the conviction to offer one of the most sophisticated parallel-walled (HEX) internal connections on the market, it was clear to SIC invent that the new conical “SICvantage® max” internal connection in turn also must be one of the best and provide innovative prosthetic restoration options.









SICvantage® max will impress more than just real taper fans. The concept is distinguished by a high level of user and product safety even with reduced implant diameters.

Indexing is performed by 4 cross-type, parallel-walled grooves (“Swiss Cross”). The conical section is tightened for the long-term by tapping gently or with the fixation screw at a torque of 20 Ncm.

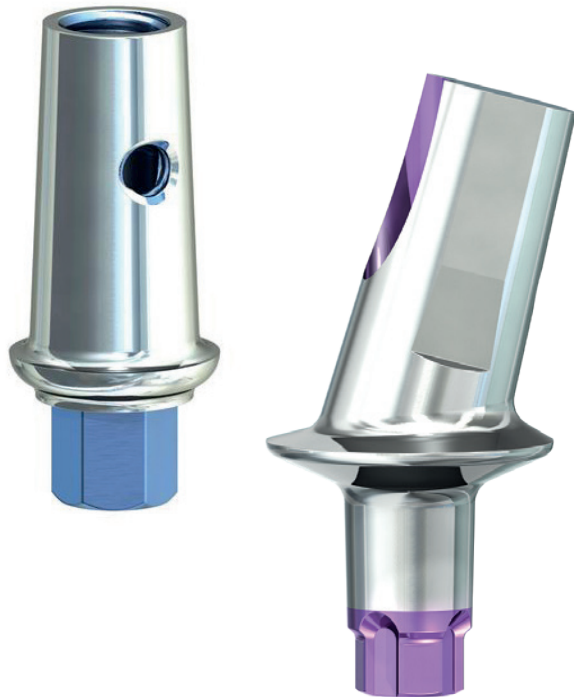
After removal of the fixation screw, the (Morse taper) conical connection can only be removed with a special instrument - the extractor.



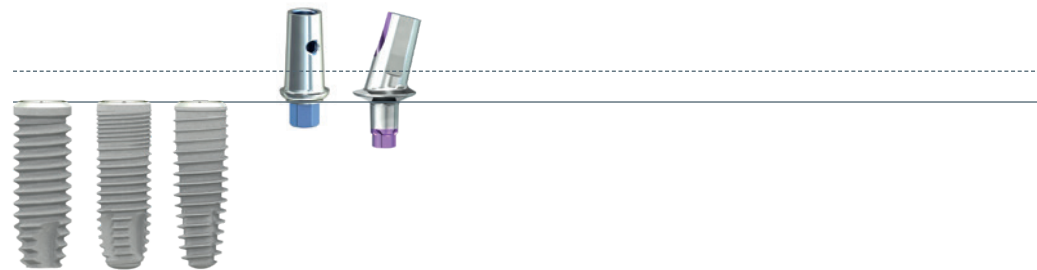
## **SICvantage® max** **SICvantage® tapered**

Implant		Prosthetics	
	3.0 mm		2.2 mm
	3.7 mm		2.5 mm
	4.2 mm		2.9 mm
	4.7 mm		
	5.2 mm		

# Standard Abutments

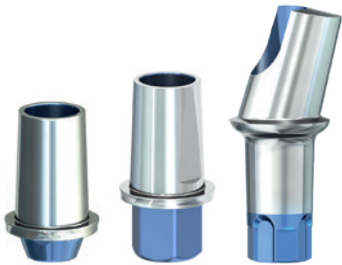


- SIC Standard Abutments are available in various designs for fabricating cemented or screw-retained single crowns and bridges.
- The abutment has a convex / concave gingival emergence profile from the implant level to the gingival height (GH) in an anterior (slim) respectively posterior (wide) design.
- The abutments can be customized by trimming and polishing for individualizing.



# CAD/CAM

## SIC Bonding Base



Bonding Base



CEREC  
Bonding Base



Milling Blank



Scan Adapter  
(Implant level)

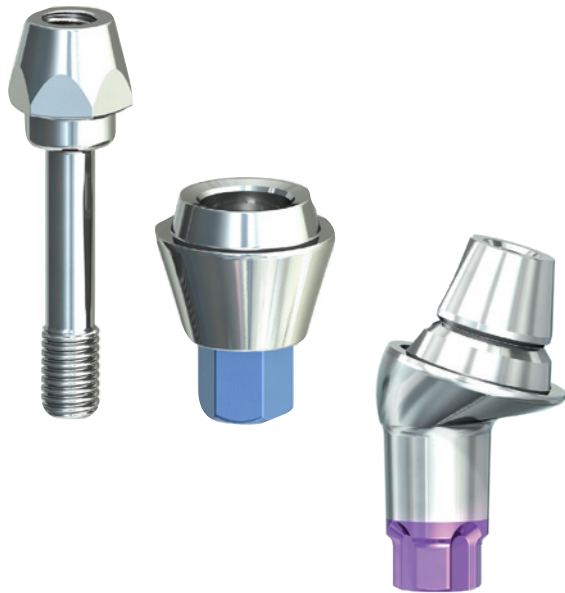


Scan Adapter  
(Multi-Unit Abutments)

- The SIC Bonding Base CAD/CAM is suitable for the fabrication of CAD/CAM designed and manufactured implant abutments and single-tooth restorations on SIC implants which are adhesively retained on the titanium base using a conventional technique.
- Adhesive bonding can be completed using conventional “cold adhesive techniques” and standard, approved adhesives or with the “hot-melt adhesive technique” using glass solder (e.g. Tizion Hot Bond). The bonding base is retained in position on the implant clinically using the SIC Standard Fixation screw (15° angled bonding base uses a SIC Fixation Screw, short).

# Multi-Unit Abutment System

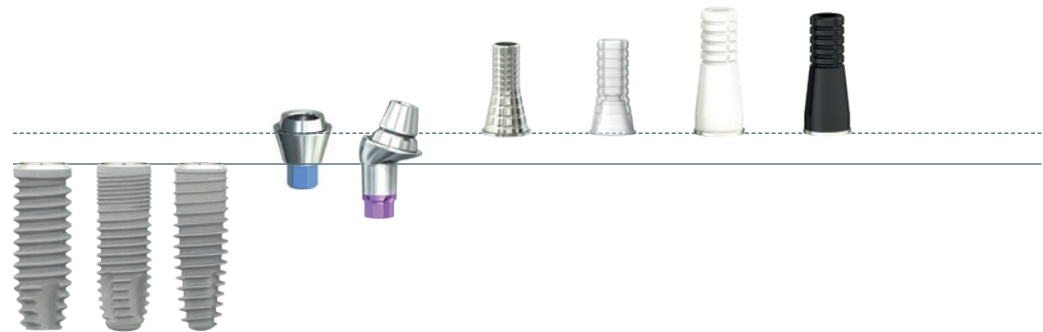
"Safe on Four"



The Multi-Unit Abutment System– for all occlusal screw-retained  
prothetics.

With this system, a fixed transgingival platform is created over which  
all further prosthetic and laboratory technical measures are completed.  
The system is indicated for fixed or removable bridge or full restorati-  
ons with the stipulation that the distal implants can have a maximum  
implantation angle of 30°.

The maximum bone availability is utilized distally by displacement of  
the most distally placed angled implant. During development of the  
system, particular value was placed on the greatest possible stability of  
individual components. The straight bar and bridge abutments consist  
of a two-part design which includes an abutment component with hex  
and a "Safe on Four" fixation post that, using the long screw shank,  
ensures maximum continuous loading capacity. The "Safe on Four"  
universal fixation screws also have a reinforced screw thread.



# Mini Multi-Unit Abutment System



In addition to the conventional Multi-Unit Abutment, this new MINI Multi-Unit Abutment is developed for cases where no major alveolar crestal resorption has occurred and the dentist chooses to perform an occlusal screw-retained bridge-work. In such cases, patients have a limited prosthetic/interocclusal space and the conventional Multi-Unit Abutment is too high and sometimes too wide. With the prosthetic width around 30% slimmer and the height almost 50% shorter, it can be used in most cases.

- SIC Mini Multi-Unit Abutments are developed for occlusal screw-retained bridge-work
- Available for all implant diameters (except 3.0 SICvantage®)
- Two different gingiva heights and one straight version
- Combinable in cases with conventional Multi-Unit Abutments



# Flex Star

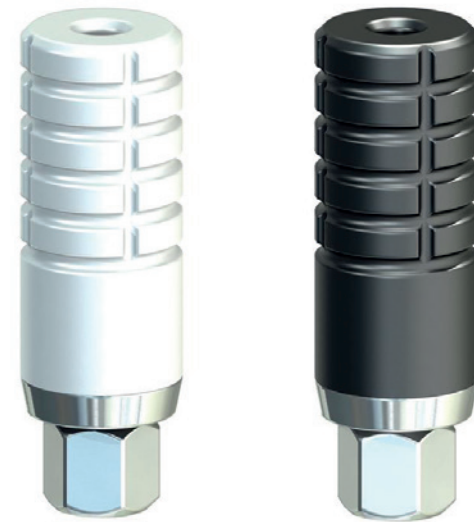
## Universal Cast-to Abutment

The “Flex Star” Cast-to Abutments are intended for further processing using precious or non-precious metal alloys of custom cast abutments for restorations using cemented or screw-retained single crowns and bridges.

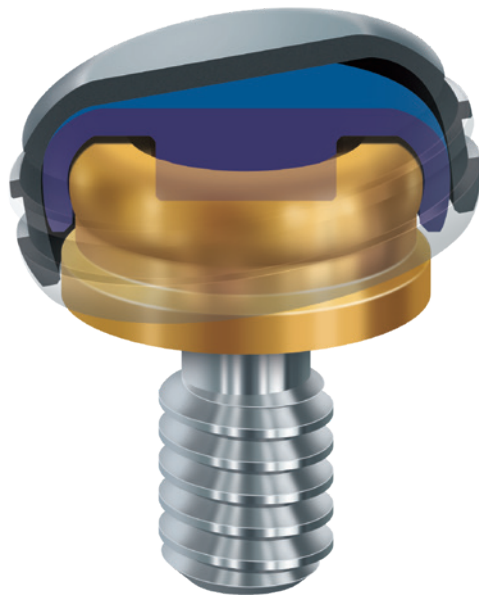
Products marked with “NEM” are based on a platinum-iridium alloy (PtIr) and can be cast on to non-precious metal alloys. The plastic section (black) of the casting/wax-up aid burns out without residue.

Products marked with “HSL” are based on a gold-platinum alloy (AuPt) and can only be cast on to precious metal alloys. The plastic section (white) casting/wax-up aid burns out without residue.

The abutment can be contoured from the implant level upwards to adapt it to the gingival contour and angulation. This also allows fabrication of directly veneered, occlusally screw-retained crowns or custom primary crowns for telescope restorations. This abutment should not be used for primary splinted, long-span restorations due to its integrated rotational security.



# Locator® Classic

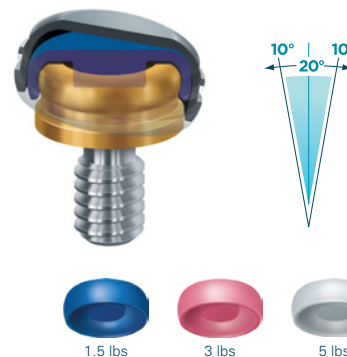


Decisive factors when planning the use of these precision attachments are minimal overall vertical height, unique dual retention principle, proven long-term stability and patient-friendly, intuitive positioning of retention inserts on the attachments. The design of the Locator® allows use when implants have extremely divergent axes - up to 40° - and very limited occlusal space. The long service life, possibility of easy exchange at the chairside and the range of diverse nylon inserts (in six different withdrawal forces of 0.5 kg to 2.3 kg) ensure the retention can be adjusted to suit the indication as well as problem-free servicing.

The range of applications of the Locator® Attachment includes retention of partial and full dentures on a minimum of 4 implants.

## LOCATOR® MALES

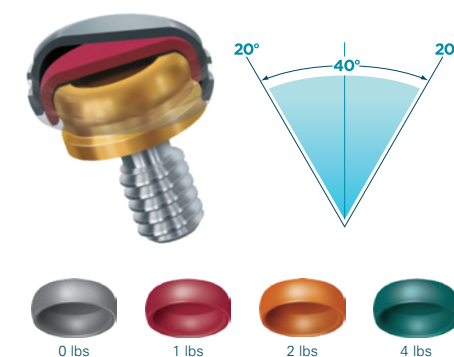
The unique Dual Retention innovation provides the LOCATOR Attachment with a greater retention surface area than ever before available with other attachments.



Dual retention, pivoting action provides resiliency to maximize stability and longevity.

## EXTENDED RANGE MALES

Allows you to restore a non-parallel implant with up to 20 degrees of angulation. This calculates to an extensive 40 degrees of divergence between two implants.

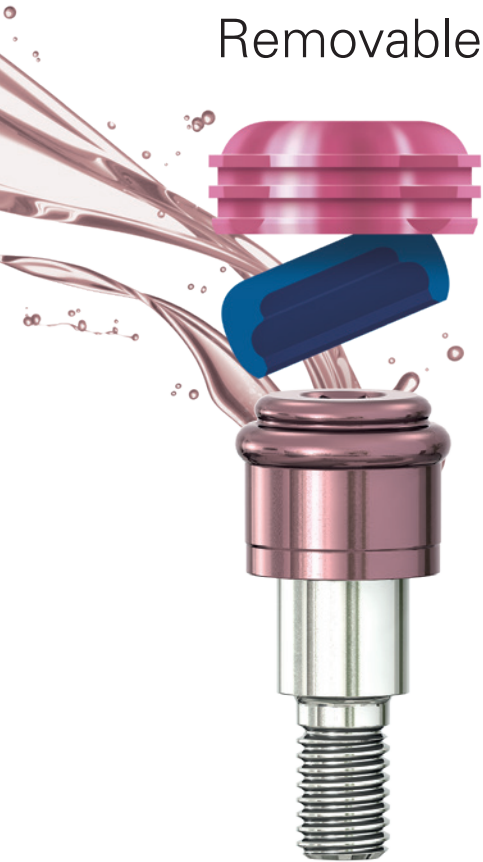


Extended Range Male's pivoting action allows for insertion with up to 40° total divergence.



# Locator R-Tx<sup>®</sup>

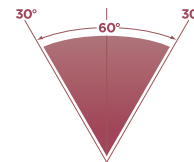
## Removable Attachment System



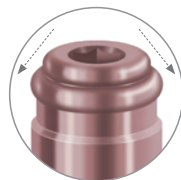
The next generation of the world's leading overdenture attachment system. Unveiling Locator R-Tx<sup>®</sup>, a better, simpler, and stronger system that relies on the same restorative techniques as the award-winning Locator<sup>®</sup>.



DuraTec is composed of multiple layers of titanium nitride and titanium carbon nitride achieving increased strength, wear resistance, and reduction in roughness.



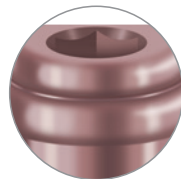
Denture attachment housing now allow the housing to pivot up to 30° over the seated Locator R-Tx<sup>®</sup> nylon retention Inserts to treat a maximum of 60° convergence/divergence between implants.



The dual engaging geometry of the abutment offers a narrower leading edge and taper-like effect to allow the patient to more easily align and properly seat the overdenture.



New pink anodization improves aesthetics in areas of thin denture acrylic.



Industry standard .050"/1.25mm\*hex drive mechanism simplifies placement.



Custom designed all-in-one, double-ended vial separately holds abutment and processing components providing all the necessary components for the case with one part number.

Available for all SiCace<sup>®</sup>, SiCmax<sup>®</sup> and SiCtapered Implants



# Locator F-Tx<sup>®</sup>

## Fixed Attachment System



No Screws. No Cement. No compromises.

What if screws or cement were no longer needed to attach a fixed prosthesis to the abutments?



What if you could shorten and simplify the treatment appointment?

What if the patient's aesthetics and comfort were maximized?



These questions were at the foundation of the design and development of the unique and innovative Locator F-Tx<sup>®</sup> Fixed Attachment System from Zest Dental Solutions. By leveraging Zest Dental Solutions' many years of expertise with the Locator<sup>®</sup> Attachment Systems and their understanding of full-arch solutions for edentulous patients, they strived to create a simpler, more efficient system for FIXED full-arch implant restorations.

Fixed for the patient. Easily removed by the clinician.



Denture Attachment Housing with pre-inserted Processing Ball



Black Processing Ball



Low **(Blue)** Retention Ball



Medium **(Tan)** Retention Ball



High **(Green)** Retention Ball



Block-out Spacer

Available for all SICace<sup>®</sup>, SICmax<sup>®</sup> and SICtapered Implants

**SIC invent** **ZD ZEST DENTAL SOLUTIONS**  
Master Distributor for ZEST | DANVILLE MATERIALS | PERIOSCOPY

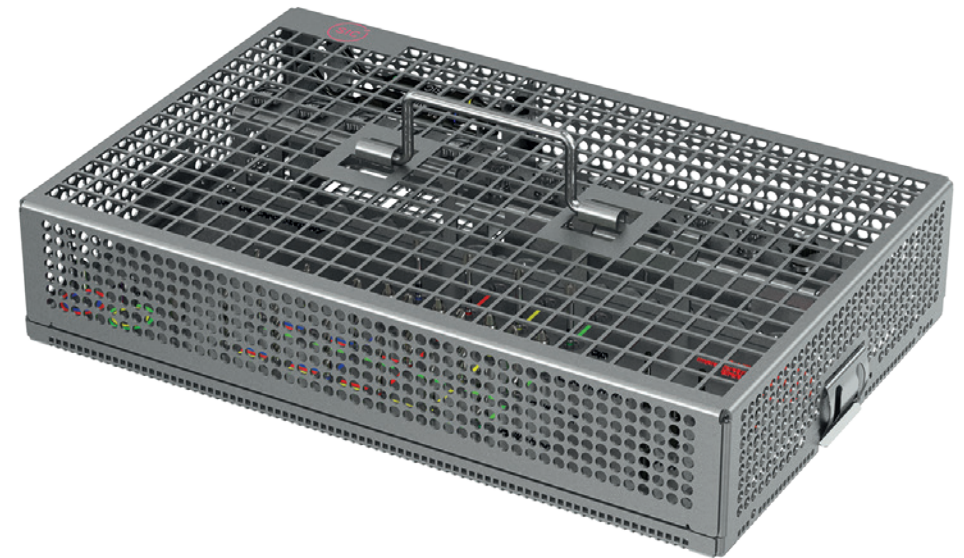
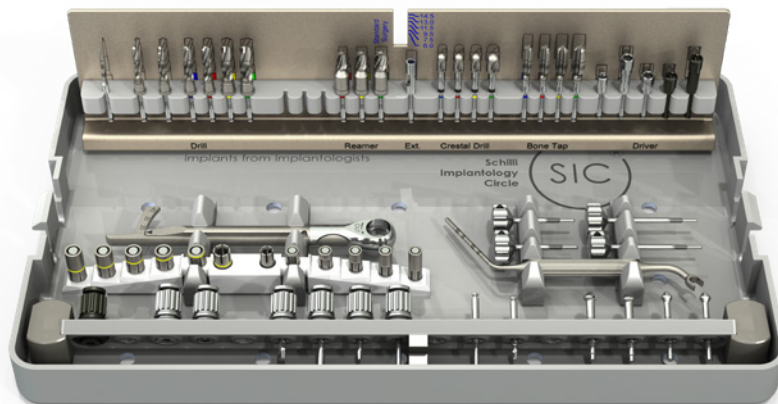
The background is a solid light gray. On the left side, there are several concentric circular lines. Two of these are solid, and two are dotted. Overlaid on these circles are several curved, arc-like segments. Some are solid and some are dotted, creating a layered, geometric effect. The word "TRAYS" is positioned in the bottom left corner, partially overlapping the circular patterns.

# TRAYS

# Surgical Trays

The SIC Surgical Tray is characterized by its optimal arrangement and ergonomic design. Due to its small dimensions, it fits into the smallest sterilizing machines even when it is completely filled. The number of instruments is reduced to the necessities. The drill system can be plugged into the tray in a modular fashion. There is the option of adding drill depth stops to the tray.

All three SIC invent implant lines are compatible with the instruments of the SIC Surgical Tray. With this "SIC one4all Concept™", we meet the demands of the dental practitioner for easy usage and cost-effectiveness.



With the new SIC Washtray, innovative processing leads to effective automated cleaning and sterilization which meets the highest standards of the Robert Koch-Institute.

The SIC Washtray is time-efficient because all instruments can remain in the washtray during cleaning, disinfection and steam sterilization.

The instruments are strategically arranged for a clear process overview.

It was especially developed to maximize efficiency for clinics, universities and large practices that perform a significant number of surgeries.

# Standard Surgery

## Bone Condenser | Titanium Ratchet | Drilling System



### Bone Condenser

- The SIC Bone Condenser, with an instrument design based on an idea suggested by Dr. A. Weidmann, enables atraumatic condensing of the implant site in the cancellous bone. Bone preparation with the new, patented instrument geometry of the condenser attachment greatly improves primary stability during implant placement in soft bone.



### Titanium Ratchet

- The SIC Titanium Ratchet (TR) combines maximum precision, secure handling, improved durability with an attractive modern design. The one-piece ratchet body is made of a titanium alloy and the snap-on ratchet head is made of stainless steel, guaranteeing high protection against corrosion with easy and thorough cleaning, care and maintenance. For checking torque, the ergonomically designed handle has an individually calibrated and scaled cam follower which is employed at torques of up to 45 Ncm.



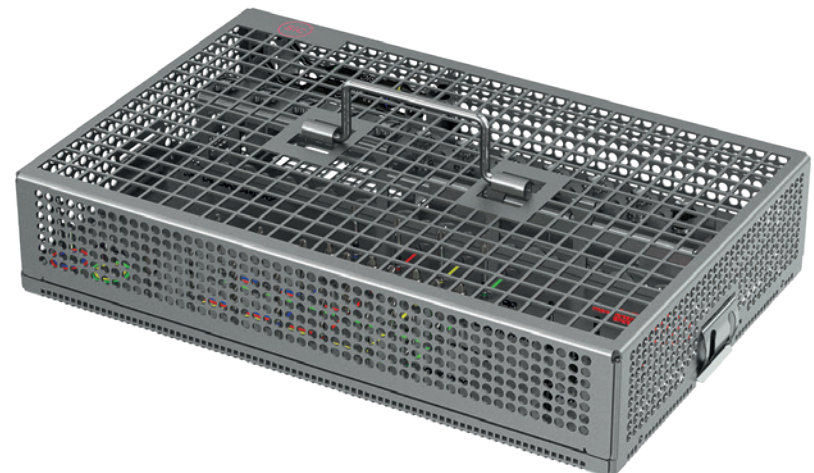
### Drilling System with a Depth Stop

- The SIC drilling system with depth stop is a very flexible system for reliable, quick implant placement. The drills can be used with or without the depth stop. A secure friction fit guarantees the high functionality of the depth stop.

# SIC Guided Surgery Tray

## Guided Surgery

- Software-independent, open instrument set
- Implemented in the planning tools: SimPlant® (Dentsply Sirona), CeHa imPLANT® (med 3D), coDiagnostiX® (Straumann®), SKYplanX (bredent), SICAT Implant (SICAT GmbH & Co. KG), smop Planning Solution (Swissmeda AG), Nemotec (Software Nemotec, S.L.), Implant Studio (3Shape), DDS and 3Dii
- Fabrication of the guide centrally by Materialise Dental, SICAT GmbH & Co. KG or in a local dental laboratory
- Guidance of implant placement using the guide template
- Maximum flexibility for the operator (no fixed depth stops)
- Master sleeve Ø 5.2 mm for standard indications and Master sleeve Ø 3.1 mm for lateral and lower incisors



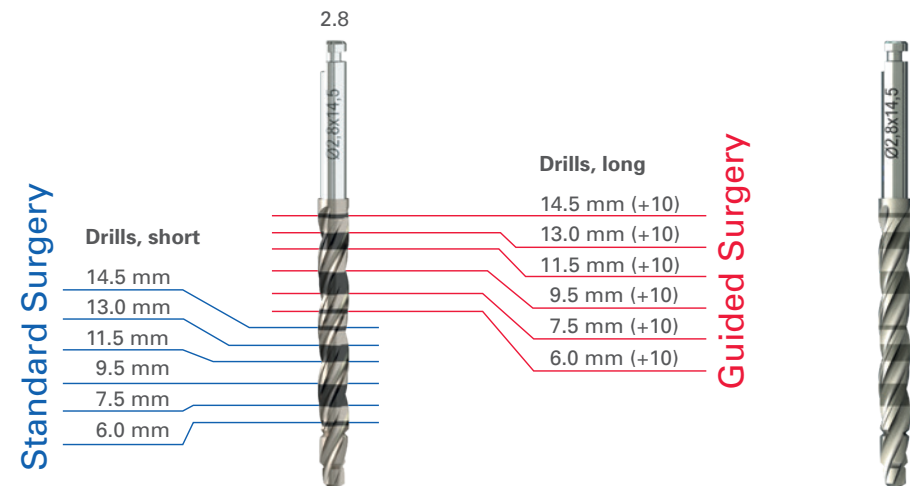


# Guided Surgery

## 3D diagnosis



3D diagnosis in combination with prosthetically oriented backwards planning increases reliability for determining the optimum tooth position. SIC Guided Surgery is a software-independent surgical system for template-guided, navigated implant insertion. Important characteristics are compactness, efficiency and ergonomics of the instruments. Maximum flexibility due to open connection to current planning tools, variability due to the possibility of laboratory or industrial production of the guiding templates, surgical freedom with maximum functionality and precision predominated during the conception and development of the system.



# Prosthetic Tray

## SIC Prosthetic Tray TR

The SIC Prosthetic Tray is a clearly arranged and economic set of instruments with sterilization tray. For all standard abutments, only one screw-driver with the torque ratchet is required.



The background is a solid light gray. It features several abstract geometric elements: a series of concentric circles and arcs on the left side, some solid and some dotted; a thick dark gray arc; and a dotted line that curves from the top right towards the bottom right. The word "BIOMATERIALS" is written in large, bold, white, sans-serif capital letters at the bottom left, partially overlapping the geometric patterns.

# BIOMATERIALS



# Biomaterials

SICmeso Guard® | SICnature graft | SICbio graft®

## SICmeso Guard® Dental Membrane\*

- Latest membrane technology GBR/GTR developed and manufactured by our partner who is one of the leading manufacturers of biomaterials – DSM Biomedical. SICmeso Guard has an open porous structure on both sides to allow for cellular infiltration and vascularization, enabling the remodeling by the body's own tissue. Due to an optimized pore size, the complete remodeling will be obtained after approx. 6 months<sup>1</sup>.



\*Manufacturer: DSM Biomedical

## SIC nature graft

- SIC nature graft is a purely biological, anorganic augmentation material of phycogene origin based on natural calcium phosphate. The porous honey-comb-like structure guarantees a rapid bone regeneration and bears high analogy to human bone. The absorbent pore structure facilitates the absorption of liquids such as blood, which provides a very good formable material with the aid of thrombin coagulation. Remodeling is obtained after approx. 24 - 36 months.



## SICbio graft\*\*

- Bioresorbable bone replacement material made of  $\beta$ -tricalcium phosphate for oral and maxillofacial surgery. It is a bone regeneration material made synthetically from the purest chemicals. As a phase-pure  $\beta$ -tricalcium phosphate (99%), it has a crystalline structure which possesses optimum biological properties. In addition to its 100% resorbability, it is easy to apply for the clinical dental indications. Remodeling is attained after approx. 6 – 24 months.



\*\*Manufacturer: Biovision GmbH





# Packaging and Labels



## Implants


Implant type

Implant diameter and length

Reference number

Sterilized using radiation





**SICace Schraubenimplantat**  
**SICace Screw Implant**  
**SICace Système implantaire**  
**SICace Sistema implantare**




**Ø4.0 L13.0 mm** 1 St./pc. **CE 0297**

**SN** 623945S000000 **Use by** 2024-01-02 **LOT** 623945

**REF** 935176 **2019-01-02**

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 4055 Basel  
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CE mark fulfills the requirements of the Medical Device Directive

Expiration Date







Production Date







Manufacturer

# Prosthetics



## Symbol Explanation

	For Single Use Only
	Production Date
	Sterilized
	Reference Number
	Instructions
	Serial Number

	Attend accompanying documents
	Do not use if packaging is damaged
	Do not resterilize
	Keep dry
	Keep away from Sunlight
	By Prescription Only

All Instructions for Use  
are available online at  
[www.sic-invent.com](http://www.sic-invent.com)

# Publications and Studies



## A posteriori registration and subtraction of panoramic compared with intraoral radiography

Thomas M. Deserno, MSc, PhD,<sup>a</sup> Janaki Raman Rangarajan, MSc,<sup>a</sup> Jens Hoffmann, BSc,<sup>a</sup> Urs Brägger, PhD,<sup>b</sup> Regina Mericske-Stern, PhD,<sup>c</sup> and Norbert Enkling, PhD,<sup>c</sup> Aachen, Germany; and Berne, Switzerland  
AACHEN UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF BERNE SCHOOL OF DENTAL MEDICINE



## Space requirement of a prefabricated bar on two interforaminal implants: a prospective clinical study

Dominic Albrecht, Ami Ramirez, Urs Kremer, Joannis Katsoulis, Regina Mericske-Stern, Norbert Enkling, Department of Prosthodontics, University of Berne, Berne, Switzerland  
Norbert Enkling, Department of Prosthodontics, Preclinical Education and Dental Materials Science, University of Bonn, Bonn, Germany



## Retention force of plastic clips on implant bars: a randomized controlled trial

Stefan Bayer, Norbert Enkling, Department of Prosthodontics, Preclinical Education and Dental Materials Science, University of Bonn, Germany  
Nathalie Komor, Annina Kramer, Dominic Albrecht, Regina Mericske-Stern, Norbert Enkling, Department of Prosthodontics, University of Bern, Switzerland



## Effect of platform switching on peri-implant bone levels: a randomized clinical trial

Norbert Enkling, Victoria Klimberg, Regina Mericske-Stern, Department of Prosthodontics, University of Berne, Berne, Switzerland  
Peter Jo'hren, Department of Oral Surgery, University of Witten/Herdecke, Witten, Germany  
Stefan Bayer, Department of Prosthetic Dentistry, Propaedeutics and Material Science, University of Bonn, Bonn, Germany  
Sren Jepsen, Department of Periodontology, Operative and Preventive Dentistry, University of Bonn, Bonn, Germany



## Open or submerged healing of implants with platform switching: a randomized, controlled clinical trial

Enkling N, Jo'hren P, Klimberg T, Mericske-Stern R, Jervøe-Storm P-M, Bayer S, Gu'lden N, Jepsen S. Open or submerged healing of implants with platform switching: a randomized, controlled clinical trial. *J Clin Periodontol* 2011; 38: 374–384.  
doi: 10.1111/j.1600-051X.2010.01683.x



## Vinylsiloxanether: A New Impression Material. Clinical Study of Implant Impressions with Vinylsiloxanether versus Polyether Materials

Norbert Enkling, Dr. med. dent; Stefan Bayer, Dr. med. dent; Peter Jöhren, Prof. Dr. med. dent; Regina Mericske-Stern, Prof. Dr. med. dent



## Precision of fit and retention force of cast non-precious-crowns on standard titanium implant-abutment with different design and height

Norbert Enkling, Hadi Gholami, Stefan Bayer, Joannis Katsoulis, Regina Mericske-Stern, Department of Prosthodontics, University of Bern, Bern, Switzerland  
Norbert Enkling, Stefan Bayer, Department of Prosthodontics, Preclinical Education and Dental Material Science, University of Bonn, Bonn, Germany  
Takayuki Ueda, Department of Removable Prosthodontics and Gerodontology, Tokyo Dental College, Chiba, Japan



## Influence of Platform Switching on Bone-level Alterations: A Three-year Randomized Clinical Trial

N. Enkling<sup>1</sup>, P. Jöhren, J. Katsoulis, S. Bayer, P-M. Jervøe-Storm, R. Mericske-Stern, and S. Jepsen



## Restoring a single-tooth space

*Dr Hermann Derks and Wilfried Lesaar, Emmerich/Germany*



## Oral Presentation EAO 2013 Abstract: Immediate loading of interforaminal implants using a chairside fabricated bar: 3 years results.

*Enkling Norbert, Albrecht Dominic, Bayer Stefan, Mericske-Stern Regina, Stark Helmut*



## Diagnostik mit Swissmeda und Implantation mit dem SIC-Guided-Surgery-System

*Dr. Pascal Marquardt*



## Wahlfreiheit: Navigiertes Vorgehen – Ja oder Nein?

*Dr. Pascal Marquardt*



## Poster: Bone resorption around self-tapping implants in bone-class I and II

*R. Mericske-Stern, N. Enkling, W. Schilli, S. Jepsen, S. Bayer, P. Jöhren  
Department of Prosthodontics, University of Bern, Switzerland*



## Platform switching: a randomised clinical trial – one year results

*N. Enkling<sup>1</sup>, V. Boslau<sup>1</sup>, T. Klimberg<sup>1</sup>, P. Jöhren<sup>2</sup>, T. Deserno<sup>3</sup>, R. Mericske-Stern<sup>1</sup>, S. Bayer<sup>4</sup>, S. Jepsen<sup>5</sup>. Dep. of Prosthodontics, University of Bern, CH<sup>1</sup>, Dep. of Oral Surgery, University of Witten / Herdecke, GER<sup>2</sup>, Dep. of Medical Informatics, Aachen University of Technology, GER<sup>3</sup>, Dep. of Prosthetic Dentistry, Propaedeutics and Material Science, University of Bonn, GER<sup>4</sup>, Dep. of Periodontology, Operative and Preventive Dentistry, University of Bonn, GER<sup>5</sup>*



## Ästhetische Frontzahnssituation durch Einsatz eines Langzeitprovisoriums

*Dr. Frank Spiegelberg/Frankfurt am Main*



## Vierdimensional rückwärts geplant Temporäre Implantatbrücke mit digital erstellter Weichgewebmaske

*Dr. Frank E. Spiegelberg, Frankfurt am Main und Ztm. Christoph Buhl, Weinheim*



## SIC invent System at the University of Bern / Switzerland: 5-Years results

*Eichenklinik - Praxisklinik für Zahnmedizin, Kreuztal, Germany  
Department of Prosthodontics, University of Berne, Switzerland  
Department of Prosthetic Dentistry, Propaedeutics and Material Science, University of Bonn, Germany*



## A journey through the science with SIC invent at the University of Bern

*Norbert Enkling, Priv.-Doz. Dr. med. dent., MAS  
Associate Professor and Vice-Chairman  
Department of Prosthodontics  
University of Berne / Switzerland*

# Publications and Studies

## **Ridge-Preservation im Oberkiefer-Frontzahnbereich Nach Teilextraktion des Zahnes unter Erhalt des bukkalen Wurzelanteils**

*Dr. med. dent. Frank Kistler, Dr. med. dent. Fabian Sigmund,  
Dr. med. dent. Steffen Kistler, Dr. med. dent. Georg Bayer,  
PD Dr. med. dent. Jörg Neugebauer. Implantologie 2/2018*

## **Ein klar definierter Fahrplan zwischen Praxis und Labor als Schlüssel zum Therapieerfolg**

*ZA Gerhard Reif, ZTM Philipp von der Osten. pip 3/2018*

## **Erweiterte Rückwärtsplanung mit allogenen Knochenblock zur absoluten Kieferkammerhöhung Kurze Implantate als Ausweg bei der implantatprothetischen Versorgung**

*Dr. med. Dr. med. dent. Manfred Nilius M.Sc. DENTALE IMPLANTOLOGIE | Jg. 22 | Ausgabe 06 | Oktober 2018*

## **Schnittstelle Prothetik Spezifische Implantat-Aufbau-Verbindung**

*Dr. med. dent. Georg Bayer, Dr. Luise Krüger. Z Oral Implant, 14. Jahrgang 1/18*

## **Festsitzender Zahnersatz im zahnlosen Unterkiefer. „Snap-in“-Attachment ohne Schrauben und Zement**

*Dr. Karl-Ludwig Ackermann, ZTM Gerhard Neuendorff,  
ZTM Janez Fiderschek. Implantologie Journal 3 | 2018*

## **Alterszahnmedizin: Knackpunkt Hygienefähigkeit. In der Alterszahnmedizin kommt der Hygienefähigkeit und Systemen, die dieser Rechnung tragen (z. B. LOCATOR, Zest Dental Solutions, ZDS), hierbei eine Schlüsselrolle zu.**

*Autor: Prof. Dr. Ralf Rößler, DI Dentale Implantologie, Ausgabe 1, Februar 2018.*

## **Der Einsatz eines neuartigen Locatorsystems zur implantatgetragenen, festsitzenden prothetischen Versorgung des zahnlosen Ober- und Unterkiefers**

*Dr. Luise Krüger. DENTALE IMPLANTOLOGIE, Jg. 22 | Ausgabe 03 | Mai 2018*

## **Die Möglichkeit zahnlose Kiefer mit dem neuen Locator F-Tx® einfach festsitzend zu versorgen, wird die Zahnmedizin verändern.**

*Dr. Marius Steigmann, Sonderdruck erschienen, QZ 1/2018*

## **Der neue Weg zur festsitzenden Versorgung im zahnlosen Kiefer. Neues Locator F-Tx-System für die bedingt abnehmbare implantatgetragene Brücke**

*José de San José González, Helmut Steveling, Andreas Beining,  
QZ 12/2017*



## **SICmeso Guard® Dental Membrane**

### References:

1. Data on file; DSM Biomedical

## **SICbio graft™**

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Clinical results with the BETABASE  $\beta$ -tricalcium phosphate  
M. Lühmann<sup>1</sup>, R. Osadnik<sup>2</sup>, JAK Ohnsorge<sup>1</sup>, S. Andereya<sup>2</sup>,  
C. Herren<sup>3</sup>, U. Maus<sup>1</sup>
- Knochenaufbauwerkstoffe in der Zahnmedizin - Eine Übersicht der eingesetzten Materialien sowie eine Beurteilung der Leistungsfähigkeit von  $\beta$ -TCP  
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- Neue mikro- und makroporöse  $\beta$ -Tricalciumphosphat-Keramik als Knochenregenerationsmaterial  
Prof. Dr. H. L. Grafelmann, Dr. med. dent. Michael Gross, Bremen

## **SIC nature graft**

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Clinical Oral Implants Research, Vol. 15, S. 100, 2004

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