CAMLOG

Prosthetic solutions on ceramic implants

The demand for aesthetic and particularly tissue-friendly implant restorations is showing steady growth. Sophisticated ceramic implant systems are one solution. The company CAMLOG meets these requirements and entered the market for ceramic implants with CERALOG®. CAMLOG has been working on ceramic implants for several years, and in summer 2016 acquired a majority stake in AXIS biodental SA, a Swiss pioneer in the production of zirconium dioxide implants. The CERALOG® implant system includes two proven ceramic implants: the one-piece CERALOG® Monobloc implant and the CERALOG® Hexalobe implant, the first two-piece ceramic implant with reversibly screw-retained PEKK abutments. The Hexalobe connection design, which is suitable for ceramics, allows modern prosthetic solutions on a ceramic implant. The Hexalobe implant in its current configuration has been used successfully in clinical practice since 2013. CERALOG® is initially only available in Germany, Austria and Switzerland, and is gradually being introduced in other countries.

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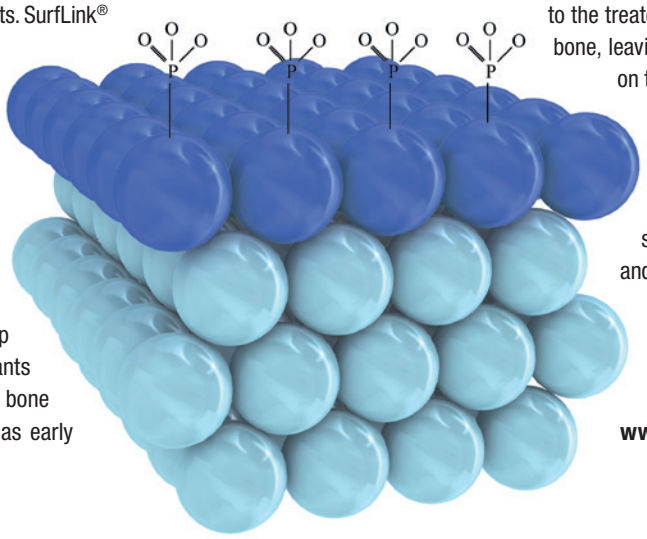
www.camlog.com

NBMolecules

Increased implant fixation

Treating ceramic-based implants with SurfLink® results in a nanometer thin layer of phosphorous-rich molecules, which is seen as bone-like by the body. It is the first product to permanently create bone fixation on dental implants. SurfLink® is compatible with any surface roughness or porosity and permanently hydrophilic by design. Preclinical studies have shown bone growing directly on titanium implants, neo-vascularisation and reduced bacterial adhesion around ceramic implants. In a sheep study with titanium implants the product increased new bone formation by +44 per cent as early as two weeks after implantation. After only two weeks, SurfLink® showed a 32 per cent increased implant fixation compared to the control. Torque testing after 52 weeks showed that bone fixation to the treated implant surface is stronger than bone, leaving a thin layer of mineralised bone on the implant surface.



For most manufacturer nearly no extra equipment is necessary for implementing the product in their production line. Furthermore, no specially trained personnel is needed and all standard logistics can be used.

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TAV Dental

Ceramic Injection Molding technology

TAV Dental, a division of TAV Medical, is a family-owned company with four decades of experience in the medical devices market. The company focuses on the development, manufacturing and marketing of zirconia dental implants and prosthetic parts, and is seeking to improve dental implant treatments by making zirconia dental implants common worldwide.

TAV Zirconia implants are the result of years of profound research and development process with exceptional focus on the safety and performance of the implants. The implants are manufactured using the advanced Ceramic Injection Molding (CIM) technology. This technology offers great advantages in terms of part design, mechanical properties and manufacturing capabilities. TAV Dental offers both one-piece and two-piece zirconia implants. Thereby, the two-piece implant-abutment connection is done by screwing.

Ceramic implants are taking the dental industry a major step into the future. Thanks to this metal-free option, implant treatment with reliable osseointegration, superior mechanical properties, biocompatibility and high aesthetic results can now be offered to the patients.

TAV Dental
Shlomi, Israel
www.tavdental.com

ZiBone

Reduced healing time

ZiBone is a one-piece zirconia implant (fixture and abutment in one piece) made of extremely strong high-purity zirconia ZrO_2-TZP, which has been used for years as orthopaedic implant material. By use of this material, the implant perfectly conforms to ISO 13356.

Zirconia is an ideal material for the manufacturing of dental implants. Compared to implants made from aluminium oxide and titanium, zirconia possesses superior mechanical properties that are making the implant stronger, less brittle, resist to fracture and deformation. The one-piece ceramic ZiBone implant is extremely biocompatible, and thus suitable for most patients. Through thorough preliminary assessment, patients will experience an enhanced osseointegration and reduced time for healing.

ZiBone is born out of the Taiwan company COHO Biomedical Technology, which has long-term experience in manufacturing biotech machinery and products specifically for the use in dentistry. Having the foundation and studied intensively with precision on the exact delicate detail of CIM (Ceramic Injection Molding) and PIM (Powder Injection Molding), the company successfully obtained several patents.

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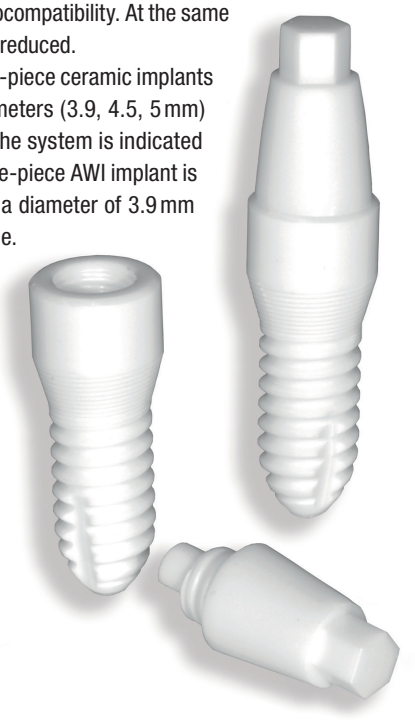
WITAR

Biocompatible ceramic implant

Metal-free, biocompatible and aesthetic: Ceramic implants have gained popularity among dentists and patients. Building upon this trend, WITAR offers a new AWI implant system for transgingival healing. With this, the company promises an implant treatment that is safe, cost-efficient and simple. The two-piece system that has been developed and patented recently is made from Y-TZP ceramic and offers a reliable and easy handling. Treatment steps had been optimised for an increased safety and biocompatibility. At the same time, treatment costs and time could be reduced.

The implant system consists of nine two-piece ceramic implants that are available in three different diameters (3.9, 4.5, 5 mm) and lengths (8, 10, 12 mm). With this, the system is indicated for all bone classes. Additionally, the one-piece AWI implant is available in two sizes (10, 12 mm) with a diameter of 3.9 mm and can be used in the anterior mandible.

Four full-ceramic abutments of which two are straight and two are angled by 15 degrees, belong to the system as well. Furthermore, the system includes a sterilisation box, surgical tray with milling machines made from ATZ high-performance ceramics, and turning tools.



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Straumann® PURE Ceramic Implant System

Straumann

Swiss quality and precision

Nowadays, patients are more aesthetic and health conscious than ever before. Healthy-looking oral soft tissues and bright teeth are considered a prerequisite for a beautiful smile and self-esteem, adding directly to health-related quality of life.
With the Straumann® PURE Ceramic Implant System dentist can grant the best aesthetic, natural and strong treatment to their patients. Patients will benefit from all the highly aesthetic advantages of a natural ceramic implant. Yet dentists can rely on a high-performance zirconia ceramic material, being even stronger as the gold standard, grade-4 titanium implants.
Every single ceramic implant has to undergo a proof test before it leaves the Straumann production facility. This exceptional standard is the result of more than 12 years of relentless research and development until the ceramic implants complied with the company's premium quality standards. They combine Swiss quality and precision, strength, clinical success and flexible treatment protocols in an innovative solution that helps dentists to meet the needs of their patients.

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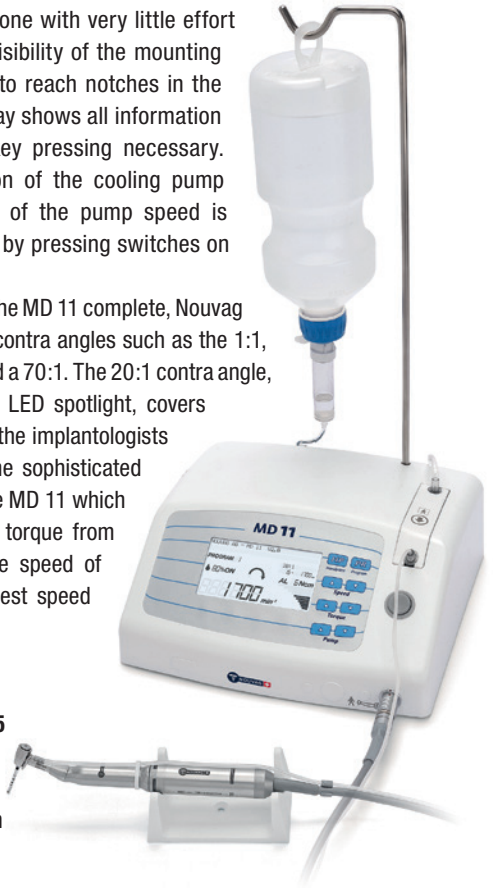
Nouvag

Sophisticated motor management

Nouvag's latest development in the field of implantology is the motor system MD 11. Drilling, thread cutting, screwing in the implants and placing the cover screw are now organised in separate programmes. The insertion of the tubing set is done with very little effort due to the great visibility of the mounting bracket and easy to reach notches in the bracket. The display shows all information at a glance, no key pressing necessary. Even the activation of the cooling pump and the changing of the pump speed is conveniently done by pressing switches on the pedal.
To make the set of the MD 11 complete, Nouvag offers all required contra angles such as the 1:1, 16:1, 20:1, 32:1 and a 70:1. The 20:1 contra angle, also available with LED spotlight, covers the largest field of the implantologists tasks, thanks to the sophisticated motor control of the MD 11 which provides sufficient torque from the lowest possible speed of 15 rpm to the highest speed of 1,700 rpm.



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SDS Swiss Dental Solutions

Ceramic implant forms with osteogenic functionality

While SDS ceramic implants were being applied routinely at the Swiss Biohealth Clinic of Dr Volz, the experience and knowledge that were gained there led to the development of a new kind of implant. The improved biocompatibility of zirconium dioxide implants, together with the bone- and soft-tissue growth associated with it have provided new options for implantation wherever pronounced oval alveoli need to be treated, or multiple rooted teeth must be replaced. To this end, the implant ranges "oval" and "balcony" were developed, available in different diameters and lengths, both as single pieces and in two parts, and which were able to optimally close the alveoli, especially with emergency implantations.
The new SDS "sinus implants" (Fig.) were developed specifically for sinus lifting. Due to the increased biocompatibility of ZrO_2, bone growth is also optimally exploited for this indication. In the apical area of the sinus implants, a plate is introduced, which on the one hand spares damage to the Schneiderian membrane upon sinus lifting, and on the other forms a large cavity under the plate due to an umbrella effect. The actual implant serves as a tent pole in this cavity, which creates optimal conditions for inward bleeding and the bone regeneration which results from this. Bone graft material is not necessary in almost all cases. The sinus implants are also available in various diameters and lengths.

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