
In-Kone®
A fresh take on
«Bone Level»
implantology
GlobalD

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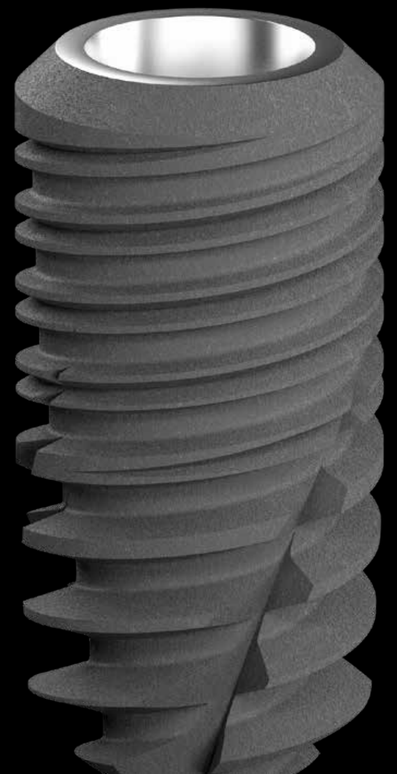
Our philosophy: ***Perio-implantology*** *in essence*

Global D is a French manufacturer with more than 30 years' experience in the design of dental implants, with a constant concern for the **preservation of the biological space.**
This approach enables us to propose a unique and proven range of therapeutic solutions, **developed to promote** the **bone, mechanical and periodontal integration of implant-based prosthetic restorations.**



TRIPLE INTEGRATION, a key **SUCCESS** factor *for your implant-based restorations*

Mechanical integration

Immobility and integrity of the prosthetic assembly during masticatory movements.[2] [3]

Periodontal integration

Barrier against the risks of leakage and contamination at the implant-prosthesis interface.[1] [4]

Osseous integration

Osseointegration of the implant and preservation of the peri-implant bone plates.[5]

These three types of integration are closely related and must be combined to **optimise the overall result** of the restoration, both aesthetically and functionally.

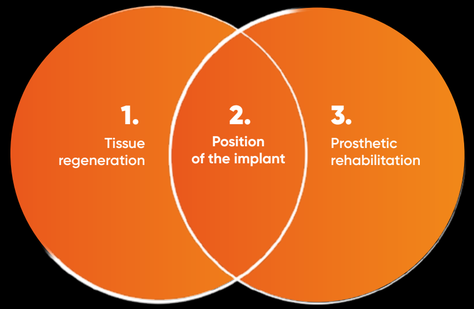
At Global D, we are particularly attentive **to this overall vision, which guarantees a successful and durable treatment plan**; it serves as our reference system for the development of our products.

Triple integration is enhanced by the right balance between a sufficiently large implantable tissue space and an aesthetic and functional prosthetic plan.

A **global** approach focused on **aesthetic** & **functional** durability

Analysis and preparation of the implantable space

1. The volume and quality of the hard and soft tissues must be able to ensure the mechanical anchorage, immune response and aesthetic appearance of the implant-based restoration. An adequately prepared tissue environment is a prerequisite for the dental implant to perform its function biomechanically in a reliable manner.



Respect of positioning

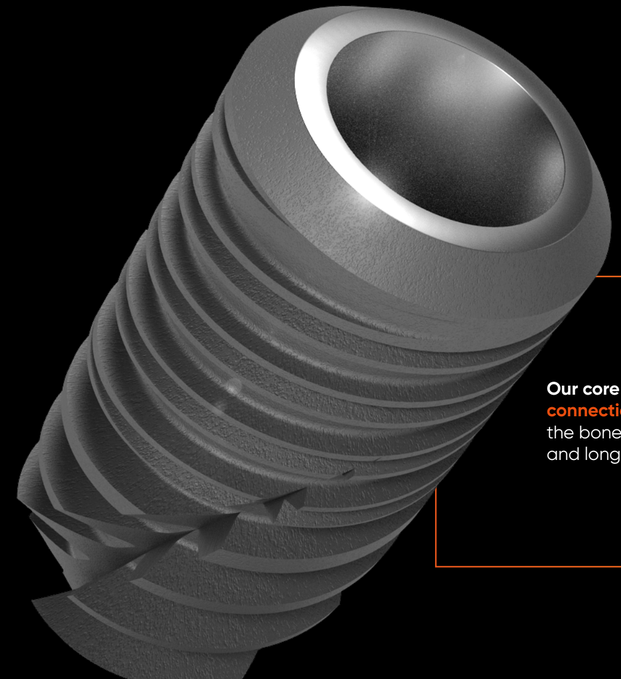
2. The three-dimensional positioning of the implant is determined by both the tissue environment, which defines the "implantable space", and the rehabilitation plan, which defines the "prosthetic space". The implant emergence axis must fulfil the requirements specific to each of these two spaces to ensure the stability of the restoration in the long term.

Analysis and design of the prosthetic space

3. The prosthetic restoration is designed to ensure optimal preservation of **the health and stability of the peri-implant tissue capital.** Quality of assembly seal and stability, passivity of frameworks, choice of prosthetic materials, occlusal adjustment and clinical monitoring of restorations are all key factors for successful prosthetic integration in the long term.

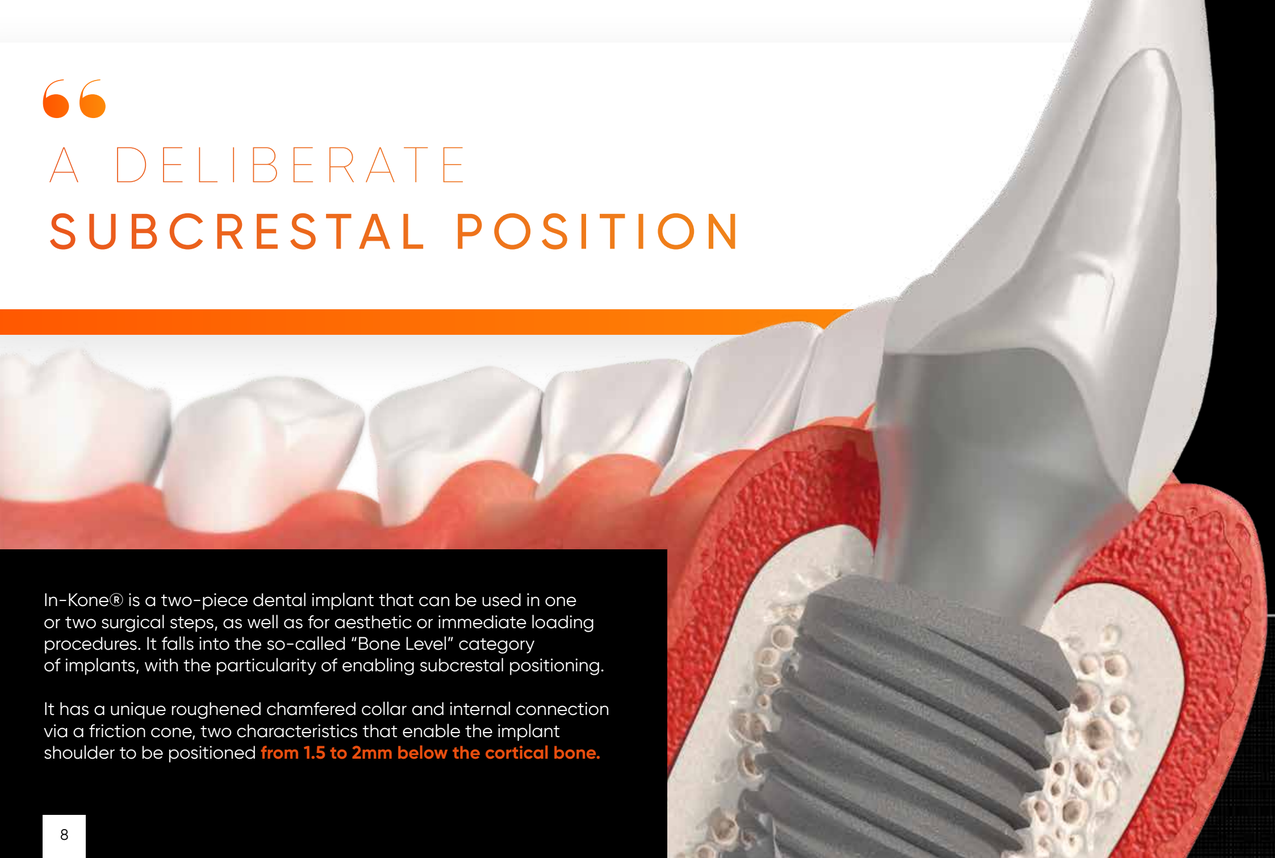
01.

In-Kone®, *a fresh take on the "Bone Level" philosophy*



Our core concept: one of the first sealed prosthesis-implant connections and a deliberate subcrestal position enable the bone plates to be widened, thus providing natural and long-lasting support to the mucosa.

A DELIBERATE SUBCRESTAL POSITION



In-Kone® is a two-piece dental implant that can be used in one or two surgical steps, as well as for aesthetic or immediate loading procedures. It falls into the so-called "Bone Level" category of implants, with the particularity of enabling subcrestal positioning.

It has a unique roughened chamfered collar and internal connection via a friction cone, two characteristics that enable the implant shoulder to be positioned **from 1.5 to 2mm below the cortical bone.**

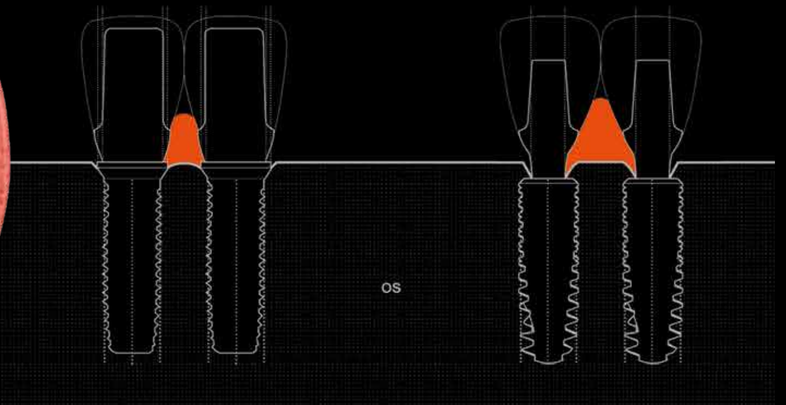
MEASURABLE CLINICAL BENEFITS*

Widening of the ***bone plates***

The subcrestal position recommended for the In-Kone® implant promotes **the rapid formation of a cervical blood clot** and **releases tension in the cortical bone** to allow the latter to grow horizontally onto the implant collar.

** Doctors Patrick MOHENG, Philippe ROCHE-POGGI, Romain CASTRO, Pierre MOHENG, Laboratoire Guillaume PÉNARANDA Implant Global D In-Kone® SA² - Survival rate at 5 years - Implant magazine 2019*

In-Kone®
Survival rate
At 1 year: **99.4%**
At 5 years: **99.10%**
Longitudinal study of 1,788 implants*



Mucosa volume

The enlarged bone plate around the In-Kone® implant provides **natural support for the peri-implant soft tissue.** The "tulip-shaped" profile of the associated prosthetic components then promotes **crimping of the restorations** with a **thick mucosal seal.**[4]

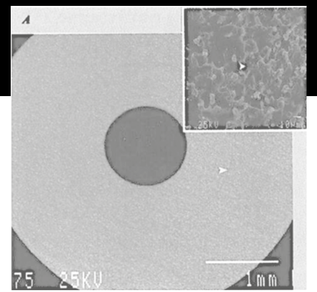
02.

Technical characteristics promoting **triple integration**

PERIODONTAL INTEGRATION

A ***stable*** implant-prosthesis connection

With the aim of preserving the tissues, the In-Kone® prosthesis connection ***(8° friction cone type)*** is designed to propose the most **stable** connection possible, both **mechanically** and in terms of its **seal**. The connection stability prevents the risks of micro-movements caused by the occlusal forces and metal deformation, two phenomena that can cause bacterial leakage at the interface[1]. Finally, this stability means that it is possible to propose prosthetic components with a concave design at the connective tier of the peri-implant mucosa[1].



Horizontal section view

Vertical section view

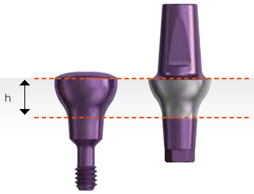
Respect ***of the anatomy*** of each patient

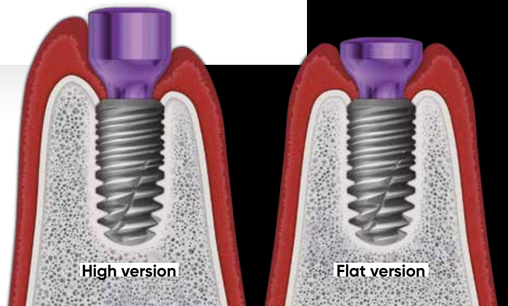
A WIDE RANGE OF HEALING SCREWS

suitable for all types of gums and clinical cases to enable modulation of the prosthetic emergence required.

As well as different transgingival heights (h) and diameters, the range of healing screws proposes flat or high head formats, to enable optimal management of all clinical situations[4].

The transmucosal profile of the healing screws is perfectly **homothetic** to that of the final components, but with a very slightly larger diameter (+0.4mm) to avoid any tension on the connective fibres when the final prosthesis is put into place (for both high and flat versions), enabling optimal management of **all situations**[4].





TULIP-SHAPED **PROSTHETIC** COMPONENTS

The range of In-Kone® prosthetic components offers a **broad choice of references** for progressive management of different biological heights. The "tulip-shaped" transmucosal profile of the prosthetic components is designed to ensure an **atraumatic** fit with the prosthetic seating formed by the corresponding healing screw.

The concave emergence prosthetic components of the In-Kone® range are designed to **free the thick connective tissues and encourage their reorganisation.** This promotes vascularisation[4] and limits the risk of telescoping with the bone edges.

A colour code indicating the selected periodontal height enables simple, immediate matching of the healing screws and prosthetic abutments.

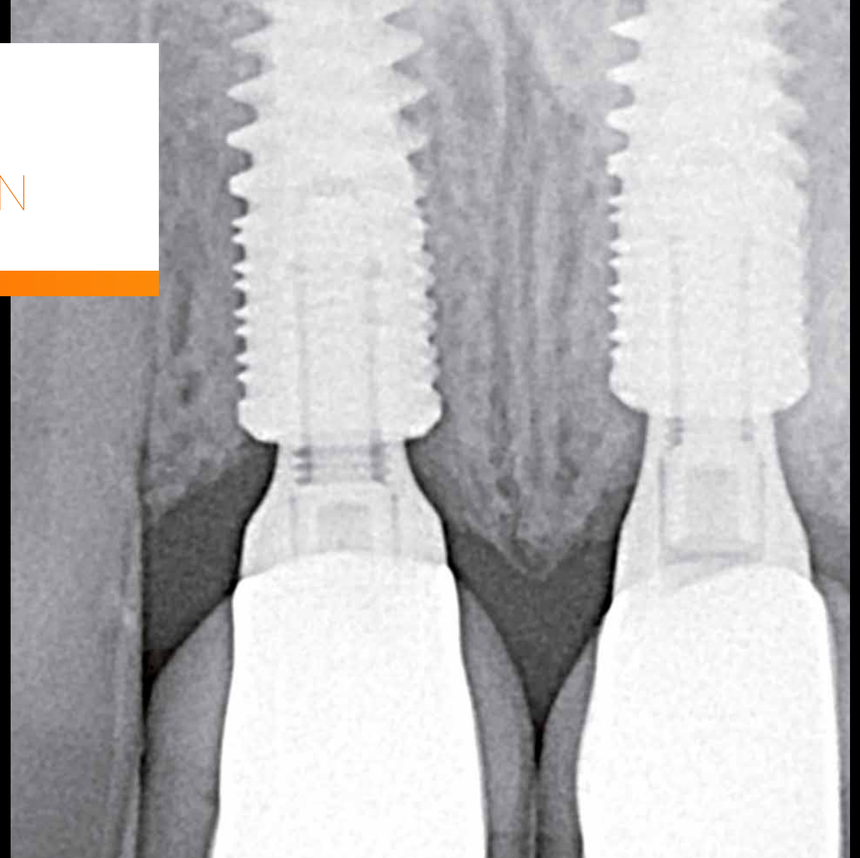
CUSTOMISABLE
SOLUTIONS

Global D strives to adapt to the changes in your practices, and therefore proposes a **wide range of prosthetic solutions that can be customised in the laboratory:**

- Direct implant titanium bases for customised zirconia abutments or screw-retained teeth
- Blanks (or pre-milled) to make personalised titanium abutments
- Titanium bases for conical abutments for implant bars and bridges
- Customised frameworks in **Global D Compliance** certified laboratories for validated connections.

Photo credit: Dr Eric SCHNECK

OSSEOUS INTEGRATION

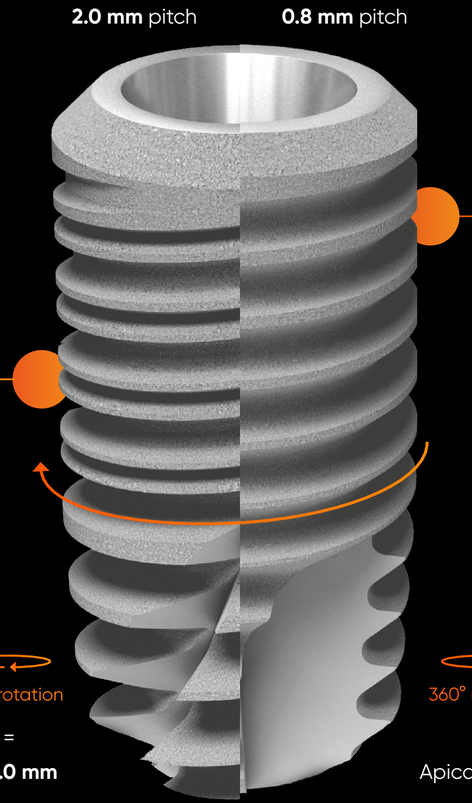


An implant collar to promote ***bone bonding***

The anatomical collar of the In-Kone® implant, roughened and chamfered at 45°, frees the cortical bone from all mechanical stress during the healing phase. **It promotes bonding with the bone** and crimping of the implant[5], two factors that facilitate tissue management and the formation of papillae.

Two ***complementary*** implant shapes

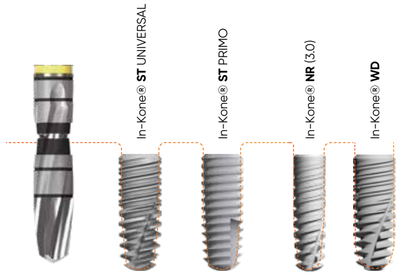
The UNIVERSAL profile has a gradual double thread to achieve **more stable primary anchorage** in low density bones.
This profile is ideal for **immediate loading** rehabilitation.



The PRIMO profile has a regular single thread suitable for surgeons seeking a certain **flexibility** in high density bones.

A single ***drilling protocol***

The two In-Kone® implant shapes, PRIMO & UNIVERSAL, use exactly the **same ULTIMATE drilling protocol,** for site preparation, allowing the surgeon to choose the profile best suited to the bone density, respecting the receiving site and encouraging osseointegration of the implant.



A carefully selected
titanium alloy

Our In-Kone® implants are manufactured from **medical grade TA6V ELI titanium alloy.** This alloy enables better **machining precision** than with "pure" titanium. This is necessary to achieve a **precise, sealed** friction cone type connection, whose **mechanical resistance** is sufficient to prevent crushing of the implant-abutment assemblies over time[2].

Recognised
surface treatment

The SA^2 surface finish of In-Kone® implants is obtained by sandblasting followed by double etching.
The resulting roughness (Ra) is between 1.5 and 2 microns. This is described as moderate roughness by scientific literature and it encourages both **cellular differentiation** and the proliferation of osteoblasts on the surface of the implant[3]. A study of In-Kone® implants on beagles showed **contact osteogenesis at 3 weeks** and **bones in the remodelling phase** in the implant thread spaces at 12 weeks [3].

1.5 to 2 µm **3 weeks** **12 weeks**

Certified clean **commitment**

The SA^2 surface finish has been certified by the German **Clean Implant Foundation**, which guarantees the cleanliness of implants based on random market sampling.

The members of the scientific board of the **Clean Implant Foundation** are internationally-reputed dental implantology researchers[3].

www.cleanimplant.com ▶

Photo credit: Dr Nicolas DAOUD

MECHANICAL INTEGRATION

Mechanical stability of the *8° friction cone*

This fiction cone offers an **effective solution** for **prosthetic stability** thanks to the homogeneous distribution of stress on the implant-abutment contact surfaces and the **reduction of micro-movements** under the effects of occlusal loads.

Respect of the *connection*

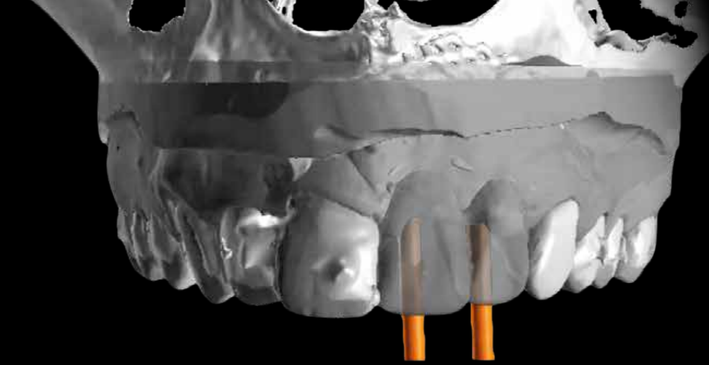
To guarantee the **performance of the abutment assembly** and implants, Global D uses an extremely precise **machining process**. This quality of assembly has repercussions on the periodontal, bone and mechanical aspects, which means that manufacturing tolerances must not be altered during the restoration phases. Machining or reworking of direct implant connections are not authorised.

To preserve the quality of the prosthetic connection, Global D supplies prosthesis laboratories with parts such as **titanium bases or blanks with ready-machined connections**. The customisable part is then handled by the **prosthesis laboratories.**

With the aim of sharing skills for the dentistry profession, Global D also invites the laboratories that can meet the equipment requirements to become **Global D Compliance** partners.

This scheme enables them to obtain programmes and tools to make implant bridges and bars on straight or angled conical abutments, with no titanium base, according to a recognised quality charter.

Planned *prosthesis-guided* surgery



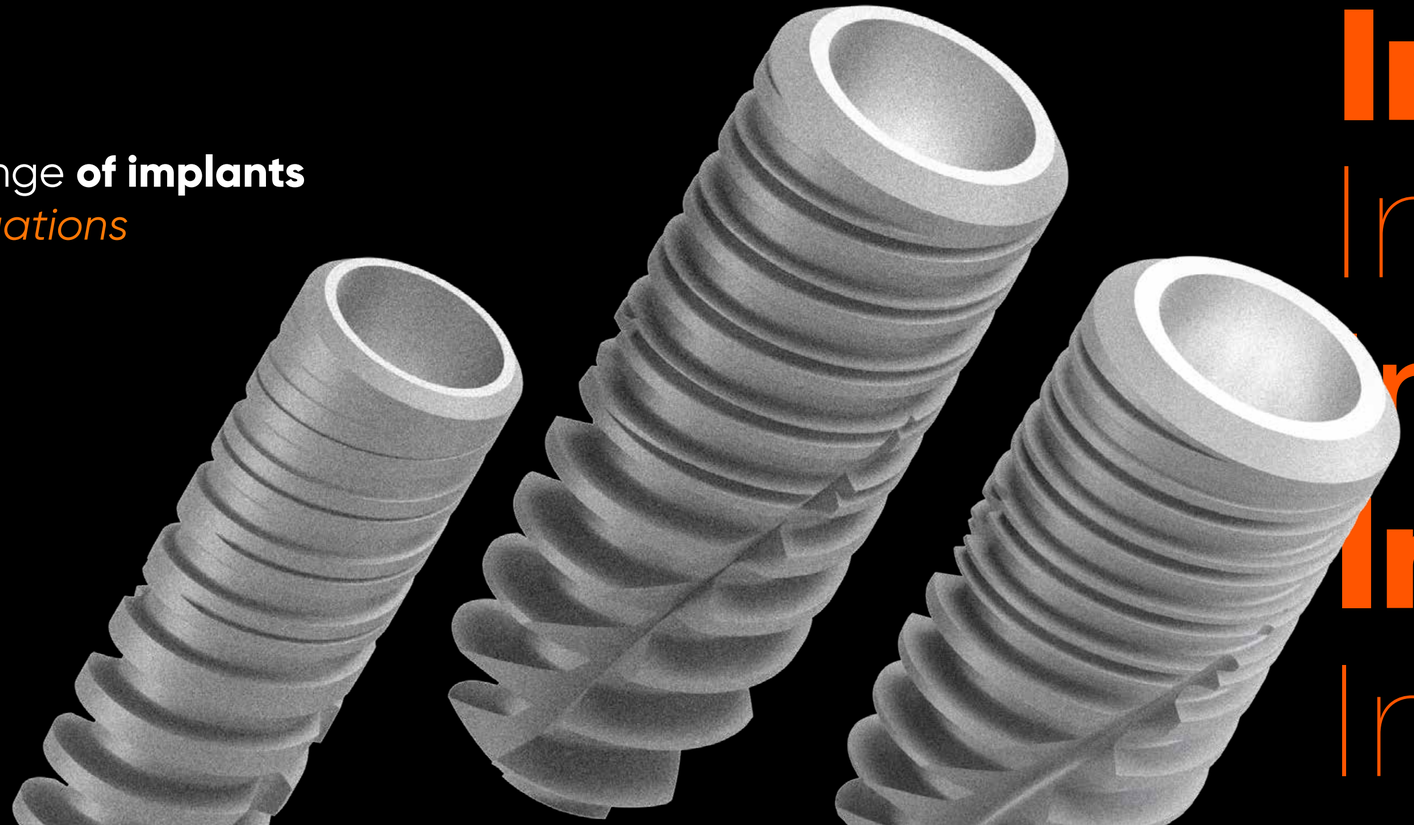
The **three-dimensional positioning** of implants is a key factor of the durability of implant-related restorations, so Global D implants are found in most of the planning software products available on the market.

Prosthesis-guided implant planning, associated with piloted or guided surgery, has become an integral part of Global D's digital therapeutic offer.

Global D proposes a full **piloted surgery kit** and a full guided surgery kit, based on application of the ULTIMATE protocol.

03.

A comprehensive range **of implants**
to suit all clinical situations



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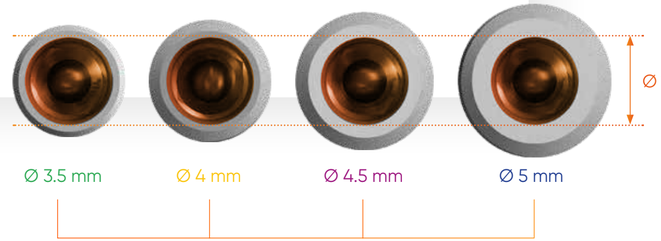
CORE CONCEPT

The original so-called standard (ST) prosthetic platform, the **very backbone** of the In-Kone® philosophy, is proposed with 4 implant diameters to suit the vast majority of your clinical cases.

This platform is essential for your routine actions, and is ideal for **full arch restoration** and the **treatment of anterior sections (single or multiple cases) and posterior sections (multiple cases).**

In-Kone® ST

4 implant diameters,
1 standard connection



ST platform In-Kone® implants are available in **UNIVERSAL** and **PRIMO** versions.

After operation

Ideal for ***aesthetic*** work

The In-Kone® implant was originally designed to treat most situations encountered in dental implantology.

Before operation

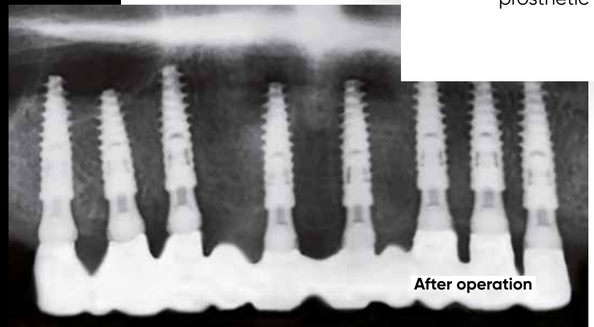
Photo credit: Dr. Alain SIMONPIERI (13)

Before operation

The external profile of the **In-Kone® UNIVERSAL** implant is a cylindrical cone, equipped with a gradual double thread.

This shape is particularly suitable for **post-extraction implantation with immediate loading.**

The possibility of gradual management of the emergence profile, thanks to its tulip-shaped prosthetic components, makes this implant ideal for interventions with an aesthetic purpose.



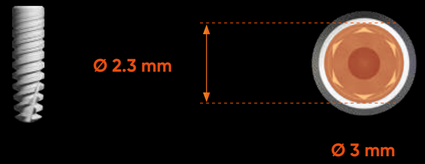
After operation

The narrow alternative, opting for ***finesse***

The In-Kone® concept is also available with an implant diameter of 3 mm **for restoration of small mesiodistal spaces of the maxillary and mandibular lateral incisors.**

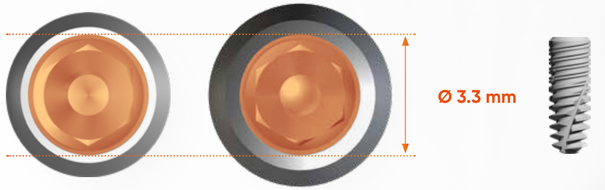
In this context, the implant is equipped with a 5° friction cone and a smaller prosthetic platform, identified as Narrow (NR). **The 3.0 implant (NR)** therefore has its own range of prosthetic components.

In the case of multiple replacement of mandibular incisors, make sure each tooth is replaced with an implant and avoid the use of pontics.



In-Kone® |NR|

In-Kone® |WD|

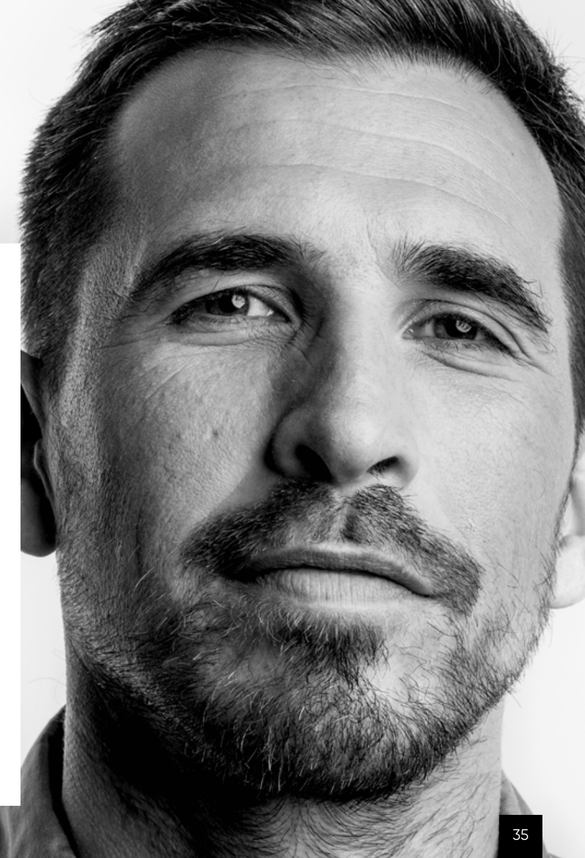


The wide alternative, opting for ***resilience***

In response to the evolution of clinical and prosthetic practices (manufacture of machined one-piece crowns, immediate treatment of single posterior edentulous spaces, etc.) and the changing patient population (younger patients, development of bruxism, etc.), Global D has extended its In-Kone® range with a larger prosthetic platform, indicated Wide (WD).

This option is a solution for clinical cases requiring up to 60% higher mechanical resistance of the implant-abutment assembly, without compromising the original philosophy of the In-Kone® implant.

WD platform In-Kone® implants are particularly recommended for the **rehabilitation of single and multiple posterior cases.**



04.

The **ULTIMATE** surgical protocol

A single surgical kit for *all In-Kone® implants*

Our ULTIMATE surgical protocol stands out with its homothetic drills and its compatibility with all our implants, regardless of their shape (UNIVERSAL and PRIMO) or platform (ST, NR, WD).

A simple, user-friendly protocol

Obvious markers for easy reading to **enable management of the different drilling depths** as the drills move back and forth during irrigation. A colour code for each diameter marked on the drills and pins in the kit enables **immediate reading** of the drilling sequences to be implemented.

Latest generation drills

The drills have a double cutting edge and a helical groove to ensure **the evacuation of bone chips.**

Modularity of the *final drilling diameter*

The very gradual incrementation of different drill diameters allows the final drilling diameter to be adjusted to **different bone densities.**

Each reamer preserves the homothetic shape of the preparation, regardless of the final drilling diameter.

FOR MORE INFORMATION ON THE FRESH TAKE ON THE BONE LEVEL PHILOSOPHY

www.globald.com

FIND OUT ABOUT OUR EXCLUSIVE OVERALL APPROACH TO THE OROFACIAL AREA

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FIELDS OF APPLICATION

Global D

Implantology
Oral surgery
Pre-implant surgery
Orthognathic surgery
Reconstructive surgery
Facial trauma surgery
Cancer surgery
Craniomaxillofacial surgery
Orthodontics
Training

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