



# RATIOPLANT®

DENTAL IMPLANTS



Fit for future  
Dental care

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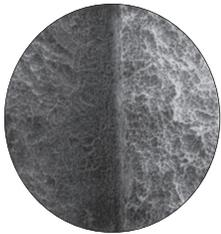
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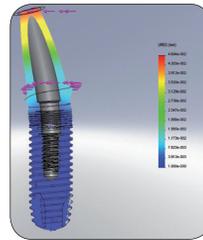
## What is an implant?

An implant is an artificial root of titanium which is introduced into the bone instead of the tooth. A suitable screw of titanium is inserted through a prepared opening in the bone. Natural bone will grow around this screw and thereby hold it in the bone. Then, after a healing time of 4 to 6 months, the implant can be fitted with a dental prosthesis. The healing time is dependent on the bone material, the patient's state of health (smoker or non-smoker) and the type of dental prosthesis. The time margin can be from 1 day after implantation up to 6 months. The patient must discuss these questions and the subsequent procedure with the dental surgeon.

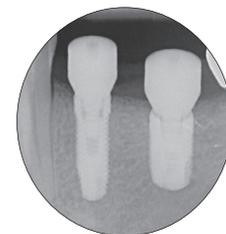
Titanium surface RatioPlant®



FEM-Study RatioPlant®



X-Ray of an RatioPlant® Implant



## 4

# What kind of materials are used for implants?

## Titanium:

Titanium implants have already been in use for many years. Many studies have shown that healing and bone adhesion to the implant significantly depend on the surface. As a result, RatioPlant® system implants are provided with the latest generation of blasted and etched surfaces. A distinction is made here between two-piece and one-piece implants.

One-piece single implants are used as interim implants, that is for the healing period of definitive implants or, after augmentation (osseous development), an existing or temporary prosthesis is supported by this interim implant, thus protecting the critical areas. In edentulous jaws, one-piece single implants can be used over the long term as supporting pillars and connecting elements, and provide support and security for removable dentures.

Two-piece Classic and Avantgarde implants are initially inserted and then heal under the gums, or are provided with a healing cap in the mouth. After the healing time, they are fitted with an abutment and the appropriate prosthesis. Crowns, bridges or prostheses can be used for this.



## RatioPlant® Single

The one-piece Single implant by HumanTech is a titanium screw implant, self-cutting and with a tapered thread, available in 2 diameters and 4 lengths. The conical abutment structure with anti-twist protection and a square surface for insertion allow very easy handling during insertion, impression and prosthetic care. The material is mainly a tissue-compatible titanium alloy, with a blasted and etched thread section according to the latest standards.



## RatioPlant® Classic

The Classic range implants by HumanTech are classic titanium cylindrical screw implants, self-cutting and with a tapered thread. 2 connecting platforms are available with an internal hexagon and cone in Standard and Large sizes. The thread portion is blasted and etched according to the latest scientific findings, in order to achieve the greatest possible, fast bone adhesion.



## RatioPlant® Avantgarde

The Avantgarde range implants by HumanTech are root-analogue titanium screw implants, self-cutting and with a tapered thread. Here, too, 2 connecting platforms are available with an internal hexagon and cone in Standard and Large sizes. The thread portion is blasted and etched according to the latest scientific findings, in order to achieve the greatest possible, fast bone adhesion.



## What is the importance of implants for us??

youthful emotional appearance

conservation of endogenous substances

to prevent bone loss

**quality of Life**

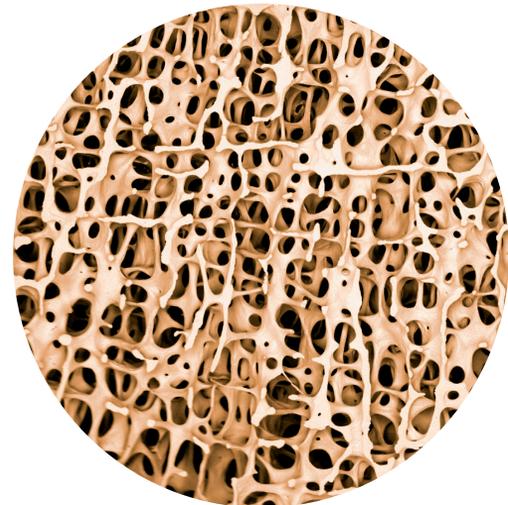
fixed prosthesis versus removable dentures

to stay young

# What is used to build up the bone?

## Bone materials

The advantages and disadvantages of various bone materials are best discussed with your implant surgeon. The patient's own bone taken from the mandible (lower jaw) or iliac crest (pelvis) constitutes a very safe type of transplant. Patients must, however, generally accept a second surgical procedure for the removal of their own bone material. Foreign materials and substitute materials in the Federal Republic of Germany must fulfil clear guidelines for processing. This means the transmission of disease is virtually eliminated. Outside the Federal Republic of Germany, very lax country-specific laws apply to some extent, so a transplant there is not advisable (CIS states or Third World countries).



Bone structure of a healthy jaw bone

# What is possible with implants?



## Fixed Prosthesis

With crowns or bridges on multiple implants. In this variant the dental care is directly cemented or screwed onto the implant abutment. The used materials include titanium, precious metals or zirconia to satisfy highest aesthetic demands.



## Telescopic Denture

Removable dentures with telescoping components on the implants. Here cylindrical or conical abutments are attached on the implants to establish a firm connection with the prosthesis. Another solution to fix prosthesis will be using the Ratio Plant ® single implants immediately after implantation and provide immediate security.



### Overdentures

Removable dentures with snap fasteners are mainly used at edentulous patients using 2, 4 or 6 implants. There are different solutions, depending on the patient's request. As fasteners can be used ball abutments or button-type structures and mounted to new or existing dentures.



### Bar Prosthesis

Removable dentures with bars between the implants as a holding element on which a prosthesis can be fixed. This way a prosthesis can be restored in maintenance and function. Bridges are mainly used in edentulous patients using 2, 4 or 6 implants.

# About HumanTech®

Our long-standing experience in the field of human implantology and our know-how of the development, manufacture and testing of implants and instrument combinations guarantee the high functionality of all HumanTech products. Combined with people's growing need for an improved quality of life and the dynamic market changes, with increased pressure on price and margins, more emphasis is also being placed on cost-oriented manufacture and distribution.

HumanTech is a corporate group which is completely dedicated to the deployment and manufacture of implants and instruments in the medical field, as well as to develop and permanently seek better solutions.

We eliminate unnecessary distribution costs, as HumanTech products are sold and distributed directly by us, the manufacturer: from development to the finished product, right through to Customer Service - everything from one single source!

RatioPlant® dental implants are manufactured in our company according to current guidelines, packed and despatched directly to our clients. The diversity of the RatioPlant® implant product ranges offers a wide variety of clinical solutions, including reconstruction of individual teeth, screw-retained or fixed cemented bridges and partial or full dentures.

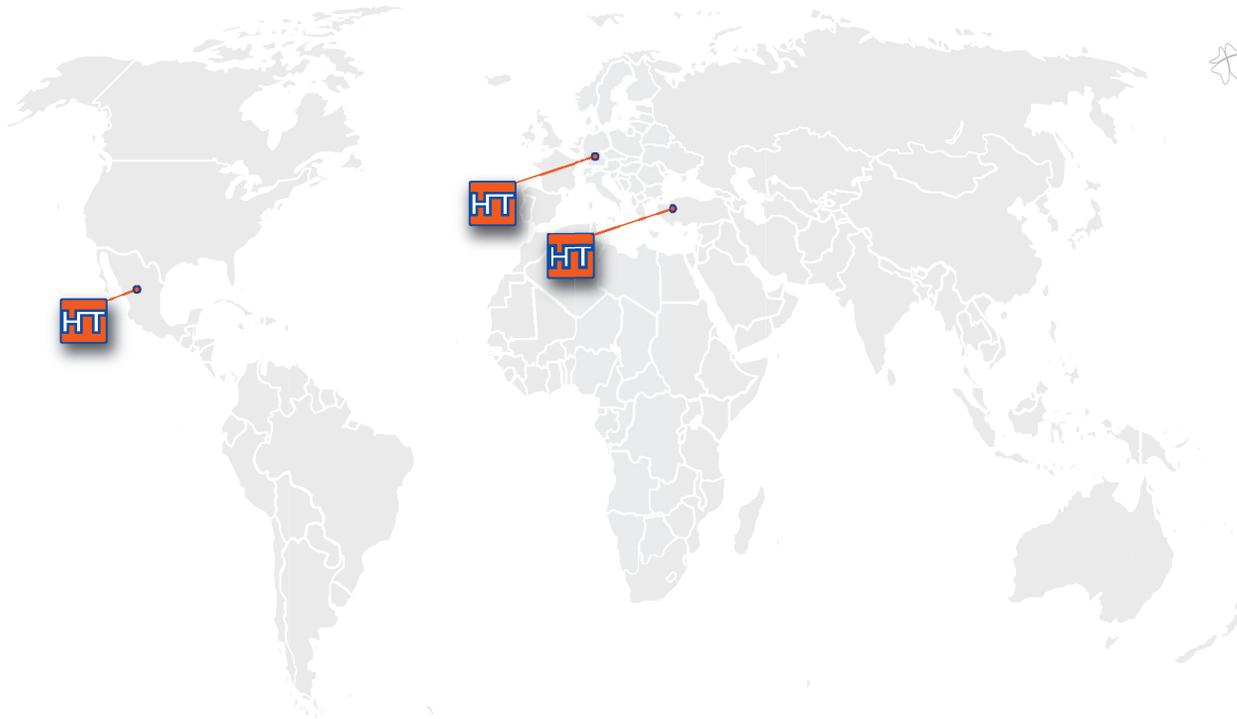
Moreover, RatioPlant® implants may be utilised in all surgical and bone augmentation procedures, from the simplest to the most difficult. They are manufactured from biocompatible quality titanium and, with their blasted and etched surfaces, are at the cutting edge of science.

All RatioPlant® implants fulfil the highest international standards. We are certified according to DIN EN ISO 13485/46001 as well as Appendix II of Directive 93/42 EEC.

## Information

If you have any further questions, please consult your dentist or contact HumanTech Germany GmbH directly.





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