HumanTech Dental

Avantgarde

Made in Germany

atioPlant

About us...

The HumanTech Group is the leading manufacturer of human implants and instruments for spinal and dental surgery. The intelligent, well thought-out implant systems are being used successfully throughout the world. With our own production facility in Steinenbronn, we create guaranteed added value for our users and a noticeable competitive advantages for our distribution partners. All our products bear the seal, “Made in Germany”.

The high standards for precision in all production areas perfectly complements the strict requirements for the manufacture of medical devices. Our high-tech machinery and state-of-the-art testing methods guarantee perfect results and the highest quality products.

Teamwork, enthusiasm and commitment are ultimately crucial to the sustainable success of the HumanTech Group. Each and every one of our employees is 100% committed to the wishes and requirements of our users and their patients. In this way, we develop and implement new ideas that always focus on the people.

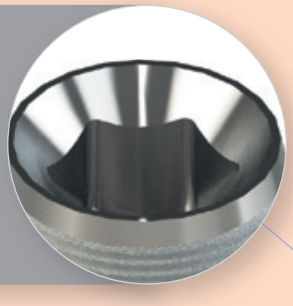
We manufacture, package and dispatch RatioPlant® dental implants directly to our customers in line with current directives. The diversity of the RatioPlant® implant product line offers a wide range of clinical solutions, such as reconstructions of single teeth, screwed or firmly cemented bridges and partial or full prostheses. You can also use RatioPlant® implants in all surgical and bone augmentation procedures, from the simplest to the most complex. They are manufactured from biocompatible quality titanium and are at the cutting edge of science thanks to their blasted and etched surface.

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

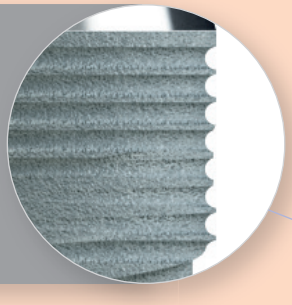
Contents

RatioPlant® Avantgarde

Tried-and-tested hexagonal connection with a polished edge that is mucosa-friendly



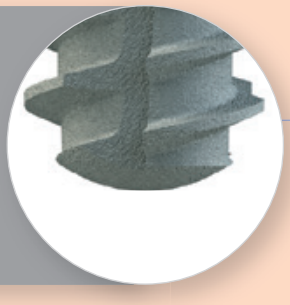
Micro-grooves in the neck area of the implant for optimal osteointegration.

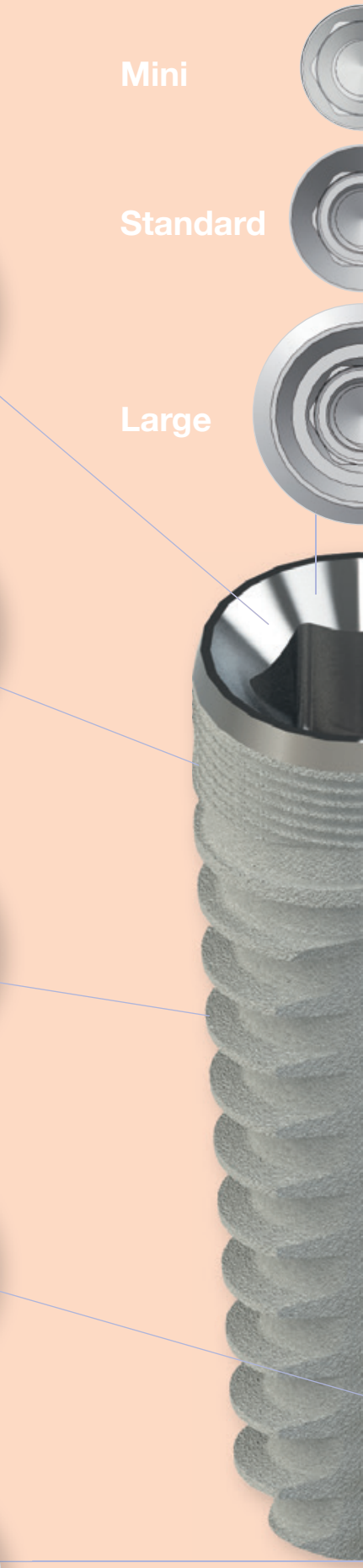


Anatomic root-analogue design for easy placement and excellent cosmetic results.

An atraumatic self-cutting thread with three extra-long cutting slots to collect bone chips and act as an anti-rotational mechanism.

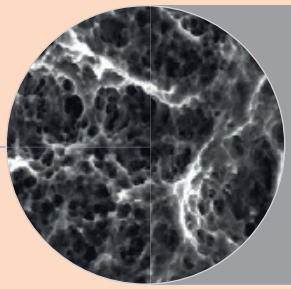
The Avantgarde line is also suitable for non-invasive use for direct sinus lifts thanks to the rounded surface of the tip of the implant.



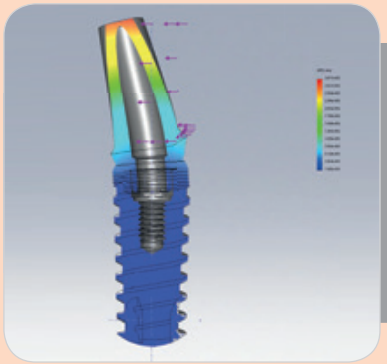


The hexagonal connection allows a high degree of flexibility in orienting the abutment and, therefore, offers the greatest possible freedom for the production of prosthetics. There are 6 possible variations of the abutment-implant position.

The implants have a hexagonal connection, a cone and inner thread in accordance with applicable standards. The RatioPlant® implants achieve a high seal between the implant and abutment, even under stresses, thanks to the conical junction from the top of the implant to the hexagonal connection. Easy handling thanks to the tried-and-tested implant/abutment connection. Three platforms – Mini, Standard and Large are distributed over five implant diameters, in order to increase stability.



The implants of the RatioPlant® Avantgarde line are root-analogous screw implants with a sandblasted and acid-etched surface for all indications and have excellent healing with optimal osteon attachment facilitated by the special nano surface.



The stability of the implants under load was ensured with FEM analyses and biomechanical tests.

RatioPlant® Avantgarde

Simple colour system

The RatioPlant® Avantgarde implants and drills are marked, depending on the diameter, in the colours yellow (3.2/3.3 mm), red (3.8 mm), green (4.2 mm) and blue (5.0 mm). This makes it easier to prepare the operating room and provides additional safety when inserting implants.

Avantgarde implant sizes

mm	3.2/3.3	3.8	4.2	5.0	6.0
6.0				●	○
8.0	●	●	●	●	○
10.0	●	●	●	●	○
11.5	●	●	●	●	○
13.0	●	●	●	●	○
16.0	●	●	●	●	

Platform

RatioPlant® Avantgarde implants are available in five diameters and five lengths. All implant sizes are distributed across three platforms. This greatly reduces the number of healing caps, tools and prosthetic components.

mm	3.2/3.3	3.8	4.2	5.0	6.0
	Mini	Standard		Large	
					

Packaging

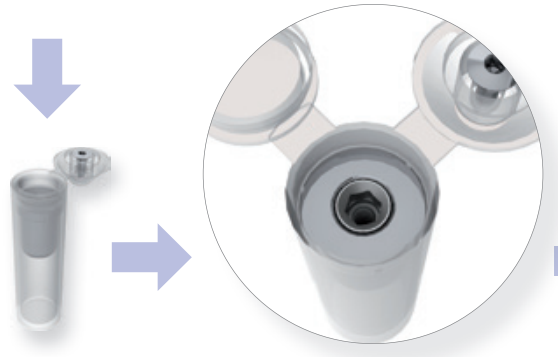
User-friendly, safe and easy...

All RatioPlant® implants are in special tube internal packaging, located in an extra blister pack. User-friendly, safe and sterile packed. This packaging provides soft inclusion with the insertion instrument directly from the tube during the surgery. Patient labels with all relevant data facilitate documentation of the implants used.

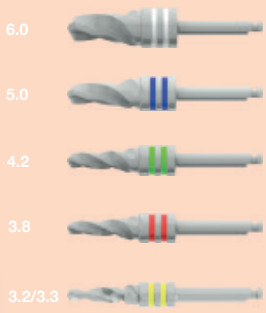
Note on packaging

RatioPlant® Avantgarde implants have an improved outer thread. This label is applied to the packaging in order to distinguish these newly-designed implants.

Removing implants



Removing cover screws



RatioPlant Avantgarde Kit PPSU

Item no. 5013904076-4 contains the following instruments:

Name	Item no.	Number
RatioPlant Container M PPSU	5013904100	1
RatioPlant Tray M PPSU ROW	5013904101	1
rose-head bur 23	5010323340	1
rose-head bur 35	5010335340	1
depth gauge 2.2	5012307001	1
triangle drill 21	5010315341	1
pilot drill 15	5010315340	1
parallel post	5012332240	4
drill extender	5010308001	1
Gingiva cutter 4.2	5012307011	1
final drill Avantgarde 080 32	5010307020	1
final drill Avantgarde 100 32	5010307021	1
final drill Avantgarde 115 32	5010307022	1
final drill Avantgarde 130 32	5010307023	1
final drill Avantgarde 080 38	5010307001	1
final drill Avantgarde 100 38	5010307002	1
final drill Avantgarde 115 38	5010307003	1
final drill Avantgarde 130 38	5010307004	1
final drill Avantgarde 080 42	5010307006	1
final drill Avantgarde 100 42	5010307007	1
final drill Avantgarde 115 42	5010307008	1
final drill Avantgarde 130 42	5010307009	1
final drill Avantgarde 080 50	5010307011	1
final drill Avantgarde 100 50	5010307012	1
final drill Avantgarde 115 50	5010307013	1
final drill Avantgarde 130 50	5010307014	1
countersink 3.2	5010332265	1
countersink 3.8	5010338265	1
countersink 4.2	5010342265	1
countersink 5.0	5010350265	1
countersink 6.0	5010360265	1
adapter hex motor long	5012302002	1
adapter hex ratchet long	5012302004	1
adapter hex ratchet short	5012302003	1
adapter hex motor short	5012302001	1
screwdriver hex ratchet short	5012301003	1
screwdriver hex ratchet long	5012301005	1
screwdriver hex hand short	5012301004	1
screwdriver hex hand long	5012301006	1
ratchet torque RUD01-	5012303002	1

RatioPlant Avantgarde HB Kit PPSU

The RatioPlant Avantgarde HB Kit PPSU was specially developed for the preparation of hard bone implant sites (D1 and D2 after mixing). Preparation and pilot drilling are done using the tools from the standard protocol. Instead of the final drill bits from the standard kit, HBs with the double colour mark are used here. The implant is subsequently screwed in as usual.

Item no. 5013904076-6 contains the following instruments:

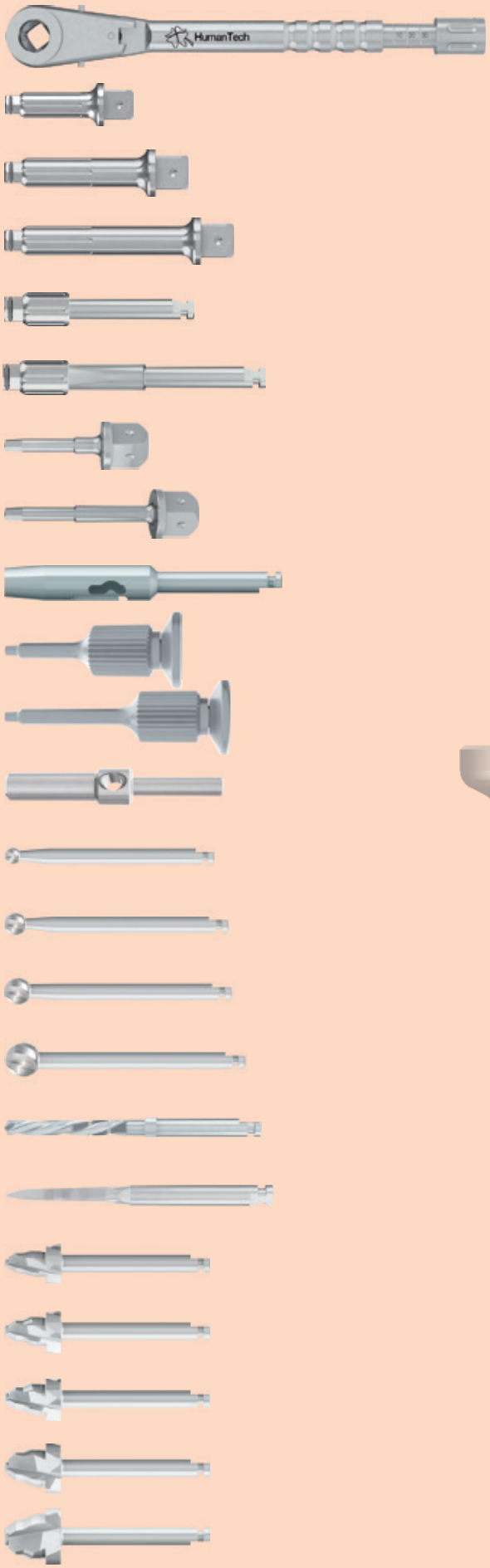
Name	Item no.	Number
RATIOPLANT CONTAINER M PPSU	5013904100	1
RATIOPLANT TRAY M PPSU	5013904101	1
Final Drill Avantgarde 080 32 HB	5010307040	1
Final Drill Avantgarde 100 32 HB	5010307041	1
Final Drill Avantgarde 115 32 HB	5010307042	1
Final Drill Avantgarde 130 32 HB	5010307043	1
Final Drill Avantgarde 160 32 HB	5010307044	1
Final Drill Avantgarde 080 38 HB	5010307045	1
Final Drill Avantgarde 100 38 HB	5010307046	1
Final Drill Avantgarde 115 38 HB	5010307047	1
Final Drill Avantgarde 130 38 HB	5010307048	1
Final Drill Avantgarde 160 38 HB	5010307049	1
Final Drill Avantgarde 080 42 HB	5010307050	1
Final Drill Avantgarde 100 42 HB	5010307051	1
Final Drill Avantgarde 115 42 HB	5010307052	1
Final Drill Avantgarde 130 42 HB	5010307053	1
Final Drill Avantgarde 160 42 HB	5010307054	1
Final Drill Avantgarde 080 50 HB	5010307055	1
Final Drill Avantgarde 100 50 HB	5010307056	1
Final Drill Avantgarde 115 50 HB	5010307057	1
Final Drill Avantgarde 130 50 HB	5010307058	1
Final Drill Avantgarde 160 50 HB	5010307059	1
Final Drill Avantgarde 080 60 HB	5010307060	1
Final Drill Avantgarde 100 60 HB	5010307061	1
Final Drill Avantgarde 115 60 HB	5010307062	1
Final Drill Avantgarde 130 60 HB	5010307063	1

Maintenance, safety and liability

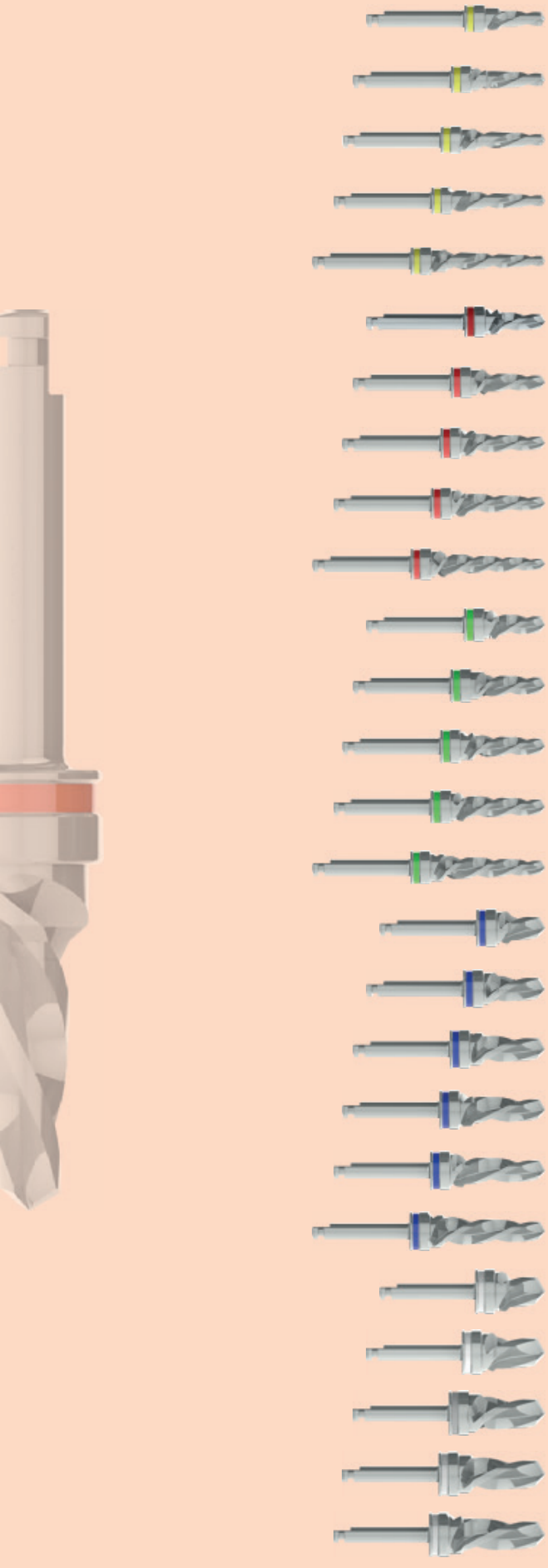
- With regard to the maintenance of the instruments and drills, please observe the RatioPlant® reprocessing instructions according to DIN EN ISO 17664:2004!
- Cutting hard bone materials and tooth substance may cause the premature loss of the sharp cutting edges. Therefore, all drill bits must be inspected for blunt cutting edges or damage after every period of use and be replaced if necessary.
- To avoid instrument fractures, the prescribed rotational speed must be adhered to.
- Caution: There is a risk of injury due to the sharp blades of the drill! There is a risk of injury due to the drill and drill bit cross-threading and slipping! The user is solely responsible for inspecting the product before its use with respect to its suitability and possible use for the intended purposes. It is the responsibility of the user to correctly use the drill and drill bits.
- Guideline value for the frequency of use: >10 - 20 x (if no wear and tear is evident, prolonged use is also possible).

Instruments

Name	Item no.
ratchet torque	5012303002
adapter hex ratchet short	5012302003
adapter hex ratchet long	5012302004
adapter hex ratchet extra long	5012302017
adapter hex motor short	5012302001
adapter hex motor long	5012302002
screwdriver hex ratchet short	5012301003
screwdriver hex ratchet long	5012301005
drill extender	5010308001
screwdriver hex hand short	5012301004
screwdriver hex hand long	5012301006
parallel post	5012332240
rosehead bur 23	5010323340
rosehead bur 31	5010335340
rosehead bur 35	5010335340
rosehead bur 40	5010340340
pilot drill 15	5010315340
triangle drill 21	5010315341
countersink 3.2 countersink 3.3	5010332265 5010333265
countersink 3.8	5010338265
countersink 4.2	5010342265
countersink 5.0	5010350265
countersink 6.0	5010360265



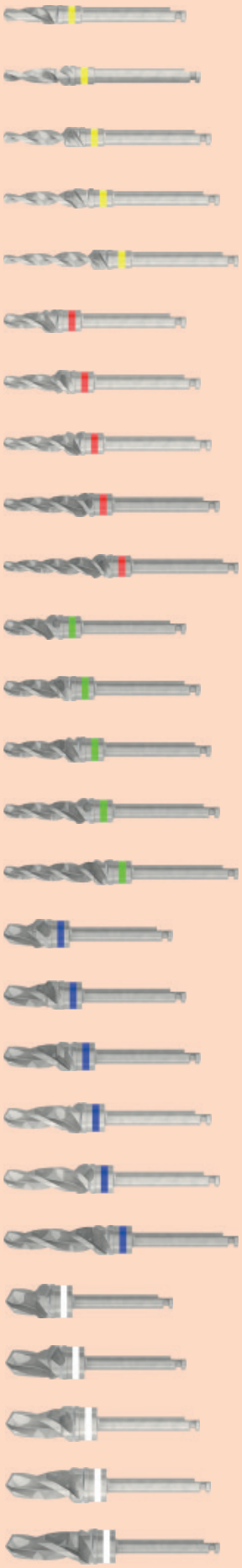
Drill with drill stop



Name	Item no.
final drill Avantgarde 32 080	5010307020
final drill Avantgarde 32 100	5010307021
final drill Avantgarde 32 115	5010307022
final drill Avantgarde 32 130	5010307023
final drill Avantgarde 32 160	5010307024
final drill Avantgarde 38 080	5010307001
final drill Avantgarde 38 100	5010307002
final drill Avantgarde 38 115	5010307003
final drill Avantgarde 38 130	5010307004
final drill Avantgarde 38 160	5010307005
final drill Avantgarde 42 080	5010307006
final drill Avantgarde 42 100	5010307007
final drill Avantgarde 42 115	5010307008
final drill Avantgarde 42 130	5010307009
final drill Avantgarde 42 160	5010307010
final drill Avantgarde 50 060	5010307030
final drill Avantgarde 50 080	5010307011
final drill Avantgarde 50 100	5010307012
final drill Avantgarde 50 115	5010307013
final drill Avantgarde 50 130	5010307014
final drill Avantgarde 50 160	5010307015
final drill Avantgarde 60 060	5010307031
final drill Avantgarde 60 080	5010307016
final drill Avantgarde 60 100	5010307017
final drill Avantgarde 60 115	5010307018
final drill Avantgarde 60 130	5010307019

Drill without drill stop

Name	Item no.
Final Drill Vario 32/33 080	5010307090
Final Drill Vario 32/33 100	5010307091
Final Drill Vario 32/33 115	5010307092
Final Drill Vario 32/33 130	5010307093
Final Drill Vario 32/33 160	5010307094
Final Drill Vario 38 080	5010307095
Final Drill Vario 38 100	5010307096
Final Drill Vario 38 115	5010307097
Final Drill Vario 38 130	5010307098
Final Drill Vario 38 160	5010307099
Final Drill Vario 42 080	5010307100
Final Drill Vario 42 100	5010307101
Final Drill Vario 42 115	5010307102
Final Drill Vario 42 130	5010307103
Final Drill Vario 42 160	5010307104
Final Drill Vario 50 060	5010307105
Final Drill Vario 50 080	5010307106
Final Drill Vario 50 100	5010307107
Final Drill Vario 50 115	5010307108
Final Drill Vario 50 130	5010307109
Final Drill Vario 50 160	5010307110
Final Drill Vario 60 060	5010307111
Final Drill Vario 60 080	5010307112
Final Drill Vario 60 100	5010307113
Final Drill Vario 60 115	5010307114
Final Drill Vario 60 130	5010307115

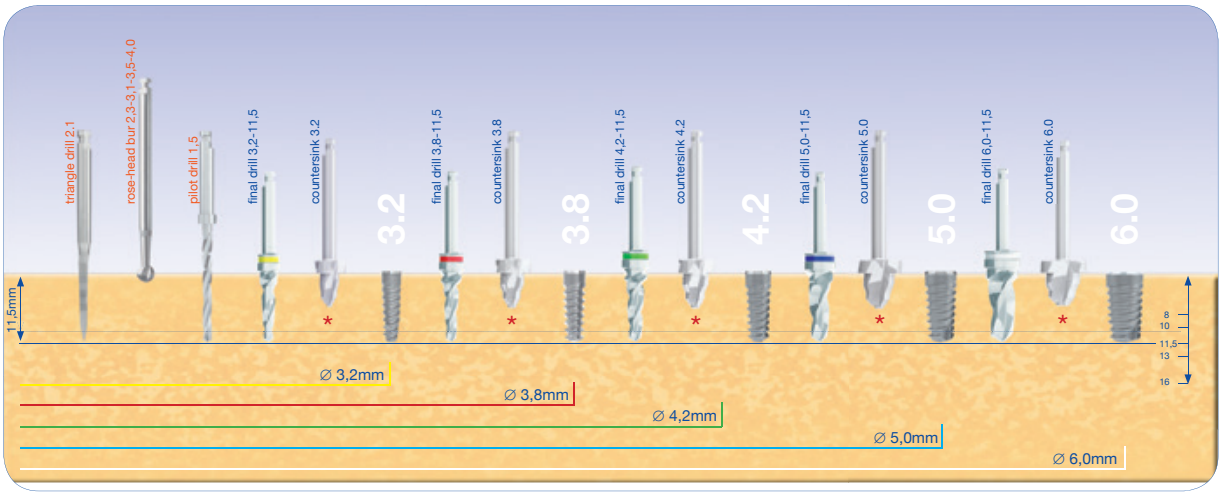


Drilling protocol

Bohrprotokoll für RatioPlant®Implantate
Drilling protocol for RatioPlant®Implants
Document No. 5014040112
Revision 01/2018

Avantgarde

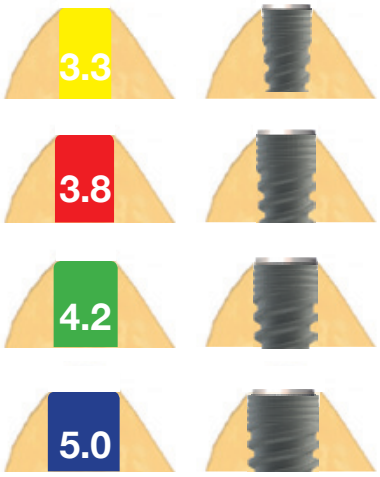
HumanTech Medical Devices

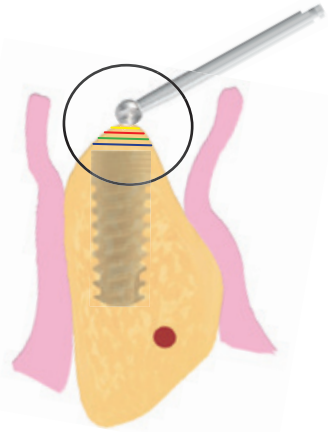


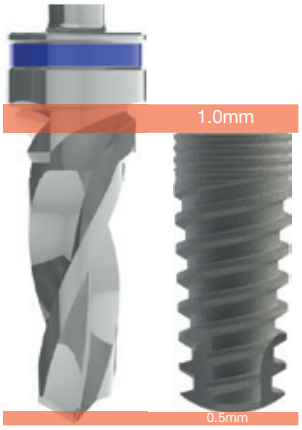
	3 verschiedene Vorbohrer zur Auswahl 3 different gimlet burs at your choice				
Tool	Triangelbohrer *triangle drill*	Rosenboher *rose-head bur*	Pilotbohrer *pilot drill*	Finalbohrer *final drill*	Versenker *countersink*
Durchmesser *diameter* ∅	2.1mm	2.3 - 3.5 - 4.0 - 5.0 mm	1.5mm	3.2-6.0mm	3.3 - 6.0mm
Drehzahl/*RpM*	900-1200	1200-1500	900-1200	700-900	200-300

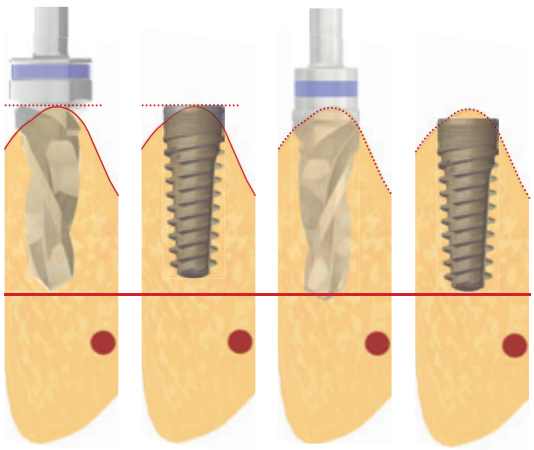
* Anzuwenden bei D1 und optional bei D2 Knochen / *Use in D1 and optional in D2 type bone!*
Tiefenmarkierungen an allen Spiralbohrern entsprechend den Implantatlängen bei 8, 10, 11.5, 13 und 16mm / *Depth markings on all twist drills according to the implant lengths of 8, 10, 11.5, 13 and 16mm*
Um einer Schädigung des Knochengewebes vorzubeugen, ist die abgebildete Bohrfolge einzuhalten! / To prevent damage of the bone tissue, the imaged drilling sequence is observed!

MEDICAL DEVICES









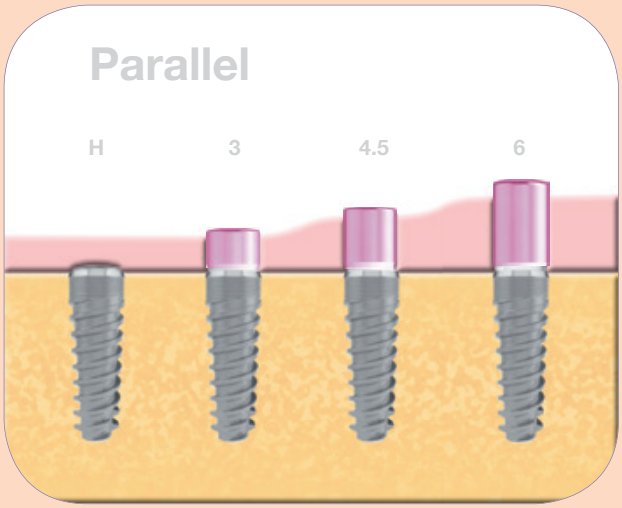
Basic approach to the preparation of the implant bed

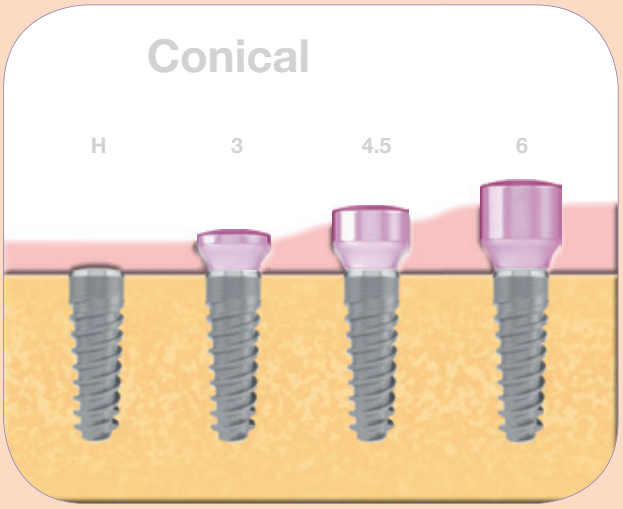
Before preparing the implant bed, especially in the case of a narrow and pointed alveolar ridge, smooth it gently with a large round burr bit or a suitable bone cutter. This will give you a flat and sufficiently wide bone surface.

Note:
- When selecting the implant length, this vertical reduction of the bone must be taken into account!
- Due to the design and function of the drills, the drill tip is 0.4 mm longer than the implant insertion depth.

If using the final drill with drill stop is not sufficient due to the bone condition, the desired depth can be created with the Vario final drill bit.

Healing screws

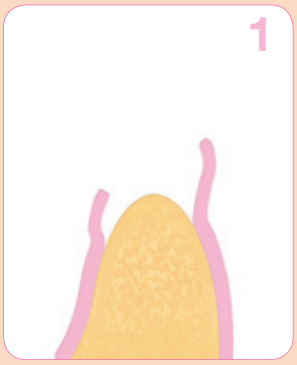




Once the implant has been inserted, the Mini, Standard or Large cover screw is used to lock everything in place. After a healing period of 4 to 6 months, depending on the situation, the implant is expanded up to the desired diameter using the healing screws to prepare for taking impressions and the prosthetic treatment of the gingival part. During this process, the parallel or conical healing screws are used chronologically.

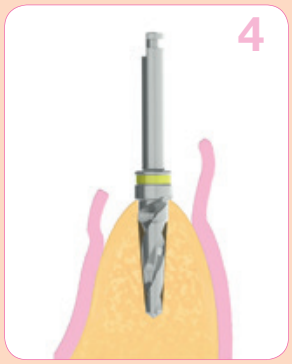
healing cap par 3.0 Mini a	5011106050		healing cap parallel - Mini ∅ Mini 3 mm Height 3, 4.5, 6 mm
healing cap par 4.5 Mini a	5011106051		
healing cap par 6.0 Mini a	5011106052		
healing cap par 3.0 S a	5011106056		healing cap parallel - Standard ∅ Standard 4 mm Height 3, 4.5, 6 mm
healing cap par 4.5 S a	5011106057		
healing cap par 6.0 S a	5011106058		
healing cap par 3.0 L a	5011106062		healing cap parallel - Large ∅ Large 5.5 mm Height 3, 4.5, 6 mm
healing cap par 4.5 L a	5011106063		
healing cap par 6.0 L a	5011106064		
healing cap con 3.0 Mini a	5011106053		healing cap conical - Mini ∅ Standard 4 mm Height 3, 4.5, 6 mm
healing cap con 4.5 Mini a	5011106054		
healing cap con 6.0 Mini a	5011106055		
healing cap con 3.0 S a	5011106059		healing cap conical - Standard ∅ Standard 5 mm Height 3, 4.5, 6 mm
healing cap con 4.5 S a	5011106060		
healing cap con 6.0 S a	5011106061		
healing cap con 3.0 L a	5011106065		healing cap conical - Large ∅ Large 6.3 mm Height 3, 4.5, 6 mm
healing cap con 4.5 L a	5011106067		
healing cap con 6.0 L a	5011106068		
healing cap individual Peek S	5011206001		
healing cap individual Peek L	5011206002		

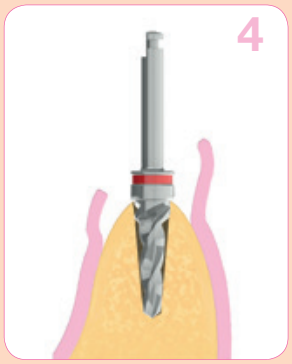
Surgical Phase – for example, RatioPlant® Avantgarde 4.2/11.5



Exposure of the bone using scalpel or mucosal punch. Removal of the periosteum and preparation of the flap.

Marking with a round burr bit; fix the implant position, level the bone plateau by milling if necessary. Pilot drilling with pilot drill bit, alternatively with triangle drill bit.





Extension drilling at the corresponding diameter, with final drill bits of the desired length and at an increasing diameter.
Colour markings on the final drill bits:

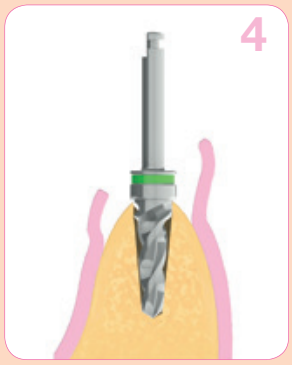
yellow	for ø 3.2/3.3
red	for ø 3.8
green	for ø 4.2
blue	for ø 5.0
white	for ø 6.0

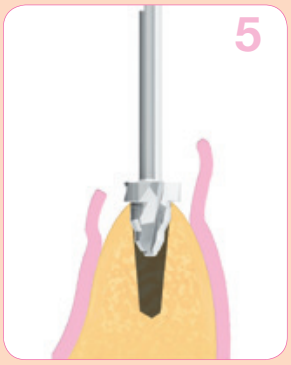
Extension drilling at the corresponding diameter, with final drill bits of the desired length and at an increasing diameter.

Colour markings on the final drill bits:

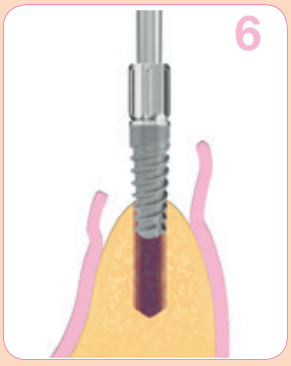
yellow	for ø 3.2/3.3
red	for ø 3.8
green	for ø 4.2
blue	for ø 5.0
white	for ø 6.0

Countersink according to the implant diameter (optional for D1/D2 bone quality) to enlarge the cortical area to allow insertion of the implant without excessive pressure.

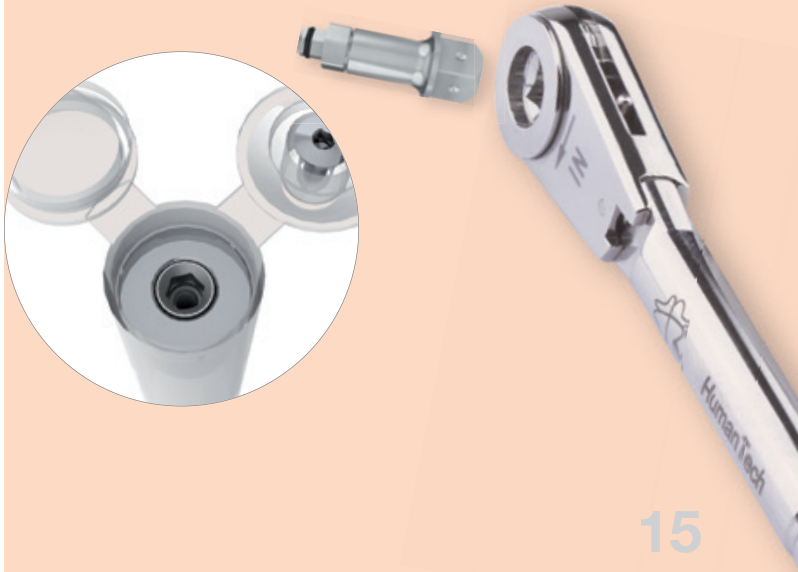




Place implant with inserter for motor, preferably tighten with torque ratchet and inserter for ratchet with max. 40 Ncm. Preferably place in an equicrestal position.

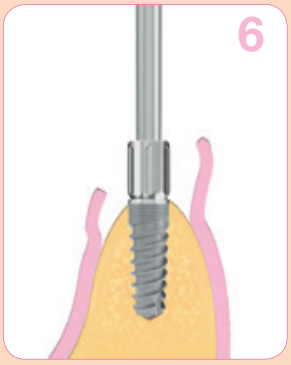


Remove the implant with the adapter for the ratchet or motor directly from the sterile plastic tube after opening the two lids. A cover screw is located in the upper lid. After opening the intermediate cover, the implant can be removed.

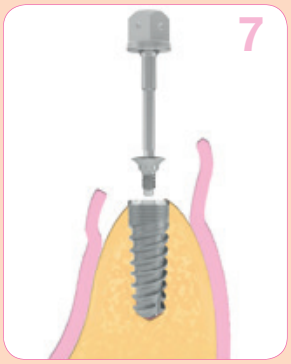


QR code for the user manual

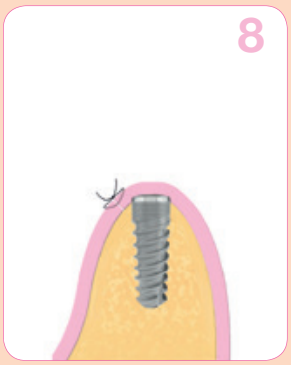
Surgical Phase – for example, RatioPlant® Avantgarde 4.2/11.5



Ensure and note the final position:
The marking on the inserter should ideally be orientated towards the buccal! The mark indicates the direction of the inclination in the 15° and 25° abutments.



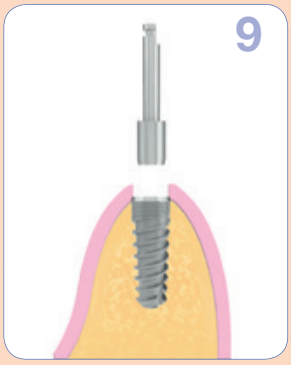
For concealed healing, seal the implant with the cover screw. This is tightened by hand. Alternatively, a corresponding healing cap can be placed to allow open healing. The augmentation material can be placed optionally.

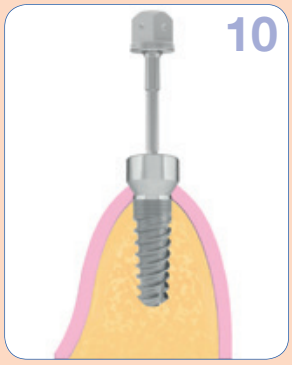


Wound closure and subsequent X-ray check.

Healing phase

After healing (4 to 6 months re-opening:
Exposing using a scalpel or mucosal punch, remove the cover screw, insert the healing cap and tighten by hand. If necessary, attach mucosa to the healing caps by placing a suture.

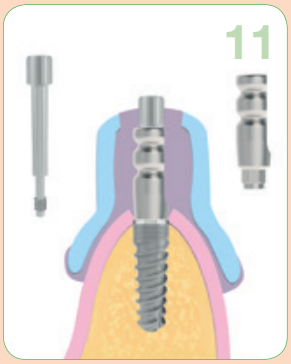




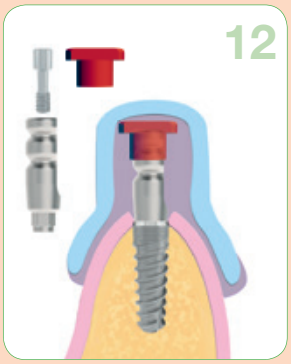
Prosthetic treatment

After shaping of the mucosa, impressions can be taken. Impression posts are available for two imprint procedures:

- Open impression method with individual tray – impression posts (Mini, Standard and Large) for open impression with the long screw.



- Closed impression method with Standard or individual tray – impression posts for closed impression (Mini, Standard and Large) with the prosthetic screw and transfer cap.



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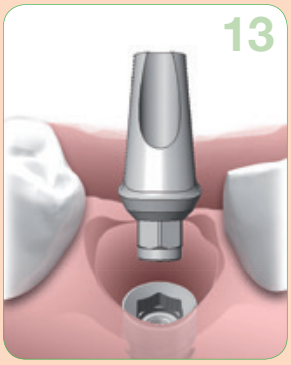
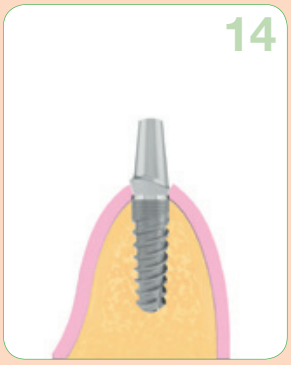
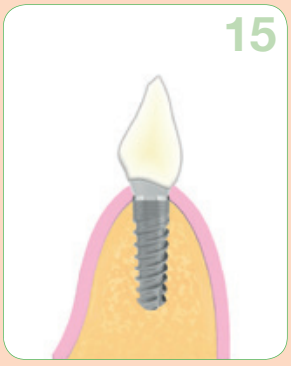




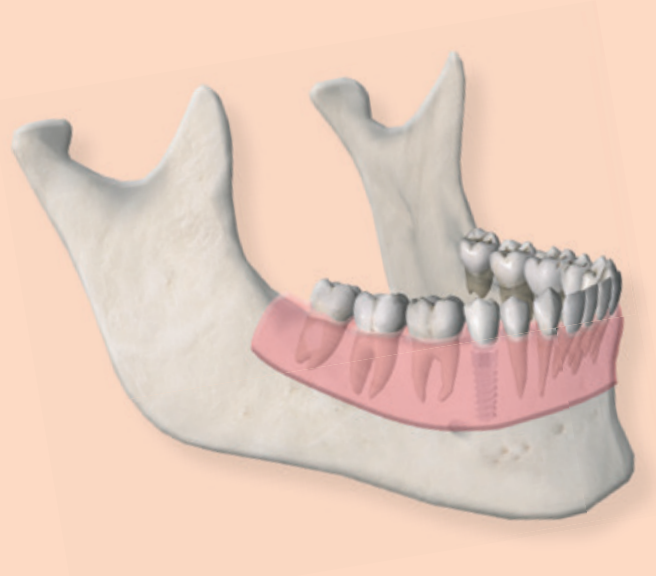
After making the prosthetics in the dental laboratory, remove the healing caps. Insert abutment and tighten with new prosthetic screw with max. 25 Ncm using a torque ratchet.

Note:
Always repeat tightening with the torque after 5 minutes!



Insert the dental prosthesis (in this case, a crown).

Note:
Before cementing, it is essential to apply a retraction thread to prevent cement residues from penetrating into the area of the implant! Otherwise there is a risk of peri-implantitis.



General note

The above-mentioned descriptions are not sufficient for the immediate application of the RatioPlant® implant system. We recommend training from an experienced surgeon in how to use the RatioPlant® implant system. As a rule, the RatioPlant® implant system must only be used by trained dentists, implantologists and dental technicians.
Methodological errors may result in the loss of the implants and damage to the peri-implant bone substance. The products are processed and applied beyond our control and are the sole responsibility of the user. We do not accept any liability for any damage caused in this way.

Please also note and observe our instructions on page 31 of this brochure regarding safety, liability and guarantees.

QR code for the user manual

Sequence of steps for an open impression

Place the impression posts for open impression with the enclosed long screws on the implant and hand tighten (1).

Test the appropriate impression tray (2).

Apply wax sheet or suitable foil on the depression hole and place suitable impression material on the impression tray (3-4).

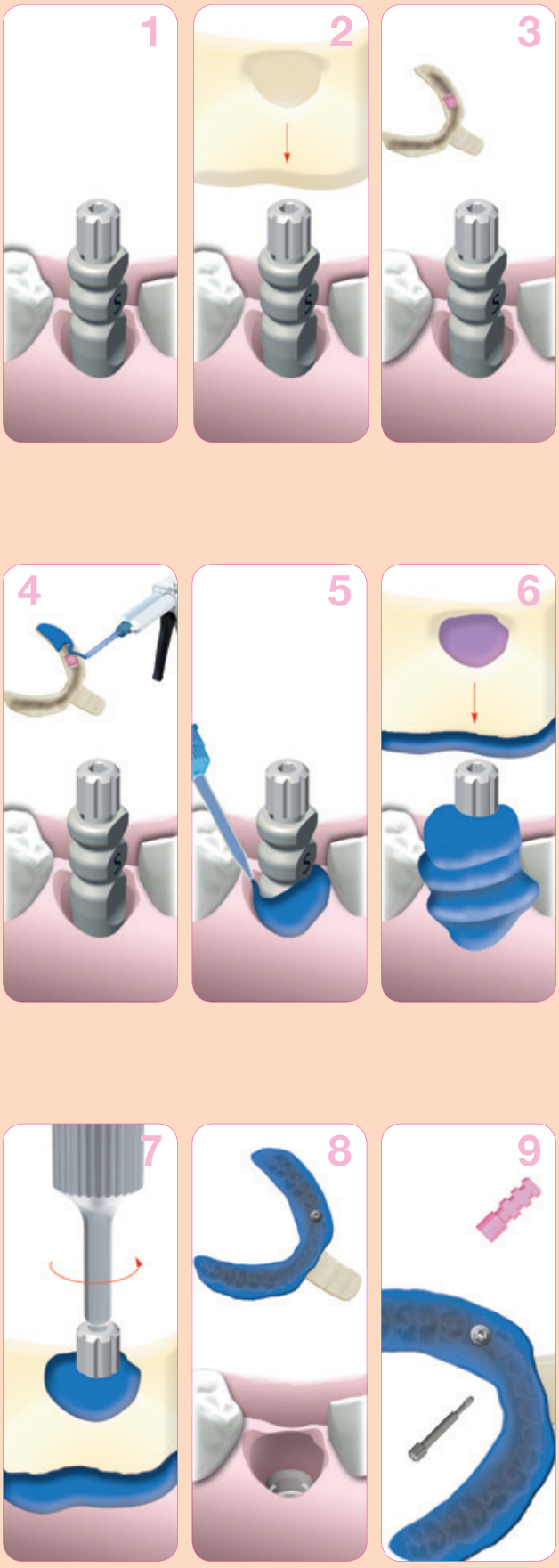
Apply impression material with fine syringe into the sulcus area, ensure it is free of air pockets and place the prepared impression tray into position without tension (5-6).

Release the impression screw after the prescribed hardening time (7).

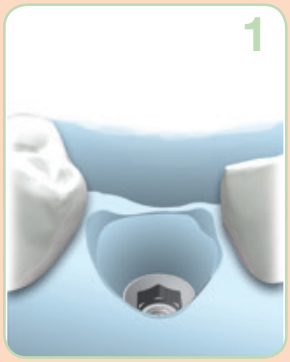
Remove the impression and prepare with a suitable disinfection agent (8).

Hand tighten the impression posts with the corresponding laboratory analogue with the long screw (9).

Example of an impression



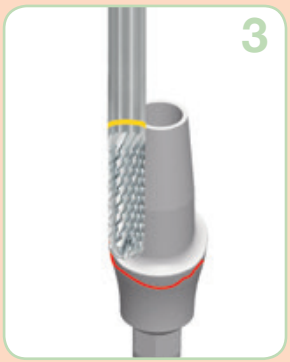
Example of dental technology



Sequence of steps for a single crown with titanium abutment

Model with model analogue (1).

Select titanium abutment corresponding to implant diameter, angles and depth of mucous membrane and hand tighten with a laboratory screw (violet) (2).



Mark the gingival margin on the model on the abutment, release laboratory screw and remove the abutment. Then remove the excess with a suitable milling cutter. We recommend using a separate laboratory analogue for improved processing (3).

Affix to the model again with the laboratory screw (4).

Shorten from occlusal, to make more space for the crown (5).

Modelling of the wax or plastic crown (6).

QR code for the user manual

Example of dental technology

Crown prepared for ceramic veneer after casting (7).

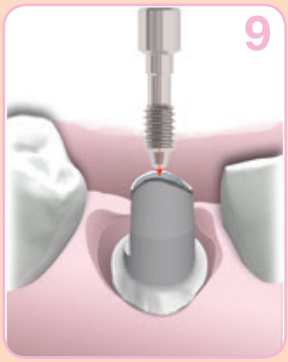
Finished ceramic crown (8).

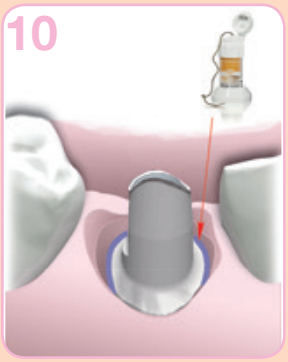
Example of cementing

After removal of the temporary treatment and cleaning, place the abutment into the mouth with the prosthetic screw with the aid of the torque ratchet at a torque of max (9).

Note:
Insert abutment (always tighten with new prosthetic screw with max. 25 Ncm using a torque ratchet. It is essential to repeat this after 5 minutes!)

Always introduce a retraction thread to avoid the excess cement getting into the subgingival space (10)!





Seal the screw channel on the abutment with a cotton pellet or similar before cementing. Mix suitable material for cementing and fill the crown (11).

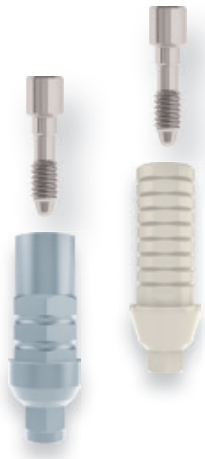
Position the crown and allow it to harden with contact to the antagonist. Remove excess cement and retraction thread after the hardening time and clean the entire area (12).

Overview of prosthetic components

Impression posts

RatioPlant®Avantgarde impression posts are available for all platforms, for impression procedures with open or closed tray, as well as for making digital impressions. The perfectly harmonised components guarantee precise transfer of the oral situation to the master model or into the digital work environment.

Temporary abutments



Temporary abutments offer solutions for the temporary restoration of aesthetics, tissue contouring and immediate function. RatioPlant®Avantgarde offers a wide range of temporary abutments for both screwed and cemented restorations.

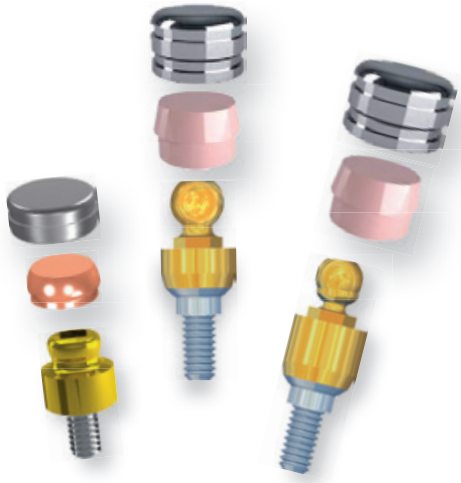
Cementable abutments

RatioPlant®Avantgarde cemented abutments are available in a range of materials, forms, angles and sizes for all platforms in order to fulfil individual patient requirements.

Aesthetic abutments

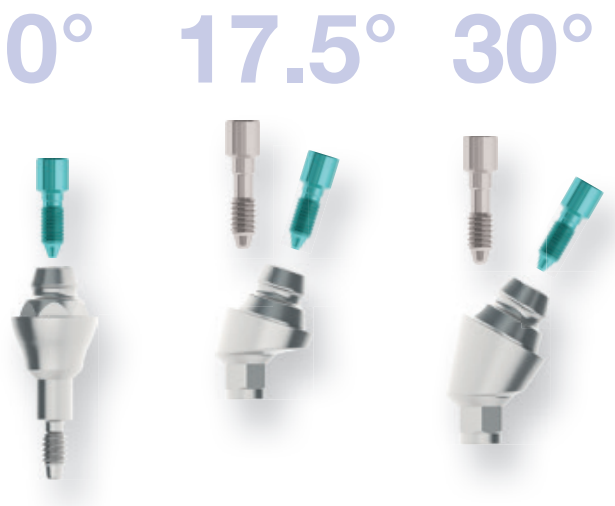
CAD-CAM discs allow occlusally-screwed crowns and/or individual abutments to be manufactured in the digital milling process with a precise connection structure. RatioPlant® adhesive abutments were developed specifically for the manufacture of individual hybrid abutments consisting of a prefabricated Ti adhesive base and an individually manufactured zirconium or pressed ceramic base using suitable 2K adhesive and are ideally suited for high-quality front tooth restoration.

Abutments hybrid prosthetics



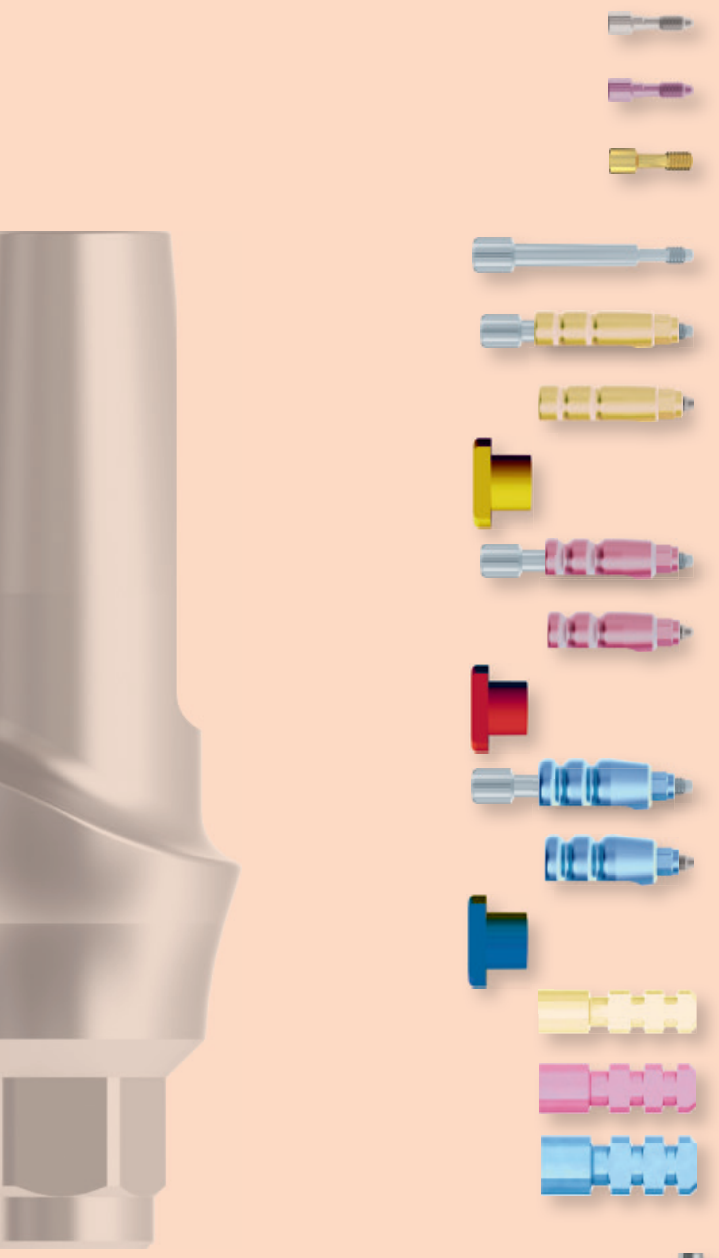
Implant-supported full prostheses can be used with a minimum of just two supporting implants, resulting in cost benefits for a number of patients. Equator and retentive anchors are ideal for the secure hold of prostheses in both the upper and lower jaw. These hybrid prostheses can also be easily managed by elderly patients and patients with disabilities.

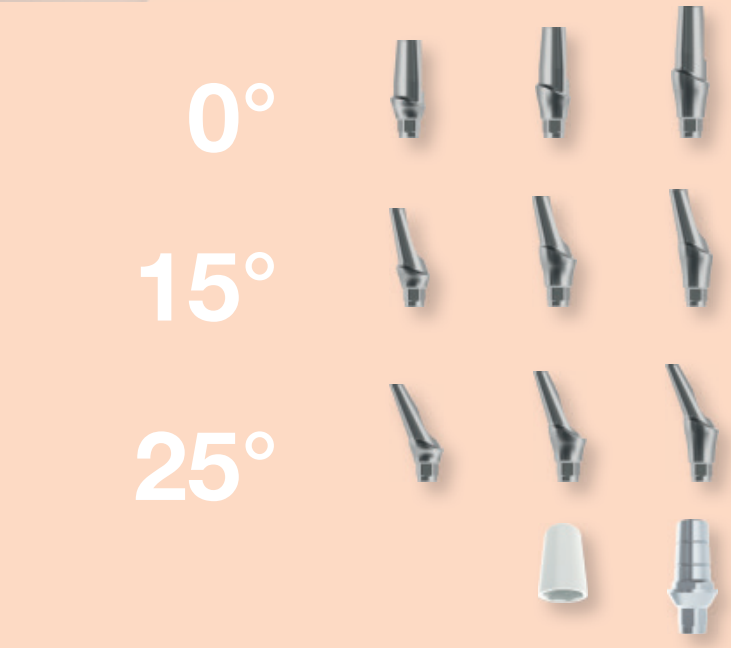
MultiUnit abutments



The RatioPlant®Avantgarde MultiUnit abutments solve challenging situations in the case of patients without teeth and offer a range of angles, shoulder heights and prosthetic components for individual and optimal treatment. The elaborate design ensures efficient treatment, including with immediate loading of the construction under the right conditions, and features an excellent system overview and a high degree of user friendliness.

Prosthetic Avantgarde





Screw/impression

prosthetic screw normal	5011109001
lab screw	5011109004
prosthetic screw ZiO	5011109005
impression screw long	5011109006
impression post open tray Mini a incl. impression screw long	5011105050
impression post closed tray Mini a incl. prosthetic screw	5011105053
transfer cap M	5011105008
impression post open tray S a incl. impression screw long	5011105051
impression post closed tray S a incl. prosthetic scew	5011105054
transfer cap S	5011105007
impression post open tray L a incl. impression screw long	5011105052
impression post closed tray L a incl. prosthetic scew	5011105055
transfer cap L	5011105009
lab analogue Mini a	5011110005
lab analogue S a	5011110006
lab analogue L a	5011110007

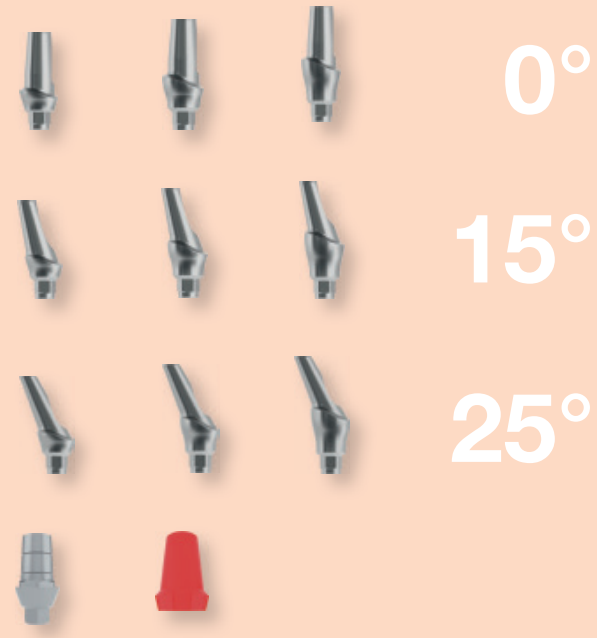
M

Titanium abutments, Mini

abutment Ti 0 con Mini H1 abutment Ti 0 con Mini H2 abutment Ti 0 con Mini H3 each incl. prosthetic screw normal	5011110170 5011110270 5011110070
abutment Ti 15 con Mini H1 abutment Ti 15 con Mini H2 abutment Ti 15 con Mini H3 each incl. prosthetic screw normal	5011110180 5011110280 5011110080
abutment Ti 25 con Mini H1 abutment Ti 25 con Mini H2 abutment Ti 25 con Mini H3 each incl. prosthetic screw normal	5011110190 5011110290 5011110091
quick-abutment Mini incl. prosthetic screw normal quick plastic cap Mini	5011110009 5011210061

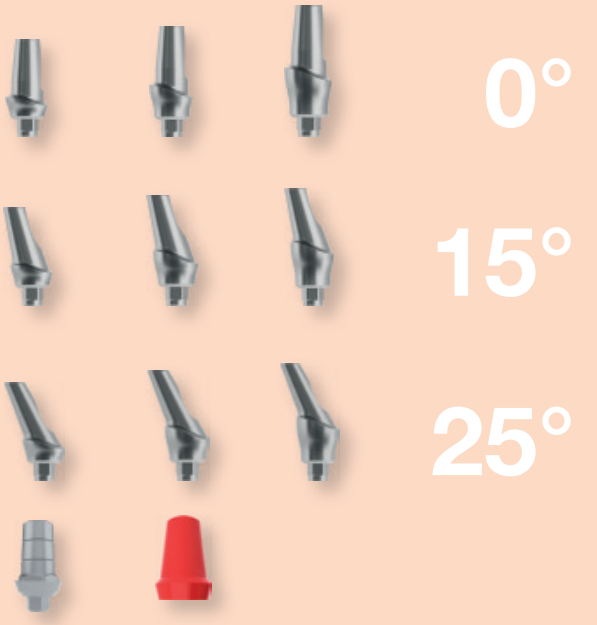
Titanium abutments, Standard S

abutment Ti 0 con S H1	5011110120
abutment Ti 0 con S H2	5011110220
abutment Ti 0 con S H3	5011110020
each incl. prosthetic screw normal	
abutment Ti 15 con S H1	5011110130
abutment Ti 15 con S H2	5011110230
abutment Ti 15 con S H3	5011110030
each incl. prosthetic screw normal	
abutment Ti 25 con S H1	5011110140
abutment Ti 25 con S H2	5011110240
abutment Ti 25 con S H3	5011110040
each incl. prosthetic screw normal	
quick-abutment S	5011110010
incl. prosthetic screw normal	
quick plastic cap	5011210060



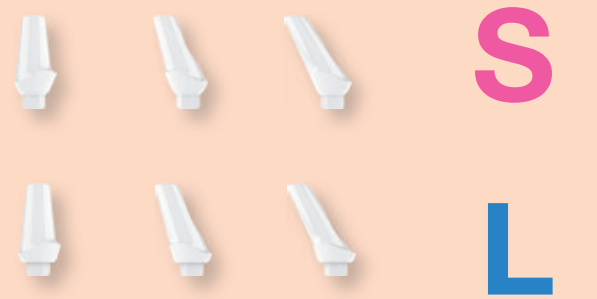
Titanium abutments, Large L

abutment Ti 0 con L H1	5011110121
abutment Ti 0 con L H2	5011110221
abutment Ti 0 con L H3	5011110021
each incl. prosthetic screw normal	
abutment Ti 15 con L H1	5011110131
abutment Ti 15 con L H2	5011110231
abutment Ti 15 con L H3	5011110031
each incl. prosthetic screw normal	
abutment Ti 25 con L H1	5011110141
abutment Ti 25 con L H2	5011110241
abutment Ti 25 con L H3	5011110041
each incl. prosthetic screw normal	
quick-abutment L	5011110011
incl. prosthetic screw normal	
quick plastic cap	5011210060



Zirconium oxide abutments

abutment ZiO 0 con a S	5011410022
abutment ZiO 15 con a S	5011410032
abutment ZiO 25 con a S	5011410042
each incl. prosthetic screw ZiO	
abutment ZiO 0 con a L	5011410023
abutment ZiO 15 con a L	5011410033
abutment ZiO 25 con a L	5011410043
each incl. prosthetic screw ZiO	



Gold-plastic abutments

gold abutment S incl. prosthetic screw normal	5011510001
gold abutment hex S incl. prosthetic screw normal	5011510002
gold abutment L incl. prosthetic screw normal	5011510011
gold abutment hex L incl. prosthetic screw normal	5011510012

Plastic abutments

plastic abutment S incl. prosthetic screw normal	5011210001
plastic abutment hex S incl. prosthetic screw normal	5011210002
plastic abutment L incl. prosthetic screw normal	5011210010
plastic abutment hex L incl. prosthetic screw normal	5011210011

Temporary abutments

PEEK abutment provisional S incl. prosthetic screw normal	5011610101
PEEK abutment provisional L incl. prosthetic screw normal	5011610102
Ti abutment provisional S incl. prosthetic screw normal	5011110101
Ti abutment provisional L incl. prosthetic screw normal	5011110102

Prosthetic components CAD-CAM

scan connector M	5011105056
scan connector S	5011105057
scan connector L	5011105058
Abutment Ti Mini CAD CAM	5011110440
Abutment Ti S CAD CAM	5011110441
Abutment Ti L CAD CAM	5011110442

Information CAD-CAM:

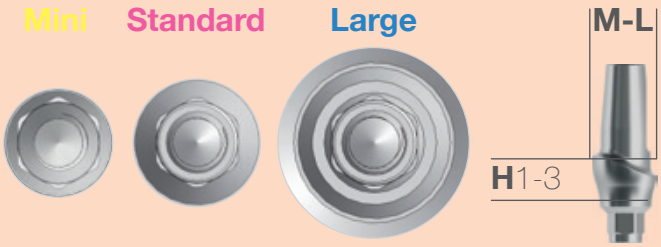
When using the CAD CAM abutments, the necessary due diligence must be applied, as the limits given in the software can not take into account all eventualities, and otherwise the required creative freedom would be too limited.

Adhesive abutments

Ti adhesive abutment Mini incl. prosthetic screw normal	5011110049
Ti adhesive abutment Standard incl. prosthetic screw normal	5011110050
Ti adhesive abutment Large incl. prosthetic screw normal	5011110060

Soft-tissue management

For the Avantgarde system, abutments are available for the 3 platforms – Mini (3.2/3.3 mm), Standard (3.8/4.2 mm) and Large (5.0/6.0 mm) and 3 different neck heights (H1 = 1.5 mm, H2 = 3.0 mm and H3 = 5.0 mm) to cover different soft tissue forms. The abutments correspond exactly to the emergence profile of the previously used healing screws and can be used on all Avantgarde implants. This range of options allows the optimal transition between the implant and dental prosthesis.



Important information for all abutments

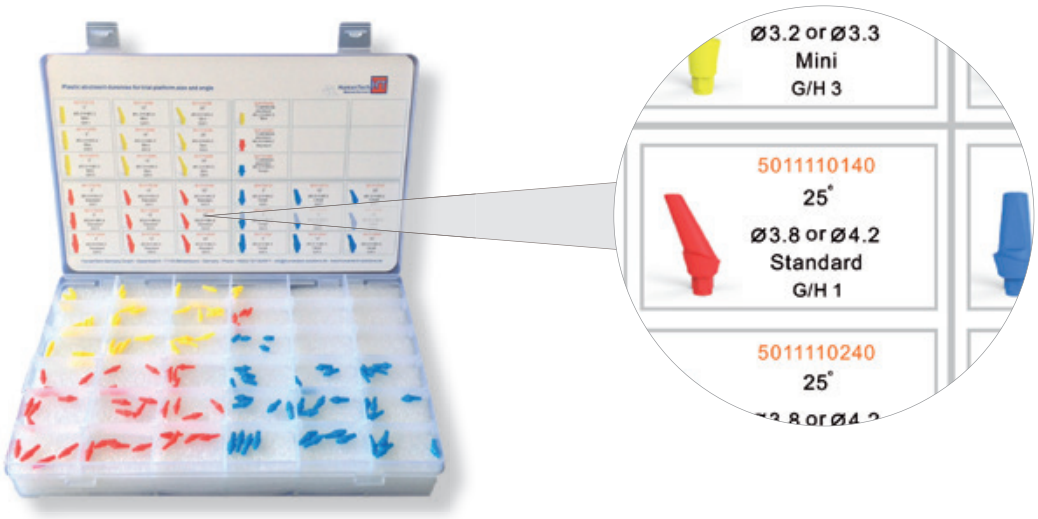
The sealing surfaces at the points at which the abutments come into contact with the implant must not be grinded, polished or processed in any way. It is essential that care be taken to ensure an optimal fit. Machining the sealing surfaces leads to the loss of the guarantee.

MUA-MultiUnit Abutment

MU abutment S 0° H1	5011110420
MU abutment S 0° H2	5011110421
MU abutment S 17.5° H1	5011110423
MU abutment S 17.5° H2	5011110424
MU abutment S 30° H1	5011110426
MU abutment S 30° H2	5011110427
MU abutment inserter	5012302022
MU healing cap H1 incl. MU prosthetic screw	5011106100
MU healing cap H2 incl. MU prosthetic screw	5011106101
MU impression post open tray	5011110013
MU impression post closed tray	5011110014
MU scan connector PEEK incl. MU prosthetic screw	5011610000
MU lab analogue	5011110004
MU 0° inserter ratchet	5012302020
MU prosthetic cap TI incl. MU prosthetic screw	5011110012
MU prosthetic cap plastic incl. MU prosthetic screw	5011210020

Sample Kit

The RatioPlant® Sample Set contains all the sizes and shapes of common abutments for easy and safe determination of the prosthetic components of the RatioPlant® system. Thus, it is easy to determine the correct abutment on the master model and to place the order without having an original abutment.

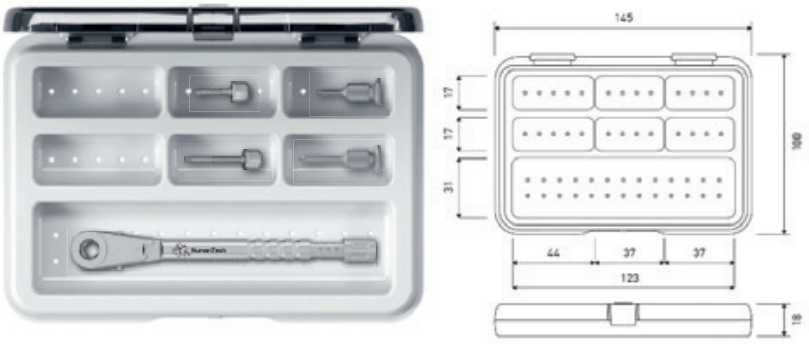


The Sample Set is only available as a complete set:

Name	Item no.	Number
Kit plastic Abutments for trial platform, heigth and angle	5013904085	1

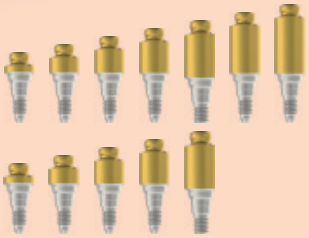
Prosthetic Kit

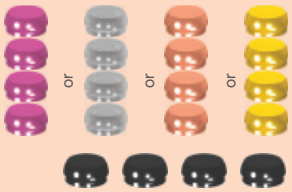
The RatioPlant® Prosthetic Kit contains all of the tools and instruments needed for the easy and safe integration of the prosthetic components from all RatioPlant® systems. It is very handy due to its small dimensions of 148 x 100 x h18 mm. The snap closure allows easy opening of the set and, if necessary, the lid can be removed from the housing. The material is easy to clean due to its smooth surface, and it is suitable for sterilisation in an autoclave.



The prosthetic kit having item no. 501390476-9 contains the following instruments:

Name	Item no.	Number
Prosthetic Container	5013904103	1
screwdriver hex ratchet short	5012301003	1
screwdriver hex ratchet long	5012301005	1
screwdriver hex hand short	5012301004	1
screwdriver hex hand long	5012301006	1
ratchet torque	5012303002	1





Prosthetic components
Hybrid prosthetics

EQUATOR abutment kit A
1 metal casing, 4 plastic caps with different retention (violet-strong; white-standard; pink-soft; yellow-extra soft), 1 distance plate, 1 EQUATOR implant abutment S or L

OT EQATOR S H1	5011008013
OT EQATOR S H2	5011008014
OT EQATOR S H3	5011008015
OT EQATOR S H4	5011008037
OT EQATOR S H5	5011008038
OT EQATOR S H6	5011008046
OT EQATOR S H7	5011008047
OT EQATOR L H1	5011008016
OT EQATOR L H2	5011008017
OT EQATOR L H3	5011008018
OT EQATOR L H4	5011008068
OT EQATOR L H5	5011008069

EQUATOR retention caps set 5011008024
(1x metal casing, 1x laboratory cap, 4x retention caps (1x each of extra-soft, 1 soft, 1 standard, 1 strong)

EQUATOR retention caps
(VE 4 items per colour)

violett „STRONG“	5011008026
white „STANDARD“	5011008027
pink „SOFT“	5011008028
yellow „EXTRA-SOFT	5011008029

4 PROCESSING CAP LABORATORY	5011008031
2 STAINLESS STEEL HOUSING	5011008025
2 IMPRESSION COPING	5011008030
2 LABORTORY ANALOG	5011008032

SPHERO abutment kit
1 metal housing, 2 plastic caps pinksoft, 3 alignment rings, 1 distance plate, 1x SPERO BLOCK implant abutment A+

SPHERO BLOCK S normo H05	5011008033
SPHERO BLOCK S normo H1	5011008001
SPHERO BLOCK S normo H2	5011008002
SPHERO BLOCK S normo H3	5011008003
SPHERO BLOCK S normo H4	5011008034
SPHERO BLOCK S normo H5	5011008035
SPHERO BLOCK S normo H6	5011008039
SPHERO BLOCK S normo H7	5011008045
SPHERO BLOCK L normo H1	5011008004
SPHERO BLOCK L normo H2	5011008005
SPHERO BLOCK L normo H3	5011008006

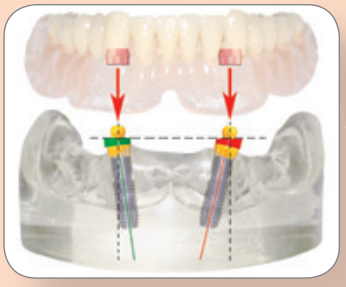
SPHERO (FLEX and BLOCK) RETENTIVE CAP
(VE 6 items per colour)

silver „EXTRA-SOFT“	5011008062
gold „EXTRA-RESILIENT“	5011008063
green „VERY ELASTIC RETENTION“	5011008064
yellow „EXTRA SOFT“	5011008065
pink „SOFT“	5011008066
clear „STANDARD“	5011008067

*EQUATOR® is a registered trademark of RHEIN83 SRL, Italy

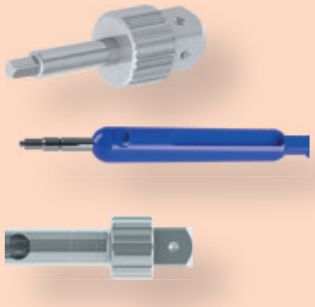
SPHERO-FLEX abutment kit
1 metal casing, 2 plastic caps pink-soft,
3 alignment rings, 1 distance plate, 1
SPHERO implant abutment

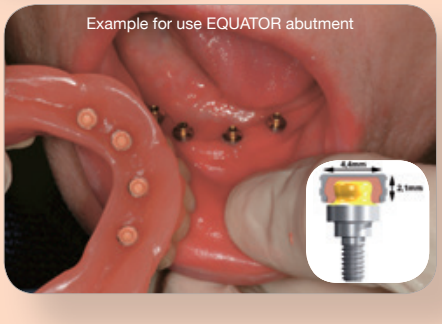
STANDARD	
SPHERO FLEX S H1	
SPHERO FLEX S H2	5011008007
SPHERO FLEX S H3	5011008008
	5011008009
LARGE	
SPHERO FLEX L H1	
SPHERO FLEX L H2	5011008010
SPHERO FLEX L H3	5011008011
	5011008012



Hybrid prosthetics instruments

equator inserter	5011008060
TOOL x INSERTING CAPS STANDARD /MI	5011008041
ball abutment inserter	5011008061





Security liability guarantee

Security

The RatioPlant® implant system must be used only in accordance with the instructions and recommendations of HumanTech Germany GmbH.
We cannot accept any liability for the use of components that are not system-related original components because they affect functionality. Consultations on the use of the products are given verbally as well as in the context of demonstration events. It corresponds to the cutting edge of science at the time of placing our products on to the market. This however shall not release the user from his/her obligation to inspect each individual product prior to their intended use with respect to their suitability for the intended purpose. The respective user is responsible for the processing and use of the products. Liability for damage resulting from the use and processing of the product is excluded.

Within the scope of our general terms and conditions, we guarantee that our products are at the cutting edge of science and technology, and are also of impeccable quality in accordance with CE certifications.

Delivery

The products are supplied only to dentists, doctors, surgeons, implantologists, dental technicians, dental clinics, dental laboratories and their dealers.

Exchange

The products can only be returned as part of an exchange. Condition for the redemption of goods:
1. Two years before the expiry of the sterile time
2. Undamaged, unchanged in appearance and in its original packaging.

HumanTech Dental

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