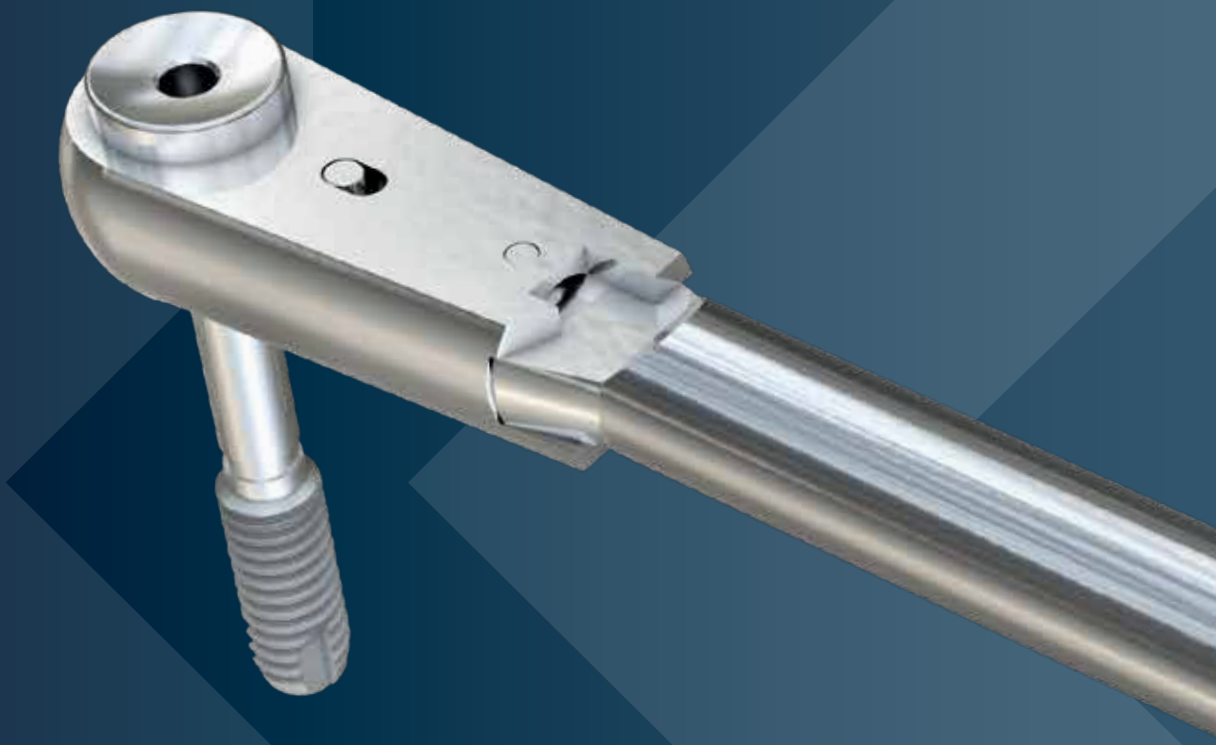
MICROCONE



IPS
Implant Systems

SURGICAL MANUAL

MEDENTiKA®
A Straumann Group Brand

THIS SURGICAL MANUAL DESCRIBES THE CONVENTIONAL APPROACH FOR THE IMPLANT BED PREPARATION.

The general applicable guidelines of the German Society of Dental, Oral and Craniomandibular Sciences (Deutsche Gesellschaft für Zahn-, Mund- und Kieferheilkunde) shall apply for the implantation indication. We recommend that a taking period (osseointegration phase) of three to six months is observed. The taking phase can also be shortened or extended in a particular case.

Please read this manual very carefully prior to the first application of the system and follow the instructions and notices in the instructions for use of the system components and instruments in each case.

In addition we recommend that all users participate in system-specific training prior to the first use of a new implant system.

INDICATIONS

- Tooth restricted gaps
- Free-end gaps
- Edentulous jaw

PROSTHETIC CONCEPT

- Replacement of an individual tooth
- Fixing of bridges and dentures

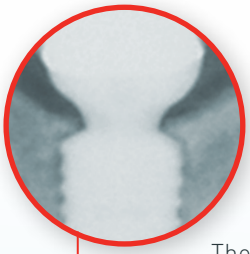
WAY OF HEALING

- Covered following installation of the screw plug
- Transgingival with gingiva forming parts
- Immediate restoration/immediate loading with prosthetic modular components

TIME OF IMPLANTATION

- Immediate implantation
- Delayed immediate implantation
- Late implantation

HIGH PRECISION CONICAL IMPLANT ABUTMENT CONNECTION



EMERGENCE PROFILE

The natural forming of the prosthetic emergence profile is an additional building block to ensure aesthetically predictable results and achieves ideal long-term treatment successes in conjunction with all the other outstanding properties of the implant.

It preserves the mucous membranes and takes account of the biological principles in the case of all indications. And not least it ensures ideal prosthetic handing.

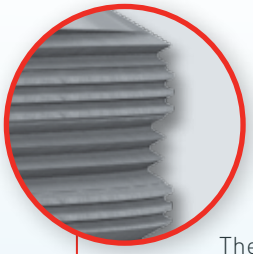
SURFACE

The ultra-pure, corundum blasted and acid-etched surface extends over the entire length of the implant to the implant shoulder (the implant shoulder is now machined). It possesses macro-micro roughness that is ideally dimensioned for the deposition of bone-forming cells and thus enhances the ideal and above all reliable long-term osseointegration of the Microcone. It ensures well above average crestal bone formation in conjunction with the coronal microthread and the conical interface, throughout the implant shoulder to the interface.

- Implant diameter from 3 mm to 5 mm
- Implant lengths from 6.5 mm to 15 mm

5 implant diameters and 6 implant lengths facilitate ideal dimensioning of the implants for each indication.
The implant diameter 3 mm (two part) enables insertion in narrow tooth gaps of the upper side and lower side and middle incisors.

Mechanically tested according to ISO 14801 by the Fraunhofer IWM in Freiburg (Germany).



MICRO-MACRO THREAD

The unique, highly complex, selfcutting micro-macro thread of the implant promotes the permanent apposition of bone cells and their retention in a really ideal manner not just in the crestal area, but across the entire implant surface.
The continuous presence of the microthread on the macrothread sides and in the root of the thread generates the requirements for the largest possible contact surface with the bone.

In the case of subcrestal insertion this results in an accumulation of the bone over the shoulder to the interface in conjunction with the conical tight joint.

Together with the biologically ideally dimensioned microthread theconical joint ensures that it also permanently stays put there. This for its part results in the supporting of the soft tissue above it and thus permanent red and white aesthetics.
The thread design that is to be inserted atraumatically reduces the possibility of medium to long-term decubital necrosis to a minimum.

Short insertion time thanks to a thread pitch of 0.8 mm per turn (macro thread).

The high precision friction-locked and keyed interface achieves the best possible levels of stability between the abutment and the implant.

1. Only one conical connection between the implant and the abutment in the case of implants with a diameter of 3.5 to 5.0 mm.

2. Conical connection between the implant and the abutment that is free of micromovements. As a result of this no mechanical irritations arise and the retention of the peri-implant bone is positively influenced.

3. The connection that is bacteria and liquid proof reduces the risk of infection, ensures healthy tissue that is not irritable and prevents bone depletion.

4. Integrated system-linked platform switching shifts the transition between the implant and the abutment from the implant shoulder to a central position. This keeps bacterial stimuli away from the peri-implant tissue in conjunction with the tight conical connection and creates a broad horizontal basis for the stable apposition of hard and soft tissue.

5. The implant abutment connection meets all the system requirements for permanent red-white aesthetics in conjunction with a subcrestal implant position and the coronal microthread section.

	LENGTH / DIAMETER	6.5 mm	8 mm	9 mm	11 mm	13 mm	15 mm
NI*	D 3.0 mm				1-01-06	1-01-07	1-01-08
RI*	D 3.5 mm		2-01-30	2-01-31	2-01-32	2-01-33	2-01-34
	D 4.0 mm	2-01-35	2-01-36	2-01-37	2-01-38	2-01-39	2-01-40
	D 4.5 mm	2-01-41	2-01-42	2-01-43	2-01-44	2-01-45	2-01-46
	D 4.5 / 3.5 mm	2-01-53		2-01-54	2-01-55	2-01-56	
	D 5.0 mm	2-01-47	2-01-48	2-01-49	2-01-50	2-01-51	2-01-52

* **Implant connection NI** (Narrow Interface)

Implant connection RI (Regular Interface)

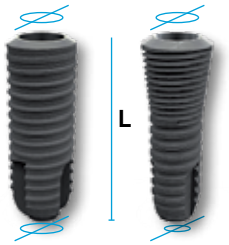
The visible indication of the implant diameter, framed by the colour coding, makes it easier to visually differentiate the respective implant diameters.

The drill bits for the implant bed preparation are also highlighted with these colours.

D 3.0 mm | D 3.5 mm | D 4.0 mm | D 4.5 mm | D 4.5 / 3.5 mm | D 5.0 mm

Clear colour coding of the implant diameters

In the colour coding field on the implant packaging the diameter of the implant is labelled in millimetres with "D" , the length in millimetres with „L" and the article number „REF".



D 4.5 mm | D 4.5 / 3.5 mm

The 4.5 mm implants are available in straight and conical form.

GINGIVA FORMER

PLEASE NOTE:

RECOMMENDED TORQUE TO SCREW IN THE GINGIVA FORMER **5-10 NCM** (FINGER- TIGHT)

The following overview should make it easier for you to select the right gingiva former. The definitive selection of the gingival former must be performed in line with the patient's specific needs.
The correct diameter of the emergence profile of the gingival former is based on the desired healing space and the implant position and thus decisively influences the correct ability to shape and the functionality of the prosthetics. You can use the gingival height gauge to determine the gingiva heights.

GINGIVA FORMER	Ø 6.5	Ø 6.5	Ø 4.5	Ø 4.5	Ø 5.5	Ø 3.5	Ø 5.5
							
IMPLANT POSITION	17	16	15	14	13	12	11
	47	46	45	44	43	42	41
							
GINGIVA FORMER	Ø 6.5	Ø 6.5	Ø 4.5	Ø 4.5	Ø 5.5	Ø 3.5	Ø 3.5

IMPLANT DIAMETERS AND LENGTHS

Our implants are available in five diameters and different lengths. Due to the needs-based size graduation they are suitable for all dental implantology indications for a minimised number of single implants.

NI
D 3.0 MM

Microcone Implant NI D 3.0 mm

Please always note that the implant connection of the implant that has a diameter of 3.00 mm is dimensionally reduced and you can use it only to treat parts which are marked with the implant connection NI (Narrow Interface).

Indications: Narrow gaps – only the upper jaw, lateral incisors and lower jaw lateral and central incisors area: 12, 22, 31, 32, 41, 42

RI
D 3.5 MM - 5.0 MM

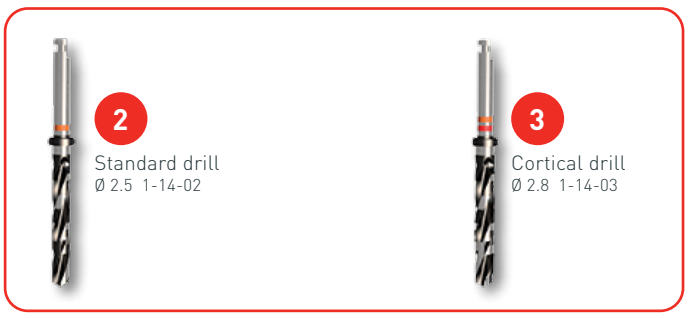
Microcone Implant RI D 3.5–5.0 mm

There is only one conical connection size between the implant and the abutment in the case of implants with a diameter of 3.5 to 5.0 mm, which is marked with RI (Regular Interface).

This means that all the impression posts, gingival formers and abutments fit into each of these implants. This markedly reduces the number of components required and thus achieves maximum transparency and efficiency.

SURGERY TRAY

The surgery tray has a clearly structured range of bone drills for the preparation of the implant activities. The drill bits are cooled externally and should not be applied at a rotational speed of more than 800 rpm. The maximum torque should not exceed 35 Ncm.

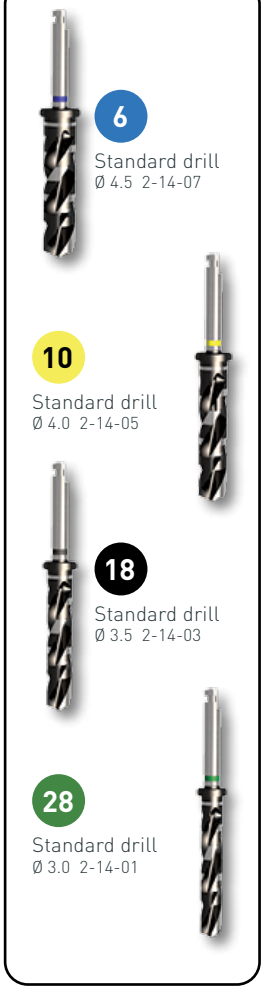


2 Standard drill Ø 2.5 1-14-02

3 Cortical drill Ø 2.8 1-14-03

12 Placement instrument implant direct removal NI 1-13-10

13 Placement instrument implant direct removal NI 1-13-09



6 Standard drill Ø 4.5 2-14-07

10 Standard drill Ø 4.0 2-14-05

18 Standard drill Ø 3.5 2-14-03

28 Standard drill Ø 3.0 2-14-01

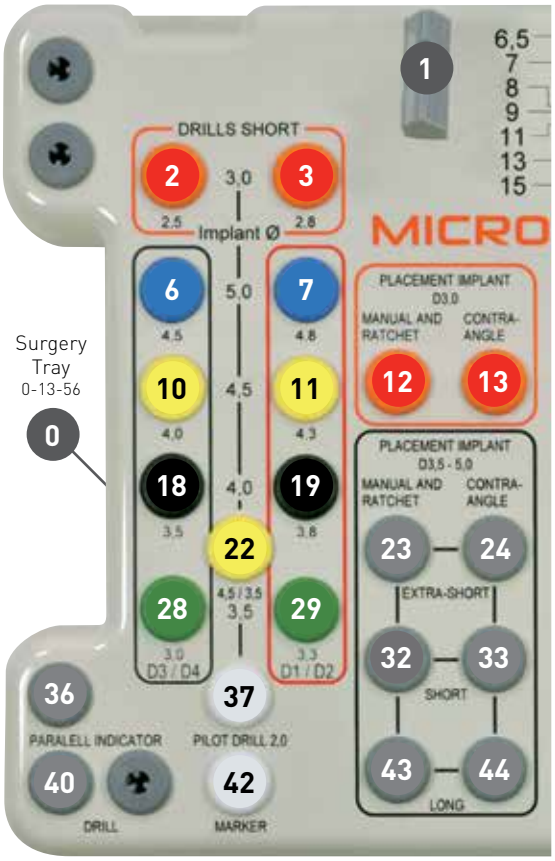
22 Reamer, conical Ø 3,0/4,5 2-14-61

7 Cortical drill Ø 4.5/4.8 2-14-08

11 Cortical drill Ø 4.0/4.3 2-14-06

19 Cortical drill Ø 3.5/3.8 2-14-04

29 Cortical drill Ø 3.0/3.3 2-14-02



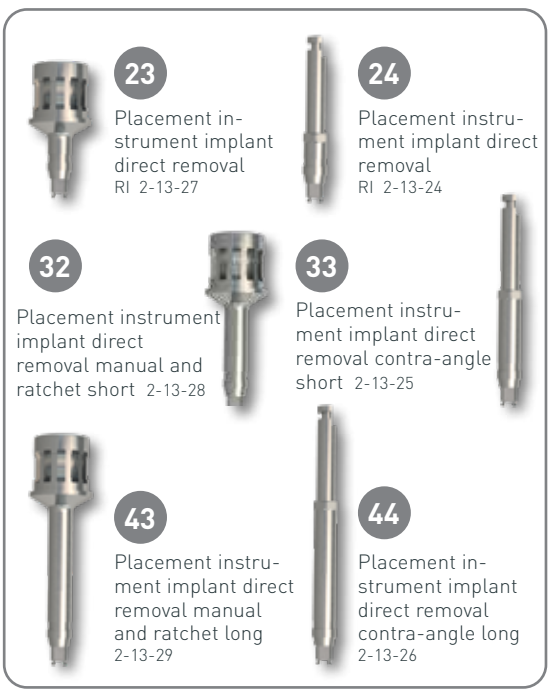
Surgery Tray 0-13-56

0

36 40 Paralleling aid Ø 2.0/3.0 0-13-01

37 Pilot drill Ø 2.0 1-14-01

42 Needle drill Ø 1.6 0-14-77



23 Placement instrument implant direct removal RI 2-13-27

24 Placement instrument implant direct removal RI 2-13-24

32 Placement instrument implant direct removal manual and ratchet short 2-13-28

33 Placement instrument implant direct removal contra-angle short 2-13-25

43 Placement instrument implant direct removal manual and ratchet long 2-13-29

44 Placement instrument implant direct removal contra-angle long 2-13-26

The picture shows optional equipment, which has to be ordered separately.

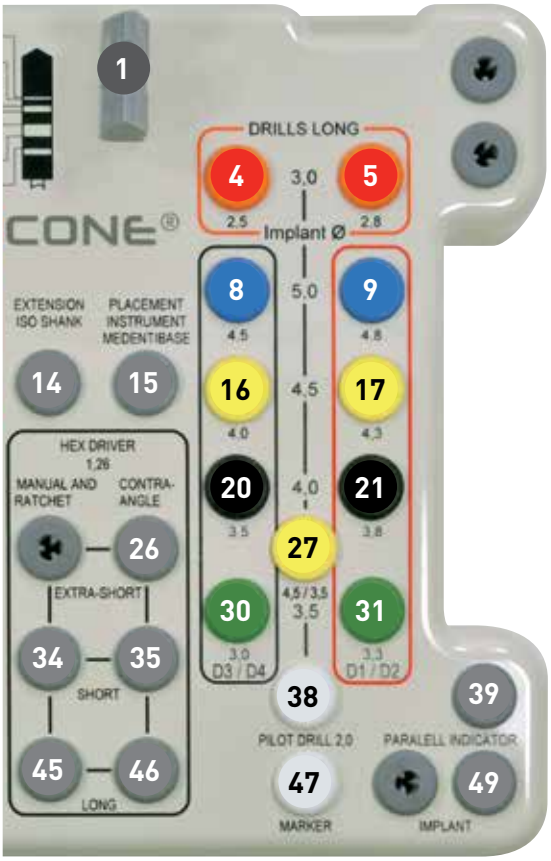
1 Torque ratchet
0-13-28

Depth gauge gingival height
0-13-17
(located in the tray floor)

Depth gauge drill hole
0-13-10
(located in the tray floor)

14 Extension ISO shank NI 0-13-55

15 Placement instrument MedentiBASE 0-13-37



4 Standard drill
Ø 2.5 1-14-05

5 Cortical drill
Ø 2.8 1-14-06

8 Standard drill
Ø 4.5 2-14-15

16 Standard drill
Ø 4.0 2-14-13

20 Standard drill
Ø 3.5 2-14-11

30 Standard drill
Ø 3.0 2-14-09

27 Erweiterungs-bohrer konisch
Ø 3,0/4,5
2-14-62

9 Cortical drill
Ø 4.5/4.8 2-14-16

17 Cortical drill
Ø 4.0/4.3 2-14-14

21 Cortical drill
Ø 3.5/3,8 2-14-12

31 Cortical drill
Ø 3.0/3.3 2-14-10

26 Placement instrument Hex 1.26 contra-angle extra-short 0-13-18

34 Placement instrument Hex 1.26 manual and ratchet short 0-13-22

35 Placement instrument Hex 1.26 contra-angle short 0-13-04

45 Placement instrument Hex 1.26 manual and ratchet long 0-13-23

46 Placement instrument Hex 1.26 contra-angle long 0-13-05

38 Pilot drill
Ø 2.0 1-14-04

39 49 Paralleling aid implant
2-13-31

47 Needle drill
Ø 1.6 0-14-77

» Depth stops «

Microcone depth stop
The Microcone depth stop ensures precise control of the drilling depth during implant site preparation for placing Microcone implants. The advantage of the depth stop is its applicability both with simple and also more demanding cases in which the location of the mandibular nerve or sinus floor plays a role. The depth stops are supplied nonsterile and should be sterilised prior to use.
The Microcone depth stops can only be used with the new, black-coated Microcone drills.

Important
Microcone depth stops are not indicated for:
Extraction alveoli, in which the bone cavity is much wider than the required support diameter for the depth stop.
Use with a drilling template, because of the obstruction due to or with the template.

Combination chart Drills and depth stops

Short drills

			SHORT DRILL BITS					
		Pilot	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical
		2.0	2.5/2.8	3.0/3.3	3.5/3.8	4.0/4.3	3.0/3.3	4.5/4.8
			Implant 3.0	**Implant 3.5**	**Implant 4.0**	**Implant 4.5**	**Implant 4.5/3.5***	**Implant 5.0**
Implant length	6.5	**Depth stop No.**	7	x	x	40	51	29	62
	8.0		6	x	28	39	50	x	61
	9.0		5	x	27	38	49	27	60
	11.0		3	14	25	36	47	25	58
	13.0		2	13	24	35	46	24	57
	15.0		1	12	23	34	45	x	56

* Use of the depth stop with the conical enlarging bit (Art. No. 2-14-61/2-14-62) is not possible due to application-related reasons

Long drills

			LONG DRILL BITS					
		Pilot	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical	Standard/ Cortical
		2.0	2.5/2.8	3.0/3.3	3.5/3.8	4.0/4.3	3.0/3.3	4.5/4.8
			Implant 3.0	**Implant 3.5**	**Implant 4.0**	**Implant 4.5**	**Implant 4.5/3.5***	**Implant 5.0**
Implant length	6.5	**Depth stop No.**	11	x	x	44	55	33	66
	8.0		10	x	32	43	54	x	65
	9.0		9	x	31	42	53	31	64
	11.0		8	19	30	41	52	30	63
	13.0		6	17	28	39	50	28	61
	15.0		4	15	26	37	48	x	59

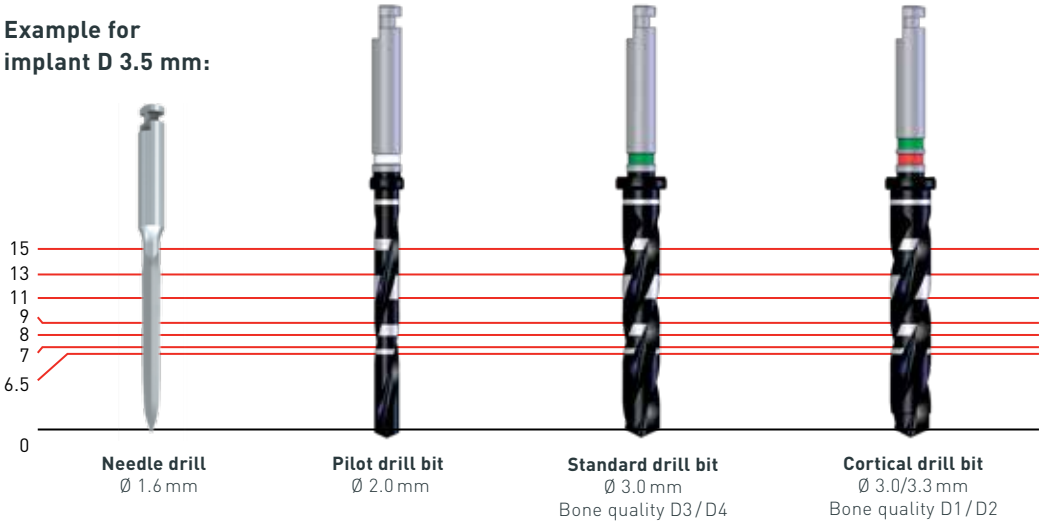
* Use of the depth stop with the conical enlarging bit (Art. No. 2-14-61/2-14-62) is not possible due to application-related reasons

IMPLANT BED PREPARATION

The Microcone drills that are precisely matched with one another in terms of their geometry make it possible to tailor the diameter of the implant bearing to the bone quality.

The bone preparation should be optionally adapted in line with the individual bone qualities by means of optimal drill sequences. The exact and atraumic preparation of the bony implant site should form a part of a successful implantation.

Example for implant D 3.5 mm:

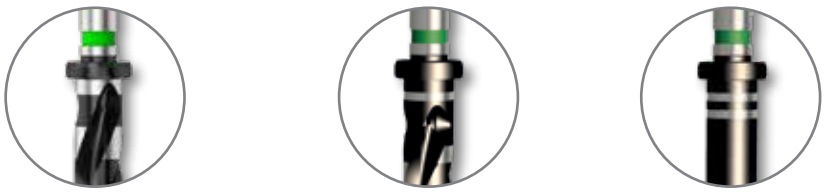


PLEASE NOTE:

The stated drill depths do not include the 0,3 mm tip of the drill bit.

Please observe their length if there is not much space available for anatomic structures. Please consult the table for the drill tip lengths.

THERE ARE THREE DRILL BIT LENGTHS:



Extra Short drill
No slim silver ring

Short drill bit
1 slim silver ring

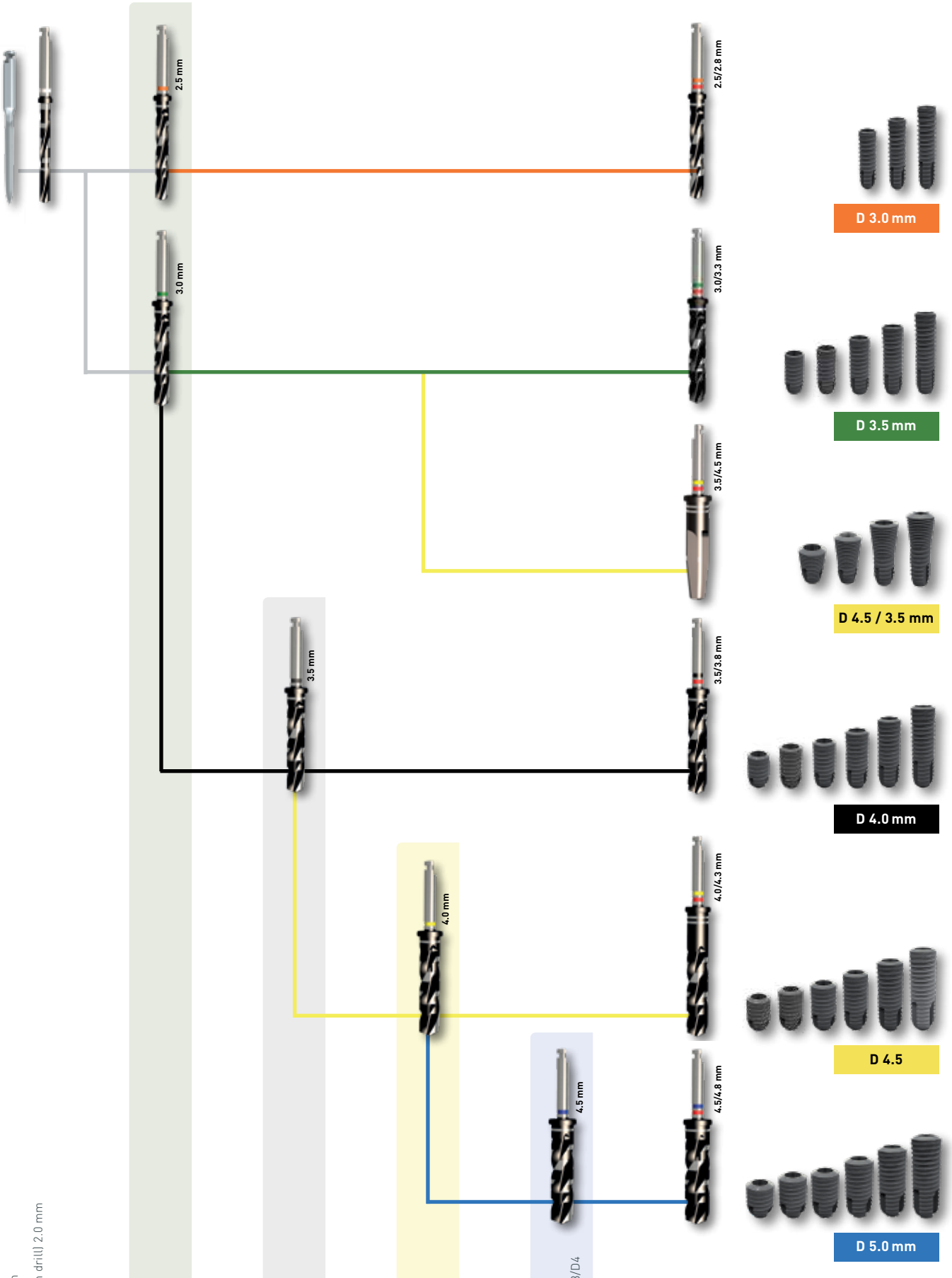
Long drill bit
2 slim silver rings

PREPARATION UNTIL THE IMPLANT-SPECIFIC DIAMETER TO REACH IT

The direction and depth of the implantation is determined with externally-cooled machine-driven instruments. The drill bits are depth marked to this end through ground-in laser markings. The maximum torque of 800 rpm may not be exceeded during this preparation cut as there is otherwise the risk of the local overheating of the bone. The necrosis of the bone that is possible as a result endangers the healing of the implant. The drilling should not be performed in a one-off operation, but intermittently at moderate pressure.

FUNDAMENTALLY THE FOLLOWING APPLIES:

- Standard drill: When using the standard drill as a final depth drill always: Implant diameter minus 0.5 mm (e.g. in the case of a implant with a diameter of 3.5 mm = 3.00 final drill hole).
  e.g. in the upper jaw in the case of average bone quality D3 / D4
- Cortical drill: When using the cortical drill as a final depth drill always:
  Implant diameter minus 0.2 mm (e.g. in the case of an implant with a diameter of 3.5 mm = 3.3 mm final drillhole). To be inserted in the case of D1 / D2 bone quality in the lower jaw in particular. Here, if necessary, at fulldepth.


Needle drill 1.8 mm
Pilot drill bit (Depth drill) 2.0 mm
Standard drill bit
Bone quality D3/D4
2.5 mm
3.0 mm
Standard drill bit
Bone quality D3/D4
3.5 mm
Standard drill bit
Bone quality D3/D4
4.0 mm
Standardbohrer
Knochenqualität D3/D4
4.5 mm
Cortical drill bit
Bone quality D1/D2
2.5/2.8 mm
3.0/3.3 mm
3.5/4.5 mm
3.5/3.8 mm
4.0/4.3 mm
4.5/4.8 mm
Implants
D 3.0 mm
D 3.5 mm
D 4.5 / 3.5 mm
D 4.0 mm
D 4.5
D 5.0 mm

CONVENTIONAL TREATMENT PLANNING

The general applicable guidelines of implant prosthodontics as well as surgical aspects such as the patient's general case history, contraindications, intraoral findings, risk factors must be taken into account during the treatment planning.

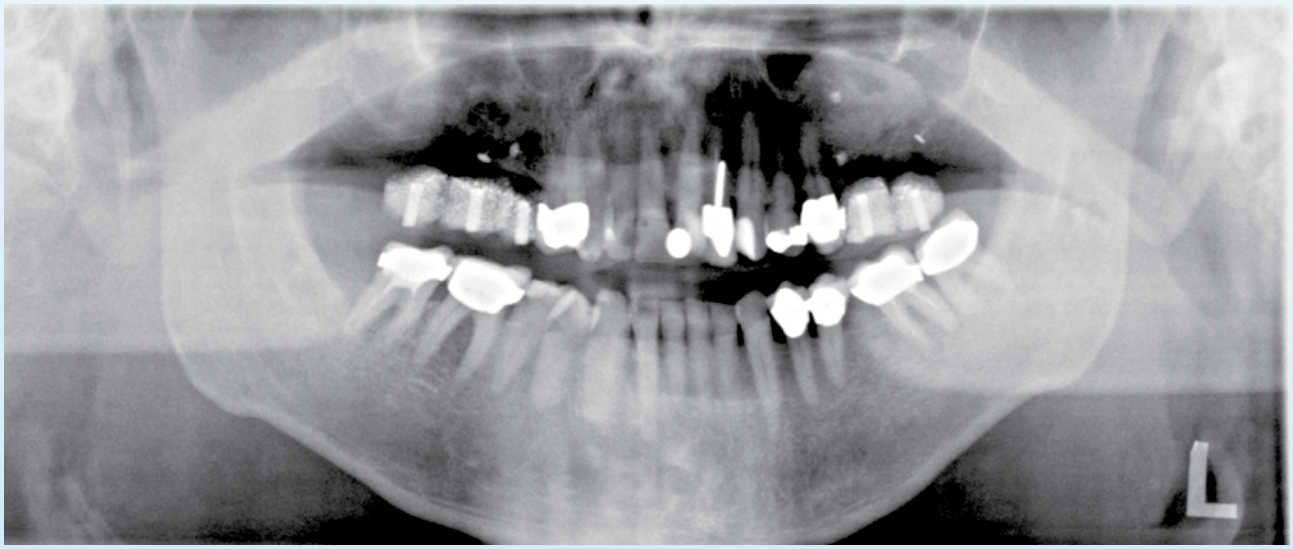
Treatment planning can be carried out in accordance with the following considerations after the evaluation of the findings:

- Preprosthetic planning
- Surgical planning

The indications and contraindications for dental surgery and implantological operations must be observed.

During the preprosthetic planning the best possible insertion of the implants should be planned in accordance with aesthetic functional considerations in-cooperation with the prosthodontist.

During the surgical planning a careful inspection must be carried out as to whether the existing bone quality is sufficient to primarily insert the implants in a stable manner



SURGICAL PLANNING

The sufficient height and width of the jaw bone for the insertion of implants must be inspected in the pre-operative planning phase. Vestibular and oral lamella should have a width of at least 1.5 mm following the insertion of the implant. The location and the course of important anatomic
structures such as the mental foramen or the maxillary sinus must be determined by x-ray. If it should be augmented, these areas must demonstrate complete and mechanically stable regeneration before the treatment. The implant lengths and diameters are selected by placing the x-ray template upon the OPG (pay attention to the enlargement scale). The subcrestal placement of the implant must be taken into account during the x-ray analysis.

PREPROSTHETIC PLANNING

Preprosthetic planning and thus the best possible, tooth analogue positioning of the implants is the most important precondition to create the basis for aesthetic and functional prosthetics.

MICROCONE

MEDENTiKA®
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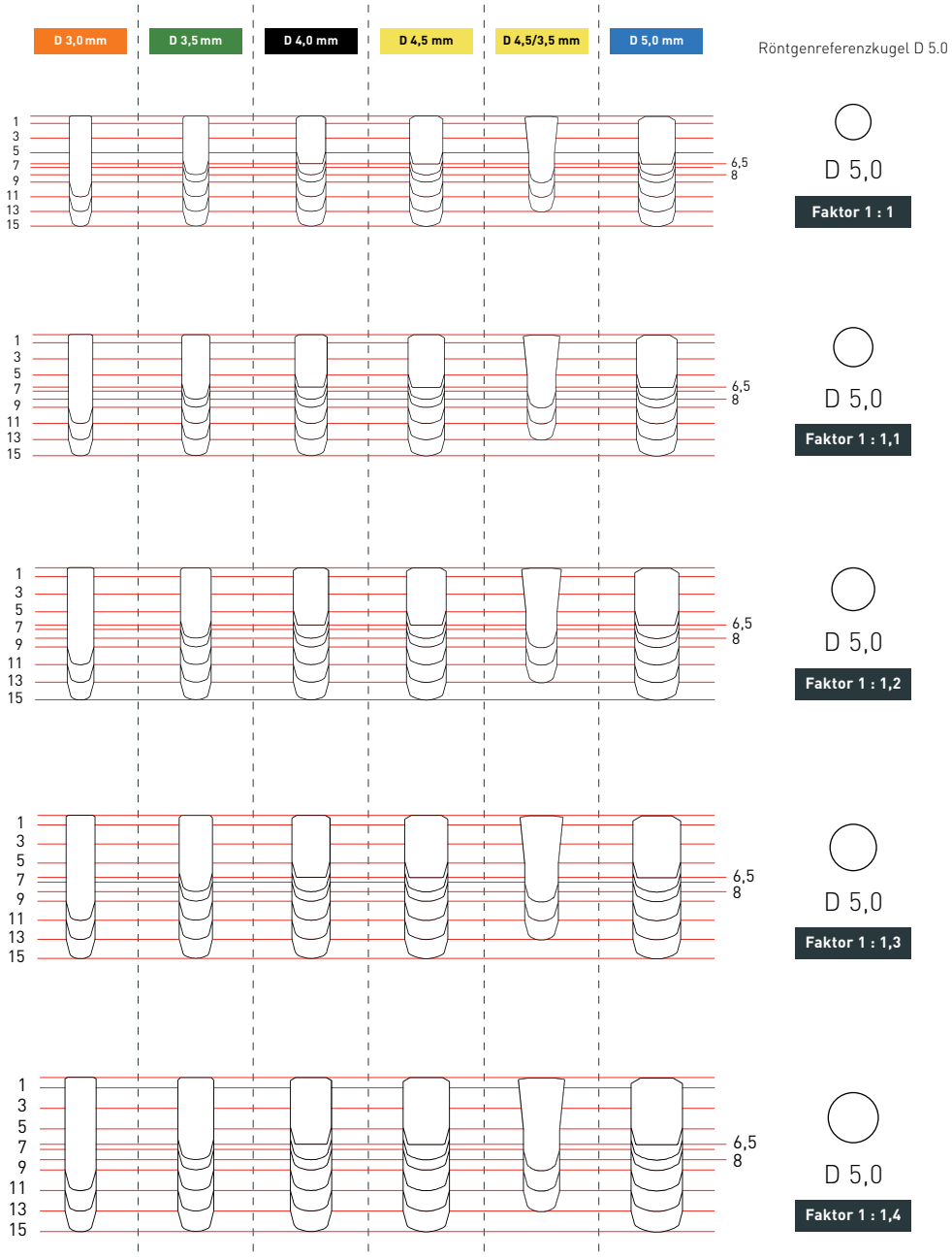


Art.-Nr. 0-24-13 September 2018

DENTiKA®
mann Group Brand

erenzkugel D 5.0

D 5,0
tor 1 : 1,5

D 5,0
tor 1 : 1,6

D 5,0
tor 1 : 1,7

D 5,0
Faktor 1 : 1,8

Art.-Nr. 0-24-13 September 2018

COMPUTER AIDED TREATMENT PLANNING

» MedentiGuide «

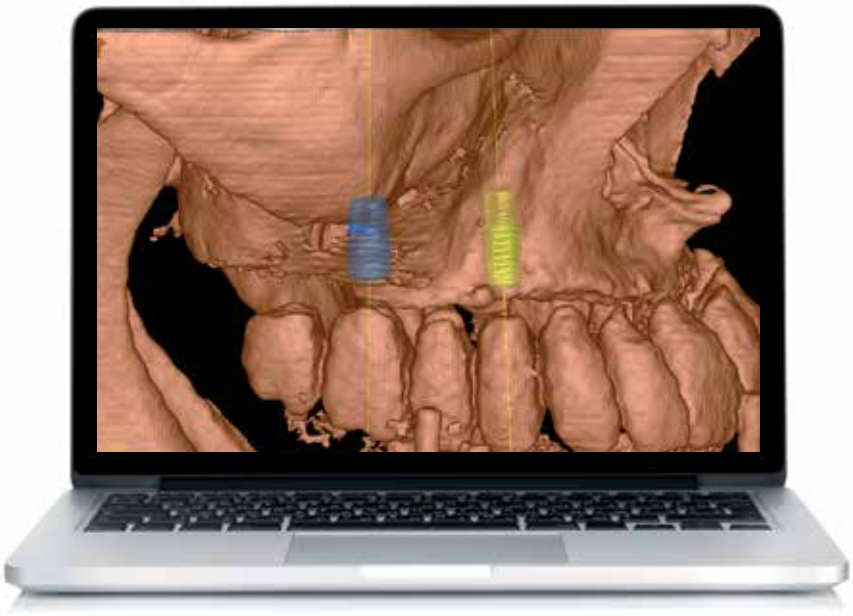
MedentiGuide drill sleeves support the surgeon in preparing the implant bed for MEDENTiKA® implants. Their use must be planned with a specially designed 3D planning system and surgical drilling template. You can plant the surgery with standard planning programs.

Treatment planning based on three dimensional imaging procedures (CT, DVT) enables high precision treatment planning and means that the treatment outcome can be accurately predicted.

The advantages over conventional planning include:

- Precision three-dimensional planning and implantation, taking into account the desired restoration
- Automatic collision control that displays if the distances to the implants or nerves are too short
- Information on peri-implant bone quality so that conclusions can be drawn on the expected primary stability

An individual drilling template can be produced on the basis of the digital planning data. This ensures the exact and precise transfer of the planning outcome to the patient's mouth.



These software manufacturers* currently support the MedentiGuide System

dental wings

3shape

exocad

SICAT
A Dentsply Sirona Company

smop
powered by swissmeda

PLANMECA

Note:

MEDENTiKA® GmbH accepts no liability for the correct planning, implementation and production of the drilling template. Sufficient knowledge of the 3D planning system being used and the MEDENTiKA® implant system is essential. It is imperative that the user is very confident in the use of 3D planning systems before using the MedentiGuide drill sleeves. Furthermore, sufficient expertise in preoperative implant planning and dental implantology is required.

* to some extent this depends on the availability of the updates of the specific manufacturer.

IMPLANT PACKAGING

The implant is supplied in a sterile blister with surrounding packaging. The packaging guarantees clear and simple storage.

- High levels of product recognition due to the clear and brand-specific design of the packaging
- Detailed label and clear external information label that is reduced to the key essentials
- It can be simply stacked as a result, important product information remains visible at a glance
- Large seal label that can be pealed off three times on the blister packaging

PACKAGING SYMBOLS

REF	**Order number**		**Read operating instructions**
LOT	**Batch Number**		**Not for reuse**
	Manufacturer	CE 0483	**CE marking with the identification number of the Notified Body**
	Expiry date	STERILE R	**Sterilised by irradiation**
℞ ONLY	**US Federal law restricts this device to sale by or on the order of a doctor.**		

DENTAL
IMPLANT PASS

» Implant **direct removal** «

01 PREPARING THE IMPLANT REMOVAL

a) Remove the implant from the outer package

b) Open the peel bag

c) Remove paper of the inner blister to lay the implant open

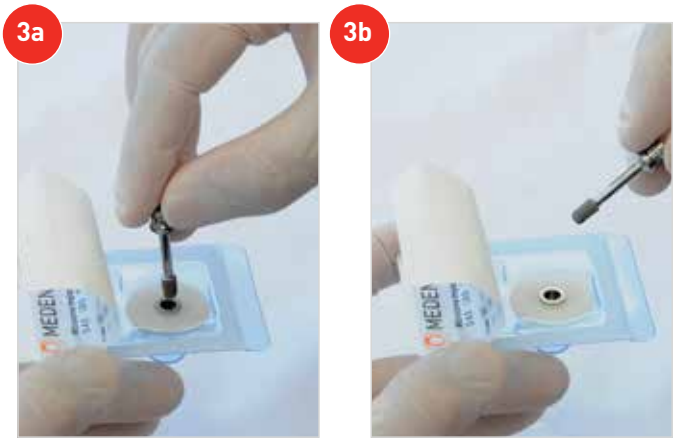
02 INSERTING THE PLACEMENT INSTRUMENT IN THE FINAL POSITION

To remove the implant from the blister pack/ titanium tube insert the placement instrument and turn it clockwise until the square of the placement instrument slides into the corresponding square of the implant. Press the placement instrument into the final position.

Please note:
In isolated cases the implant may slightly jam in the titanium tube. If this happens, turn slightly counterclockwise to release.

03 REMOVING THE IMPLANT FROM THE TITANIUM TUBE

Once you feel the implant is fixed on the instrument you can easily remove it from the titanium tube.



Step by step **preparation of the implant**

(Example for implant diameter 3.5 mm x 11 mm)

Incision phase

The incision phase serves to form a mucosa flap to reveal the implantation point as bone. In this process a muco-periosteal flap is formed, the incision phase is case-dependent and must be considered based on the patient's individual requirements depending on the healing mode (submerged or open healing).

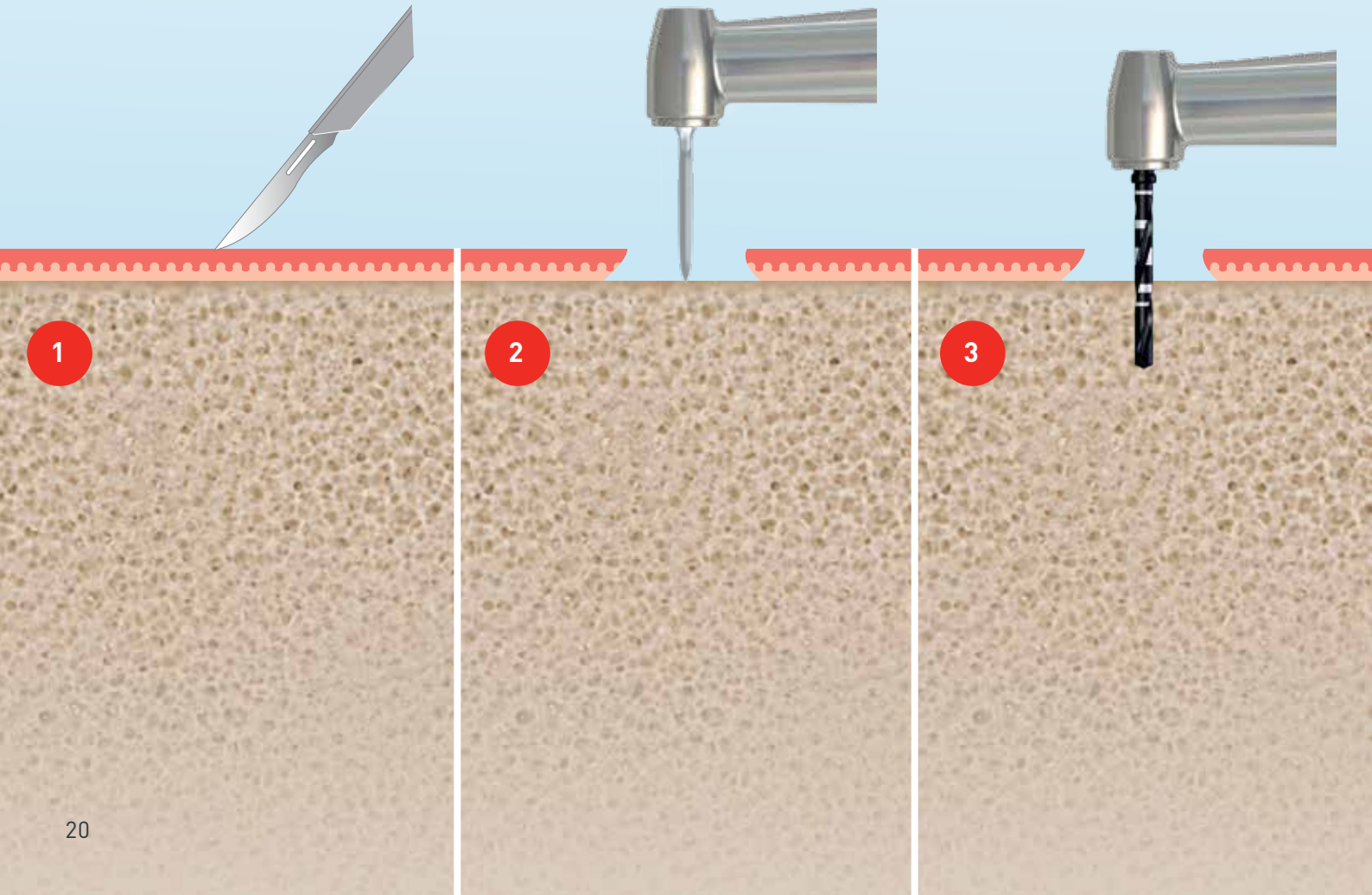
First marker drill with the needle drill Ø 1,6 mm

The marking bore is inserted following the mobilization of the mucoperiosteal flap with the needle drill and can also alternatively be performed with the aid of a drilling template.

Pilot drill hole with the pilot drill bit Ø 2,0 mm

Preparation of the implant bed for an straight implant with the pilot drill 2.0 mm. In this process the saggital dire tion of the implant axis as well as the drilling depth is determined (please observe the depth markings).

A template-based implantation is recommended for the definitive aligment and to prevent deviations from the implant planning.



bed

Depth drilling with the standard drill bit Ø 3,0 mm

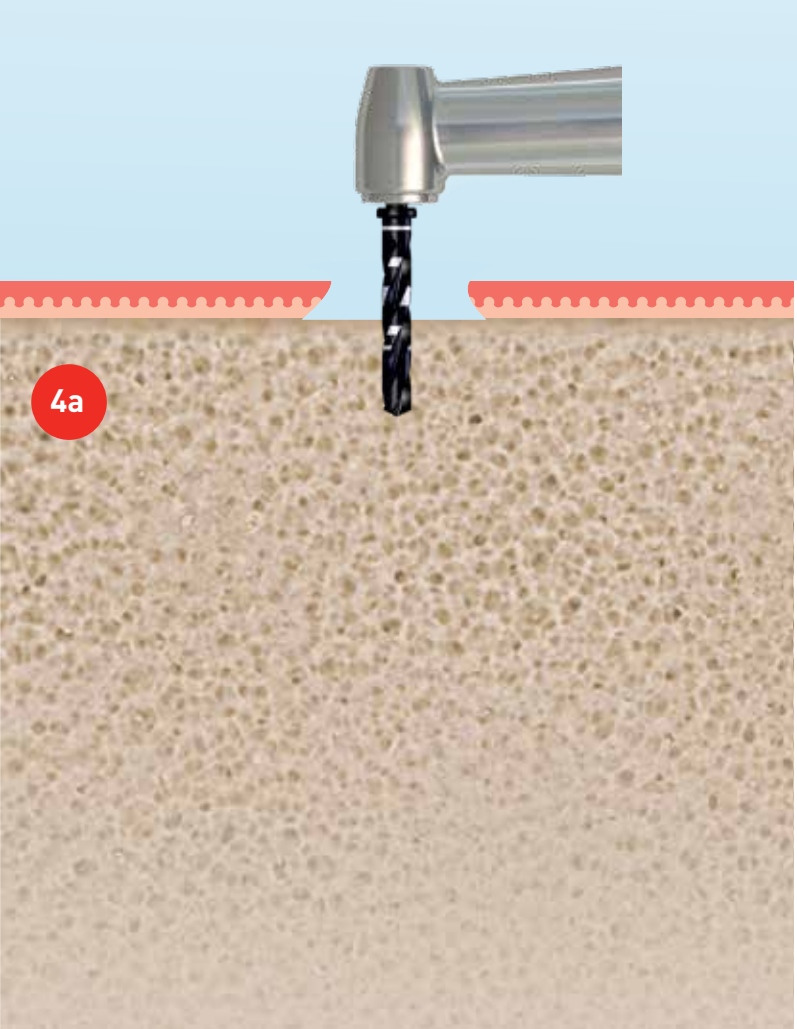
The final depth drilling in bone quality D1/D2 is always completed directly using the final drill. In this case with the standard drill bit D 3,0 mm.

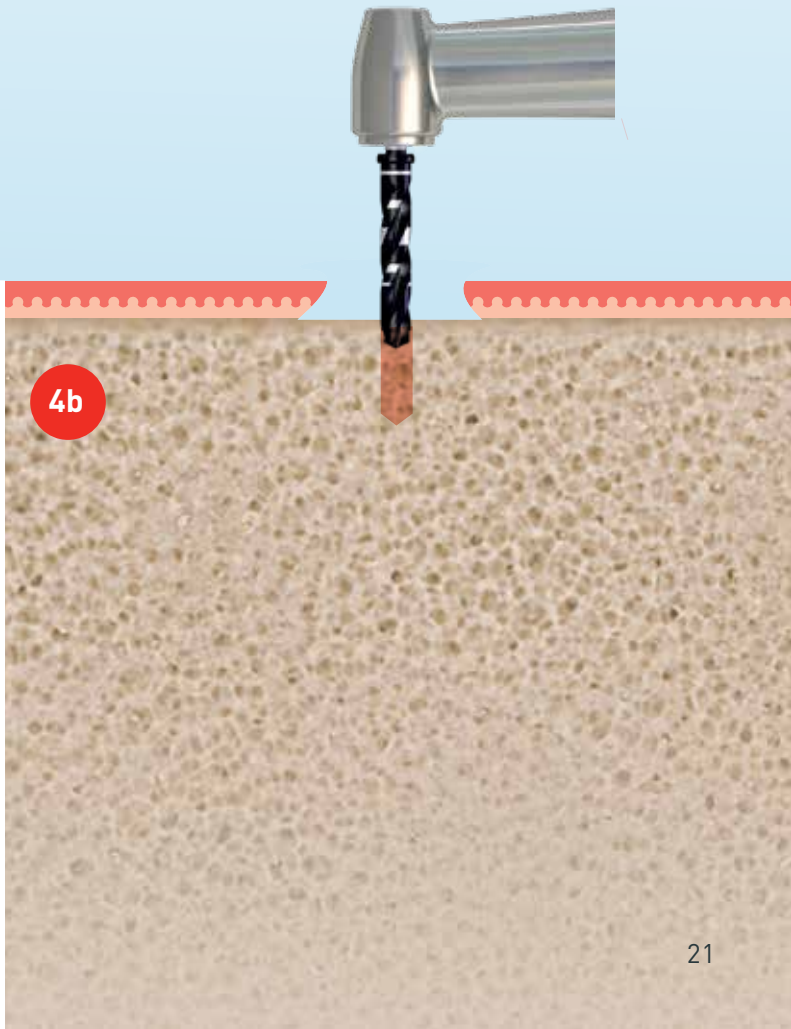
The laser markings that correspond to the respective implant length serve to inspect the depths for their part.

The max. number of revolution is 800 rpm.

Depth drilling with the cortical drill bit Ø 3,0/3,3 mm

It is recommended in the event of an extremely compact cortex and an average spongiosa or D1/D2 bone quality in the lower jaw, using additionally the cortical drill with 3.0/3.3 mm diameter.





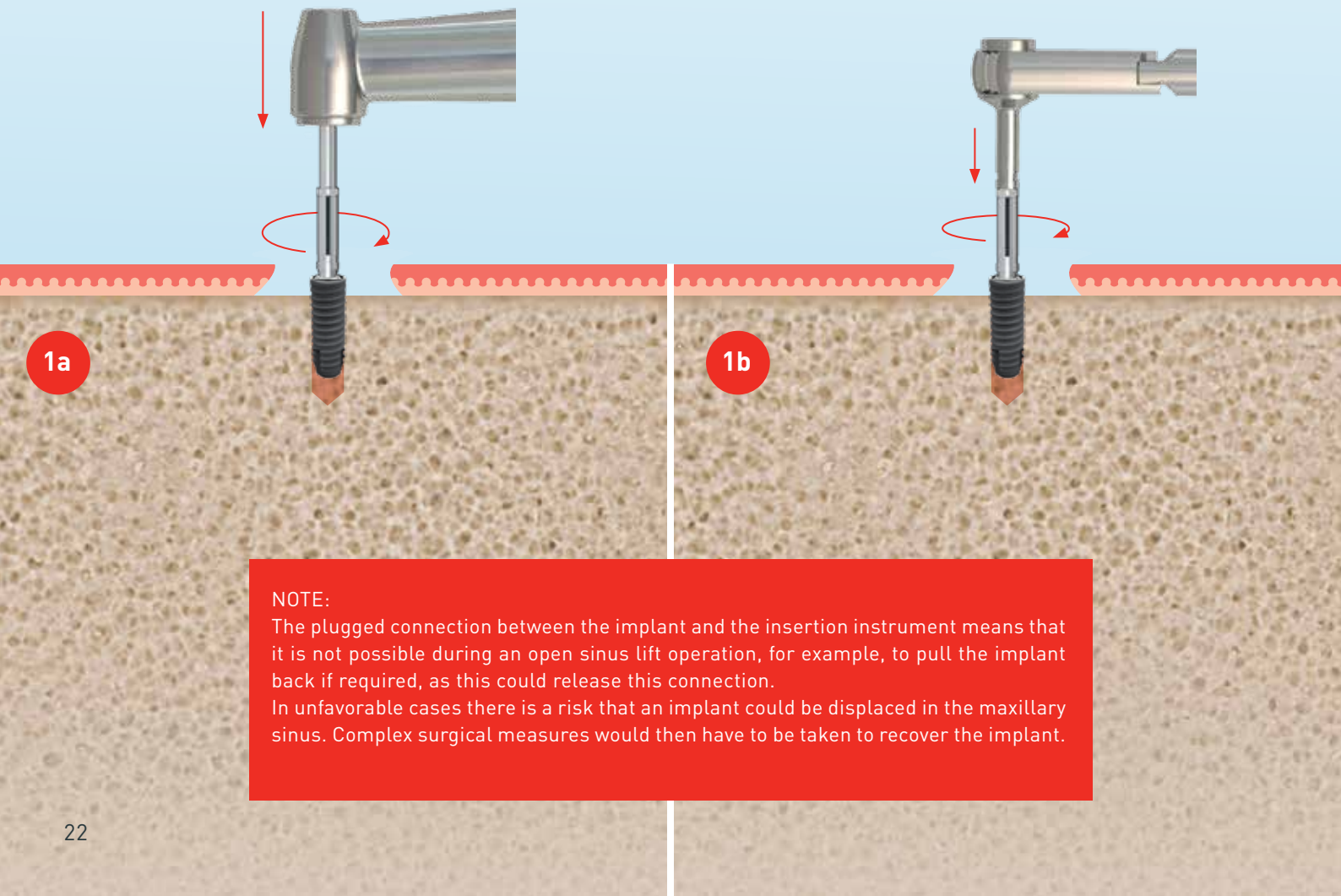
Implant insertion

Implant placement with the contral angled handpiece

If the implant is inserted with the placement instrument for the angeled handpiece, a max. number of 50 rpm and a torque of 35 Ncm should not be exceeded. When 35 Ncm must be clearly exceeded before getting the final implant position, we recommmend to carefull unscrew the implant and use the cortical drill for enlarging the implant bed.

Final positioning with the torque ratchet

If the implant is inserted with the placement instrument for the manual use with the torgue ratched, a max. torque of 35 Ncm should be set on the ratched and not be exceeded. When 35 Ncm must be clearly exceeded before getting the final implant position, we recommmend that you carefully unscrew the implant and use the cortical drill for enlarging the implant bed.



NOTE:
The plugged connection between the implant and the insertion instrument means that it is not possible during an open sinus lift operation, for example, to pull the implant back if required, as this could release this connection.
In unfavorable cases there is a risk that an implant could be displaced in the maxillary sinus. Complex surgical measures would then have to be taken to recover the implant.

Implant insertion

Remove placement instrument

Once the implant has reached its final position, the placement instrument should be carefully removed from the implant (either by handpiece or by torque ratchet).

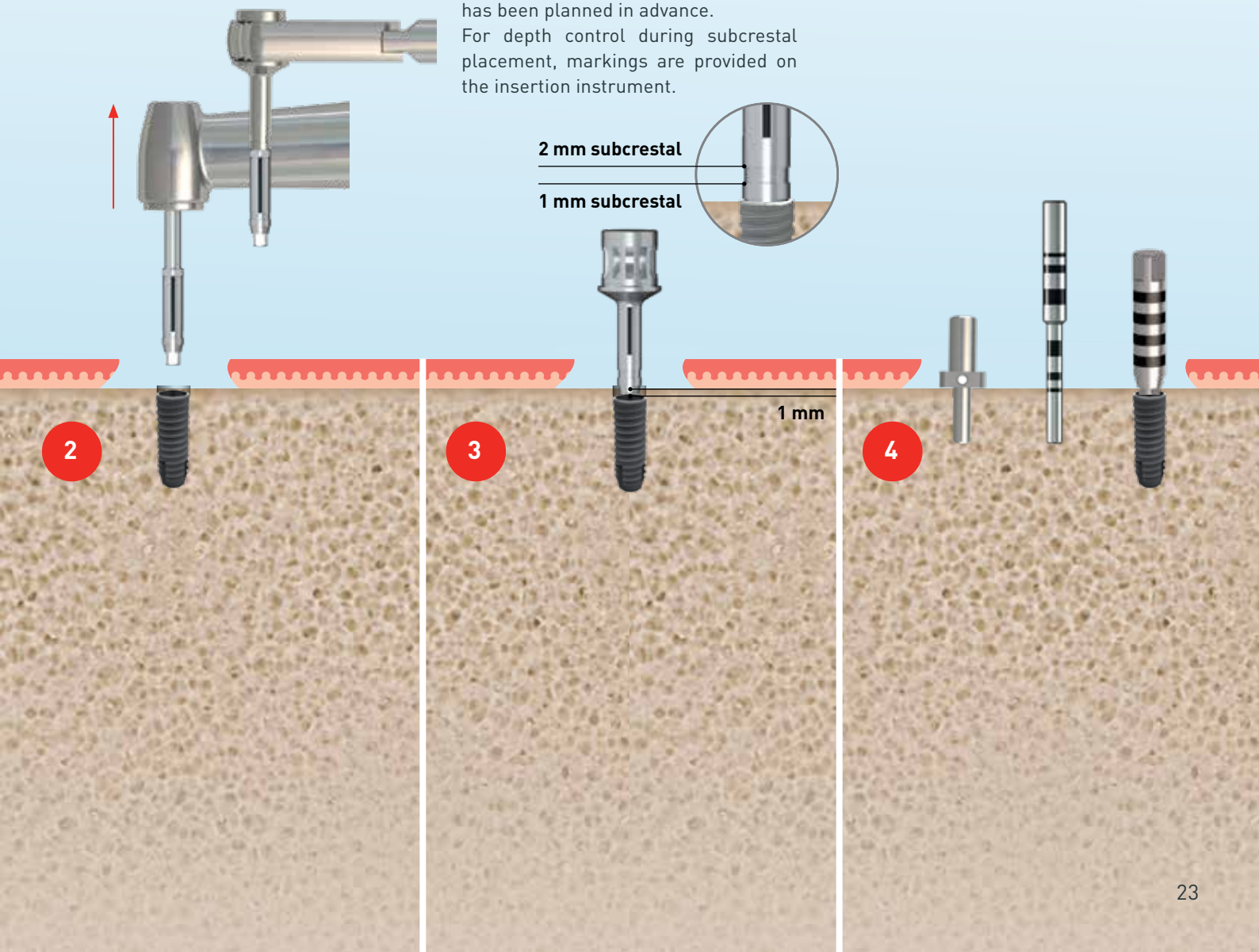
Subcrestal implant position

Due to the internal tapered connection the implant can be inserted approx. 1 mm subcrestally if there is a sufficient amount of bone in a vertical direction, in order to stabilise the periimplant bone better. Such a procedure ensures unencumbered healing even under the mucosa supported dentures and can improve the prosthetic results in aesthetically relevant area if there is not enough soft tissue available.
In the case of the pre-surgical planning and the observation of the ground-in laser marking of the bit you must ensure the subcrestal implant position has been planned in advance.
For depth control during subcrestal placement, markings are provided on the insertion instrument.

Paralleling aid

The paralleling aid can be used for orienting to the selected implant axis when inserting several implants.

This can be performed either by placing the paralleling aid in the implant bed or by placing the paralleling aid directly in the implant.



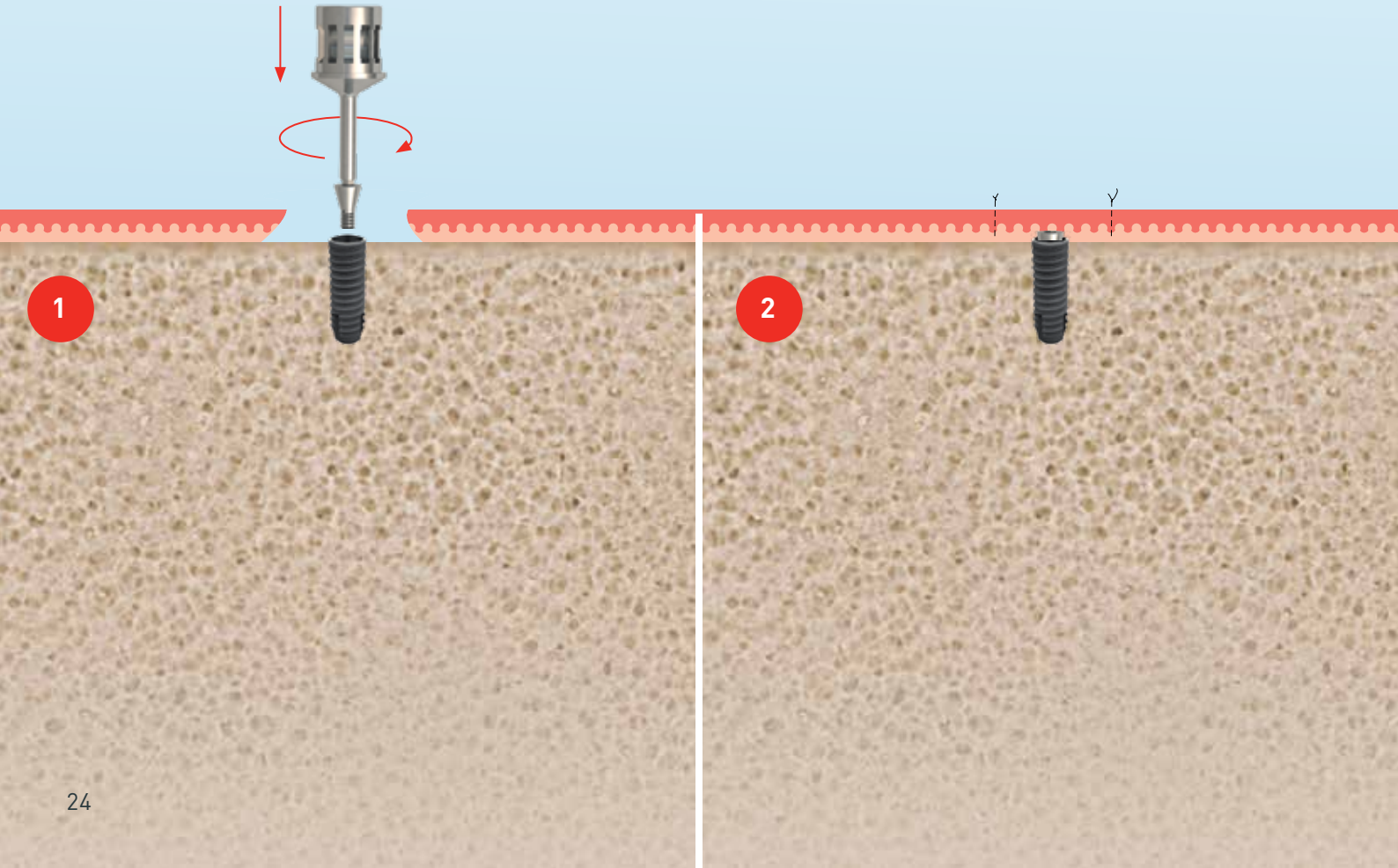
» Option 1: Submerged healing «

Locking closer screw

If the implant is intended for submerged healing, the closer screw must be inserted hand tight following the removal of the placement instrument implant.

Closure

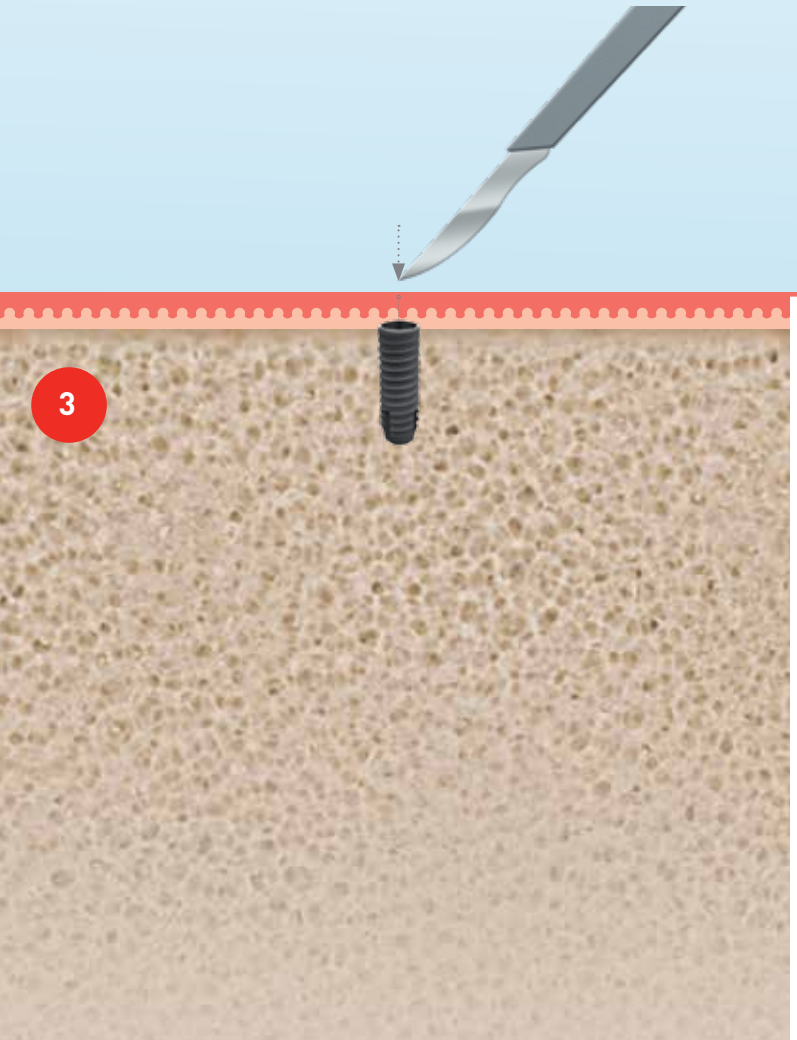
The gingiva has to be sutured tension free but salavia close. To document the final implant position, a post operation X-ray could be done. A load-free healing phase must be ensured.



» Option 1: **Submerged** healing «

Incision

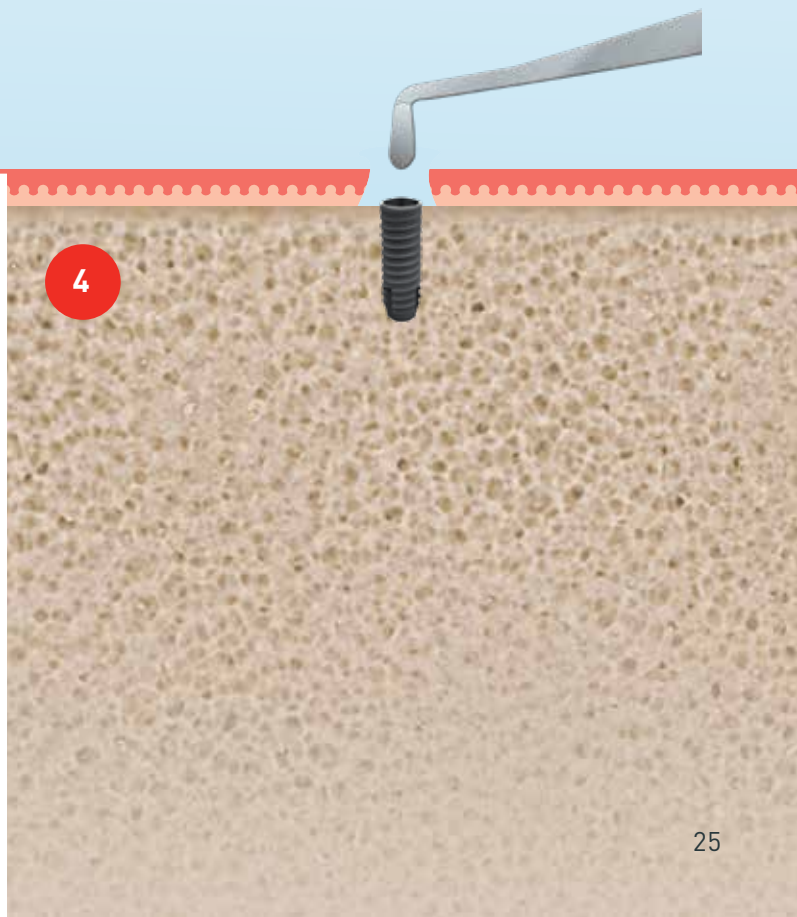
Following the localisation of the implant and the point-based anaesthetic directly above the implant a limited crestal cut is performed to the implant surface.



Uncovering

The central interior hex of the closer screw is found with the probe. Connective tissue or bone must be removed with the sharp curette above the locking closer screw.

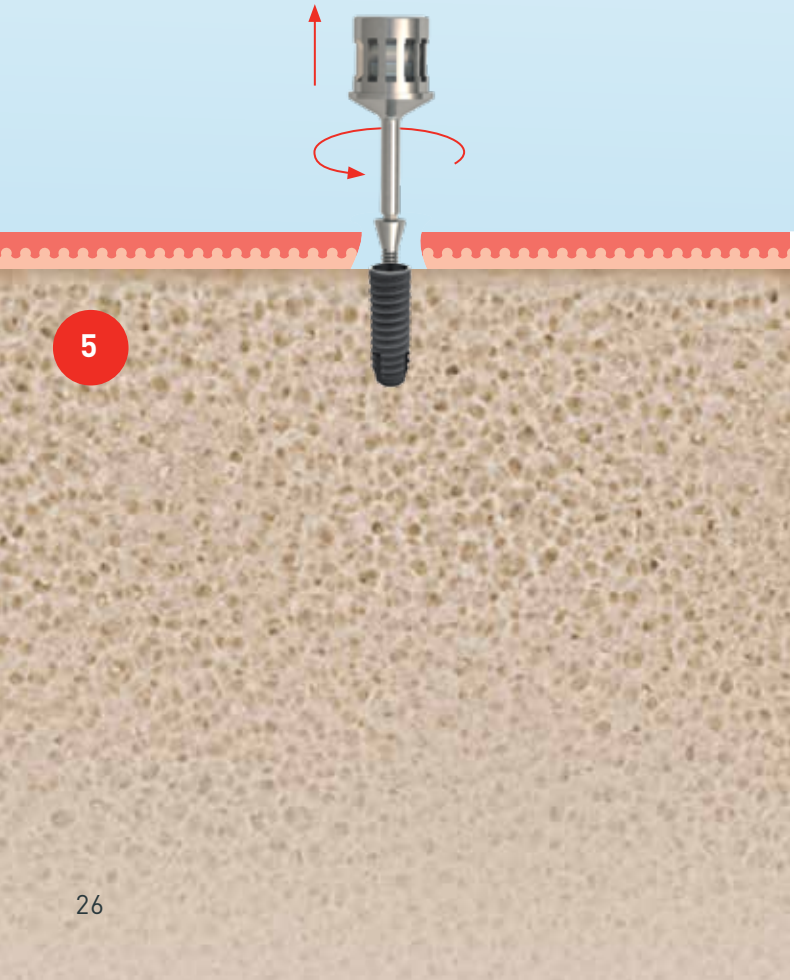
Bones which disrupt the emergence profile must be removed.



» Option 1: Submerged healing «

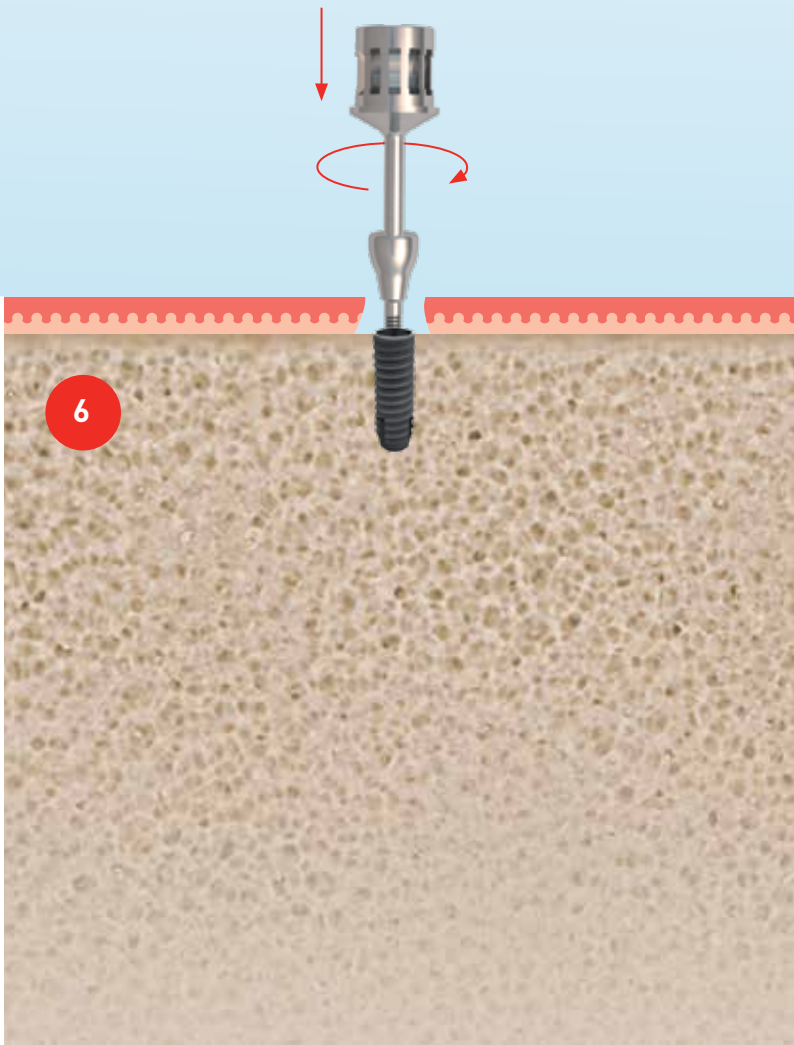
Removal of the closer screw

The closer screw must be removed with the hand screwdriver.



Inserting the gingiva former

In accordance with the prosthetic requirements the gingiva former that fits must be screwed in with the manual screwdriver.



» Option 2: **Transgingival** healing «

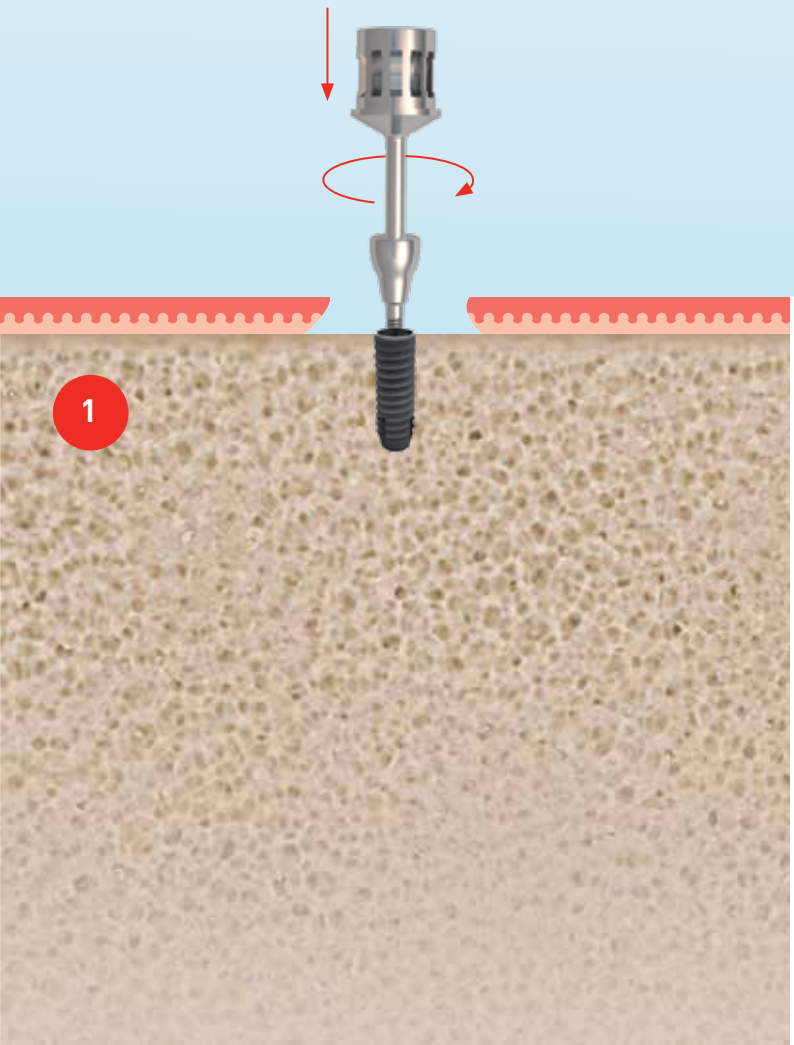
Gingiva former

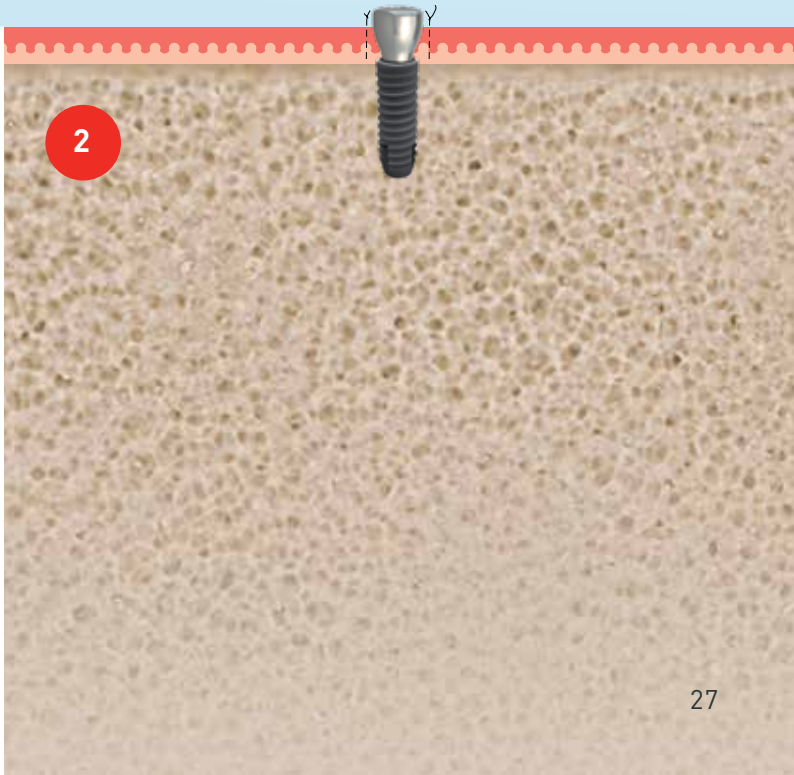
If the implant is intended for transgingival healing, the gingiva former must be inserted in accordance with the thickness of the soft tissue following the removal of the placement instrument. The diameter of the gingiva former must be selected in accordance with the prosthetic requirements.

PLEASE NOTE:
In the event of temporary restoration with full or partial dentures you must ensure that there is no contact between the gingiva former and the temporary restoration.

Wound closure

The wound edges adapted by sutures to the gingival tension free but salavia close by sutures.





» Option 3: Immediate restoration with a provisional «

Introduction

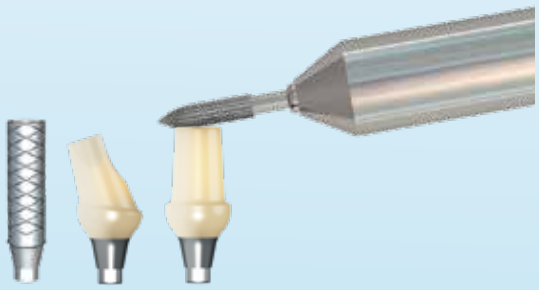
If the clinical conditions allow an immediate restoration, the patient could get immediately after insertion of the implants an implant-supported denture by using he temporary abutment. It must be pointed out, that the temporary has to stand out of occlusion so the implant can heal unloaded. It is the responsibility of the surgeon to inform the patient about the postoperative behavior of a load-free healing of the implant.

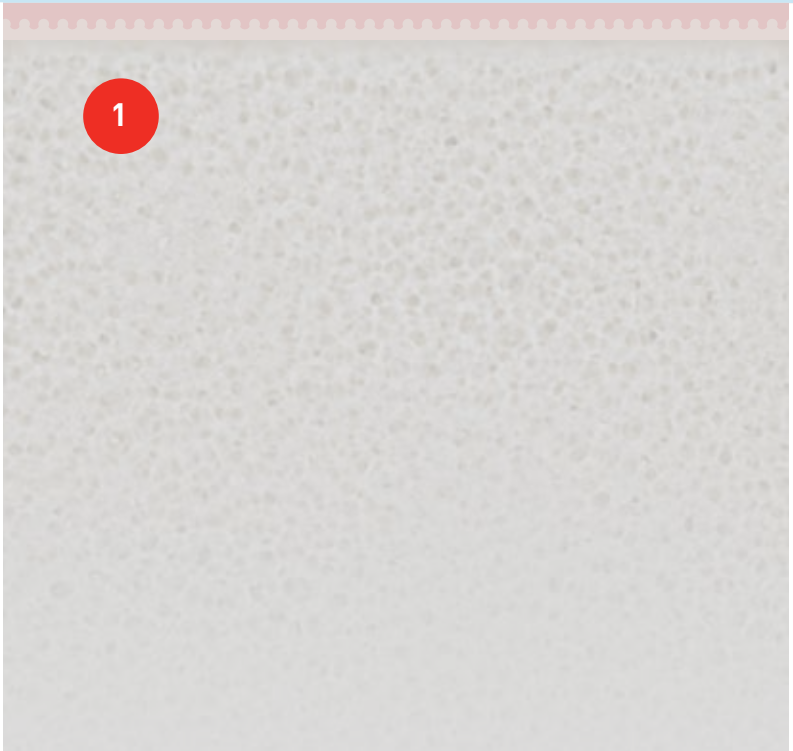
Production of a provisional

The temporary restoration is manufactured on the temporary abutment. The grinding operation should be performed outside of the mouth.

Temporary abutments with an emergence diameter of 5.5 mm, straight and angled, are available to ensure an easy individualisation.

Also available are temporary abutments, which are used as a metal basis for additive procedures.



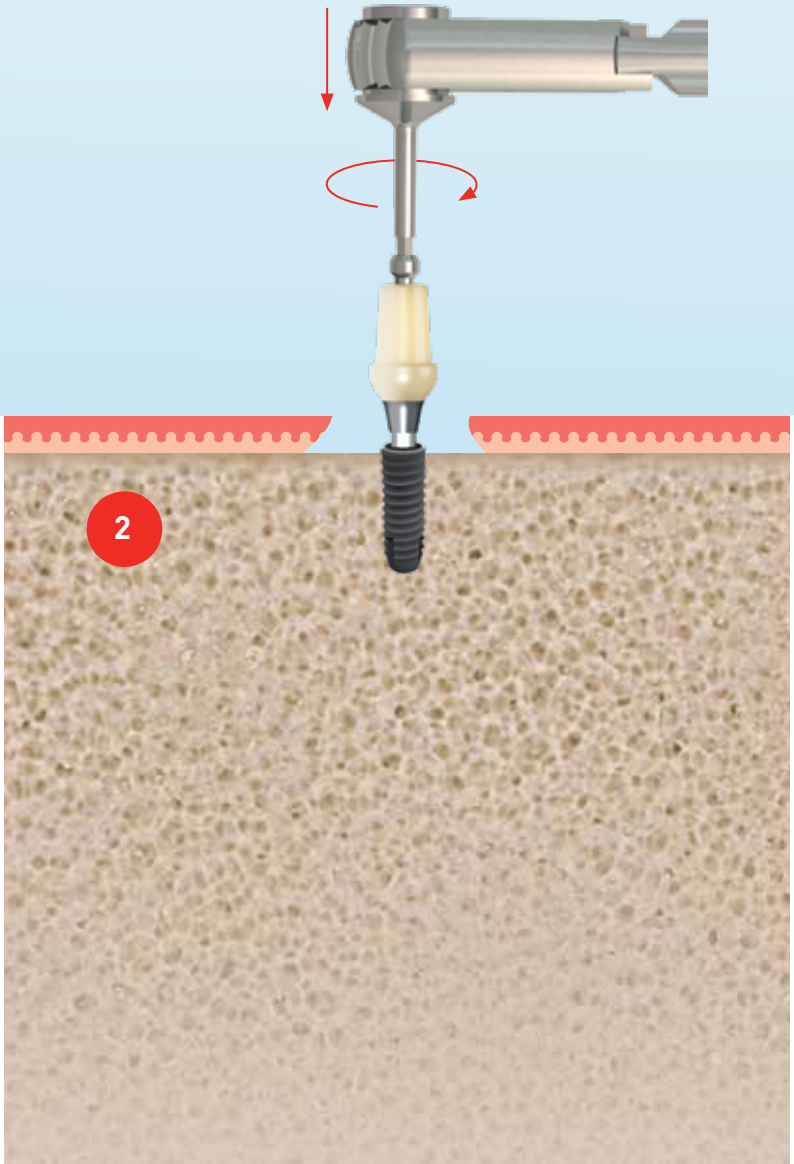


» Option 3: Immediate restoration with a provisional «

Insertion of a provisional

Before inserting the provisonal, the interface of the implant should be cleand by an air/water spray. Afterwards the abutment ist inserted by using the rachet or an angled handpiece with 25 Ncm.
For cemented restorations the use of provisional cementum is recommended. The gingiva has to be sutured tension free but salavia close around the abutment.

PLEASE NOTE:
Temporary restorations must be replaced after six months at the latest.



Loads

The precondition for immediate stressing is primary stability that is greater than or equal to 35 Ncm. The possibility of excess stress through the temporary restoration should be ruled out. No occlusion or articulation contacts may be present. An insertion torque of at least 35 Ncm during the initial healing phase reduces the risk of macromovements at the implant bone boundary, for instance through tongue or cheek pressure. Studies[1,2] demonstrate that micromovements up to a threshold value of approx. 150 µm are tolerated during the osseointegration of dental implants.

Successful osseointegration can also take place in the event of "non-functional immediate stress" subject to the precondition that this value is not exceeded and all the other requirements are fulfilled.

1 Brunski JB: Biomechanical factors affecting the bone-dental implant interface.
Clin Mater 1992; 10 (3): 153–201

2 Brunski JB: Avoid pitfalls overloading and micromotions of intraosseous implants.
Dent Implantol Update 1993;4 (10): 77–81

» Continuity of **Emergence Profile** «

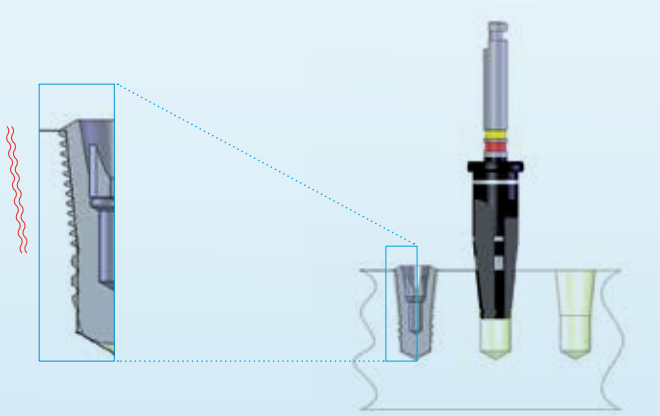
CONTINUITY OF EMERGENCE PROFILE				
	MICROCONE RI D 3.5 – 5.0			
IMPLANTS	GINGIVA FORMER			TEMPORARY
GINGIVA FORMER /PROVISIONAL				
	Ø 4.5 GH 1–6	Ø 5.5 GH 1–6	Ø 6.5 GH 1–6	Ø 5.5 GH 1–6
IMPLANT PICK-UP				
				
	Ø 4.5 GH 1–2	Ø 5.5 GH 1–2	Ø 6.5 GH 1–2	Ø 5.5 GH 1–2
				
	Ø 4.5 GH 3–6	Ø 5.5 GH 3–6	Ø 6.5 GH 3–6	Ø 5.5 GH 3–6
ABUTMENT				
	Ø 4.5 GH 1.5–5	Ø 5.5 GH 1.5–5	Ø 6.5 GH 1.5–5	Ø 5.5 GH 1.5–5

The form (emergence profile) of the gingiva former and the temporary abutment is exactly based on the form of the prosthetic abutments. You have the additional option of using the individual implant pick-ups to ensure the better transfer of the selected emergence profile onto the model, these are also exactly based on the emergence profile of the gingival formers and abutments.

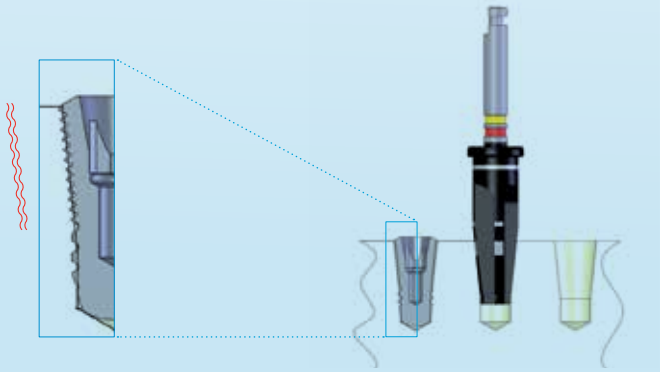
Conical enlarging bit

To be optionally inserted for a conical implant with a diameter of 4.5 / 3.5 mm

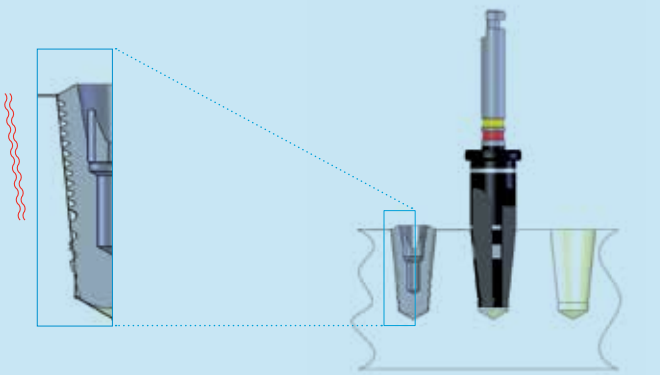
The penetration depth of the thread flanks of the conical implant section can be individually controlled using the optional conical enlarging bit, as in the following illustration. This can influence the primary stability of the implant depending on the quality of the bone.



1. The thread flanks of the conical implant section have the full penetration depth in the bone.



2. The thread flanks of the conical implant section have half the penetration depth in the bone.



3. The thread flanks of the conical implant section are disengaged.

Prosthetic dentistry

All prosthetic indications can be achieved with our highly hese abutments even more attractive innovative prosthetic dentistry range. The high precision conical implant abutment connection can be securely fixed in place and prevent micromovements between the implant and the abutment. A large number of abutments within our prosthetic range are available even for the most demanding cases. Whether it is a crown, bridge or a removable denture - the most diverse fittings provide you with the room for manoeuvre to securely realise all prosthetic indications.

01 CUSTOMISED IMPLANT PICK-UPS

Our system provides you with the option of transferring the emergence profile that has been ideally moulded by the gingiva former onto the model with the aid of the impression in a consistent manner for the final prosthetics.

The implant pick-ups that can be customized with one simple movement now make it possible for the person administering the treatment to precisely transfer the emergence profile according to the gingiva former into the laboratory. Abutments that are perfectly customised for this are available there.

02 TEMPORARY ABUTMENT ADDITIVE

- Ideal for easy, quick fabrication of temporary restorations
- Their extremely reasonable purchase price makes these abutments even more attractive

03 TEMPORARY ABUTMENT

- For the manufacture of provisional restorations
- Available in a straight or angled form
- Made from tooth-coloured acrylic sprayed onto a titanium core, it is therefore light and can be rapidly customised

04 STANDARD ABUTMENT

- For single crowns and bridges
- Available in a straight or angled form
- In different gingiva heights and abutment diameters
- Can be customised through grinding

05 SOLID ABUTMENT

- For the simple and optimised manufacture of double crowns
- For the fixing of dentures and removable bridges
- Equalisation of marked axial divergences through customised milling technology
- Available in a straight or angled form

06 CASTABLE GOLD ABUTMENT

- For difficult prosthetic situations which require customised solutions for crowns, bridges and dentures
- For the equalisation of axial divergences
- For free contouring in the event of a difficult implant position

07 CoCr ABUTMENT

- For difficult prosthetic situations which require customised solutions for crowns, bridges and dentures
- For non -ferrous metals with a liquidus temperature up to 1420 degrees celsius
- Precise cast-on section
- Less expensive than castable gold abutments

09 TITANIUM BASE ASC FLEX

The titanium base for angled screw channels has been especially developed for complex prosthetics. For unfavorably positioned implants or esthetically demanding cases, it is now possible to move the screw channel in an oral direction.

- in different gingiva heights
- spezielle Schraube und Schraubendreher mit Kugelhex für einfacheres Festschrauben bei schwierigen Verhältnissen

08 TITANIUM BASE 2ND GENERATION

- Two different chimney heights for the ideal static support of the zircon design
- Two gingiva heights, for the ideal design of the ceramic emergence profile
- Platform with reduced diameter with much more creative freedom for the zircon design
- Scanbodies manufactured from titanium grade 5 with much higher levels of precision and durability
- The surface of the scan bodies is coated with a special coating to ensure ideal recording in the scanner

11 MEDENTICAD ABUTMENT

CUSTOMISED SINGLE-PIECE ABUTMENTS:

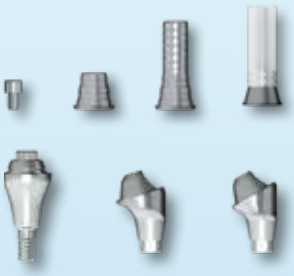
TITANIUM AND CoCr

- Custom-made in 48 hours
- You design it digitally or manually – we mill it for you
- Manufactured in a highly precise manner
- Less expensive than pre-fabricated abutments

12 LABORATORY IMPLANT CADCAM

- Highly precise, repositionable, radially and axially absolutely stable laboratory implants specially developed for printed models and intraoral scanners.
- The final position can be reliably checked and clearly defined by a highly perceptible >>CLICK<< which prevents the position being changed unintentionally due to vibration or contamination etc.
- This considerably increases the process reliability and avoids often very costly errors.
- The product range is supplemented by the appropriate placement tools for the respective laboratory implants.

13 MULTI-UNIT



The new Multi-unit abutment supports a variety of prosthetic restorations. Thus it is ideal for creating patient oriented individual hybrid restorations or being the base for an individualized restoration in the esthetic zone.

- in straight and angled configurations 17° und 30°
- in various gingiva heights
- great variety of prosthetic components
- sterile packaged

14 MEDENTIBASE

- Using the straight MedentiBASE abutment you have the option of fabricating conventional or CADCAM manufactured bar and bridge restorations in the upper and lower jaws. MedentiBASE abutments are available in 5 different gingival heights.
- Special adhesive bases enable the realization of stressfree patterns ⟶ PASSIVE-FIT
- Can be manufactured simply and precisely using casting and castable crown bases
- Superstructures that have been set once remain in the mouth, the laboratory works on analogous models
- Simplified supragingival impression and trial fitting

15 MEDENTILOC

- Further development of the abutment of the market leader by KAMEDENTiKA®
- Two-piece with separate screw for an ideal fit in the implant
- Excellent value for money

NOVALOC MATRIX SYSTEM

Novaloc - state-of-the-art technology.
The Novaloc matrix system with its newly developed technology is a prefabricated connector for retaining removable restorations on MedentiLOC and Novaloc abutments. The matrix housing is available in titanium and colour-neutral PEEK.

16 MEDENTiKA® NOVALOC MATRIX SYSTEM

ADLC SURFACE

- The surface quality of the ADLC coating (amorphous diamond-like carbon) sets new standards.
  Maximum hardness in combination with optimum sliding characteristics reduces abrasion on the abutment and damage to the retention insert.

SCREW HEAD OPENING

- The small screw head opening of the straight Novaloc abutment reduces food packing.Can be manufactured simply and precisely using cast-on and castable crown bases.

DIVERGENCE COMPENSATION

- In combination with the angled Novaloc abutments you can compensate for divergences of up to 70° between the implants.

17 MEDENTiKA® OPTILOC MATRIX SYSTEM

ADLC SURFACE

- The surface quality of the ADLC coating (amorphous diamond-like carbon) sets new standards.
  Maximum hardness in combination with optimum sliding characteristics reduces abrasion on the abutment and damage to the retention insert.

CLOSED SURFACE

- The Optiloc abutment does not require a screw opening thanks to the cleverly designed placement instrument. This completely prevents accumulation of food particles in this area.

MINIMUM SIZE

- Slimmer than the market leader, more retentive than ball attachments. Optimum dimensions now also allow the matrix to be placed where only minimum space is available.

18 PREFACE

TITANIUM AND CoCr

Highly precise PreFace abutments as milling blanks. While the diameters 11.5 and 16 millimetres provide the necessary variability, a uniform length guarantees the exact zero point definition.

We always supply PreFace abutments with the abutment screw included. To ensure the greatest possible material variability, the PreFace abutments are available in titanium Grade 5 CF and CrCo.

19 PREFACE ABUTMENT HOLDER

Significantly more precise fabrication instead of using conventional holders – due to the innovative, onepiece design. Short production times – thanks to simultaneous processing of six blanks in one working cycle. Particularly time-saving procedure – by clamping the abutment using only one screw in the holder. Maximum protection for the precisely designed implant interface – by clamping the abutment only on the face side.

Very clear, non-error-prone production – due to a minimum number of components. Extremely favourable investment – because of the simple design of the PreFace abutment holder and the avoidance of expensive expendable parts.

PreFace abutment holders are available for:

VHF®
imes-icore®
Datron D5®
Wissner Gamma 202®
Röders RXD®
Dental Concept DC1/DC5®
MB Maschinen Cobra Mill®
Primacon PFM 24 mediMill®
R+K
Sirona InLab MC X5

PreFace abutment holders must be ordered directly from the machine manufacturer.

international patent pending

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Graphic Design Studio
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As at:: December 2019

We are certified:
DIN EN ISO 13485
Medical Devices Directive 93/42/EEC,
Annex II

CE 0483

You can find the Instructions for use and warranty conditions on the website
www.medentika.com.
More information on the warranty can also be requested directly from the manufacturer.

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» **Passion** for precision «