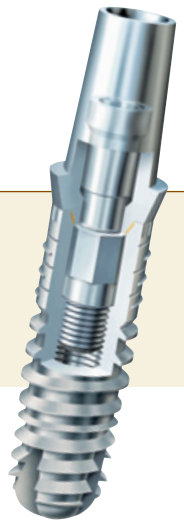
Implantological success via prosthetics:

Trias® Implant system



Implant surgery – Instructions

servo-dental

Contents

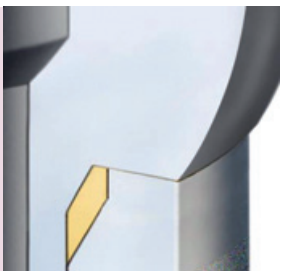
Overview of the possiblities of prosthetic treatment

with the *Trias*® Implant system

1. Introduction

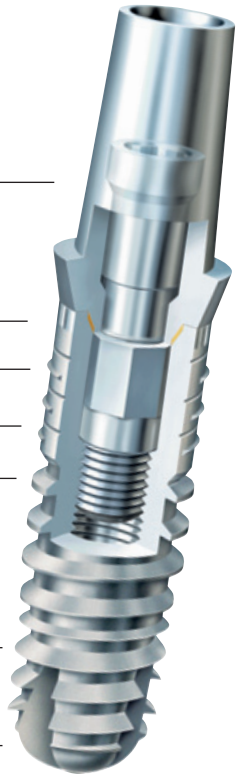
Servo-Dental has from the very beginning held the view that high-quality implantology is successful only with custom-made prosthetics tailored to the individual patient. The ***Trias®*** line of products thus provides the fitting treatment for each individual case. The implementation of reliable modern technologies and designs in one implant and the ease of handling of the ***Trias®*** implant system have been a matter of course but also a fundamental prerequisite.

In addition to various subjects on which science and industry are at present working, it was especially the microgap between implant and abutment which was a challenge to the development capacities. After the causes of the crestal bone loss had been investigated in various scientific studies, it was imperative to account for the novel findings from the point of view of technology and design.



The ***Trias®*** implant system with the patent-protected fine gold seal between implant and abutment is the result of the work carried out by the V.I.P.-Prothetik network (procedure, innovations and products for implant and endoprothetics) from Thuringia consisting of nine innovative companies and four research centres from the field of medical technology.

- **novel quick connection between implant and abutment screw**
- **polished edge**
- **extension lamellae:** improved primary stability, reduction of heat generation during insertion
- **circular grooves:** optimized osseointegration
- **floating transition between compression and tapping thread**
- **apical rounding**



For the external design, the thread structure was further optimized. The extension lamellae in the shoulder area ensure excellent primary stability through reduced heat generation during insertion. Due to the increase in surface, the circumferential grooves improve osseointegration. Compression and tapping thread in the apical area merge with one another harmoniously. The standardized internal design ensures exchangeability of the prosthetic posts so that platform switching is possible, if desired.

1. Introduction

The ***Trias®*** implants are available in the following diameters and lengths:

	diameter				
length	3.3 mm	3.8 mm	4.4 mm	5.0 mm	6.5 mm
8 mm			x	x	x
10 mm	x	x	x	x	x
12 mm	x	x	x	x	x
14 mm	x	x	x	x	
16 mm	x	x	x		

Furthermore, the ***Trias®*** implant system offers a comprehensive product portfolio. With it, a suitable restoration will be possible for every individual patient situation. Due to the virtually unlimited offer of diverse construction elements such as locks, abutment elements, retentive anchors, magnetic keepers, bars, friction elements, prefabricated telescopic crowns, joints and attachments made of different alloys and polymer, prosthetic planning is enabled for every individual situation.

2. Advanced Implantology Training Programme

It is the aim of Servo-Dental not only to offer high-class implant systems and a broad range of solutions for prosthetic treatment for dentists having specialized in implantology but also to provide possibilities of qualification and exchange of experience. For this purpose, together with experienced practitioners, a comprehensive advanced training programme was developed. The individual areas were exactly matched to the training requirements of dentists, surgeons and assistants.

The course system is organized in levels. It acquaints beginners with the fundamentals of implantology and accompanies them in becoming experts in implantology. Persons interested can decide themselves which course level they want to begin with and which level they want to reach. For dentists who newly tackle this field, it is advisable to start with a free basic course which gives an overview of the forty years of development and the state of the art of implantology. The uppermost level, and thus the final point, of the course programme is the first practical implantation which is supervised by an experienced surgeon. For surgeons, on the basis of the theoretical fundamentals of the open or closed sine lift, step-by-step procedures are demonstrated and practically applied within the scope of a surgery. Assistants learn both the universal and the system-specific procedure for the preparation and carrying-out of an implantation as well as the billing of implantological services. Individual habits and questions of practices are naturally taken into account in all courses.

3. Indication

The **Trias®** implant can be used both for single-tooth and for multi-tooth replacement in any position justified in terms of anatomy and prosthetics. Besides the two-phase healing (subgingival), single-phase healing (transgingival) is possible using a gingiva former. Circular bone material of at least 1 mm is recommended. When used for reimplantation, the alveolar diameter should be completely filled out or expanded to achieve high primary stability.

Our products are certified in accordance with Annex II of Directive 93/42/EEC, DIN EN ISO 13485:2003.

The application and safety information for the **Trias®** implant system in this brochure and in the Instructions for Use is to be complied with. The application of the implant is reserved to dentists having knowledge of the system which can be acquired in advanced training events.

Servo-Dental reserves the right to modify its products to allow for innovative developments.

4. Equipment

The surgical tray is a standardized box whose instrument tray is specifically manufactured for the ***Trias®*** implant system. Thanks to its outside dimensions, the standardized box can be sterilized in commercial sterilizers. Furthermore, due to a special seal and the incorporated filter system, it offers the advantage of sterile storage of the instruments without additional sterilization jacket. The tray for the instruments whose dimensions are standardized also fits into other surgical trays.

The instrument tray is made of high-grade stainless steel. The instruments are arranged according to the operating procedure and follow the order marked by arrows. The contents of the surgical tray can be adapted to the user's wishes.

1. Surgical tray

To spare the instruments which are not used for the scheduled surgery, it is recommended to equip the tray only with the instruments needed. For this, an additional small surgical tray is available.

4. Equipment

2. round drill
and/or cortical drill

3. twist drill
2.0 mm dia.

4. depth gauge

5. 2-caliber drill
3.0 mm dia.

6. parallelization tool

7. final drill – marked in green
3.3 mm dia.,
lengths: 10 mm, 12 mm, 14 mm, 16 mm

8. final drill – marked in yellow
3.8 mm dia.,
lengths: 10 mm, 12 mm, 14 mm, 16 mm

9. final drill – double marked in red
4.4 mm dia.,
lengths: 8 mm, 10 mm, 12 mm, 14 mm, 16 mm

10. final drill – marked in blue
5.0 mm dia.,
lengths: 8 mm, 10 mm, 12 mm, 14 mm

11. preparation drill for 6.5 mm dia. – marked in white 6.0 mm dia., lengths: 8 mm, 10 mm, 12 mm (no standard item)	
12. final drill – double marked in white 6.5 mm dia., lengths: 8 mm, 10 mm, 12 mm (no standard item)	
13. universal insertion tool, long	
14. universal insertion tool, short	
15. universal insertion tool, mechanical	
16. drill extension	
17. drill key, manual	
18. torque ratchet	
19. lab dish	

4. Equipment

Fig. 1

Using a colour coding system all drills intended for one and the same diameter can be identified both by the silicon holder and by a colour ring on the drill itself (Fig. 1). As a result, confounding of the drills is largely precluded.

The slots marked with white silicon holders are reserved for the pre-drills and the final drills for the implant diameter of 6.5 mm. As their use is restricted to a relatively limited indication, equipping of the instrument tray with these drills as a standard was dispensed with. Subsequent integration is possible at any time.

The grey silicon holders are equipped with instruments which are used irrespective of diameter and length of the implant to be inserted. The use of these surgical instruments is described in chapter 5.4 (round drill, twist drill, depth gauge, 2-caliber drill and parallelization tools).

The universal insertion tools with short or long shaft and the mechanical insertion tool can be used not only for implant insertion but also for other prosthetic work. This is possible because the shaft is provided with an octagon for the implants and with a hexagon for the prosthetic screw (Fig. 2).

To extend the drill, the standard variant (lean form, without trigger safety switch) or the variant with trigger safety switch are optionally available.

In addition, the scope of supply comprises a torque ratchet whose use is described in chapter 6.

Fig. 2

5. Example of Clinical Procedure

5.1. Preparation and Diagnostics

Implantation has developed into a standard dental therapy. A substantial part of the success achieved is due to compliance with the indications and the pre-surgery preparation which also covers the preparation of the patient.

Only an informed patient can actively help ensure the long-term success of the implant. After provision and evaluation of all diagnostic documents, the course of the therapy can be definitely fixed. The course of the therapy should be discussed with the patient in detail.

The instruction of the patient comprises in particular:

> explanation of the intervention, including discussion of general and patient-specific risks

> presentation and consideration of alternative concepts

> information about costs as against the alternative treatment, after instruction of the patient

> written consent to the surgery after instruction of the patient

Before the treatment is started, the patient has to thoroughly clean his teeth and to rinse the mouth for about half a minute with a disinfecting solution. Then local anesthesia is carried out (often peripheral infiltration anesthesia which is also sufficient for the mandibular molar area).

The perioral area, including nose and chin, are to be disinfected. The facial area is covered with a sterile slotted cloth and the chest area with a sterile chest cloth. The qualification of the surgery personnel is as necessary as the preparation of the area of intervention to protect them from cross infections and implants from contamination.

Besides the general and specific anamnesis, the diagnostics comprises the statement of the clinical findings. Defects that need therapy are remedied before the implantation.

The clinical examination serves to determine:

> the form and width of the alveolar process

> the width of the fixed gingiva

> the position of the neighbouring structures

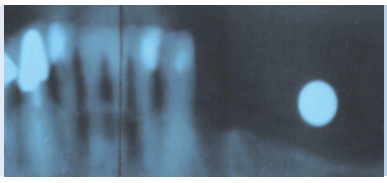
5. Example of Clinical Procedure

5.2. Planning and Selection of Implant

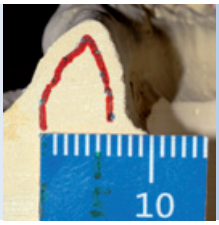
The implantation should always be carried out in the position which is most favourable from the point of view of prosthetics taking account of the anatomic and bone-physiological conditions. In the ideal case, a multilateral bone wall of at least 1.0 mm surrounds the implant in an area in which the gingiva cannot be displaced.

There are various options for the selection of the implant, each of them being based on X-ray diagnostics. This may be carried out by two- or three-dimensional CT or MRT methods.

For the esthetic and functional success of the implantation, the optimal positioning of the implants should be identified in cooperation with the dental technician.



The X-ray sphere in the template / thermo-formed splint shows not only the position of the implant but also the gingival height to be expected (hint for calculation: scale of radiograph = dia. of sphere / dia. of original sphere).



The measurement results from the radiograph (bone height = bone height on radiograph / scale of radiograph) and the results additionally obtained for the mucosal thickness furnish an almost three-dimensional impression of the bone profile that can be transferred to the model.

With the planning tool (Fig. 3, see also following page) it is now possible to select the respective implant true to scale. Please note: Due to the design, there is a difference between the possible insertion depth of the implant and the drilled cavity of 0.3 mm (Fig. 4).

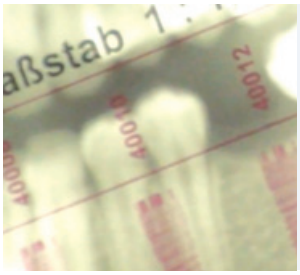


Fig. 3

In the case of well-founded indications, the advantages of three-dimensional diagnostics should always be set against the risks.

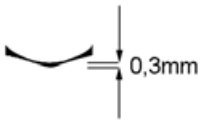
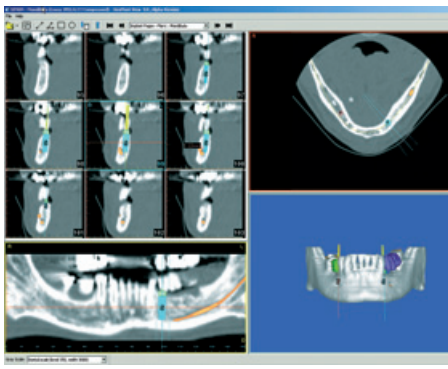


Fig. 4

These risks are related to the exposure to radiation which at present is of the order of approx. 2 to 4 mSv and thus approx. 100 to 1000 times that for a conventional radiograph.



The manufacture of the drilling templates is, however, based on the analysis of the bone structures in which experience plays an important part. Analysis errors (position of the mandibular nerve, bone boundaries, etc.) are transferred to the template to be fabricated.

The advantage of three-dimensional template navigation consists in the virtual preliminary planning and the ascertainment of the bone situation, e.g. width of residual ridge, cavities and potential resorption zones. As it is possible to get the jaw model, including the desired drilling templates, before the surgery, it is possible to better plan the surgery and to fabricate temporary dentures beforehand.
Considering the investment involved and the higher costs for the patient (CT examination, drilling templates, fee for attending dentist), the “conventional” diagnostics by OPG is an option.

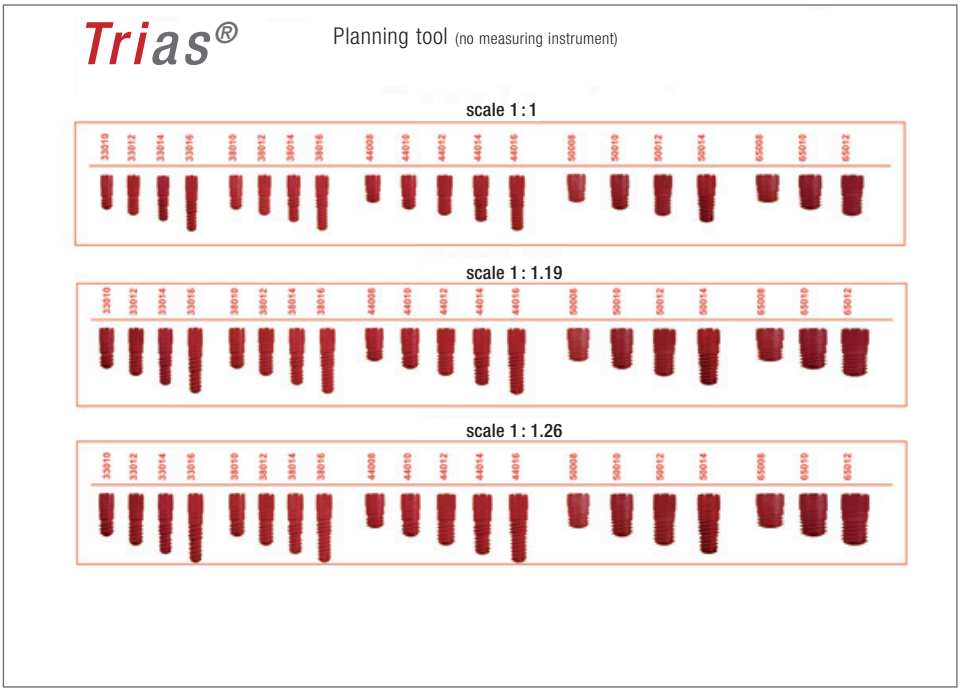
5. Example of Clinical Procedure

Planning safety can be ensured by

> fabricating a situation model with diagnostic wax-up to simulate the envisaged implant treatment

> conceiving a planning tool to transfer the implant position and, if possible, for use as a drilling tool. It serves, however, only as guidance. For precise measurements tomograms or computer tomographies are to be made.

Fig. 5



5.3. Ordering of Materials

To be on the safe side, it is advisable to order a greater/smaller diameter or a greater/smaller length of an implant, as this offers the possibility of inserting an implant other than the original one without delay. **Each individual delivery of an implant comprises, besides the implant itself, the healing screw to close the implant and a universal insertion tool:**

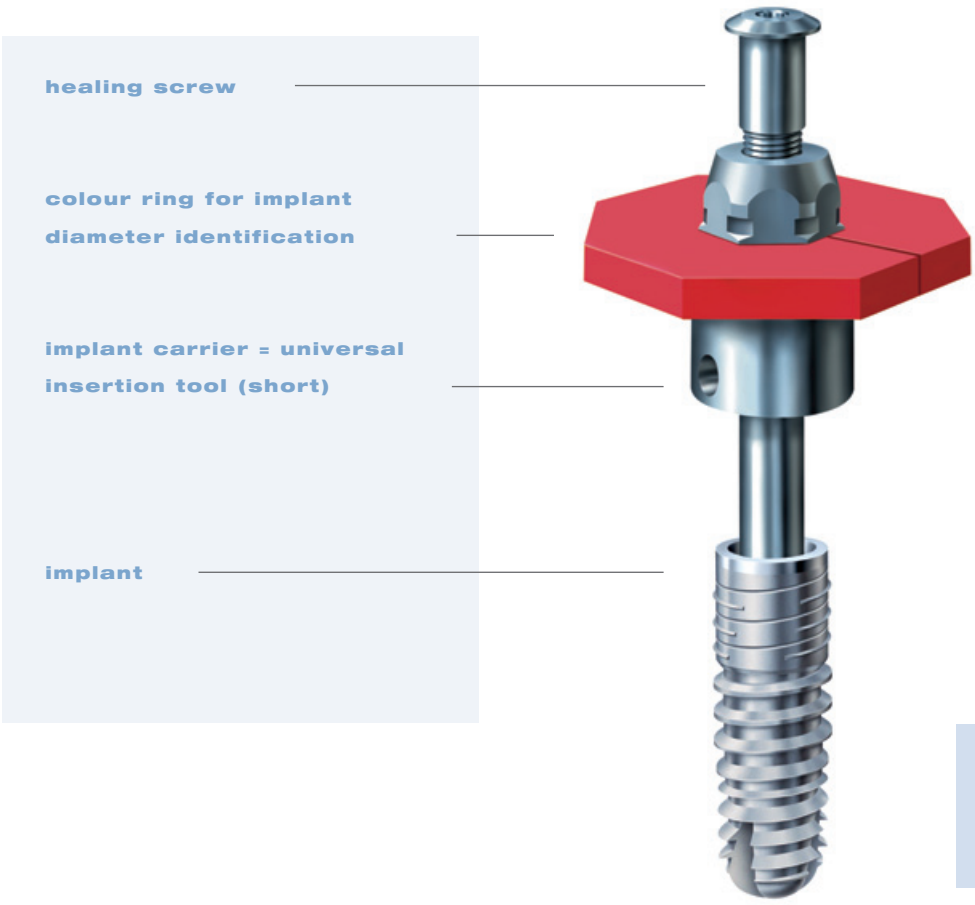


Fig. 6
Scope of supply for implant

5. Example of Clinical Procedure

Four your safety – the colour coding system

From the final drills to the implants to the abutments, all parts are assigned to a diameter using a colour coding system:

	green	**3.3 mm dia.**
	yellow	**3.8 mm dia.**
	red	**4.4 mm dia.**
	blue	**5.0 mm dia.**
	white	**6.5 mm dia. (incl. preparation drill, 6.0 mm dia.)**

The abutments can also be set on smaller or greater implant diameters (platform switching), as all implants are of the same internal design (cone, octa tube and thread).

The implant carrier is at the same time a universal insertion tool. This instrument has both an octagon for implant insertion and a hexagon to fix all prosthetic abutments.

5.4. Surgical procedure

5.4.1. Drilling template

A drilling template can be advantageous for the prosthetically favourable positioning of the implants. The use of drilling templates fabricated on the basis of CT pictures has already been described.

Fig. 7
Lab fabricated drilling template

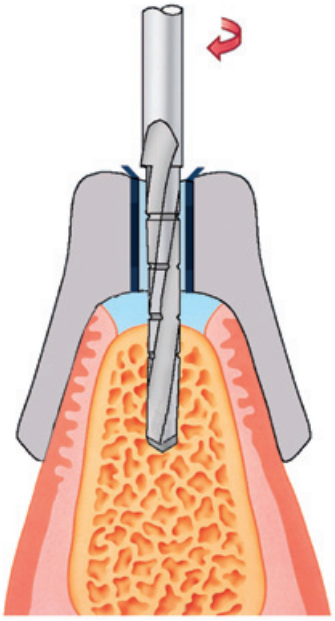


Fig. 8
Representation of pilot drill hole using a drilling template

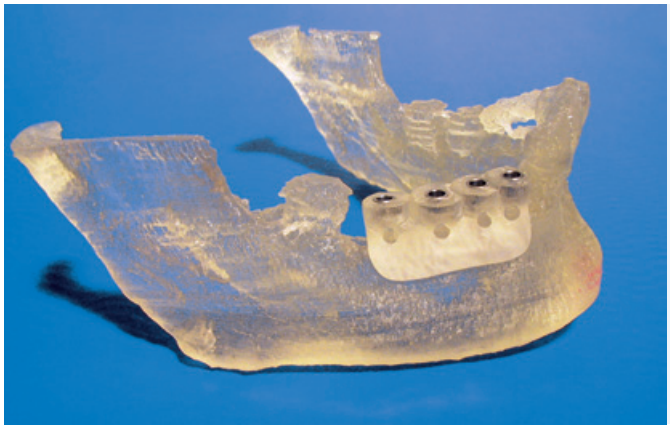
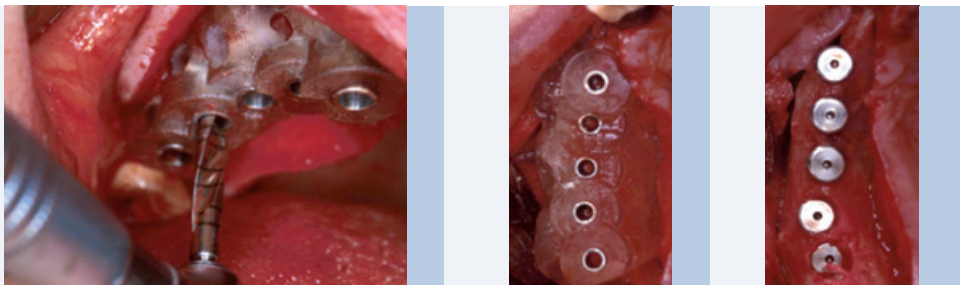


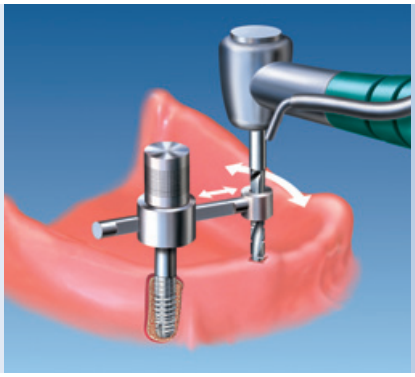
Fig. 9
Drilling template (SurgiGuide) of the SimPlant® platform, Materialise GmbH

5. Example of Clinical Procedure

Fig. 10
Drilling template in situ



The fabrication of the drilling template in the dental laboratory is carried out on the basis of an impression and the pertaining radiographs. For the *Trias®* implant system the associated sleeves are available which consist of a sleeve-in-sleeve system. When the template is fabricated with a sleeve 2.0 mm in internal diameter, a fitting sleeve with an internal diameter of 2.0 mm can be inserted:



One possibility of influencing the direction of insertion in a defined way when several implants are inserted is the use of the parallel implant. The resulting prosthetic direction of insertion may be limited for certain treatments (bridge or bar, conical or telescopic crown).

Using the knurled head screw, the parallel implant is screwed into the implant inserted first. The freely movable arm serves to make the next pilot drill hole. The mobility is limited by the length of the arm and its axial rotation. With various arms an axial rotation from 0° to 6° and up to 10° is possible.

5.4.2. Incision

In dependence on the number of implants and on anatomic and esthetic aspects, the gingiva is opened using a scalpel or laser and the location for the implant is freed by folding the soft tissue cover outwards (the implant should, if possible, be placed at the highest point of the bone). Alternatively, opening can be carried out using a mucosa punch (optionally available). For this procedure the exact bone dimensions must, however, be known.

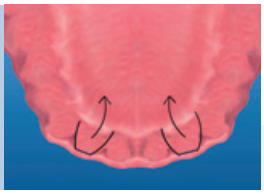


Fig. 11

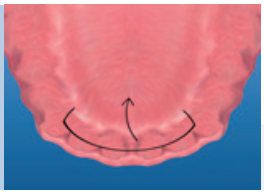


Fig. 12

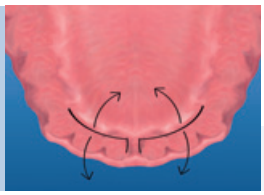


Fig. 13

Opening by means of a scalpel offers a good view of the place of implantation and the incision can be expanded, if necessary. Some examples:

Mandible, without teeth – implants interforaminal

Fig. 11: Two implants mandible

Fig. 12: Four to six implants/vestibuloplasty

Fig. 13: Four to six implants, transgingival or immediate loading / cone

5. Example of Clinical Procedure

Fig. 14

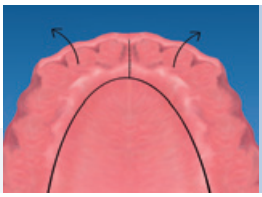


Fig. 15

Fig. 16

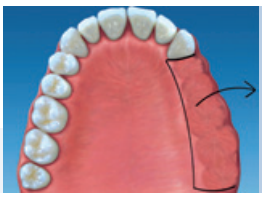


Fig. 17

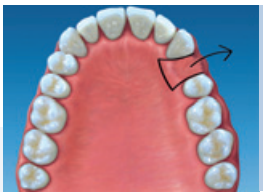


Fig. 18

Maxilla

Fig. 14: Single-tooth implants

Fig. 15: Several implants

Fig. 16: Several implants / alternating incision for vestibuloplasty

Fig. 17: Free-end gap, palatally displaced incision

Fig. 18: Single-tooth implantation, parapapillar incision

The drills of the ***Trias®*** implant system need external cooling. It takes place automatically via a separate supply on the surgery hand piece or is ensured by a surgery assistant. The risk of overheating of the bone by clogging of the cooling hole as may occur when internally cooled drills are used is thus avoided.

5.4.3. Preparation of Implant Bed

The descriptions of the following drilling steps give recommendations which need to be adapted to the surgery conditions depending on the bone mineral density and the bone quality.

A. Marking with the round or cortical drill
at the prosthetically optimal point. If the ridge is tapered, the place of insertion which at least is of the order of the implant diameter should be flattened beforehand using the round drill.
Recommended speed: 1,400 rpm. (Figs. 19 and 20)

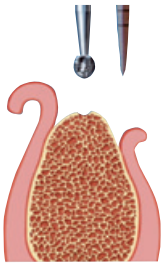


Fig. 19

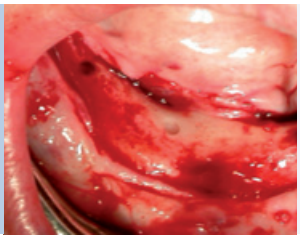


Fig. 20

B. Pilot drilling with the twist drill
The twist drill has a diameter of 2.0 mm and is provided with depth marks corresponding to the implant lengths: 8, 10, 12, 14, 16 mm. The depth of the pilot drill hole depends on the anatomic situation and the implant length selected. For each implant length, a depth stop is available which is slipped over the twist drill to define the drilling depth.
Recommended speed: 800 rpm. (Figs. 21 and 22)

Fig. 21

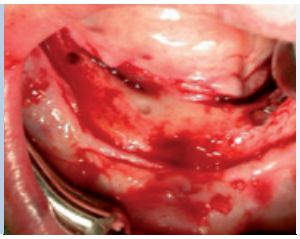
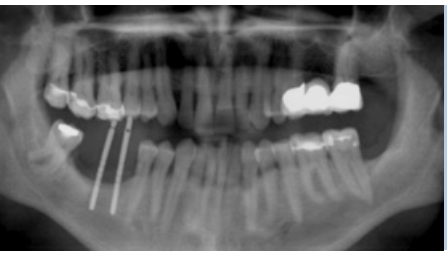


Fig. 22

5. Example of Clinical Procedure



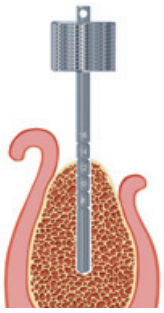


Fig. 23

C. Depth measurement

The depth measurement can be carried out using the depth gauge or the parallelization tools. Both instruments have a depth graduation beginning with 8 mm and extending in 2 mm spacings up to 16 mm. If parallelization tools are inserted, the pilot drilling can be checked against a radiograph and changes can be made, e.g. the pilot drill hole can be deepened or a final drill shorter than originally provided can be used (Fig. 23).

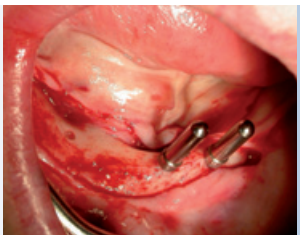


Fig. 24

When several implants are inserted, the parallelization tools can substantially support the parallelism of the pilot drilling. To achieve this, a parallelization tool is positioned in the completed pilot drill hole. Then the alignment of the next pilot drilling can be made visually (Fig. 24).

Fig. 25

D. Extension with the 2-caliber drill

The 2-caliber drill is a special cutter which follows the specified pilot drilling with its round guiding nose (2.0 mm dia.) and increases the drilling diameter to 3.0 mm. The depth specified for the pilot drilling is not changed.
Recommended speed: 800 rpm. (Figs. 25 and 26)

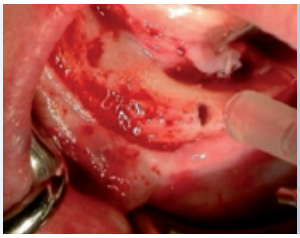


Fig. 26

E. Final drilling, 3.3 mm dia.

All final drills are provided with a depth stop. The selection of the right length must be borne in mind. For the 3.3 mm diameter, only one final drilling is necessary.

Recommended speed: max. 600 rpm. (Fig. 27)

Fig. 27

Fig. 28

F. Final drilling > 3.3 mm dia.

For a final diameter of, for example, 3.8 mm, first the final drill of 3.3 mm dia. (green colour ring) and then the final drill of 3.8 mm dia. (yellow ring) are used.

Recommended speed: max. 500 rpm. (Figs. 27, 28 and 29)

For implant diameters greater than 3.8 mm, final drills 4.4 mm, 5.0 mm and 6.5 mm in diameter are available. Here, as a principle, the drills with the smaller diameters are used one after another in ascending order as pre-drills. For the implant 6.5 mm in diameter, the separate 6.0 mm pre-drill is used as an intermediate step.

Recommended speed: max. 400 rpm.

Fig. 29

Attention:

Careful preparation of the implant bed with intensive but pressureless cooling is to be ensured. This applies to the relatively large diameters of 5.00 mm and 6.00 / 6.5 mm in particular.

The four- to six-edged final drills are very well suited to obtain autologous bone material (Fig. 30). For purposes of augmentation, this material can be collected in the lab dish.

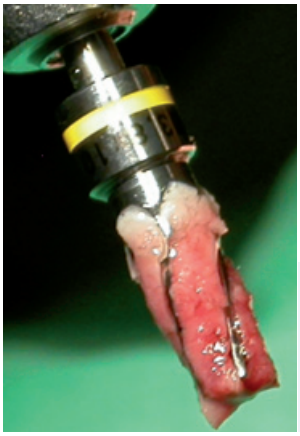


Fig. 30

5. Example of Clinical Procedure

5.4.4. Insertion

Before breaking the seal, the diameters (colour coding) and the length of the implant must be checked. The ***Trias®*** implant is removed from the packaging and inserted into the implant bed after having briefly been wetted with autologous blood. The ***Trias®*** implant is arranged on an implant carrier (see page 19) which is identical with the universal insertion tool.

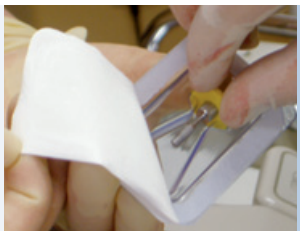


Fig. 33

The implant needs not be transferred but can be set into the prepared implant bed and then be gently inserted direct from the packaging (Fig. 33).

By slowly inserting the implant (approx. 15 rpm, torque max. 60 Ncm), the self-tapping capacity is ensured while the friction increases sensibly. After one or two revolutions the plastic ring can be removed. Then the insertion can take place flush with the cortical bone (Fig. 34). Make sure that no soft tissue particles get into the implant bed.

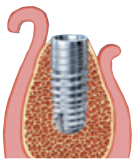


Fig. 34

The final position of the implant should be reached by means of a torque ratchet (see also chapter 6). At a recommended torque of 35 to 45 Ncm, this allows an estimate of the actually reached torque to be made (Fig. 35).

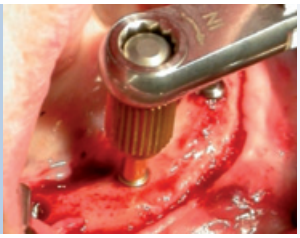


Fig. 35

> It is pointed out that immediate loading is not recommended for a torque < 35 Ncm

> If 45 Ncm is exceeded, the protocol for dense bones is to be complied with.

> As an alternative to manual insertion, the ***Trias®*** implants can also be inserted using the mechanical insertion tool, the recommended speed being 20 rpm.

> The implant position can be checked using the implant post.

5. Example of Clinical Procedure

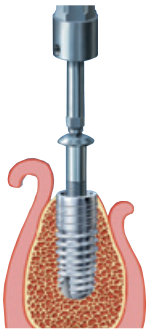


Fig. 36

5.4.5. Implant Closure and Suture

By means of the healing screw forming part of the implant carrier the implant is closed. The torque ratchet is not used here (Fig. 36).

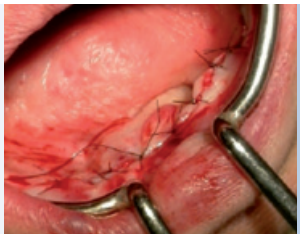


Fig. 37

Now the wound is closed with a head or mattress suture depending on the esthetical (e.g. papilla form) or anatomic requirements (Fig. 37). Before closure, defects in the jaw or extraction wounds can be augmented.

Fig. 38

In case a temporary denture is necessary in the front teeth area, a temporary element with different gingival heights is available. This element which is made of plastics can be provided with a temporary crown which is ground out of contact and has a purely esthetic function (Fig. 38). Further details are available from product sheets offered for the respective system elements of Servo-Dental.

General information:
The patient must be instructed expressly and in detail about the necessary oral hygienic measures and integrated into a continuous recall system.

6. Application of torque ratchet

The torque ratchet contained in the instrument tray which has been specifically fabricated for the ***Trias®*** implant system can be used

> for manual implant bed preparation (using the manual drill key)

> to fix the implants in their final position

> to insert the abutments as well as the central screw and the bar screw.

The Instructions for Use accompanying each ratchet must be observed.

Important:
The torque ratchet is to be disassembled and cleaned prior to initial and after each use.

Fig. 39

The torque ratchet (Fig. 39) consists of the ratchet head, the ratchet handle and the setscrew at the end of the ratchet handle. By axially rotating the ratchet, “insertion” (ON) or “removal” (OFF) can be selected.

As the ratchet wheel is exchangeable, the torque ratchet can also be used for tools of other implant manufacturers.

6. Application of torque ratchet

Fig. 40

The torque range of the ratchet is 10 to 40 Ncm.

The torque is set by rotating the setscrew and thus displacing the marking (Figs. 40/41). When doing so, the scale disappears into the ratchet handle on whose edge it indicates the torque setting. When the set torque is reached, the ratchet is angled in the articulation between handle and head (Fig. 41):

Fig. 41

7. Re-opening and Prosthetic Treatment

After the implant has healed – preferably over three months for the mandible and six months for the maxilla –, the final treatment can take place. In the case of early loading, the implants are to be blocked by a bar connection until the final treatment is carried out. It is absolutely necessary to comply with the protocol for early loading.

An overview of prosthetic abutments can be found in the annex to these Instructions and of their application in product sheets offered for the respective system elements of Servo-Dental.

After re-opening using a scalpel or mucosa punch, the healing screw of the implant is removed. The use of lasers is possible if the titanium parts are covered beforehand, e.g. by using the healing screw made of plastics.

Before impressions are taken, the gingiva is formed over ten to 14 days using gingiva formers at different sulcus heights.

Impression posts are used to take the closed- or open-tray impression. While for the closed-tray impression the central screw is used, which is suitable for all abutments, a special impression screw is available for the open-tray method.

Information:
For prosthetic treatment after a temporary treatment and for abutments which are placed by the chair-side technique, it is not necessary to use sulcus formers (Trias®ball, -magnetic, -cone, -tsa, -locator®).

7. Re-opening and Prosthetic Treatment

It is recommended to document the patient's situation before and after the surgery by radiographs.

For the final treatment, a great selection of abutments is available. An overview is given at the back of these instructions.

Trias®solo:	various individual posts for fixed or conditionally removable prostheses
Trias®ball:	ball attachment system
Trias®magnetic:	magnetic attachment system
Trias®bar:	various components for bar solutions
Trias®cone:	system for double-crown prostheses, also for diverging implants
Trias®tsa:	titanium shock absorber: prosthetics with special abutments with absorber element
Trias®locator®:	cylindrical attachment with retention

For detailed information material for these and many other prosthetic components (bolts, articulations, attachments etc.), please contact Servo-Dental.

Innovative products made in Germany ensure systemic solutions for the present and for the future. The basis for this is the combination of more than 30 years of competence in the fields of production, service and distribution:

Implantological success via prosthetics!

Besides the ***Trias®*** series of products, we offer you a great number of other products for prosthetics and implantology:

- NPM dental alloys
- magnetic systems
- attachments
- ball elements
- friction elements for telescope technology
- bolts
- articulations/joints
- anchoring systems
- cast systems

We are prepared to help you – from the planning to the design or in case of repairs – to find the suitable solution for each individual patient and accompany you with competent advice, rapid availability of services and products of highest quality.

- Acquaint yourself with our range of products, courses and exhibitions under **www.servo-dental.de**.
- Contact our customer consultants by phone under **+49 (0) 23 31 - 95 91-0**.

Possibilities of Prosthetic Treatment

Preparation

> Gingiva forming


gingiva former


esthetic former

> Moulding

closed-tray impression


standard post + impression cap + central screw


impression post + central screw

open-tray impression


impression post + impression screw

> Model fabrication


central screw


handle for abutment


model analog

Conditionally removable/ fixed prosthesis

> Trias®solo


central screw
(identical for all Trias® abutments)


titanium post


high-melting alloy post


plastic sleeves (optional for high-melting alloy + titanium posts)


titanium abutment 0° standard profiles


titanium abutment 0° emergence profiles


titanium abutment 15° emergence profiles


titanium abutment 25° emergence profiles


standard post


titanium conical abutment

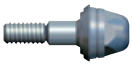

Ti post for ZrO_2 abutments + ZrO_2 ball abutment


gold sealing ring with positioning pin
(optional for all Trias®solo abutments)

> especially for bridge prosthetics


bar post (for diverging implants)


conical post


tsa® post (H1)

Removable prosthesis

> Trias®cone


cone post


cone cap, frictive


cone cap, retentive


conical threaded sleeve

> Trias®ball


Trias®ball post, sphere 1.8 mm dia.


Trias®ball matrix for sphere 1.8 mm dia.


Trias®ball housing for 1.8 mm matrix


O-ring matrices or metal matrices available as alternatives


Trias®ball post, sphere 2.5 mm dia.


Trias®ball matrix for sphere 2.5 mm dia.


Trias®ball housing for 2.5 mm matrix


Alternative: flex spherical post 7°, ball 2.5 mm dia.

> Trias®bar

Bar prosthetics, cast


bar post, plastics


dolder bar, plastics (drop shaped) (l = 5 cm)


round bar, plastics (l = 5 cm)


parallel bar, plastics (l = 5 cm)

Bar prosthetics laser or tray technique


bar post titanium / high-melting alloy

round bar, titanium (l = 5 cm)

round bar, precious metal (l = 5 cm)

dolder bar, precious metal (drop shaped) (l = 5 cm)

Matrices for bar prosthetics

Universal rider, orange, resilient, internal dia. 1.9 mm

Universal rider, yellow, rigid, internal dia. 1.8 mm

Universal rider, black, internal dia. 1.6 mm

Universal rider, red, internal dia. 1.5 mm

Universal rider, white, internal dia. 1.4 mm

outer sleeve, stainless steel, for Universal rider

precious metal matrix (milled)

TeleClick retention elements

> Trias®magnetic [1]

magnetic post

magnet S3, 300 g strength

magnet S5, 500 g strength

> Trias®locator® [2]

females for 0°-10° to compensate divergences in retention levels

females for 10°-20° to compensate divergences in retention levels

locator

blue, 680 g

pink, 1361 g

transparent, 2268 g

red, 880 g

green, 1361 g

matrix housing, titanium, incl. construction female mold + spacer disc

> Trias®tsa [3]

®titanium shock absorber

tsa® post (H2-H4)

tsa® matrix

Possibilities of Prosthetic Treatment

Preparation

> Gingiva forming

> Moulding

> Model fabrication

Conditionally removable/ fixed prosthesis

> Trias®solo

Removable prosthesis

> Trias®cone

> Trias®ball

> Trias®bar

> Trias®magnetic [1)]

> Trias®locator® [2)]

> Trias®tsa [3)]

Important information:

For all measures associated with the implantation the lege artis principle is valid. Training, advice with respect to the application, and advanced training in the handling of Trias® implants are organized by Servo-Dental. The fundamental prerequisite for the implantation of Trias® implants is compliance with the rules on indication and contraindication. Mastering of the surgery techniques, respect of the sterility conditions and the competence of the assistants are to be ensured by the attending dentist. The X-ray template helps select the implants and is not a measuring instrument. Due to the ongoing product development, the presentation of the products may deviate.

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2) Zest Anchors Inc., USA, 92029 CA Escondido
3) Bonecare GmbH, Germany, 86150 Augsburg

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