2.1 Fixed constructions

2.2 Removable constructions

3.1 Universal abutment made or adjusted by the laboratory

3.2 Cemented constructions abutment directly adjusted chair side

3.3 Cemented constructions abutment made or adjusted by the laboratory

THIS MANUAL HAS BEEN MADE IN COOPERATION WITH Mr. Hans van Overveld †
Dyna Dental Engineering BV, Halsteren (Bergen op Zoom) the Netherlands has implemented and maintains a quality management system for the following field of activities: development, manufacturer and sale of dental and implantology products. Dyna Dental Engineering B.V. is ISO 13485 certified.

Warning
The descriptions given in this enclosure are insufficient to allow immediate use of all Dyna Implant Systems. Guidance in the handling of the Dyna Helix® ART Octalock® Implant System and Dyna (Octalock®) Implant System by an experienced operator is strongly recommended. Dyna Helix® ART Octalock® and Dyna (Octalock®) Implant Systems must only be used by properly trained dentists/doctors and in combination with original components. In case of multiple use the following dangers could occur: cross infection, damaging products and as a result their function, wrong identification of products. For more detailed information please refer to the Dyna Implant Manuals as well as Dyna Terms of Guarantee – available on request. With the publication of this instructions for use all previous are no longer valid.

Content package
See label on packaging.

Precautions
Proper planning is essential for successful implant treatment. Improper technique can contribute to implant failure and/or bone loss; hard tissues must be treated with care. Use only in combination with original instruments. Implant mobility, bone loss, infection may be the symptoms of implant failure. In case of any doubts concerning the use of Dyna products contact Dyna Dental Engineering BV or your local dealer.

Sterilization
All Dyna abutments are supplied not sterile in a blister packaging, and intended for single use only. It must be sterilised/disinfected before clinical use in an appropriate manner. All Dyna abutments are supplied non-sterile and must be disinfected and sterilized before each clinical use, in an appropriate manner. Do not use abutments when the packaging is damaged.

Complications
Possible complications, related to prosthetic rehabilitation with dental implants, include: inflammation, bone loss, (chronic) pain, patient discomfort, tissue degeneration, bone/implant/restoration fracture, implant/suprastructure mobility. In case of complications follow the specific for the particular situation, appropriate course of actions-for more details see the Dyna Implant Manual.

Please note:
It is the user of Dyna products who is obliged to determine whether or not any products are suitable for a particular clinical situation. It is the user of Dyna products who is obliged to document in appropriate manner the products used for each patient. Dyna Dental En-
engineering BV disclaims any liability, express or implied and shall not be responsible for any damages arising from or in connection with any errors in professional judgement or practice in the use or installation of Dyna products. It is the users duty to study the latest developments in dental implantology as well as Dyna Implant Systems and its applications. When using our product intra-orally take proper care to prevent them from being inhaled or ingested.

Handling and Storage
Store in clean, dry, dust-free, dark room at room temperature.

Delivery
Federal law restricts these devices to sale by or on the order of a dentist or a physician.

Traceability of serial/lot numbers
It is the end users responsibility by law to record the serial and/or lot numbers of all products for traceability purposes. The Health Industry Bar Code (HIBC) on the label does not contain information for traceability purposes, but only the Labeler Identification Code (LIC) “EDYN” followed by the Dyna reference number. Read the human-readable interpretation of the bar code symbol printed below for verification.

Training
Dyna Dental Engineering BV arranges regular training courses for the beginning and advanced implantologists. The courses are obligatory and are meant to provide the Dyna user with practical and theoretical expertise concerning the use of Dyna Implant System.

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Explanation Symbols

<table>
<thead>
<tr>
<th>REF</th>
<th>SN</th>
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<tr>
<td>Catalogue number, article code</td>
<td>Serial number</td>
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</table>

| LOT | |
|-----| |
| Batch code | Manufacturer |

| ! | |
|-----| |
| Attention, read instructions for use | Single use only – do not reuse |

Dyna Dental Engineering B.V.
Vang 9
4661 TX Halsteren
The Netherlands
Tel. +31 164 258980
Fax. +31 164 258390
E-mail dyna@dynadental.com
Website www.dynadental.com
The prosthetic procedure shall be presented on simple examples of different types of prosthetic constructions on Dyna Octalock and Dyna Helix implants. For prosthetic constructions on Dyna implants see the push-in implant manual.

Packaging & labelling

All Dyna prosthetic products are packaged in a blister and can be opened simply.

How to use labels for traceability purposes
**Sterilisation**

All prosthetic components are supplied clean but not sterile. Operator is obliged to sterilize them or disinfect in appropriate manner.

**Hygiene Aspects**

Every construction made on implants should include in its design hygiene aspects. This means that the patient should be able to keep the prosthesis clean. It is the dentist task to access patient’s ability and motivation to perform everyday hygiene and afterwards decide on type of the prosthesis. On the other hand it is the technician task to produce a construction keeping in mind the hygiene aspects for the patient e.g. interproximal spaces to be easily accessible with interproximal brushes. Proper hygiene is conditio sine qua non for predictable functioning of the implant supported prostheses.

**Implant-abutment connection**

The Dyna Octalock® implant-abutment connection has been designed to achieve 0 degree rotation in the clinical use, as well as to enable easy transfer of the situation in the patients mouth to the lab model. The use of the octagon and conical connection has been carefully chosen. Any antirotation is of no use when there exists a significant freedom of movement between an abutment and an implant. many systems present on the market, nowadays, have a rotational freedom of 4 to 12 degrees*. This may influence clinical performance of any prosthetic construction and prevents an accurate transfer of the implant position intra orally to the model. Only a 0 degree rotational freedom can guarantee a reliable and save connection. Dyna Octalock® connection has been designed to make the transfer procedure as accurate as possible.

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* Int J Prosthodont. ;9 (2):149-60 8639238 (P,S,E,B)

The effect of implant/abutment hexagonal misfit on screw joint stability. P P Binon, Department of Restorative Dentistry, School of Dentistry, University of California at San Francisco, USA.
The Dyna Octalock® press-fit connection has a 0 degree rotation. This is realized by slightly tapered walls of the external abutment octagon. Due to this modification by means of micro deformation, abutments and impression copings are prevented from any rotation once seated and screwed in the implant with a torque of 30Ncm (Note: Extension abutments must be placed with 35 Ncm). This 0 degree rotational freedom results in a perfect, trouble-free transfer from mouth to the model and vice versa. This means in terms of practical usage, no more problems with taking impressions. The fixed prosthesis is made in the lab by using a titanium analogue on the same abutment as the one placed later in the mouth of the patient, and therefore, it will always have a perfect fit.

The conical octagon in combination with the conical upperpart realizes a press-fit connection with a perfect seal to the outside environment. Choosing two different angulations always results in an almost 100% closed connection between the implant and the abutment. At the same time this conical connection provides a stable fit in the implant, which makes the whole construction very solid and generates the ideal distribution of the applied forces. Fatigue tests proved that this design, even after more than 50 million cycles (10 x ISO 14801) no fracture accured. The conical shape of the universal fixation screw prevents it from loosening and fracturing if tightened with 30 Ncm. This provides high stability and
makes the whole system self centring. Due to friction forces, only a small amount of the applied torque will be transferred to the thread of the screw resulting in a considerable tension relaxation. This, in combination with the conical connection, makes it almost impossible to overload, and break the screw during normal physiological use.

The internal octagon has been introduced for several reasons:
- Increase of the implant wall strength (comparing with the hexagon design) – allowing for the same diameter of the fixing screw and the hexagon/octagon wall, the minimal thickness of the implant wall for hexagon design is about 20-25% thinner than for analogue situation with octagon design.
- Simplicity - each abutment fits all implant diameters using just one universal fixation screw.
- Improved aesthetics – the octa has been chosen to be internal instead of external so that no space is lost from the connection upwards. In this way it is possible to use a very low abutment in all those situations where the gingiva thickness is insufficient, so that no compromise in aesthetics has to be made.
- Security – the connection joins the best features of the other renowned implants systems in one, giving the security of equal force distribution, break protection and the best aesthetics.
- Function - in case an angled abutment is indicated, the position of the implant can be adjusted per 45°. Using a hexagon this is 60° and with a triangle just 120°. This can affect the esthetics concerning the height of the position of the implant (CEG).

**Abutment Height**

The proper height of the transmucosal part of the abutments is very important for the final result. It determines not only the proper function of the whole prosthetic construction but aesthetic outcome as well.

When choosing proper abutment height as well for removable and fixed constructions it is helpful to determine the gingiva height (GH = distance between gingival margin and the implant.). This should be done after healing period (full gingiva maturation) using grooves on the healing abutment (2mm, 4mm and 6mm).

For overdentures it is important to choose the lowest abutment possible (the higher the abutment the higher the lateral-leverage forces on the implant). Therefore, in some cases it would be indicated to do gingiva correction rather than choose higher abutments!
When choosing the right abutment hygiene should be taken into consideration. It is extremely important to enable the patient proper cleaning of the prosthetic construction. Therefore, in some situations too short abutment may be an obstacle for good hygiene (especially for bar overdentures).

Bite relation can also influence the abutment choice. In cases when there is not sufficient space between the maxilla and the mandible using certain types of abutments or even type of restoration may be impossible or strongly contraindicated!

For fixed constructions it is the general rule to choose the abutment to realize the future margin of the crown sub-gingival.

Every situation should be judged individually and the prospective decision should be a balanced choice between local bite relations, implant mechanics, patient’s motivation and hygiene aspects.

**Abutment fixation with the Dyna Torque wrench**

All final abutments must always be fixed onto the implants with 30 Ncm (note: extension abutments with 35 Ncm) using the torque wrench instrument and the Dyna Hex screwdriver. Every abutment/implant connection should be checked for fit by X-ray photo. This will prevent undesired loosening and/or fracture. The abutment must be screwed into the implant without any debris between. Check the torque by means of the Dyna Torque wrench before final cementation of the crown or bridge.

The Dyna Torque Wrench is a special instrument used to screw Dyna abutments to the torque of 15, 30 or 35Ncm*. It should be used with all Dyna abutments to prevent unscrewing. (see also instruction for use delivered with the Dyna Torque Wrench).

* Apply **15 Ncm** indication for all cover screws and healing abutments.
Apply **35 Ncm** indication for all extension abutments
Apply **30 Ncm** indication for all final abutments placed on Implant or extension level

Note: Dyna Torque Wrench should be calibrated once a year for proper torque.
Impressions can be taken as well at implant level as well for several supra-structures at abutment level. The several methods are described by means of the chosen supra-structure. Because the implant-abutment connection is all equal for all Dyna Octa push-in and Dyna Helix one and two phase implants the amount of different impression abutments is limited. All Impression abutments fit all Dyna Helix® and Dyna Octalock® Push-in implants.

2.1 FIXED CONSTRUCTIONS

Cemented constructions
open tray technique

Multi Unit screw retained constructions
open tray technique

Cemented or screw retained constructions
closed tray technique

Abutments contoured intra-orally
close tray technique
2.2 REMOVABLE CONSTRUCTIONS

Magnetic retained constructions

Abutment level
close tray technique directly on the abutment

Ball retained constructions

Abutment level with or without impression cap

Bar or cone retained constructions

Abutment or implant level with:

1  Impression copings open tray technique

Tighten the impression copings with the Dyna Hex Screwdriver. There is no need to use the Dyna torque wrench. See for further details the procedure in the fixed construction part.

2  Impression coping closed tray technique

Tighten the impression copings octa CIT with finger pressure and take a functional impression. Unthread the impression copings. Tighten the copings on to the implant analogues (type depending on impression taken on implant level, transmucosal implant or extension level). Put the copings back in the impression.
The rest of this manual describes the technique for fixed constructions. Techniques for removable constructions are described in specific manuals for each kind of attachment.
Dyna Direct Temporary abutments enable immediate function and realizes fewer patient visits. It is an easy procedure saving time for the dental surgeon as well as the patient.

The Dyna Direct Temporary abutment is available in two versions:

- Dyna Direct Temporary abutment octa straight for crowns (art.no. 89TA2 incl. cap)
- Dyna Direct Temporary abutment octa conical for crown and bridge (art.no. 89TA3 incl. cap)

**Dyna Direct Temporary abutment octa conical for crown and bridge**

The Abutment is mounted into the implant and tightened with the Hex driver with a torque of 30 Ncm.

The cap is tried in and relieved for clearance if necessary. The receptor sites for the Hex driver are blocked out with wax so they do not become filled with restorative materials or cement.

A temporary bridge is fabricated with traditional methods using either acrylic or composite. Cement using temporary cement.
Technique 3
Temporary solutions

Dyna Direct Temporary abutment octa straight for crowns

This abutment is used for single tooth implant chair-side restorations.

The abutment is mounted into the implant and tightened with the Square driver (art.no. 10ST1) with a torque of 30 Ncm.

The abutment is adjusted for height and clearance if necessary.

The cap is tried in and relieved for clearance if necessary.

A temporary crown is fabricated with traditional methods using either acrylic or composite.

Cement using temporary cement.

Warning:
Do not use polyurethane cements. The cement will not cure.
Crown & Bridge restorations open tray technique

- Straight abutments (Ti-6Al-4V Eli)
- Straight XL abutments (Ti-6Al-4V Eli)
- Angled abutments (Ti-6Al-4V Eli)
- Temporary abutments (Ti-6Al-4V Eli)
- Universal abutments (Au/pom)
- Anatomic abutments Titanium (Ti-6Al-4V Eli)
- Anatomic abutments Zirkonium (ZrO2)

3.1 Universal abutment made or adjusted by the laboratory

**DENTIST**

Make a full arch alginate impression of the healing abutments and edentulous areas. Send it to the lab for fabricating an open tray impression tray.

**LABORATORY**

Pour the impression in dental stone and separate cast after it sets. Block the space over, and around the abutments to simulate the position of impression copings that will be used. Fabricate the custom tray as usual. Create openings above the abutments to allow access to fixation screws (open tray technique).

**Please notice:**

If a prefabricated (transparent) impression tray is used skip procedure 2.1 and 2.2
DENTIST

Determine the height of the final abutment using the mm markings on the (Ø5mm) healing abutments. Remove the healing abutments and tighten the impression transfers with torque wrench to 30 Ncm. Verify the connection with X-ray photo.

The Healing abutment Ø 6mm with a height of 6mm has only one marking at 3mm and is used for preparing the sulcus for the Dyna Angled and Straight XL abutments.

Verify intra-orally the custom tray. The screw should penetrate through the top of the tray without any hindrance.

Cover the access opening with softened piece of baseplate wax. Carefully try in the tray and let the screws penetrate through the wax, creating small access holes.

Make the impression with elastomeric material (either on implant or extension level).

Please notice:

When taking the impression press with your finger tips on the wax so that the fixation screws are “pushed through”. In this way it will be possible to unscrew them easily after material set.

Unthread the screws from the transfers and remove gently the tray from the mouth. Make an opposing arch impression. Retighten the healing abutments. Make a bite registration at the vertical dimension of occlusion. Send all parts to the dental laboratory.
**LABORATORY**

Attach the laboratory implant analogue. Pass the screw through the impression material in the Impression abutment and thread it into the analogue with the Dyna Hex screwdriver as tight as possible (preferable 30 Ncm). Prevent a gap between Laboratory Implant analogue and the Impression abutment!

Make gingiva mask. Pour in the working cast. Unscrew the fixation screws and free the tray.

Mount the working cast and opposing model in an articulator.
Choose proper final abutments. The titanium Straight, Angled (18°), Straight XL, Anatomic abutments (Titanium or Zirkonium) must be adjusted individually for redesigning the chamfer line to follow the gum contour and to realize an anti-rotation for the crown. Tighten the chosen abutment on the Laboratory Implant Analogue with the universal Fixation screw at 30Ncm! Adjust the abutment(s) individually. In case of bridges take into account the parallelism.

In case the individual shape can not be realized with the custom made abutments the gold or plastic universal abutment is chosen. (81UA1S, 81UP1S) With these abutments any shape can be realized by waxing up the abutment. When the Universal full plastic abutment is chosen, the precision press-fit will be less but it can be casted in any alloy desired. In case of the Golden Universal abutment the precision will be high but can only be casted in precious alloys. This versatile abutment expands the prosthetic possibilities and may be used in almost all clinical situations. Custom fabrication from the top of the implant is a great advantage in those cases where optimal emergence profile and crown design is necessary. Prosthetic correction of the implant divergence or unfavourable angulation improvement is easy to realize. Both screw-type and cemented constructions can be produced with help of this universal abutment.

Tighten the chosen Universal abutment onto the Laboratory analogue with the Universal Fixation screw by means of the Dyna Hex screwdriver and the Dyna Torque wrench at 30 Ncm.

Realize the desired shape of the abutment in wax or acrylic. Unscrew the universal fixation screw and gently remove the construction. Attach the casting sprues and cast as crown & bridge work.

**Please notice:**
Because of the press fit-connection it may be difficult to remove the universal abutment. Unscrew and tighten the abutment before modelation.
The castable sleeve can be prepared and adjusted to every desirable shape. Low metal collar allows for achieving perfect aesthetics (although less precise connection it is also possible to choose fully castable plastic sleeve) and achieve optimal contouring of soft tissue, for an even more natural looking restoration. The abutment is available for single tooth reconstructions and cemented bridges with octagon, and for screwed retained bridges without octagon.

**Please note:** Incorporate anti-rotation elements for the crown on to the abutments.
**Technique 3**

**Fixed constructions**

**Material:** POM* and Gold Alloy (61.5%Au, 20.1%Pt, 17.5%Pd, 0.5%Ag), melting interval 1340°C -1470°C, thermal expansion coefficient (25-500°C) 13.0µm/m.K, recommended solders – high and low fusing precious solders

general indication:
1. For soldering with gold alloy
2. To cast to with precious alloys

* POM: to cast in any desired precious and non-precious alloy

POM needs to be burned out during 20 minutes with a minimum temperature of 260 and maximum of 300°C. Heating cycle of the oven is recommended on a maximum of 30°C per minute. If burning out is done faster than recommended there is a risk of burning POM causing porous castings.

**DENTIST**

In Case of multi units constructions it is recommended to try in the In case abutments intra-orally. If necessary make necessary adjustments.
LABORATORY

Fabricate the crown following standard laboratory procedures. Finish and carefully polish the final work.

DENTIST

Replace the healing abutment with final abutments and tighten it with torque wrench to 30Ncm. Fill-up the screw opening with a filling material (for example Voco clip). Insert the finished crown into the patient's mouth and place it on the abutment. Make final adjustments to the occlusion. Cement the work temporarily.

Instruct the patient in the use and care of the prosthesis, and provide adequate hygiene information and training. After a period of undisturbed functioning for minimally two weeks check the torque of 30 Ncm by means of the Dyna Torque Wrench. Finally cement the crown semi-permanently.
3.2 Cemented constructions abutment directly adjusted chair side

DENTIST

Determine the height of the final abutment using the mm markings on the healing abutments.

The Healing abutment Ø 6mm with a height of 6mm has only one marking at 3mm and is used for preparing the sulcus (sub-gingival area) for the Dyna Angulated and Straight XL abutments.

Order the Titanium Straight, the Straight XL, the Angulated (18°) or Anatomic abutment (Titanium or Zirkonium) in the height desired.

<table>
<thead>
<tr>
<th>Art.nr. 81AA0/1/2/3</th>
<th>Art.nr. 81X</th>
<th>Art.nr. 81ST0/2/3/4</th>
<th>Art.nr. 81AN..</th>
<th>Art.nr. 81ANZ..</th>
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<tbody>
<tr>
<td>Technique 3</td>
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**What platform connections do the Dyna Helix implants have?**

<table>
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<th>Platforms in Ø</th>
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<tr>
<td>4.0</td>
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<td>3.6</td>
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<td>3.2</td>
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<table>
<thead>
<tr>
<th>Dyna Helix 5.0 DC</th>
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<tbody>
<tr>
<td>Dyna Helix 3.6 DC</td>
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<tr>
<td>Dyna Helix 3.2 DC</td>
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<table>
<thead>
<tr>
<th>Dyna Helix 5.0 ST</th>
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<tr>
<td>Dyna Helix 4.2 ST</td>
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<td>Dyna Helix 3.6 ST</td>
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<table>
<thead>
<tr>
<th>Dyna Helix 3.6 TM</th>
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<tbody>
<tr>
<td>Dyna Helix 4.2 TM</td>
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</table>

**What does that mean for the gingiva heights of the straight abutments?**

<table>
<thead>
<tr>
<th>Gingiva height in mm</th>
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<tbody>
<tr>
<td>81ST2 STRAIGHT ABUTMENT 2</td>
</tr>
<tr>
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</tr>
<tr>
<td>1,9</td>
</tr>
<tr>
<td>2,2</td>
</tr>
</tbody>
</table>

| 81ST3 STRAIGHT ABUTMENT 3 |
| 2,5 |
| 2,9 |
| 3,2 |

| 81ST4 STRAIGHT ABUTMENT 4 |
| 3,5 |
| 3,9 |
| 4,2 |

**What does that mean for the gingiva heights of the angled abutments?**

<table>
<thead>
<tr>
<th>Gingiva height in mm</th>
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<tbody>
<tr>
<td>81AA1 ANGLED ABUTMENT 18° 1</td>
</tr>
<tr>
<td>1,3</td>
</tr>
<tr>
<td>1,6</td>
</tr>
<tr>
<td>2,0</td>
</tr>
</tbody>
</table>

| 81AA2 ANGLED ABUTMENT 18° 2 |
| 2,3 |
| 2,6 |
| 3,0 |

| 81AA3 ANGLED ABUTMENT 18° 3 |
| 3,3 |
| 3,6 |
| 4,0 |

A 81AA3 on a Dyna Helix 4.2 DC implant can bridge a gingiva of 3,3mm. But on a Dyna Helix 3.2 DC implant that same abutment can bridge 4,0mm.
Fixed constructions

For Dyna Helix™ implants special Straight and Angled abutments 0 mm are available (81ST0 / 81AA0).

Remove the healing abutments and tighten the abutment with torque wrench to 30Ncm (note: extension abutments 35 Ncm). Verify the connection with X-ray photo.

Individually adjust the abutment intra-orally for redesigning the chamfer line to follow the gum contour and to realize an antirotation for the crown. Fill out the opening in the abutment with a soft composite material (e.g. Clip Voco, GmbH)

Carefully try in the (custom) tray. Make a full arch impression (no alginate! - we recommend using vinyl polysiloxane material) Make sure the margin (outline) is clearly visible in the impression. Make interocclusal records and an impression of the opposing arch. Produce a temporary.
LABORATORY
Make gingiva mask. Pour the impression in dental stone and separate cast after it sets.

After pouring the opposing arch impression, utilizing the interocclusal records, mount the cast in the articulator.

Apply a dye spacer.

Produce a wax-according to routine crown-and-bridge procedures.

Cast it.
Follow conventional laboratory techniques to fit and finish the cast

Please notice:
We recommend trying in the metal structure.

Apply porcelain to the metal according to routine laboratory procedures.

DENTIST
Remove the provisional restoration from the patient’s mouth. Check the torque of 30 Ncm (note: extension abutments 35 Ncm) by means of the Dyna Torque Wrench. Seat the crown and verify fit, bite relation aesthetics and phonetics. Cement the crown semi-permanently. Provide the patient with oral hygiene instructions prior to release.

Note:
We advise cementing the crown first with the temporary cement and after a period of problem-free functioning to check the torque at 30 Ncm. Then cement it semi/permanent. Trying in the metal is advisable. For the best result we recommend also producing temporary crown (see also anti rotation)
3.3 Cemented constructions Abutment adjusted by the laboratory

**DENTIST**

Make a full arch alginate impression of the healing abutments and edentulous areas. Send it to the lab for pouring in a working cast and impression tray.

**LABORATORY**

Pour the impression in dental stone and separate cast after it sets. Block the space over, and around the abutments to simulate the position of impression copings that will be used. Fabricate the custom tray as usual. Create openings above the abutments to allow access to fixation screws (open tray technique).

**DENTIST**

Remove the healing abutments and tighten the impression transfers (with OCTA) with torque wrench to 30Ncm. Verify the connection with X-ray photo. Verify intra-orally the custom tray. The screw should penetrate through the top of the tray without any hindrance.
**DENTIST**

Cover the access opening with softened piece of base plate wax. Carefully try in the tray and let the screws penetrate through the wax, creating small access holes. Make the impression with elastomeric material.

**Please notice:**
When taking the impression press with your finger tips on the wax so that the fixation screws are “pushed through” it. In this way it will be possible to unscrew them easily after material sets.

Unthread the screws from the transfers and remove gently the tray from the mouth. Make an opposing arch impression. Retighten the healing abutments. Make a bite registration at the vertical dimension of occlusion. Send all parts to the dental laboratory.
LABORATORY

Attach the laboratory implant analogue (30 Ncm). Pass the screw through the impression material in the Impression abutment and thread it into the analogue with the Dyna Hex screwdriver as tight as possible. Do not change the position of the transfer in the impression. Prevent a gap between Laboratory Implant analogue and the Impression abutment!

Make gingiva mask. Pour in the working cast. Unscrew the fixation screws and free the tray.

Mount the working cast and opposing model in an articulator.

Attach the Straight (XL), Angled abutments onto the laboratory analogues. Individually adjust the abutments following the contour of the mucosa and assure an antirotation for the crown. Wax up the Crown construction and cast in the desired alloy. Finish the construction in metal. In case zirconium is desired, scan the construction or send it to a Dyna Cyrtina scancentre.

Verify the fit intra-orally before applying the ceramic or any other veneer technique.

Follow up the usual way of production the crown and bridge works on implants.

**Please note:**

In Case of multi-unit constructions a transfer Jig is recommended to simplify position of the abutments intra-orally.
DENTIST

Remove the Healing abutments and screw the metal or ceramic bridge with the Fixation screws at 30 Ncm. Verify the fit (x-ray) and occlusion.

Remove the provisional restoration from the patient’s mouth. Seat the bridge and verify fit, bite relation aesthetics and phonetics. Make necessary adjustments. Fixate the bridge with the Dyna fixation screws at 30Ncm. Close the screw entrees. Provide the patient with oral hygiene instructions prior to release.
3.4 Individually manufactured mesostructures or provisional restorations with the Dyna TiBase abutment

The Dyna TiBase abutment octa includes an abutment screw.

The scanbody from Sirona (www.sirona.com) can be used in combination with the Dyna TiBase abutment octa. All parts are non-sterile and intended for single use only. Individually manufactured mesostructures or provisional restorations can be glued onto the TiBase. The glued parts are screwed onto the Dyna Helix implant with the abutment screw in the patient's mouth. The scanbody is used only to scan the position of the implant for creating the design in for example the inLab 3D software.

Materials
TiBase, abutment screw Ti6Al4V, medical grade 5, ASTM 136 Scanbody ABS (Cyclolac GPM 5500 /WH4A015F)

Indications for use
The Dyna TiBase abutment is attached to an implant as prosthetic titanium base for adhesion to mesostructures to restore function and aesthetics in the oral cavity.

Contra-indications are:
- Insufficient oral hygiene
- Insufficient space available
- Bruxism
- For restorations with angulation correction of more than 20° to the implant axis.
- For individual tooth restorations with free end saddle.
- For restorations whose length exceeds a ratio of 1:1.25 in comparison to the length of the implant.

SCANNING

1. Mount the Dyna TiBase abutment octa on the Dyna laboratory implant analog octa in the master model and screw it tight using the supplied abutment screw.

2. Plug a scanbody onto the Dyna TiBase abutment octa so that it is seated free of gaps, and therefore flush while watching out for the intended guide groove. The scanbody is scannable without powder or scan spray.

3. Acquire the situation alternatively with inEos Blue, inEos, CEREC 3 or CEREC AC (www.sirona.com)
4. Use for example inLab 3D for abutments software V3.65 or inLab 3D V3.80 software (or higher) to design the individual shape of the mesostructure and mill the shape from a meso block (www.sirona.com).

**Be sure to observe the information on design, postprocessing and sintering of zirconia provided in the Operating Instructions for meso blocks.**

**PROCESSING THE DYNA TiBASE ABUTMENT OCTA**

The diameter of the abutment must not be reduced e.g. by grinding. Shortening it is not recommended. The contact surfaces of the abutment to the implant should not be sand-blasted or otherwise processed. Only the surfaces of the abutment intended for gluing with a mesostructure must be sandblasted (50μm aluminum oxide, max. 2.0 bar) and then cleaned (with alcohol or steam). The abutment should be fastened in a Dyna laboratory implant analog octa to protect the internal connection.

Use e.g. "PANAVIA™ F2.0" (www.kuraray-dental.de) as an adhesive extraorally to connect the Dyna TiBase abutment octa and the sintered mesostructure.

- For easier handling during the gluing process, it is recommended that the abutment be screwed into a laboratory implant analogue or a polishing tool.
- Cover the hex head of the abutment screw with wax.
- Mix the glue according to the manufacturer’s instructions and apply it to the Dyna TiBase abutment octa.
- Push the sintered mesostructure in as far as it will go. Make sure it latches into the rotation and position stops.
- Remove excess glue immediately.
- Apply the Airblocker ("Oxyguard") to the junction where the ceramic and titanium surfaces meet and to the screw funnel for final hardening.
- Remove residue with a rubber polisher after hardening.

**Information for the dentist**

Use the Dyna Torque to screw the restoration onto the implant with a tightening torque of 30 Ncm
General Terms of Guarantee (1206-01-02)

1. Purchaser assumes all risks and liability resulting from the use of products produced by Dyna Dental Engineering b.v., whether used separately or in combination with other products not of Dyna Dental Engineering’s manufacture.

Dyna Dental Engineering b.v. strongly recommends completion of postgraduate dental implant education and strict adherence to the procedures for use instructions contained in related manuals and those accompanying our products.

Dyna Dental Engineering b.v. cannot be held responsible for any other use or application than indicated by Dyna Dental Engineering b.v., that these products may be put to, neither from the user nor the consumer. Such misuse will void any rights for claims under this guarantee.

2. Dyna Dental Engineering b.v. makes no warranty, express or implied, except that its products shall be free from defects in material and/or workmanship after date of purchase and shall be of merchantable quality for a period of one year. The products should however be stroaged in a clean, This warranty applies only to the original purchaser.

In the event of defect of products of Dyna Dental Engineering b.v, Dyna Dental Engineering b.v. will at its option either repair, replace or issue credit for such defects. Any other costs incurred with the replacement, reparation or issuing credit for products are not covered by this guarantee.

3. Dyna Dental Engineering b.v. continually strives to improve its products and therefore reserves the right to improve, modify or discontinue products at any time, or to change specifications without notice and without incurring obligations.

4. Return Policy:
   - Products returned must be new and unopened, and must be received within 30 days of the invoice date, and full replacement or credit will be given.
   - Products returned after 30 days will be subject to a 15% restocking fee.

All products must be returned to Dyna Dental Engineering b.v. headquarters or its dealer accompanied by the copy of the original invoice or packing list. Returns that were purchased by credit card will be refunded by credit to the client’s account minus costs of creditcard payment; no cash refunds for returns on credit card purchases. No return after 90 days from the invoice date. Products received in other conditions, e.g. opened, damaged, polluted, etc. will not be accepted for return.

Shipping discrepancies: any shipping discrepancies should be reported to Dyna Dental Engineering b.v. headquarters by fax or e-mail within 7 days after receipt of the products.
5. In the event of alleged defect under warranty, the purchaser is obliged to follow the instructions for return of the products:

a. Every claimed product should be send to Dyna Dental Engineering b.v. headquarters:
   Dyna Dental Engineering b.v.
   P.O. Box 70
   4600 AB Bergen op Zoom
   The Netherlands
   or its appointed dealer

   List of authorised dealers can be sent on request or found on (www.dynadental.com)

b. No claim will be accepted and proceeded unless accompanied by
   • Copy of the original invoice
   • Completely filled in guarantee request form (FRM821-03) available at dyna Dental Engineering b.v. headquarters

c. All products should be clearly marked, sterilized and delivered in sealed plastic packaging. Dyna Dental Engineering b.v. will at its option replace or credit all alleged products within 20 workdays from the date of receipt.

d. All claims will be given standard or individual information-letter concerning the decision taken by Dyna Dental Engineering b.v.

e. Dyna Dental Engineering b.v. reserves the right to change time obligation in point c if any other further research would be needed to establish the reason for the product failure.

6. All claims against the manufacturer for failure due to malfunction or any other reason will be settled under the Dutch law, in accordance with accepted commercial practices.

7. Upon publication of these terms of guarantee all previous versions are no longer valid.
Terms of Guarantee Dyna implant (1206-01-03)

Dyna Dental Engineering b.v. is pleased to present the Dyna 5 year implant guarantee program, our comprehensive guarantee package that provides the confidence you need for your dental implant practice.

The benefits in this guarantee program are exclusively for the benefit of eligible treating clinicians and are not for the benefit of any other entity, including the patients of eligible clinicians.

Eligibility
To receive the benefits described above, the surgical doctor and the restorative doctor must fill in the registration form.

To be covered all products must be installed in accordance with the Dyna Implant Manual and in accordance with accepted dental practices. Contraindicated implant and restorative procedures such as described in the Dyna Implant Manual will void the guarantee program.

The Dyna 5 year guarantee program requires the patient to comply with the generally accepted standards of good oral hygiene. Implants failed as a result of poor hygiene maintenance and/or infection may not be covered under this program.

Respective treating clinician must enrol the patient into a yearly check-up recall system.

Completion of additional Dyna sponsored certification courses is not required as long as all implant procedures are performed in accordance with Dyna Implant Manual instructions and generally accepted dental practices, and all program conditions are met. However, potential operator must be able to prove his or her specific experience in implant procedures.

1. Failure prior to loading

If an implant surgical treatment fails for any reason prior to loading and Dyna implant has to be removed, the implant(s) will be delivered for replacement to the eligible doctor free of charge by Dyna Dental Engineering b.v. providing the doctor sends to Dyna Dental Engineering b.v.:

- the actual failed implant,
- pre- and post-operative pantographs and/or other pertinent radiographs and
- completed questionnaire.
2. Failure subsequent to loading

Dyna Dental Engineering b.v. guarantees all Dyna implants and abutments for a period of 5 years after insertion of the implant or the placement of the abutment. Subject to the limitation and exceptions described above Dyna will at its option replace at no charge or credit the implants and/or abutments.

Dyna Dental Engineering b.v. will not provide the benefits under this program if:

1. Failure of warranted product is the direct result of trauma.
2. Implants are placed with patients with a medical history indicating possible compromise to the healing process including, but not limited to, alcoholism, uncontrolled diabetes, chronic drug use, tobacco usage, recent history of chemotherapy, etc.
3. Implants are not placed in accordance with guidelines for patient evaluation and selection contained in the Dyna implant Manual.
4. The requirements of section 5 of the general terms of guarantee are not met.

This program does not apply to any implants or components, regardless whether these are manufactured by Dyna Dental Engineering b.v. or any other producer, which are custom designed or specially manufactured or modified at the request or by a treating doctor. And no warranty of merchantability or fitness for particular purpose is made here under.

Dyna Dental Engineering b.v. reserves the right to modify or terminate this guarantee program at any time upon providing participating clinicians not less than 30 days prior written notice of such action.

Dyna Dental Engineering b.v. reserves the right to terminate the eligibility of any participating clinician for this program by providing 30 days prior written notice of such action.

This 5 year implant guarantee program covers the following:
1. Dyna implants placed before loading
2. Dyna implants placed and restored exclusively with Dyna prosthetic components
3. Dyna prosthetic components used to load Dyna implants
4. Dyna prosthetic components to be used in combination with other brand implants according to Dyna specifications

Accidental misuse, inappropriate installations or failure to follow manufacturer’s directions voids the warranty.

See our general terms of guarantee for other warranty issues.
Terms of Guarantee Dyna implant abutments (1206-01-03)

Loosening of abutment screw components, and screw fracture are frequent problems related to dental implants, and are often the result of either too little torque or excessive torque placed on the abutment screw. While all torque wrenches are calibrated at the factory when new, the accuracy of a torque wrench can change if the wrench is more than 12 months old, has never been calibrated or has been autoclaved many times. Not calibrated wrenches may give 2 to 3 times more torque, resulting in screw fracture.

The Dyna Implant manual recommends that the torque wrenches have to be calibrated a minimum of once per year (free of charge in Dyna headquarters).

Dyna Dental Engineering b.v. reserves the right to ask the operator for recalibration proof in case of alleged warranty claim for Dyna abutments.

Dyna Dental Engineering b.v. disclaims any liability resulting from the use of abutments of diameter 3mm for any fixed constructions except for restoring lower incisors. Claims deriving from the use of these abutments in above mentioned situations will be treated individually after consulting Dyna Dental Engineering b.v. headquarters.

Accidental misuse, inappropriate installations or failure to follow manufacturer’s directions voids the warranty.

See our general terms of guarantee for other warranty issues.

Terms of Guarantee Dyna implant drills (1206-01-03)

The Dyna Implant Manual recommends drills to be replaced when worn, corroded, dull, or otherwise compromised. Drills should be replaced after 20 uses.

Drills produced by Dyna Dental Engineering b.v. may only be used in combination with standardized and fully operational handpieces. Any use of drills in combination with not standardized equipment will void this guarantee.

Dyna Dental Engineering b.v. Warrants the drills against defects in material or workmanship for a period of 90 days from the date of the original invoice. Dyna's sole obligation under product warranty is, at its discretion, to replace or repair defective components in part or whole.

Accidental misuse, inappropriate installations or failure to follow manufacturer’s directions voids the warranty.

See our general terms of guarantee for other warranty issues.
Terms of Guarantee Dyna magnets (1206-01-04)

Dyna Dental Engineering b.v. is pleased to present the Dyna 5 year magnet guarantee program for the Dyna WR magnets – and 1 year for the regular Dyna magnets (1101, 1102 and 1106) - our comprehensive guarantee package that provides the confidence you need for your dental implant practice.

The benefits in this guarantee program are exclusively for the benefit of eligible treating clinicians and dental technicians. The program is not for the benefit of any other entity, including the patients of eligible clinicians.

Eligibility

To be covered all products must be installed in accordance with the Dyna Magnet Manual and in accordance with accepted dental practices. Contraindicated restorative procedures as described in the Dyna Magnet Manual will void the guarantee program.

The Dyna guarantee program requires the patient to comply with the generally accepted standards of good oral hygiene and regular check-ups to determine any overloading that may appear during prospective functional use of the denture.

Respective treating clinician must enrol the patient into yearly check-up recall system.

Completion of additional Dyna Dental Engineering b.v. sponsored certification courses is not required as long as all magnet restorative procedures are performed in accordance with the Dyna Magnet Manual instructions and generally accepted dental practices, and all program conditions are met. However, potential operator must be able to prove his or her specific knowledge concerning magnets usage.

Dyna Dental Engineering b.v. guarantees all Dyna WR magnets for a period of 5 years after fixation of the magnet but no more than 6 years from the date of the purchase on the invoice.

Dyna Dental Engineering b.v. guarantees all regular Dyna magnets (1102 and 1106) for a period of 1 year after fixation of the magnet but no more than 2 years from the date of the purchase on the invoice.

Subject to the limitation and exceptions described above Dyna Dental Engineering b.v. will at its option replace at no charge or credit the magnets and related restorative components providing the doctor sends to Dyna Dental Engineering b.v.:

- the actual failed magnet
- copy of the original invoice
- completed questionnaire.

Dyna Dental Engineering b.v. may at its option ask the operator to send any essential proof that could help in establishing the real reason for the product failure.
Dyna Dental Engineering b.v. will not provide the benefits under this program if:

- Failure of warranted product is the direct result of trauma.
- Magnets are placed with patients with a medical history indicating possible compromise to the use of magnetic attachments.
- Magnets are not placed in accordance with guidelines for patient evaluation and selection contained in the Dyna Magnet Manual.
- The requirements of section 5 of the general terms of guarantee are not met.
- Mechanical damage to the magnet during placing and/or replacing procedures
- Damage caused by improper shape of the root cap (for Dyna System) or using materials other than Dyna products.

Dyna Dental Engineering b.v. reserves the right to modify or terminate this guarantee program at any time upon providing participating clinicians not less than 30 days prior written notice of such action.

Dyna Dental Engineering b.v. reserves the right to terminate the eligibility of any participating clinician for this program by providing 30 days prior written notice of such action.

This program covers all Dyna Magnets purchased by eligible doctor.

Accidental misuse, inappropriate installations or failure to follow manufacturer’s directions voids the warranty.

See our general terms of guarantee for other warranty issues.