

# Instructions for use

**LTS-BASE® - a stable long-term bonding base for the manufacture of a hybrid abutment for cementable or screw-retained single crowns, bridges or bar elements.**

# CE 0483



## Indication:

For the manufacture of single or multi-section, screwed or cemented bridges and bar elements on dental implants. Prior to insertion in the oral cavity, the LTS bonding bases are bonded with customised or assembled bonding bodies and then screwed into the implant.

## Article numbers:

In order to simplify the handling of bonding bases and to avoid any mix-ups, the article number includes the implant type and diameter. The article numbers of the LTS Ti-bases and screws are assigned to the implants in the following chart.

Implant	Ti-Base
Astratech® Osseospeed TX Ø3.5- 4.0	AS-35.KX-XX
Astratech® Osseospeed TX Ø4.5- 5.0	AS-45.KX-XX
Conelog® Ø3.8	CO-38.KX-XX
ICX® Ø3.45- 4.8	IX-34.KX-XX
Nobel Active® NP Ø3.5	NA-35.KX-XX
Straumann Bonelevel® NC Ø3.3	SB-33.KX-XX
Straumann Bonelevel® RC Ø4,1-4,8	SB-41.KX-XX
Zimmer TSV® Ø3.5	ZI-35.KX-XX
MIS®SEVEN Ø3.5	ZI-35.KX-XX
BioHorizons® Ø3.5	ZI-35.KX-XX
AlphaBio® Ø3.5	ZI-35.KX-XX
Biomet 3i Certain® Ø3,4	3I-34.KX-XX
Biomet 3i Certain® Ø4,1	3I-41.KX-XX
Osstem®-TSIII Mini Ø3,5	OS-35.KX-XX
Megagen Anyridge® Ø3,5-8,4	MA-35.KX-XX
GC Aadva® Ø4,0-5,0	GA-40.KX-XX
Astratech EV® Ø4,2	AE-42.KX-XX
Camlog® Ø3.8	CA-38.KX-XX
Camlog® Ø4,3	CA-43.KX-XX

## Materials:

The bonding bases are made from Ti6Al4V, medical grade 5, ASTM 136. In order to lower the plaque

accumulation and improve the aesthetics, they are also coated with titanium nitride (TiN). All screws are DLC-coated in order to lower friction in the cone.

## Warning:

The following descriptions are not sufficient to immediately use and further process the LTS bonding basis. Knowledge of dental implantology and experience in the handling of abutments will be necessary in any case.

## Contraindication:

Allergies or hypersensitivity to the chemical components of the used materials. The LTS-BASE bonding bases of the respective series may only be combined with the corresponding compatible implant system. Abutments with inappropriate connection geometry must not be used. All LTS bonding bases are only designed to be used once.

## Mechanical information:

The LTS bonding bases must be tightened with the appropriate screwdrivers or driver tips with at least 25 and a maximum of 30 Ncm. Please note that the torque of a badly maintained mechanical ratchet can easily exceed 40 Ncm which with implants with a small diameter can lead to a fracture. If the torque is too low, the result may be a loosening of the screw which can lead to a fracture of the screw or abutment.

Any kind of reworking of the connection geometry to the implant leads to an inaccuracy of fit which excludes any further processing. Furthermore, it is not permitted to remove any part of the LTS bonding bases in order, for example, to enable a greater angle or to create more space for the veneer. This is because the bonding bases are essential to ensure sufficient stability and accuracy of fit.

## Bonding:

In the bonding region of the bonding body, the LTS bonding bases have a microstructure which removes the need for a sandblasting process. This structure is characterised by a grain size of the glass particles in the bonding agent down to 10 µm. For the bonding we recommend Multilink Automix® from the company Ivoclar-Vivadent in Liechtenstein. Other resin-reinforced composite cements, however, can also be used provided the glass fillers have a suitable size. Prior to the bonding process, it is essential to completely remove dust and grease from the LTS bonding bases. The bonding should be made with the bonding base screwed onto a laboratory analogue in order to protect the implant interface. The screw access channel should also be temporarily closed with wax

in order to prevent ingress of the bonding agent into the channel. The bonding agent must be applied to both the bonding base and bonding body. The abutment must be flush with the LTS-BASE. In this process, care must be taken to ensure that during the curing the abutment is pressed onto the LTS-BASE with light finger pressure. Larger pieces of residual bonding agent must be immediately removed. Compression lugs can easily be cleaned off before the bonding agent has fully cured. The screw access channel must be thoroughly cleaned. In order to prevent the screw loosening, no residual cement must be allowed to reach the inner cone of the LTS-BASE. The instructions for use from the manufacturer must be observed.

**Development of the basal surface:**

The underside (basal) of the LTS-BASE is characterised by macro retentions which enable a denser attachment of connective tissue fibres of the soft tissue. This reduces the risk of bacteria from the oral cavity going in the direction of the implant shoulder. In order to obtain this effect, ensure that the basal surface of the abutment is not over-polished. A high gloss surface is counter-productive and should be avoided.

The abutment screw must be guided into the screw access channel before the abutment is placed in the implant. Otherwise the screw may jam in the screw access channel with the screwdriver.

Excessive force during assembly of the abutment and implant is to be avoided. In particular, care must be taken that the anti-twist protection from the implant manufacturer has fully engaged and that no gap forms between the abutment and implant. Non-observance can lead to irreparable damage to the implant interface.

The interface must be cleaned before screwing with the implant. Residual blood must be removed. The jamming of soft tissue must be avoided. The insertion of chlorhexidine gel is advantageous. Before cementing the dental prosthesis, the screw access channel must be closed with suitable materials (e.g. silicone, teflon, wax, or other).

**Safety notice:**

Metal and ceramic dust is harmful to health. During processing, a suction system equipped with a fine particulate filter as is the usual practice must be used together with the wearing of protective goggles and a face mask.

**Side effects:**

In extremely rare cases, allergies or sensitivity to the alloy cannot be excluded.

**Interactions:**

Different types of alloy in the same oral cavity can lead to a galvanic reaction.

**Cleaning, disinfection and sterilisation:**

The LTS bonding bases are delivered unsterile in a suitable packaging. After processing the prescribed cleaning and hygiene measures must be observed. Bonding bases which have already been in the oral cavity must be disinfected before reworking in the laboratory. The hygiene guidelines of the Robert Koch Institute must be observed.

**Guarantee:**

We grant a 5-year guarantee on the mechanical stability of the LTS-BASE above the implant shoulder provided the processing has been competently carried out under observance of our processing instructions.

Independent of this, the information conveyed in oral or written form or in lectures is based on tests and experience and therefore can only be regarded as standard values.

Our products are subject to continual development. In this context we reserve the right to make changes to the product with regard to design and composition.

	Article number
	Batch number
	For single use only
	Follow instructions for use
	Non-sterile

**Manufacturer:**



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Status: Revision 8 of 2017-01-09