INTRODUCTION
Please read this product description/ instruction manual before you use the Goldloc™-male part for the first time.

Correct adherence to the instructions below is the prerequisite and guarantee for the proper operational reliability of the system.

The manufacturer accepts no liability whatsoever for any damage caused by failure to observe these instructions.

Legend

Conformity symbol

Do not reuse

manufacturer

REF Article number

Non-steril

LOT Batch code

Instructions for use

Indication
Is intended for long-term anchoring of removable, fixed or resilently anchored prosthetics on root caps.

Contraindication
Unilateral prosthesis without transversal support.

Field of application
Dentistry

Sterilisation
The product is delivered UNSTERILISED. Every prosthetic reconstruction must be cleaned and disinfected before use.

Allergies
This product must not be used for patients with suspicion of an existing allergy to one or more elements of the materials used.

The product must be used only after an allergy test has been performed and proof obtained that no allergy exists.

Note
Using toothbrushes and toothpaste to clean products mechanically can lead to premature wear in functional areas.
### Content:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>System description</td>
<td>3</td>
</tr>
<tr>
<td>General</td>
<td>3</td>
</tr>
<tr>
<td>Technical Data</td>
<td>3</td>
</tr>
<tr>
<td>Dimensioning</td>
<td>3</td>
</tr>
<tr>
<td>Application</td>
<td>3</td>
</tr>
<tr>
<td>Recommended matrix system for the attachment of removable dentures</td>
<td>3</td>
</tr>
<tr>
<td>Risks</td>
<td>3</td>
</tr>
<tr>
<td>System Overview</td>
<td>4</td>
</tr>
<tr>
<td>Goldloc™ components</td>
<td>4</td>
</tr>
<tr>
<td>Preparation</td>
<td>4</td>
</tr>
<tr>
<td>General</td>
<td>4</td>
</tr>
<tr>
<td>Disinfection</td>
<td>4</td>
</tr>
<tr>
<td>Instructions for thermal bonding procedures</td>
<td>5</td>
</tr>
<tr>
<td>1 Laser welding of the male part for gold root caps</td>
<td>5</td>
</tr>
<tr>
<td>1.1 Fixing resp. defining of the mounting axis</td>
<td>5</td>
</tr>
<tr>
<td>1.2 Laser-welded connection of the male part for gold root caps</td>
<td>6</td>
</tr>
<tr>
<td>1.3 Trimming and polishing</td>
<td>6</td>
</tr>
<tr>
<td>2 Soldered connection of the male part for gold root caps</td>
<td>7</td>
</tr>
<tr>
<td>2.1 Fixing resp. defining of the mounting axis</td>
<td>7</td>
</tr>
<tr>
<td>2.2 Additional informations for variations 1 + 2</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Soldered connection of the male part for gold root caps</td>
<td>8</td>
</tr>
<tr>
<td>2.4 Trimming and polishing</td>
<td>8</td>
</tr>
<tr>
<td>Alloys and materials</td>
<td>9</td>
</tr>
</tbody>
</table>
SYSTEM DESCRIPTION

GENERAL
The Goldloc™ male part for gold root caps can be used in hybrid dental prosthetics and offers the possibility to use familiar Locator® technology as the male part on gold root caps. The male part is bonded with the gold root cap using soldering or laser welding technology. The Goldloc™ was exclusively developed for the Novaloc™ matrix system and therefore presents a particularly attractive treatment option, which can also even be easily administered by inexperienced therapists.

The new male part has tangible advantages in terms of clinical treatment and vertical space needs compared to standard ball anchorages.

A great deal of attention was also paid to the greatest possible user-friendliness during the development of the correct paralleometer insert so that the male sits comfortably.

TECHNICAL DATA
Dimensioning
In functional terms, the male part consists of a horizontal, ring-shaped retention part, which is turned from a single piece with a platform (attachment basis for soldering, laser welding or casting).

Application
In an ideal case, the male part should be mounted parallel to the prosthetic axis of insertion of the denture using the associated paralleometer insert. Otherwise, the functional fit can be guaranteed without a problem even with angulations up to 20 degrees per male part, or 40 degrees of several correlating male parts in one jaw.

Recommended matrix system for the attachment of removable dentures
The specific Novaloc™ matrix system is available for the Goldloc™ male part system. It consists of two parts and contains a matrix housing (with a choice between titanium or PEEK) as well as an insert made of PEEK. The insert is anchored in the housing through a jointed snap-action mechanism. There are 4 different, colour-coded inserts available, which are differentiated by area of application and retention value.

RISKS
Currently, there are no known risks related to the use of Goldloc™. Should you encounter unexpected complications or pain, please inform your attending dentist or dental technician immediately.

1 Locator® is a registered trademark of Zest Anchors LLC.
SYSTEM OVERVIEW

GOLDLOC™ COMPONENTS

<table>
<thead>
<tr>
<th>Picture</th>
<th>Part No.</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
</table>
|         | 2011.401| **Male part for gold root caps**  
                   -desinfectable-                   | High-gold alloy  
                   A = Ancrofluct  
                   (see alloys and materials p. 9)   |
|         | 2011.610| **Parallelogram insert**    
                   -desinfectable-                   | Aluminium, Steel                      |

PREPERATION

GENERAL

The product is delivered UNSTERILISED.

Responsibility for regular maintenance and monitoring of cleaning, disinfection and sterilization equipment rests with the operator, as does the corresponding validation.

The relevant product information by the manufacturer of the respective cleaning, disinfection and sterilization equipment is to be followed for all settings not listed here (e.g. pressure, time).

DISINFECTION

All surfaces have to be accessible to the disinfection and sterilization agents.

If prepared manually, the solution used has to be checked daily (contamination load). As a rule, disinfection solutions have to be replaced daily, unless the disinfection agent manufacturer can produce an independent expert assessment supporting a longer service life. Concentrations and contact times for the solutions as specified by the disinfection agent manufacturer have to be accurately adhered to.
INSTRUCTIONS FOR THERMAL BONDING PROCEDURES

1  LASER WELDING OF THE MALE PART FOR GOLD ROOT CAPS

1.1  Fixing resp. defining of the mounting axis

Variation 1

Mill smooth the high gold-content alloy root cap at a right angle to the defined path of insertion. [Fig.1]

Variation 2

With the help of the associated parallelogram insert, attach the male part to the gaping side with adhesive wax according to the defined path of insertion.

On the side where the male part comes into contact with the root cap, fix one or two points with welding wire. [Fig.2]
1.2 Laser-welded connection of the male part for gold root caps

The male part is circularly welded in the established position to the root cap. [Fig.3]

The male part should be fixed crosswise beforehand to prevent a position shift or tension.

Circular filling of the undercut at the base of the male part with high gold-content laser welding wire. (Ø0.3mm or Ø0.4mm) [Fig.4]

Circularly smooth out the area of the laser welding. [Fig.5]

Please note:
Do not go beyond the outer edge of the base of the male part when removing material while smoothing.

1.3 Trimming and polishing

Trim and seamlessly high-shine polish with a rubber polisher. [Fig.6]

Please note:
To protect the functional area of the male part while trimming the welded areas it is absolutely essential to put on a Novaloc™ processing spacer (white).
2 SOLDERED CONNECTION OF THE MALE PART FOR GOLD ROOT CAPS

2.1 Fixing resp. defining of the mounting axis

Variation 1

Mill smooth the high gold-content alloy root cap at a right angle to the defined path of insertion. [Fig.7]

Fig.7

Variation 2

With the help of the associated parallelogram inser, attach the male part to the gaping side with adhesive wax according to the defined path of insertion.

On the side where the male part comes into contact with the root cap, fix one or two points with welding wire. [Fig.8]

Fig.8

2.2 Additional informations for variations 1 + 2

- If a dental laser welding unit is available, spot welding the male part with welding wire to prevent position shifting is recommended.
- Variation 2 is only possible, if a dental laser welding unit is available.
2.3 Soldered connection of the male part for gold root caps

**Variation 1**

Place the male part on the ground-flat area of the root cap and weld with a standard soldering unit and high gold-content solder. (liquidus temperature 750°C – 850°C) [Fig.9]

*Please note:*
The solder may not flow about the upper edge of the neck of the male part.

= the beginning of the functional area of the male part.

**Variation 2**

The male part, that has been spot welded with the laser unit, is soldered circularly with high gold-content solder on the gaping side. (liquidus temperature 750°C – 850°C) [Fig.10]

*Please note:*
The solder may not flow about the upper edge of the neck of the male part.

= the beginning of the functional area of the male part.

2.4 Trimming and polishing

Trim and seamlessly high-shine polish with a rubber polisher. [Fig.11]

*Please note:*
To protect the functional area of the male part while trimming the welded areas it is absolutely essential to put on a Novaloc™ processing spacer (white).
# ALLOYS AND MATERIALS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Name</th>
<th>Colour</th>
<th>Composition</th>
<th>Physical properties</th>
<th>Mechanical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ancrofluct</td>
<td>Yellow</td>
<td>Au % 67.0</td>
<td>Pt % 13.5 Ag % 8.5</td>
<td>Cu % 10.8  Zn % 0.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>910 - 995°C</td>
<td></td>
<td>(hardened) 910 - 995°C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>300</td>
<td></td>
<td>(hardened) 300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>800 MPa</td>
<td></td>
<td>(hardened) 800 MPa</td>
</tr>
</tbody>
</table>

## Information on use

<table>
<thead>
<tr>
<th>Connexion possibilities</th>
<th>Technical hints</th>
</tr>
</thead>
</table>
| Casting                | Heat treatment after lasering or brazing:  
Annealing: 750°C 30 Min  
Hardening: 400°C 60 Min  
Pickling: in a warm solution of 10 vol. % sulfuric acid (H₂SO₄)  
Do not pickle with nitric acid (HNO₃) or hydrochloric acid (HCl) |
| Soldering              |                 |
| Laser welding          |                 |
| Phaser welding         |                 |
| Resin-bonding          |                 |
| Polymerization         |                 |