

Supraradicular, retentive, resilient anchor

Characteristics

- The lamellae retention insert is **screwed** into the housing to adjust it reliably and **long-term**.
- The retention can be **adjusted** to «low» or «high».
- Based on **the proven, well known** ball principle designed by Dr. Dalla Bona
- Perfect for **implant-supported restorations**

Processing advantages

- The precious metal alloy (Pd-Cu-free) male parts for casting-on **save time**.
- The **female part exists in two versions** at identical height: The version **elliptic** features a reinforced elliptic retention cap, ensuring secure hold also at highest stress-loads.
- Diverging abutments **can be compensated**: 8° – 16° depending on activation. **On implants** up to 40° depending on the system.
- As the dimensions are identical to those of the Dalbo®-B, existing restorations can be upgraded perfectly.
- A special male part for the laser welding technique is available.

Clinical advantages

- The denture retention force can be adjusted **easily and progressively** during the treatment to **suit the patient's individual requirements**.
- **Highly flexible**: the choice of three different sizes of lamellae retention inserts increases the range of friction. These can be exchanged easily, without having to go through the time consuming process of repolymerization.
- The female part **elliptic** increases the retentive force in the denture's body, ideal for **direct (chairside) integration!**
- **Safe for patients** as the materials are free of toxic elements

Indications

- Removable, rigidly or resiliently retained restorations supported on **implants** and root caps

Examples:

- Hybrid dentures
- Unilateral free-end dentures locked transversally
- Insertion/free-end dentures

Description of the concept

Due to its unique performance, the Dalbo®-PLUS basic and Dalbo®-PLUS elliptic can be considered an **exclusive product** for retaining hybrid dentures on natural teeth and implants. Screwing in the lamellae retention insert into the housing with the screwdriver/activator closes the four lamellae and adjusts the unit exactly. The special thread and full length slots in the lamellae retention insert compress and wedge it slightly while being screwed in to prevent inadvertent adjustment. The range of retentive forces varies between approx. 200 grams and 1.200 grams.

Male part

- The **male part (V)** is made of **Valor®**, a **palladium- and copper-free**, precious metal alloy for casting-on. It can only be either cast-on or soldered to the root cap. Casting-on saves time and does not require joining materials.
- The **special male part for the laser welding technique (E)** of Elitor® has been developed for this joining technology. The ingenious design of the base plate beneath the ball allows a safe and easy laser welding of this male part onto the root caps.

Female part

- The **female part (TE)** exists in two versions. The **elliptic** version differs from the basic PLUS version in its enlarged elliptic-shaped retention cap for the fixation in the resin, **without changing the popular minimal height of the female part**. This version is indicated either for a direct (chairside) fixation or where an **extra high strength** connection with the denture is required.

Tuning female part system

The ball anchor is the most widely used anchoring method worldwide. Countless manufacturers compete in this particular market. The smallest variations in ball diameter, material, shape and tolerance factors can influence the friction range of an anchor.

Two special Tuning female parts with different inner diameters of the lamellae retention inserts allow the retention to be restored, no matter what system was used or if the male part is worn out.

Limitation of use

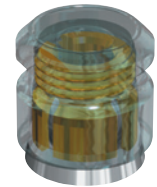
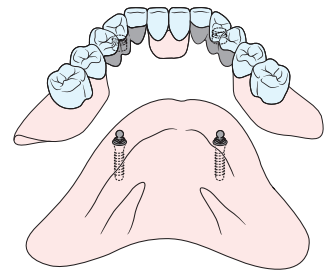
- Unilateral dentures without transverse splinting

Condition for correct processing

- Ideally, a simple parallelometer should be available for determining the best direction of insertion.

Please note

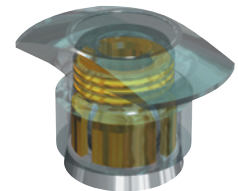
- As the male parts, female parts and some auxiliary instruments are compatible with the Dalbo®-B and Dalbo®-Classic, they can be interchanged with each other.



basic version



Male part Valor® (V)



elliptic version



standard lamellae retention insert

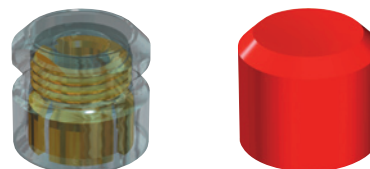
For more details and to order online, please visit:

www.cmsa.ch/dental

Dalbo®-PLUS 43.04

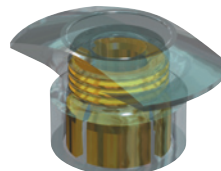
The Dalbo®-PLUS female part basic

is indicated for **integration in the laboratory**. It can either be directly polymerized or resin-bonded in the housing. The duplicating aid/spacer that comes with the product facilitates the manufacturing process of a box for bonding in the laboratory.



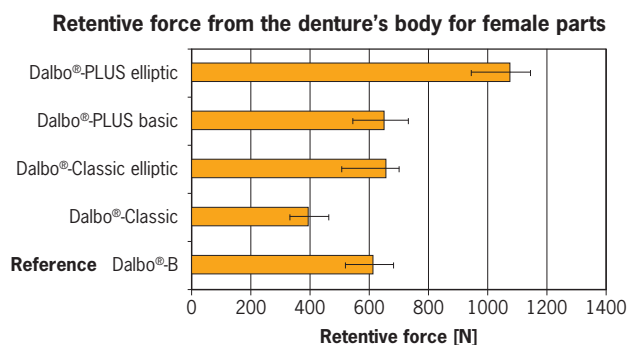
The Dalbo®-PLUS female part elliptic

is indicated for direct (chairside) fixation. Experiments have shown that resin quality is reduced by direct (chairside) integration and that under high stress-loads, the female part may get extracted from the denture. Our solution is an elliptically shaped female part which significantly increases the retentive force in the denture's body!



Retentive force in the denture's body: A comparison of the Dalbo® female parts for ball anchors

Under laboratory conditions, all female parts for ball anchors have a sufficient retention in denture's body. What's remarkable is that in some cases the Dalbo®-PLUS female part elliptic displays values exceeding that of the mechanical properties of the resin.



The lamellae retention insert

is the actual retentive element in the system. It is made of **Elitor®**, which is a yellow precious metal alloy with ideal mechanical properties for long-term, reliable functioning. The insertion is quick and simple. Just unscrew the insert from the housing with the special screwdriver – activator without extracting the female part from the denture's body.



standard version
(no indentation)



The Tuning lamellae retention inserts

Two special tuning retention inserts with reduced inner diameter provide an extraordinarily wide range of friction and allow retention to be restored.

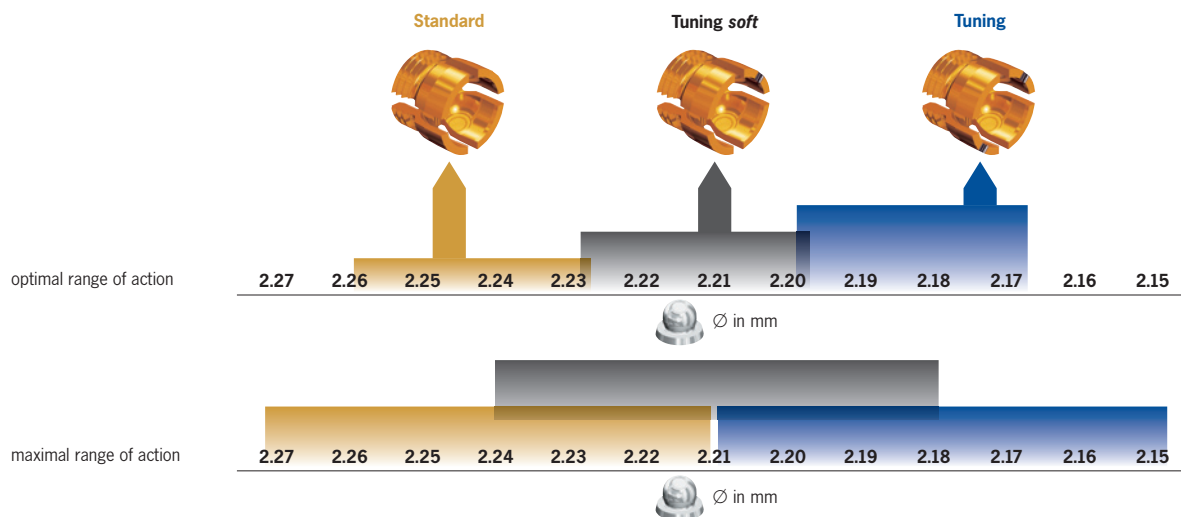


Tuning **soft** version
(1 indentation)



Tuning version
(2 indentations)

Choosing the right retention insert



Male parts

for the root cap therapy, depending on application, two different materials are available. The male part (V) made of Valor®, can be either soldered or directly cast-on to the root cap which saves time. A growing trend is to join the Male part to the root cap by means of laser. A male part especially designed for safe laser welding is available.



Dalbo® Valor® (V)
male part



Dalbo® Elitor (E)
laser male part

Ball abutments on implants

It would be hard to imagine the field of implantology without Ball anchor systems. They are cost effective, easy to clean for the patient and they usually have a long lifespan. A great number of patients found their quality of life significantly improved by this type of therapy.

The 2.25 mm diameter ball anchor introduced by CM over 40 years ago has become a benchmark. Several implant systems e.g. von Straumann, Nobel Biocare, Camlog, Thommen Medical, Astra Tech, 3i and many more are compatible with our Dalbo® ball anchor system. We recommend the female part with elliptical shape for direct (chairside) integration.



Treatment carried out by:
Christophe Rignon-Bret (DCD, MS, PhD, Associate Professor),
Jean-Marie Rignon-Bret (DCD, DSO, DEO, Professor, Head of Prosthetic Department),
René Descartes University, Paris 5, France

Adjusting the retentive force

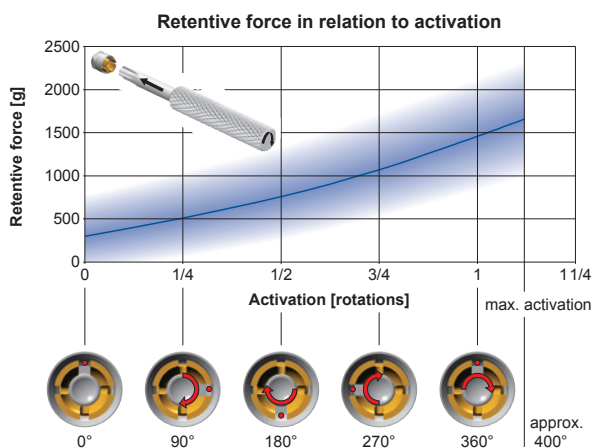
The integrated Dalbo®-PLUS can be identified by the titan-coloured edge of its gold yellow lamellae retention insert. It is activated by rotating the special screwdriver – activator (order no. 072 609) clockwise and deactivated by rotating it counter clockwise. The highest level of activation is obtained after one and a half clockwise rotation.

Activation: the «Zero Position» corresponds when the lamellae retention insert is flush with the opening of the housing. The retention strength increases by approx. 200g with each ¼ rotation (see diagram).

If needed, the lamellae retention insert can be exchanged, or in case of advanced wear of the sphere, replaced with a tuning lamellae retention insert without removing the female part from the denture's body.

NEW:

The gauge set (ball Ø 2.24 mm), facilitates the adjustment of the retentive force! Adjustment in the denture can be measured with the male part gauge. The female part gauge comes with an original housing. The retentive force of the different lamellae retention inserts can be measured individually chairside.



Sales program

Order No. 1:1
ID No.

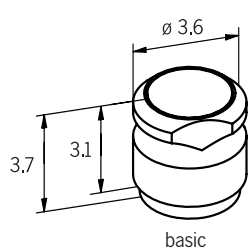
Version basic:

055 750
43.04.8 TEV

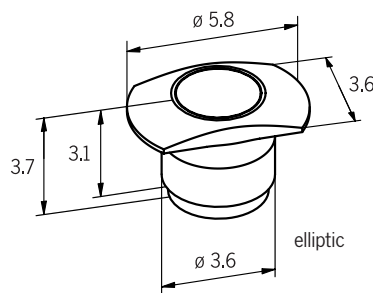


Version elliptic:

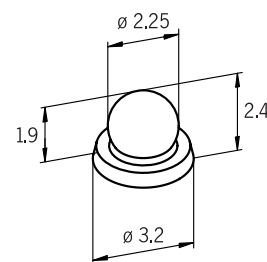
055 889
43.04.9 TEV



basic



elliptic



Single parts

Description

055 752



Female part TE basic complete

For polymerizing into the denture resin (not intended for soldering), adjustable. Delivery includes PVC ring and duplicating aid.

055 890



Female part TE elliptic complete

For the direct (chairside) fixation into the denture, adjustable.

055 643






Lamellae retention insert E




For screwing into the housing




Dalbo®-PLUS 43.04

Tuning_soft



1:1		Auxiliary parts	
0500 0214		Tuning female part <i>soft</i> TE basic complete	For polymerizing into denture resin (not intended for soldering), adjustable. Delivery includes PVC ring and duplicating aid.
0500 0215		Tuning female part <i>soft</i> TE elliptic complete	For the direct (chairside) fixation into the denture, adjustable.
0500 0068		Tuning lamellae retention insert <i>soft</i> E	For screwing into the housing

Tuning

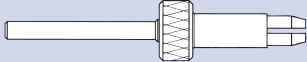
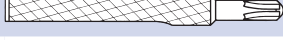

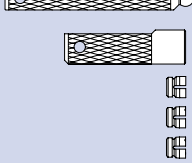


055 771		Tuning female part TE basic complete	For polymerizing into denture resin (not intended for soldering), adjustable. Delivery includes PVC ring and duplicating aid.
055 891		Tuning female part TE elliptic complete	For the direct (chairside) fixation into the denture, adjustable.
055 687		Tuning lamellae retention insert E	For screwing into the housing

050 394		Spacer disc Z	Provides for vertical resilience if required. Fitted between the female part and male part while the resin is being polymerized
055 647		Male part V	Can be cast-on or soldered to the root cap Cannot be laser-welded!
055 921		Laser male part E	Special male part for the laser welding technique featuring thicker and larger base plate


1:1 Auxiliary parts

072 626		Duplicating aid / spacer G	Duplicating aid (not indicated for the female part elliptic)
070 157		Transfer jig	Male part analogue for pouring master models

1:1 Auxiliary instruments

072 637		Special parallelometer insert	Simplifies positioning the male part
072 609		Screwdriver / Activator	For screwing in and activating the lamellae retention insert
072 639		Heating rod	For removal of the housing from the denture resin
0700 0026		Gauge set	Includes: <ul style="list-style-type: none"> • male part gauge (order no. 0700 0027) • female part gauge (order no. 0700 0024) • lamellae retention insert (order no. 055 643) • tuning lamellae retention insert <i>soft</i> (order no. 0500 0068) • tuning lamellae retention insert (order no. 055 687)
0700 0027		Male part gauge	For testing the retentive force in the denture, outside of the patient's mouth
0700 0024		Female part gauge	Does not include lamellae retention inserts For testing the retentive force in the patient's mouth and choosing the appropriate lamellae retention insert. We recommend securing instruments with a cord to prevent aspiration.

1:3

070 222		Attachment tweezers	
010 903		Laser welding wire E	Filler material for the laser welding technique (Ø 0.40 mm, length 200 mm)

Materials:

T = Pure titanium

E = Elitor®. Yellow precious metal alloy.

V = Valor®.

Non-oxidizing, palladium- and copper-free, precious metal alloy for casting-on.

Cannot be laser-welded!

Mouth-resistant plastic.

G = Galak

Z = Tin

Note:

• Changes of these indications due to technical reasons are reserved.

The complete and valid technical data and instructions for use are to be found in the instructions for use.

• In some countries the sales program may differ.