

A black and white photograph of a stick insect (Phibosoma) camouflaged on a tree branch. A white wireframe is overlaid on the insect, consisting of lines connecting various points on its body and limbs, illustrating a CAD model of its natural form. The background is dark and out of focus.

Phibo[®] CAD-CAM

phibo^φ

We decode nature.

Perceive, interpret,
reproduce with fidelity.
Nature works like this.

The stick insect is a curious creature that, as its name indicates, takes the form of a stick. It lives amongst the small branches of trees in order to camouflage itself and avoid being eaten.

And its appearance is no coincidence.
Phibo[®] CAD-CAM in its natural state.

phibo[®]

We
decode
nature.





Welcome to Phibo®

A brand that evolves and innovates with people in mind and a single objective: to accompany you in your evolution.

And we do this with the utmost care, following a guide that teaches and inspires us: nature.

At Phibo® we decode its shapes, beauty and harmony to make complex challenges simple and to offer you solutions, tools and technologies that we can now share with you.

We evolve with you, accompanying you on your journey.

Beauty. Simplicity. Growth.



What is Phibo[®] CAD-CAM?

Akin to a stick insect, Phibo[®] CAD-CAM is a system that perceives, interprets and reproduces a patient's tooth with absolutely fidelity.

Thanks to this advanced technology, at Phibo[®] we can design and manufacture structures that reproduce teeth so perfectly that they appear to be created by nature itself.

Phibo[®] CAD-CAM

A simple process,
thousands of benefits

Compared to traditional methods, the use of CAD-CAM technology to prepare dental prostheses simplifies and reduces the number of processes involved. This turns into reduced costs and increased productivity, while simultaneously offering a final product of higher quality.



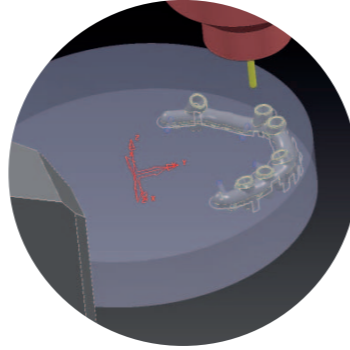
Digital impression

The process begins by taking an impression of the teeth. This can be digital, thanks to the use of intraoral scanners, or traditional, in which case we would obtain a digital impression by means of the laboratory scanner.



CAD design

The laboratory then rapidly and accurately designs the final prosthesis with a highly aesthetic finish which, thanks to Phibo® Library, they can perform on any implant system.



Preparation for CAM manufacturing

When Phibo® receives the file, it is reviewed exhaustively and then production of the intermediate structure in CAD-CAM is planned.



Production and quality control

The structure is produced with the use of different manufacturing techniques such as milling or sintering. Once finished, the structure must pass a final quality control test before being prepared for delivery.



Reception and finishing

The dental laboratory receives the piece and gives the final form to the tooth.



Teeth in mouth

Finally, we get a natural tooth, a perfect smile and a satisfied patient.



Traditional impression, model and scanning





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“Thanks to CAD-CAM we obtain a digital design for the manufacture of high-quality prostheses at reasonable prices.”

“With just one click we can produce implants for both simple and complex cases, obtaining aesthetic and predictable prostheses for our patients.”

Dr. Walter Rao
Dentist. Periodontics and digital implantology specialist. Pavia (Italy).



“Why do we no longer travel by boat and instead use airplanes? Speed, safety, reliability, accuracy, etc., new technological solutions are always one step ahead and an improvement on the existing ones.”

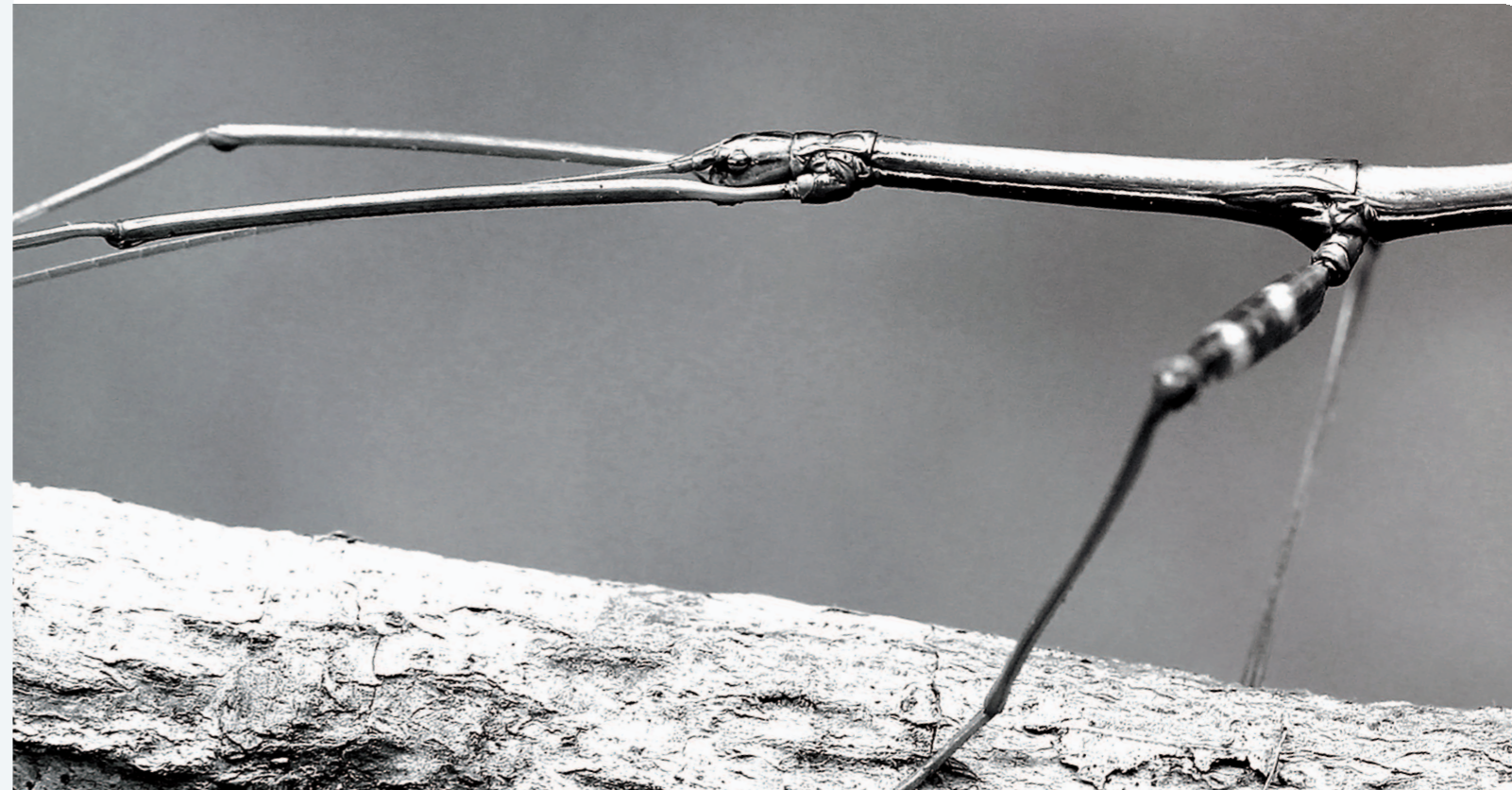
Mr August Bruguera
Dental Laboratory and Dental Training Centre. Barcelona (Spain).



“If you ask me why I work with Phibo[®] CAD-CAM technology, the key words are: predictability and reproducibility.”

“Other advantages include the fit, accuracy and control over every step of the process.”

Mr Daniel Carmona Cando
M.T.D. Masters in Dental Technology. Barcelona (Spain).

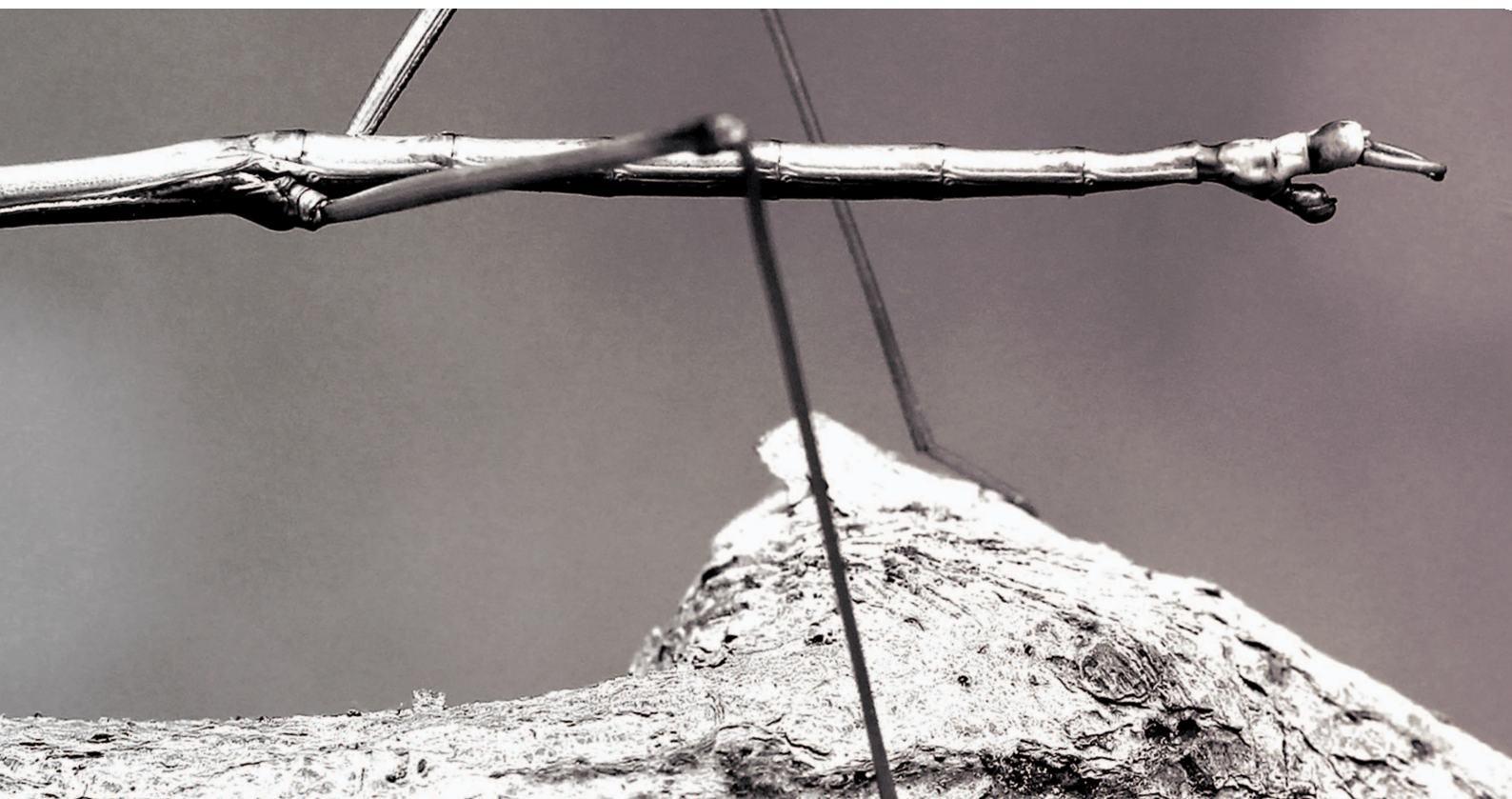


Benefits of Phibo[®] CAD-CAM

Exceptional fit

The CAD-CAM system affords a lot of benefits to both patients and clinics, which results in a simpler and much more accurate restoration.

In contrast to traditional casting methods, prostheses manufactured with CAD-CAM have an exceptional fit. This means the result is totally reliable and predictable, producing a final tooth that is unbeatable.



100% customised solution



Every single tooth manufactured through Phibo® CAD-CAM structures is designed according to the specific needs of each patient. That's why no two teeth are equal.

Highly aesthetic pieces



As each tooth is fully customised, as well as being manufactured with materials that offer the same colours and translucency as natural teeth, the final result is highly aesthetic.

Total versatility



Thanks to Phibo® Library, the most complete implant library on the market, Phibo® CAD-CAM allows any type of restoration to be carried out on any type of implant system.

The best quality



We are a leading company in the dental sector given that our CAD-CAM prostheses and all of our manufacturing processes are periodically certified and audited.

phibo^φ

One solution for each patient

Versatile and durable restorations



Adhoc[®]

Versatility in screwed Cobalt-Chrome

Adhoc[®] is a **unique product** for metal-ceramic **screwed restorations** as it combines the best of different technologies in order to yield some **exceptional results**.

Thanks to an innovative manufacturing process, we can achieve **excellent adherence** from the ceramic due to its extremely rough surface, as well as an **exceptional fit** around the point of connection.

Phibo[®] manufactures the screwed Cobalt-Chrome unit **for every type of structure**: from abutments to complete anatomical structures. And they can be attached to any implant system **thanks to Phibo[®] Library**, the most complete implant library on the market.

- **Improved adherence of the ceramic**
- **Exceptional fit of the connection**
- **Highly resistant**
- **Functions with any implant system**



3 mm

30 μm

30 μm



Fragment of an Adhoc[®] structure

The figure shows the different surfaces of a Cobalt-Chrome screwed prosthesis according to its functionality



Adhoc[®] structure with TSA[®] implants finished with ceramic



PHILIPS

3sha

Axis[®]

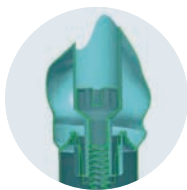
The angled solution from Phibo[®]

Axis[®] is a solution developed completely by Phibo[®], which allows **the angulation of the screw channels to be corrected** in restorations on implants. With the aid of Axis[®] by Phibo[®] we can achieve **very aesthetic Cobalt-Chrome screwed** restorations by changing the angle of screw emergence by up to 20°.

With Axis[®] it is also possible to rectify the screw entry, regardless of the position of the implants, providing complete **functionality**.

Axis[®] can be performed on **any type of screwed Cobalt-Chrome restoration**, both single or multiple, and both internal or external connections.

- *Improved aesthetics*
- *Total functionality*



Adhoc[®]
crown with a straight channel
and TSA[®] implant



Crown with
Axis[®] angulation

The images demonstrate how the Axis[®] angulation produces a finished prosthesis with exceptional aesthetics



Crown with
Axis[®] angulation
with ceramic



Titanium

The lightest of materials

Phibo® titanium abutments are the ideal solution when the dentist recommends a cemented prosthesis, given that it is a **light, biocompatible** material to which **soft tissue has an excellent response**.

Similarly, the **total flexibility in its design** allows the **desired anatomical emergence profile** to be obtained.



Customised titanium abutment



Customised abutment with cemented cobalt-chrome coping



Customised abutment with a ceramic-finished coping

- **Optimal anatomical emergence profile**
- **High precision and reliability**
- **Light and biocompatible**
- **Excellent response from soft tissue**

Gold-shaded Titanium

The most aesthetic of titanium implants

In cases where titanium is chosen as the prosthetic material and additional aesthetic qualities are required, Phibo® offers their **gold-shaded titanium abutments**.

With the same properties as titanium, they also provide a **warm golden tone** that produces **more natural results** under the soft tissue.



Customised gold-shaded titanium abutment



Customised abutment with cemented cobalt-chrome coping



Customised abutment with a ceramic-finished coping

- **A more natural result**
- **With all the advantages of titanium**



phibo[®]

Restorations with high aesthetic compromise

Phidia[®]

All aesthetics by Phibo[®]

Phibo[®] presents Phidia[®], the Zirconia implants that will change how we perceive dental aesthetics.

Phidia[®] is named after Phidias, a 5th century BC sculptor and architect who conceived art in a more naturalist manner, seeking beauty and aesthetics. Exactly what we pursue at Phibo[®].

Patients have an ever-increasing need for **highly aesthetic metal-free restorations**. Phidia[®] by Phibo[®] responds to this demand with Zirconia, a material that holds all of the advantages of ceramics (principally **biocompatibility and aesthetic appeal**) coupled with increased **mechanical resistance** and high **translucency**.



Phidia® High Translucent Zirconia

Phidia® High Translucent Zirconia is the ideal material in cases where there is **not enough space to overlay the ceramic**, as it can be used to carry out **complete anatomical** restorations, particularly indicated for restorations at the back of the mouth.

Translucent Zirconia from Phibo® can be employed with both cemented and screwed restorations, for which Phibo® guarantees a **maximum of seven pieces with gold-shaded titanium interfaces**, providing improved aesthetics.

Phibo® offers their Translucent Zirconia products in **four base colours**, so you can always obtain the desired final colour.

- **High translucency offers improved aesthetics**
- **It prevents problems such as ceramic fractures and chipping**
- **Complete anatomical restorations are possible**
- **Wide range of colour tones**



Phidia® High Translucent Zirconia, screwed, complete anatomy, base colour HTZ2



Phidia® High Translucent Zirconia, cemented, complete anatomy, base colour HTZ0



Table of colours:

Base:	Final:	
HTZ0	BL1, BL2, BL3, BL4	<input type="checkbox"/> White
HTZ1	A1, A2, B1, B2	<input type="checkbox"/> Soft
HTZ2	A3, A3'5, A4, B3, C1, C2, C3, D2, D3	<input type="checkbox"/> Medium
HTZ3	B4, D4, C4	<input type="checkbox"/> Intense

Phibo® recommends using base colours HTZ0, HTZ1, HTZ2 and HTZ3 to attain the final colours given on the right after the glazing and staining process

Phidia[®] Classic Zirconia

Phidia[®] Classic Zirconia is the perfect Zirconia for **restorations with a ceramic load** and for which a **highly aesthetic appearance** is desired, it is particularly relevant for restorations at the front of the mouth.

Phibo[®] Classic Zirconia can be employed with both cemented and screwed restorations, for which Phibo[®] guarantees a **maximum of seven pieces with gold-shaded titanium interfaces**, providing improved aesthetics.

Phibo[®] offers Phidia[®] Classic Zirconia in **four base colours**, so you can always obtain the desired final colour.

- *High aesthetic quality*
- *Biocompatibility and resistance*
- *Wide range of colour tones*



Phidia[®] Classic Zirconia,
screwed structure, base colour ZR2

Table of colours:

Base:	Final:	
ZR0	White	<input type="checkbox"/> White
ZR1	A1, B1, C1	<input type="checkbox"/> Soft
ZR2	A2, B2, C2, D2	<input type="checkbox"/> Medium
ZR3	A3, B3, C3, D3, B3.5, A4, B4, C4, D4	<input type="checkbox"/> Intense

Phibo[®] recommends using base colours ZR0, ZR1, ZR2 and ZR3 to attain the final colours given on the right after the ceramic load due to the prosthetic piece



Phidia[®] Classic Zirconia structure
cemented with ceramic

IPS e-max[®] CAD

High aesthetic quality

IPS e.max[®] CAD is an innovative system that uses lithium disilicate ceramic to create prosthetic structures. This highly aesthetic material makes it possible to carry out total volume, high-strength **monolithic restorations**.

All types of restorations can be performed on natural teeth using IPS e.max[®] CAD: veneers, inlays/onlays, complete anatomical crowns or copings to overlay the ceramic.

IPS e-max[®] CAD prosthetics provide a **natural luminosity** and thanks to their variety of **translucencies and colours**, provide highly-aesthetic complete anatomical restorations.

- **High strength**
- **Complete anatomical restorations**
- **Exceptional aesthetics**

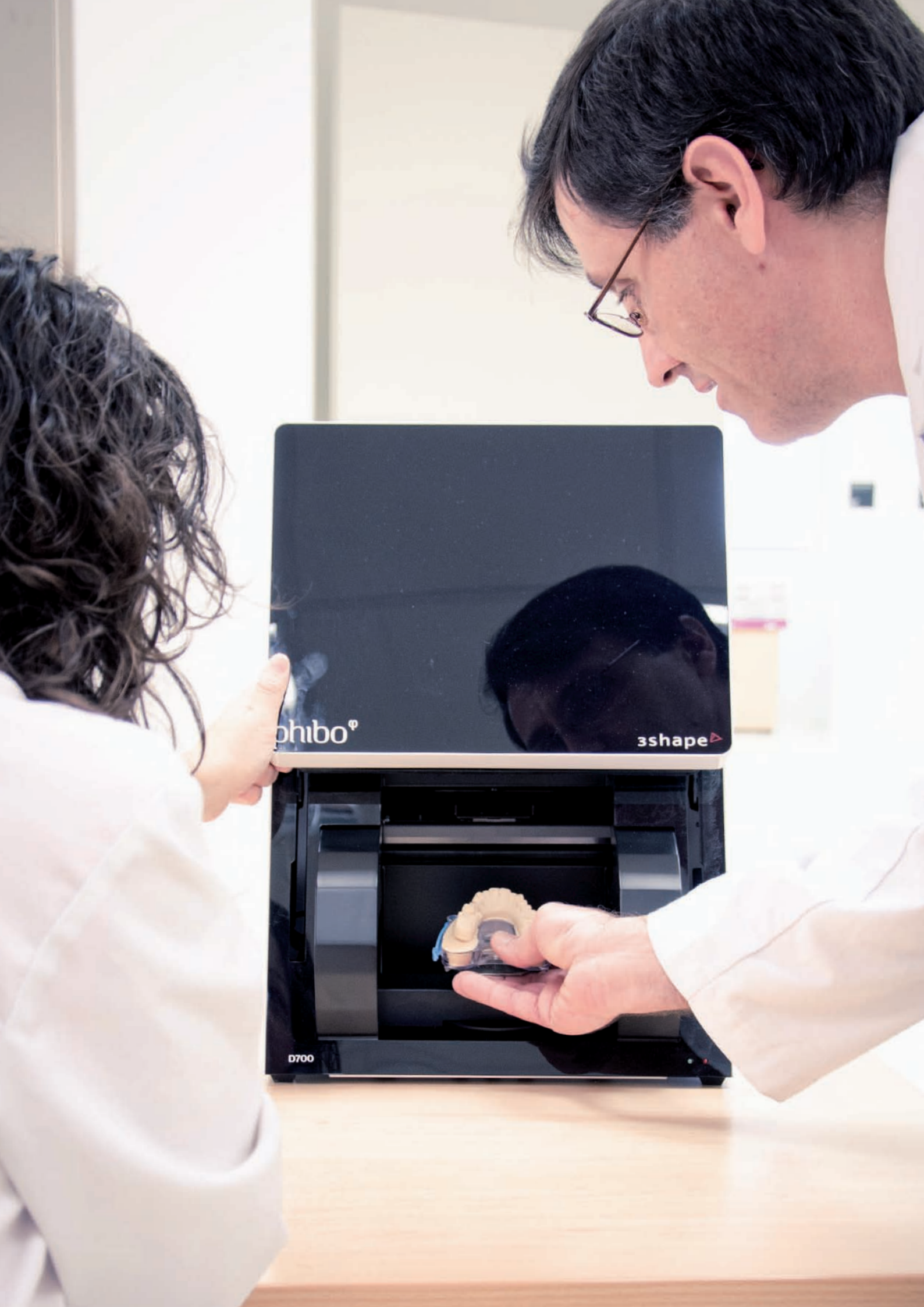


IPS e-max[®] CAD
posterior crown, without
crystallisation



IPS e-max[®] CAD
posterior crown, finished





phibo®

3shape

D700

Partially or fully removable restorations

Overdenture bars

In certain cases the best course of action given the clinical situation is patient rehabilitation with a bar overdenture.

Phibo® titanium overdenture bars are particularly **light** and indicated for **toothless patients** where there is a desire to **minimise vertical bone augmentation procedures**, or in the case of **significant soft and hard tissue loss**. All of our bars provide an **excellent fit**, which achieves **optimum long-term results**.

With Phibo® any type of bar could be prepared: Dolder and Ackerman bars, bars with fittings for Locator® abutments, Bredent® balls, Ceka® attachments, etc.

- *Optimal long-term results*
- *Light and strong*
- *On any implant system*



Titanium bar with Locator® abutments



Dolder® titanium bar



Bar with Bredent® titanium abutments with ball housing

Hybrid structures

When looking for an alternative to complete metal-ceramic structures, hybrid structures are a good option given that they require **fewer implants, whilst offering the same stability.**

These structures are fixed for the patient but are removable for the dentist.

In particular, they are indicated for **toothless patients or those in whom bone augmentation is not desirable.**

Phibo[®] manufactures Titanium and Cobalt-Chrome hybrid structures, on any implant system.

- ***Mechanically stable***
- ***High strength***
- ***On any implant system***



Attachments for removable prostheses

Phibo® produces the innovative **mechanised attachments for removable prostheses**, especially recommended for Cobalt-Chrome cemented structures.

Their **mechanised connection** enables **total precision** thanks to an **unbeatable fit**.

Additionally, this innovative system means that if the ball were to wear out, it would not require the preparation of a new structure.

- *Total precision*
- *Easy to substitute the ball*



Cobalt-Chrome cemented structure with a Bredent® attachment



Cobalt-Chrome cemented structure with ceramic and a Bredent® attachment

Temporary restorations

Cronia[®]

Temporary anatomical restorations

Cronia[®] comprises the ideal product for cases that require a **provisional prosthesis** while waiting to insert the final prosthesis.

It is made from PMMA (polymethylmethacrylate), which unlike other plastics, is highly translucent, easily moulded and can be repaired if the surface gets scratched.

Cronia[®] has many advantages, such as a **high aesthetic quality** thanks to its **anatomical shape**, similar to that of the natural tooth. It also helps with the **care, conformation and maintenance of the soft tissue**, they are completely **reliable and durable** prostheses, totally **biocompatible and hypoallergenic**, and allow correct **functionality**.

Phibo[®] produces Cronia[®] temporary prostheses for **all types of restorations**: cemented and screwed, single or multiple units. Cronia[®] is available in four tones.

- **Highly aesthetic**
- **Reliable, durable and functional**
- **Biocompatible and hypoallergenic**
- **Takes care of soft tissue**



Cronia[®], PMMA cemented structure



Cronia[®], PMMA screwed structure

Tones:

PMMA A1	<input type="checkbox"/>	White
PMMA B2	<input type="checkbox"/>	Soft
PMMA A3	<input type="checkbox"/>	Medium
PMMA A3.5	<input type="checkbox"/>	Intense



CAD-CAM restorations

SCREWED

Multiple
screwed
structures

Adhoc[®]



Cobalt-Chrome



Titanium

Phidia[®]



High Translucent
Zirconia



Classic Zirconia

Cronia[®]



PMMA

Hybrid
structures

Adhoc[®]



Cobalt-Chrome



Titanium

Overdenture bars



Titanium

Single
screwed
structures

Adhoc[®]



Cobalt-Chrome



Titanium

Phidia[®]



High Translucent
Zirconia



Classic Zirconia

Cronia[®]



PMMA

CEMENTED

Multiple cemented structures



Cobalt-Chrome



Titanium



High Translucent Zirconia



Classic Zirconia

Cronia®



PMMA

Single cemented structures



Cobalt-Chrome



Titanium

Phidia®



High Translucent Zirconia



Classic Zirconia

Cronia®



PMMA

IPS e.max® CAD by Phibo®



IPS e.max® CAD crown



IPS e.max® CAD veneers



IPS e.max® CAD inlays/onlays



Phibo®: the maximum guarantee

Thanks to over 20 years of research and development, and our strict application of science and technology, every single Phibo® product and service offers unbeatable quality.

Therefore, at Phibo®, we offer a five-year guarantee for all of our CAD-CAM interim structures (with the exception of Cronia® structures, which have a six-month guarantee as they are recommended for provisional restorations).

Furthermore, we boast a 100% quality-orientated management system that seeks excellence in all of our procedures, from the most strategic to the most operative. Which is why our CAD-CAM prostheses are certified according to ISO 9001 and ISO 13485.



Clinical case of Axis[®] with Adhoc[®]

Francisco Barbosa¹,
Implantologist.

Daniel Carmona¹,
Prosthetic Technician.

1. Private practice.



Intra-operative image of initial situation.



Extraction and surgery. Teeth 11 and 22 were extracted and Phibo[®] Aurea[®] implants (RP and NP, respectively) were inserted according to the surgical procedure set out by Phibo[®].

Diagnosis

32-year old patient who visited the clinic due to persistent detachment of the bridge between 11 and 22; teeth with an impossible diagnosis.

Reference: 10-13-92.

Treatment plan

Atraumatic exodontial extraction at 11 and 22.
Restoration with Phibo[®] Aurea[®] RP and NP in 11 and 22 respectively.

Phase 1: Provisionalisation.

Provisionalisation of the Aurea[®] implant for immediate aesthetic purposes in 11 and 22. This provisionalisation will be performed with a Phibo[®] Cronia[®] crown (PMMA).

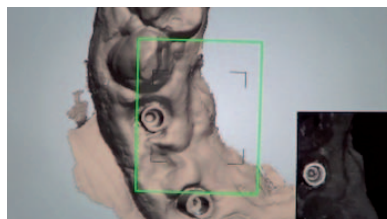
Phase 2: Definitive restoration.

Once the soft tissue has formed, a Phibo[®] (Adhoc[®]) screwed Cobalt-Chrome restoration is carried out on the Aurea implant in 11 and 22, with the screw channel angled, thanks to the Axis[®] system by Phibo[®].

RESTORATION



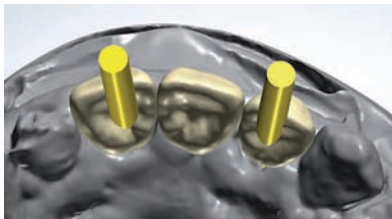
Provisional prosthesis. Impressions are taken and sent to the laboratory, where the plaster cast model is made, scanned in an extraoral scanner and the design used to prepare the provisional Cronia[®] (PMMA) prosthesis using Phibo[®] CAD-CAM technology.



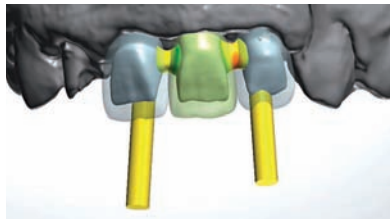
Planning the definitive prosthesis. Impressions are taken again, this time using the Trios[®] intraoral scanner by 3Shape[™], since soft tissue formation was completed in the provisionalisation stage.



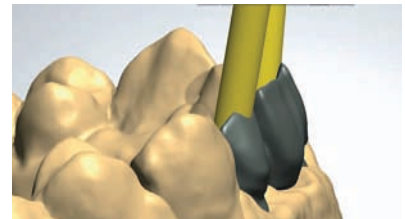
Designing the definitive prosthesis (I). The definitive prosthesis is designed using the software program Dental Designer.



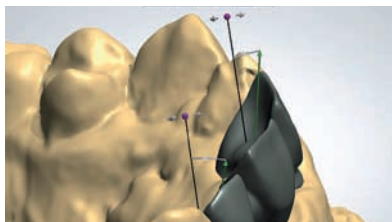
Designing the definitive prosthesis (II). The importance of the screw's entry position in terms of obtaining a good aesthetic result can be observed during the design process.



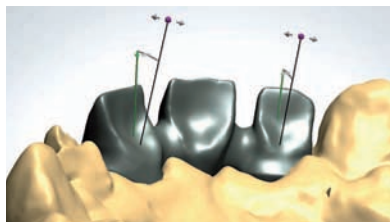
Designing the definitive prosthesis (III). Both the final anatomical and Adhoc structures can also be observed in the design stage.



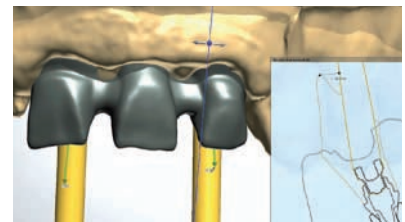
Designing the definitive prosthesis (IV). The correct angle of the screw entry channel is verified because the screw emergence from tooth 22 is visible from the buccal side.



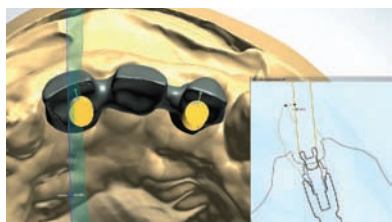
Channel angulation process with the Axis solution from Phibo. It is concluded that the ideal angulation for tooth 22 in buccal-lingual direction of the channel is 13.9°. The channel of tooth 11 has also been angled to 12°.



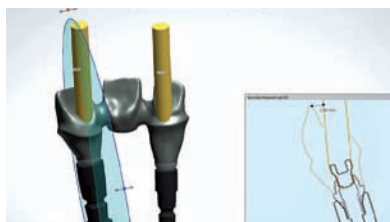
Channel angulation process with the Axis solution from Phibo (II). The angulation optimisation process is repeated in the medial-distal direction. The optimum angulation is 1° (in reference to the axis of the implant).



Final position of the channels. A buccal view and cross-section of tooth 22 is shown. The distance between the channel exit point and incisal margin has been increased thanks to Axis.



Final position of the channels (II). An occlusal view and cross-section of tooth 11 is shown. The increased distance between the channel exit point and incisal margin is checked again.



Final review of the design. Checks are made to verify that the angulation of the channels does not negatively affect the emergence profile and to ensure that it maintains the aesthetic compromise and functionality of the prosthesis.



Final review of the design (II). The detail of the angulation of the channel required in this clinical case in order to respect the aesthetics is observed.



The manufactured prosthesis. Images of the Axis screw and screwdriver developed by Phibo.



Test of the restoration metal. The aesthetic compromise comprised in tooth 22 thanks to the Axis solution can be observed.



The finished prosthesis. The finished prosthesis can be seen in the image, with its exceptional aesthetic appearance thanks to the Axis solution from Phibo.

phibo[®]

The best endorsement: the response of professionals and patients

As a result of internal scientific development and collaboration with universities, studies have been published in high profile international journals, which provide scientific evidence that evaluates the use of odontological techniques and/or solutions that guarantee the results expected by both professionals and patients.



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